Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-45' **Lab ID: 10480346009** Collected: 06/19/19 11:25 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.076	0.013	1	07/01/19 18:09	07/02/19 20:47	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.076	0.011	1	07/01/19 18:09	07/02/19 20:47	10061-01-5	
m&p-Xylene	**<0.0094**	mg/kg	0.15	0.0094	1	07/01/19 18:09	07/02/19 20:47	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.076	0.018	1	07/01/19 18:09	07/02/19 20:47	95-47-6	
trans-1,2-Dichloroethene	**<0.035**	mg/kg	0.076	0.035	1	07/01/19 18:09	07/02/19 20:47	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.076	0.011	1	07/01/19 18:09	07/02/19 20:47	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-125		1	07/01/19 18:09	07/02/19 20:47	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1	07/01/19 18:09	07/02/19 20:47	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1	07/01/19 18:09	07/02/19 20:47	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-50' **Lab ID: 10480346010** Collected: 06/19/19 11:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**35.4**	%	0.10	0.10	1		07/05/19 11:38		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.036**	mg/kg	0.077	0.036	1	07/01/19 18:09	07/02/19 21:06	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.014**	mg/kg	0.077	0.014	1	07/01/19 18:09	07/02/19 21:06	79-34-5	
1,1,2-Trichloroethane	**<0.0093**	mg/kg	0.077	0.0093	1	07/01/19 18:09	07/02/19 21:06	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.090**	mg/kg	0.31	0.090	1	07/01/19 18:09	07/02/19 21:06	76-13-1	
1,1-Dichloroethane	**<0.0087**	mg/kg	0.077	0.0087	1	07/01/19 18:09	07/02/19 21:06	75-34-3	
1,1-Dichloroethene	**<0.023**	mg/kg	0.077	0.023	1	07/01/19 18:09	07/02/19 21:06	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.077	0.017	1	07/01/19 18:09	07/02/19 21:06	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.077	0.015	1	07/01/19 18:09	07/02/19 21:06	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0081**	mg/kg	0.077	0.0081	1	07/01/19 18:09	07/02/19 21:06	106-93-4	
1,2-Dichlorobenzene	**<0.0031**	mg/kg	0.077	0.0031	1	07/01/19 18:09	07/02/19 21:06	95-50-1	
1,2-Dichloroethane	**<0.0085**	mg/kg	0.077	0.0085	1	07/01/19 18:09	07/02/19 21:06	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.077	0.012	1	07/01/19 18:09	07/02/19 21:06	108-67-8	
1,3-Dichlorobenzene	**<0.0028**	mg/kg	0.077	0.0028	1	07/01/19 18:09	07/02/19 21:06	541-73-1	
1,4-Dichlorobenzene	**<0.0048**	mg/kg	0.077	0.0048	1	07/01/19 18:09	07/02/19 21:06	106-46-7	
2-Butanone (MEK)	**<0.041**	mg/kg	0.39	0.041	1	07/01/19 18:09	07/02/19 21:06	78-93-3	
2-Hexanone	**<0.018**	mg/kg	0.39	0.018	1	07/01/19 18:09	07/02/19 21:06	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.39	0.016	1	07/01/19 18:09	07/02/19 21:06	108-10-1	
Acetone	**<0.48**	mg/kg	1.5	0.48	1	07/01/19 18:09	07/02/19 21:06	67-64-1	
Benzene	**<0.0044**	mg/kg	0.031	0.0044	1	07/01/19 18:09	07/02/19 21:06	71-43-2	
Bromodichloromethane	**<0.026**	mg/kg	0.077	0.026	1	07/01/19 18:09	07/02/19 21:06	75-27-4	
Bromoform	**<0.12**	mg/kg	0.31	0.12	1	07/01/19 18:09	07/02/19 21:06	75-25-2	
Bromomethane	**<0.091**	mg/kg	0.77	0.091	1	07/01/19 18:09	07/02/19 21:06	74-83-9	
Carbon tetrachloride	**<0.037**	mg/kg	0.077	0.037	1	07/01/19 18:09	07/02/19 21:06	56-23-5	
Chlorobenzene	**<0.0044**	mg/kg	0.077	0.0044	1	07/01/19 18:09	07/02/19 21:06	108-90-7	
Chloroethane	**<0.040**	mg/kg	0.77	0.040	1	07/01/19 18:09	07/02/19 21:06	75-00-3	
Chloroform	**<0.039**	mg/kg	0.31	0.039	1	07/01/19 18:09	07/02/19 21:06	67-66-3	
Chloromethane	**<0.019**	mg/kg	0.31	0.019	1	07/01/19 18:09	07/02/19 21:06	74-87-3	
Dibromochloromethane	**<0.0090**	mg/kg	0.31	0.0090	1	07/01/19 18:09	07/02/19 21:06	124-48-1	
Dichlorodifluoromethane	**<0.025**	mg/kg	0.31	0.025	1	07/01/19 18:09	07/02/19 21:06	75-71-8	
Ethylbenzene	**<0.0042**	mg/kg	0.077	0.0042	1	07/01/19 18:09	07/02/19 21:06	100-41-4	
Hexachloro-1,3-butadiene	**<0.019**	mg/kg	0.39	0.019	1	07/01/19 18:09	07/02/19 21:06	87-68-3	
Methyl-tert-butyl ether	**<0.0092**	mg/kg	0.077	0.0092	1	07/01/19 18:09	07/02/19 21:06	1634-04-4	
Methylene Chloride	**<0.15**	mg/kg	0.31	0.15	1	07/01/19 18:09	07/02/19 21:06	75-09-2	
Naphthalene	**<0.073**	mg/kg	0.31	0.073	1	07/01/19 18:09	07/02/19 21:06	91-20-3	
Styrene	**<0.0035**	mg/kg	0.077	0.0035	1	07/01/19 18:09	07/02/19 21:06	100-42-5	
Tetrachloroethene	**<0.027**	mg/kg	0.077	0.027	1	07/01/19 18:09	07/02/19 21:06	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.1	0.11	1	07/01/19 18:09	07/02/19 21:06	109-99-9	
Toluene	**<0.019**	mg/kg	0.077	0.019	1	07/01/19 18:09	07/02/19 21:06	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.077	0.012	1	07/01/19 18:09	07/02/19 21:06	79-01-6	
Trichlorofluoromethane	**<0.14**	mg/kg	0.31	0.14	1	07/01/19 18:09	07/02/19 21:06	75-69-4	
Vinyl acetate	**<0.0090**	mg/kg	0.77	0.0090	1	07/01/19 18:09	07/02/19 21:06	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.031	0.015	1	07/01/19 18:09	07/02/19 21:06	75-01-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-50' **Lab ID: 10480346010** Collected: 06/19/19 11:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.077	0.013	1	07/01/19 18:09	07/02/19 21:06	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.077	0.011	1	07/01/19 18:09	07/02/19 21:06	10061-01-5	
m&p-Xylene	**<0.0096**	mg/kg	0.15	0.0096	1	07/01/19 18:09	07/02/19 21:06	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.077	0.018	1	07/01/19 18:09	07/02/19 21:06	95-47-6	
trans-1,2-Dichloroethene	**<0.036**	mg/kg	0.077	0.036	1	07/01/19 18:09	07/02/19 21:06	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.077	0.011	1	07/01/19 18:09	07/02/19 21:06	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-125		1	07/01/19 18:09	07/02/19 21:06	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1	07/01/19 18:09	07/02/19 21:06	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1	07/01/19 18:09	07/02/19 21:06	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-55' **Lab ID: 10480346011** Collected: 06/19/19 12:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**27.2**	%	0.10	0.10	1		07/05/19 11:38		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.032**	mg/kg	0.069	0.032	1	07/01/19 18:09	07/02/19 23:21	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.012**	mg/kg	0.069	0.012	1	07/01/19 18:09	07/02/19 23:21	79-34-5	
1,1,2-Trichloroethane	**<0.0083**	mg/kg	0.069	0.0083	1	07/01/19 18:09	07/02/19 23:21	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.080**	mg/kg	0.28	0.080	1	07/01/19 18:09	07/02/19 23:21	76-13-1	
1,1-Dichloroethane	**<0.0078**	mg/kg	0.069	0.0078	1	07/01/19 18:09	07/02/19 23:21	75-34-3	
1,1-Dichloroethene	**<0.021**	mg/kg	0.069	0.021	1	07/01/19 18:09	07/02/19 23:21	75-35-4	
1,2,4-Trichlorobenzene	**<0.015**	mg/kg	0.069	0.015	1	07/01/19 18:09	07/02/19 23:21	120-82-1	
1,2,4-Trimethylbenzene	**<0.014**	mg/kg	0.069	0.014	1	07/01/19 18:09	07/02/19 23:21	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0073**	mg/kg	0.069	0.0073	1	07/01/19 18:09	07/02/19 23:21	106-93-4	
1,2-Dichlorobenzene	**<0.0028**	mg/kg	0.069	0.0028	1	07/01/19 18:09	07/02/19 23:21	95-50-1	
1,2-Dichloroethane	**<0.0076**	mg/kg	0.069	0.0076	1	07/01/19 18:09	07/02/19 23:21	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.069	0.011	1	07/01/19 18:09	07/02/19 23:21	108-67-8	
1,3-Dichlorobenzene	**<0.0025**	mg/kg	0.069	0.0025	1	07/01/19 18:09	07/02/19 23:21	541-73-1	
1,4-Dichlorobenzene	**<0.0043**	mg/kg	0.069	0.0043	1	07/01/19 18:09	07/02/19 23:21	106-46-7	
2-Butanone (MEK)	**<0.037**	mg/kg	0.35	0.037	1	07/01/19 18:09	07/02/19 23:21	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.35	0.016	1	07/01/19 18:09	07/02/19 23:21	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.014**	mg/kg	0.35	0.014	1	07/01/19 18:09	07/02/19 23:21	108-10-1	
Acetone	**<0.43**	mg/kg	1.4	0.43	1	07/01/19 18:09	07/02/19 23:21	67-64-1	
Benzene	**<0.0039**	mg/kg	0.028	0.0039	1	07/01/19 18:09	07/02/19 23:21	71-43-2	
Bromodichloromethane	**<0.024**	mg/kg	0.069	0.024	1	07/01/19 18:09	07/02/19 23:21	75-27-4	
Bromoform	**<0.10**	mg/kg	0.28	0.10	1	07/01/19 18:09	07/02/19 23:21	75-25-2	
Bromomethane	**<0.081**	mg/kg	0.69	0.081	1	07/01/19 18:09	07/02/19 23:21	74-83-9	
Carbon tetrachloride	**<0.033**	mg/kg	0.069	0.033	1	07/01/19 18:09	07/02/19 23:21	56-23-5	
Chlorobenzene	**<0.0039**	mg/kg	0.069	0.0039	1	07/01/19 18:09	07/02/19 23:21	108-90-7	
Chloroethane	**<0.036**	mg/kg	0.69	0.036	1	07/01/19 18:09	07/02/19 23:21	75-00-3	
Chloroform	**<0.035**	mg/kg	0.28	0.035	1	07/01/19 18:09	07/02/19 23:21	67-66-3	
Chloromethane	**<0.017**	mg/kg	0.28	0.017	1	07/01/19 18:09	07/02/19 23:21	74-87-3	
Dibromochloromethane	**<0.0080**	mg/kg	0.28	0.0080	1	07/01/19 18:09	07/02/19 23:21	124-48-1	
Dichlorodifluoromethane	**<0.022**	mg/kg	0.28	0.022	1	07/01/19 18:09	07/02/19 23:21	75-71-8	
Ethylbenzene	**<0.0038**	mg/kg	0.069	0.0038	1	07/01/19 18:09	07/02/19 23:21	100-41-4	
Hexachloro-1,3-butadiene	**<0.017**	mg/kg	0.35	0.017	1	07/01/19 18:09	07/02/19 23:21	87-68-3	
Methyl-tert-butyl ether	**<0.0082**	mg/kg	0.069	0.0082	1	07/01/19 18:09	07/02/19 23:21	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.28	0.13	1	07/01/19 18:09	07/02/19 23:21	75-09-2	
Naphthalene	**<0.065**	mg/kg	0.28	0.065	1	07/01/19 18:09	07/02/19 23:21	91-20-3	
Styrene	**<0.0032**	mg/kg	0.069	0.0032	1	07/01/19 18:09	07/02/19 23:21	100-42-5	
Tetrachloroethene	**<0.024**	mg/kg	0.069	0.024	1	07/01/19 18:09	07/02/19 23:21	127-18-4	
Tetrahydrofuran	**<0.10**	mg/kg	2.8	0.10	1	07/01/19 18:09	07/02/19 23:21	109-99-9	
Toluene	**<0.017**	mg/kg	0.069	0.017	1	07/01/19 18:09	07/02/19 23:21	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.069	0.011	1	07/01/19 18:09	07/02/19 23:21	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.28	0.12	1	07/01/19 18:09	07/02/19 23:21	75-69-4	
Vinyl acetate	**<0.0080**	mg/kg	0.69	0.0080	1	07/01/19 18:09	07/02/19 23:21	108-05-4	
Vinyl chloride	**<0.014**	mg/kg	0.028	0.014	1	07/01/19 18:09	07/02/19 23:21	75-01-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-55' **Lab ID: 10480346011** Collected: 06/19/19 12:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.011**	mg/kg	0.069	0.011	1	07/01/19 18:09	07/02/19 23:21	156-59-2	
cis-1,3-Dichloropropene	**<0.0099**	mg/kg	0.069	0.0099	1	07/01/19 18:09	07/02/19 23:21	10061-01-5	
m&p-Xylene	**<0.0086**	mg/kg	0.14	0.0086	1	07/01/19 18:09	07/02/19 23:21	179601-23-1	
o-Xylene	**<0.016**	mg/kg	0.069	0.016	1	07/01/19 18:09	07/02/19 23:21	95-47-6	
trans-1,2-Dichloroethene	**<0.032**	mg/kg	0.069	0.032	1	07/01/19 18:09	07/02/19 23:21	156-60-5	
trans-1,3-Dichloropropene	**<0.0096**	mg/kg	0.069	0.0096	1	07/01/19 18:09	07/02/19 23:21	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-125		1	07/01/19 18:09	07/02/19 23:21	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1	07/01/19 18:09	07/02/19 23:21	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1	07/01/19 18:09	07/02/19 23:21	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-60' **Lab ID: 10480346012** Collected: 06/19/19 12:40 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**32.2**	%	0.10	0.10	1		07/05/19 11:38		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.033**	mg/kg	0.071	0.033	1	07/01/19 18:09	07/02/19 21:26	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.071	0.013	1	07/01/19 18:09	07/02/19 21:26	79-34-5	
1,1,2-Trichloroethane	**<0.0085**	mg/kg	0.071	0.0085	1	07/01/19 18:09	07/02/19 21:26	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.082**	mg/kg	0.28	0.082	1	07/01/19 18:09	07/02/19 21:26	76-13-1	
1,1-Dichloroethane	**<0.0080**	mg/kg	0.071	0.0080	1	07/01/19 18:09	07/02/19 21:26	75-34-3	
1,1-Dichloroethene	**<0.021**	mg/kg	0.071	0.021	1	07/01/19 18:09	07/02/19 21:26	75-35-4	
1,2,4-Trichlorobenzene	**<0.016**	mg/kg	0.071	0.016	1	07/01/19 18:09	07/02/19 21:26	120-82-1	
1,2,4-Trimethylbenzene	**<0.014**	mg/kg	0.071	0.014	1	07/01/19 18:09	07/02/19 21:26	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0075**	mg/kg	0.071	0.0075	1	07/01/19 18:09	07/02/19 21:26	106-93-4	
1,2-Dichlorobenzene	**<0.0029**	mg/kg	0.071	0.0029	1	07/01/19 18:09	07/02/19 21:26	95-50-1	
1,2-Dichloroethane	**<0.0078**	mg/kg	0.071	0.0078	1	07/01/19 18:09	07/02/19 21:26	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.071	0.011	1	07/01/19 18:09	07/02/19 21:26	108-67-8	
1,3-Dichlorobenzene	**<0.0026**	mg/kg	0.071	0.0026	1	07/01/19 18:09	07/02/19 21:26	541-73-1	
1,4-Dichlorobenzene	**<0.0044**	mg/kg	0.071	0.0044	1	07/01/19 18:09	07/02/19 21:26	106-46-7	
2-Butanone (MEK)	**<0.038**	mg/kg	0.35	0.038	1	07/01/19 18:09	07/02/19 21:26	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.35	0.016	1	07/01/19 18:09	07/02/19 21:26	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.015**	mg/kg	0.35	0.015	1	07/01/19 18:09	07/02/19 21:26	108-10-1	
Acetone	**<0.44**	mg/kg	1.4	0.44	1	07/01/19 18:09	07/02/19 21:26	67-64-1	
Benzene	**<0.0040**	mg/kg	0.028	0.0040	1	07/01/19 18:09	07/02/19 21:26	71-43-2	
Bromodichloromethane	**<0.024**	mg/kg	0.071	0.024	1	07/01/19 18:09	07/02/19 21:26	75-27-4	
Bromoform	**<0.11**	mg/kg	0.28	0.11	1	07/01/19 18:09	07/02/19 21:26	75-25-2	
Bromomethane	**<0.083**	mg/kg	0.71	0.083	1	07/01/19 18:09	07/02/19 21:26	74-83-9	
Carbon tetrachloride	**<0.034**	mg/kg	0.071	0.034	1	07/01/19 18:09	07/02/19 21:26	56-23-5	
Chlorobenzene	**<0.0040**	mg/kg	0.071	0.0040	1	07/01/19 18:09	07/02/19 21:26	108-90-7	
Chloroethane	**<0.037**	mg/kg	0.71	0.037	1	07/01/19 18:09	07/02/19 21:26	75-00-3	
Chloroform	**<0.035**	mg/kg	0.28	0.035	1	07/01/19 18:09	07/02/19 21:26	67-66-3	
Chloromethane	**<0.017**	mg/kg	0.28	0.017	1	07/01/19 18:09	07/02/19 21:26	74-87-3	
Dibromochloromethane	**<0.0082**	mg/kg	0.28	0.0082	1	07/01/19 18:09	07/02/19 21:26	124-48-1	
Dichlorodifluoromethane	**<0.023**	mg/kg	0.28	0.023	1	07/01/19 18:09	07/02/19 21:26	75-71-8	
Ethylbenzene	**<0.0039**	mg/kg	0.071	0.0039	1	07/01/19 18:09	07/02/19 21:26	100-41-4	
Hexachloro-1,3-butadiene	**<0.017**	mg/kg	0.35	0.017	1	07/01/19 18:09	07/02/19 21:26	87-68-3	
Methyl-tert-butyl ether	**<0.0084**	mg/kg	0.071	0.0084	1	07/01/19 18:09	07/02/19 21:26	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.28	0.13	1	07/01/19 18:09	07/02/19 21:26	75-09-2	
Naphthalene	**<0.066**	mg/kg	0.28	0.066	1	07/01/19 18:09	07/02/19 21:26	91-20-3	
Styrene	**<0.0032**	mg/kg	0.071	0.0032	1	07/01/19 18:09	07/02/19 21:26	100-42-5	
Tetrachloroethene	**<0.025**	mg/kg	0.071	0.025	1	07/01/19 18:09	07/02/19 21:26	127-18-4	
Tetrahydrofuran	**<0.10**	mg/kg	2.8	0.10	1	07/01/19 18:09	07/02/19 21:26	109-99-9	
Toluene	**<0.017**	mg/kg	0.071	0.017	1	07/01/19 18:09	07/02/19 21:26	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.071	0.011	1	07/01/19 18:09	07/02/19 21:26	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.28	0.12	1	07/01/19 18:09	07/02/19 21:26	75-69-4	
Vinyl acetate	**<0.0082**	mg/kg	0.71	0.0082	1	07/01/19 18:09	07/02/19 21:26	108-05-4	
Vinyl chloride	**<0.014**	mg/kg	0.028	0.014	1	07/01/19 18:09	07/02/19 21:26	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-60' **Lab ID: 10480346012** Collected: 06/19/19 12:40 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.071	0.012	1	07/01/19 18:09	07/02/19 21:26	156-59-2	
cis-1,3-Dichloropropene	**<0.010**	mg/kg	0.071	0.010	1	07/01/19 18:09	07/02/19 21:26	10061-01-5	
m&p-Xylene	**<0.0088**	mg/kg	0.14	0.0088	1	07/01/19 18:09	07/02/19 21:26	179601-23-1	
o-Xylene	**<0.016**	mg/kg	0.071	0.016	1	07/01/19 18:09	07/02/19 21:26	95-47-6	
trans-1,2-Dichloroethene	**<0.033**	mg/kg	0.071	0.033	1	07/01/19 18:09	07/02/19 21:26	156-60-5	
trans-1,3-Dichloropropene	**<0.0099**	mg/kg	0.071	0.0099	1	07/01/19 18:09	07/02/19 21:26	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-125		1	07/01/19 18:09	07/02/19 21:26	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		1	07/01/19 18:09	07/02/19 21:26	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1	07/01/19 18:09	07/02/19 21:26	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-65' **Lab ID: 10480346013** Collected: 06/19/19 12:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**29.1**	%	0.10	0.10	1		07/05/19 11:38		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.032**	mg/kg	0.068	0.032	1	07/01/19 18:09	07/02/19 21:45	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.012**	mg/kg	0.068	0.012	1	07/01/19 18:09	07/02/19 21:45	79-34-5	
1,1,2-Trichloroethane	**<0.0081**	mg/kg	0.068	0.0081	1	07/01/19 18:09	07/02/19 21:45	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.079**	mg/kg	0.27	0.079	1	07/01/19 18:09	07/02/19 21:45	76-13-1	
1,1-Dichloroethane	**<0.0076**	mg/kg	0.068	0.0076	1	07/01/19 18:09	07/02/19 21:45	75-34-3	
1,1-Dichloroethene	**<0.020**	mg/kg	0.068	0.020	1	07/01/19 18:09	07/02/19 21:45	75-35-4	
1,2,4-Trichlorobenzene	**<0.015**	mg/kg	0.068	0.015	1	07/01/19 18:09	07/02/19 21:45	120-82-1	
1,2,4-Trimethylbenzene	**<0.014**	mg/kg	0.068	0.014	1	07/01/19 18:09	07/02/19 21:45	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0071**	mg/kg	0.068	0.0071	1	07/01/19 18:09	07/02/19 21:45	106-93-4	
1,2-Dichlorobenzene	**<0.0027**	mg/kg	0.068	0.0027	1	07/01/19 18:09	07/02/19 21:45	95-50-1	
1,2-Dichloroethane	**<0.0075**	mg/kg	0.068	0.0075	1	07/01/19 18:09	07/02/19 21:45	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.068	0.011	1	07/01/19 18:09	07/02/19 21:45	108-67-8	
1,3-Dichlorobenzene	**<0.0025**	mg/kg	0.068	0.0025	1	07/01/19 18:09	07/02/19 21:45	541-73-1	
1,4-Dichlorobenzene	**<0.0042**	mg/kg	0.068	0.0042	1	07/01/19 18:09	07/02/19 21:45	106-46-7	
2-Butanone (MEK)	**<0.036**	mg/kg	0.34	0.036	1	07/01/19 18:09	07/02/19 21:45	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.34	0.016	1	07/01/19 18:09	07/02/19 21:45	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.014**	mg/kg	0.34	0.014	1	07/01/19 18:09	07/02/19 21:45	108-10-1	
Acetone	**<0.42**	mg/kg	1.4	0.42	1	07/01/19 18:09	07/02/19 21:45	67-64-1	
Benzene	**<0.0038**	mg/kg	0.027	0.0038	1	07/01/19 18:09	07/02/19 21:45	71-43-2	
Bromodichloromethane	**<0.023**	mg/kg	0.068	0.023	1	07/01/19 18:09	07/02/19 21:45	75-27-4	
Bromoform	**<0.10**	mg/kg	0.27	0.10	1	07/01/19 18:09	07/02/19 21:45	75-25-2	
Bromomethane	**<0.079**	mg/kg	0.68	0.079	1	07/01/19 18:09	07/02/19 21:45	74-83-9	
Carbon tetrachloride	**<0.032**	mg/kg	0.068	0.032	1	07/01/19 18:09	07/02/19 21:45	56-23-5	
Chlorobenzene	**<0.0038**	mg/kg	0.068	0.0038	1	07/01/19 18:09	07/02/19 21:45	108-90-7	
Chloroethane	**<0.035**	mg/kg	0.68	0.035	1	07/01/19 18:09	07/02/19 21:45	75-00-3	
Chloroform	**<0.034**	mg/kg	0.27	0.034	1	07/01/19 18:09	07/02/19 21:45	67-66-3	
Chloromethane	**<0.016**	mg/kg	0.27	0.016	1	07/01/19 18:09	07/02/19 21:45	74-87-3	
Dibromochloromethane	**<0.0079**	mg/kg	0.27	0.0079	1	07/01/19 18:09	07/02/19 21:45	124-48-1	
Dichlorodifluoromethane	**<0.022**	mg/kg	0.27	0.022	1	07/01/19 18:09	07/02/19 21:45	75-71-8	
Ethylbenzene	**<0.0037**	mg/kg	0.068	0.0037	1	07/01/19 18:09	07/02/19 21:45	100-41-4	
Hexachloro-1,3-butadiene	**<0.017**	mg/kg	0.34	0.017	1	07/01/19 18:09	07/02/19 21:45	87-68-3	
Methyl-tert-butyl ether	**<0.0081**	mg/kg	0.068	0.0081	1	07/01/19 18:09	07/02/19 21:45	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.27	0.13	1	07/01/19 18:09	07/02/19 21:45	75-09-2	
Naphthalene	**<0.063**	mg/kg	0.27	0.063	1	07/01/19 18:09	07/02/19 21:45	91-20-3	
Styrene	**<0.0031**	mg/kg	0.068	0.0031	1	07/01/19 18:09	07/02/19 21:45	100-42-5	
Tetrachloroethene	**<0.024**	mg/kg	0.068	0.024	1	07/01/19 18:09	07/02/19 21:45	127-18-4	
Tetrahydrofuran	**<0.099**	mg/kg	2.7	0.099	1	07/01/19 18:09	07/02/19 21:45	109-99-9	
Toluene	**<0.017**	mg/kg	0.068	0.017	1	07/01/19 18:09	07/02/19 21:45	108-88-3	
Trichloroethene	**<0.010**	mg/kg	0.068	0.010	1	07/01/19 18:09	07/02/19 21:45	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.27	0.12	1	07/01/19 18:09	07/02/19 21:45	75-69-4	
Vinyl acetate	**<0.0079**	mg/kg	0.68	0.0079	1	07/01/19 18:09	07/02/19 21:45	108-05-4	
Vinyl chloride	**<0.013**	mg/kg	0.027	0.013	1	07/01/19 18:09	07/02/19 21:45	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-65' **Lab ID: 10480346013** Collected: 06/19/19 12:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.011**	mg/kg	0.068	0.011	1	07/01/19 18:09	07/02/19 21:45	156-59-2	
cis-1,3-Dichloropropene	**<0.0097**	mg/kg	0.068	0.0097	1	07/01/19 18:09	07/02/19 21:45	10061-01-5	
m&p-Xylene	**<0.0084**	mg/kg	0.14	0.0084	1	07/01/19 18:09	07/02/19 21:45	179601-23-1	
o-Xylene	**<0.016**	mg/kg	0.068	0.016	1	07/01/19 18:09	07/02/19 21:45	95-47-6	
trans-1,2-Dichloroethene	**<0.032**	mg/kg	0.068	0.032	1	07/01/19 18:09	07/02/19 21:45	156-60-5	
trans-1,3-Dichloropropene	**<0.0094**	mg/kg	0.068	0.0094	1	07/01/19 18:09	07/02/19 21:45	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-125		1	07/01/19 18:09	07/02/19 21:45	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1	07/01/19 18:09	07/02/19 21:45	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1	07/01/19 18:09	07/02/19 21:45	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-70' **Lab ID: 10480346014** Collected: 06/19/19 14:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**30.2**	%	0.10	0.10	1		07/05/19 11:39		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.032**	mg/kg	0.069	0.032	1	07/01/19 18:09	07/02/19 22:04	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.012**	mg/kg	0.069	0.012	1	07/01/19 18:09	07/02/19 22:04	79-34-5	
1,1,2-Trichloroethane	**<0.0082**	mg/kg	0.069	0.0082	1	07/01/19 18:09	07/02/19 22:04	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.080**	mg/kg	0.28	0.080	1	07/01/19 18:09	07/02/19 22:04	76-13-1	
1,1-Dichloroethane	**<0.0077**	mg/kg	0.069	0.0077	1	07/01/19 18:09	07/02/19 22:04	75-34-3	
1,1-Dichloroethene	**<0.021**	mg/kg	0.069	0.021	1	07/01/19 18:09	07/02/19 22:04	75-35-4	
1,2,4-Trichlorobenzene	**<0.015**	mg/kg	0.069	0.015	1	07/01/19 18:09	07/02/19 22:04	120-82-1	
1,2,4-Trimethylbenzene	**<0.014**	mg/kg	0.069	0.014	1	07/01/19 18:09	07/02/19 22:04	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0072**	mg/kg	0.069	0.0072	1	07/01/19 18:09	07/02/19 22:04	106-93-4	
1,2-Dichlorobenzene	**<0.0028**	mg/kg	0.069	0.0028	1	07/01/19 18:09	07/02/19 22:04	95-50-1	
1,2-Dichloroethane	**<0.0076**	mg/kg	0.069	0.0076	1	07/01/19 18:09	07/02/19 22:04	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.069	0.011	1	07/01/19 18:09	07/02/19 22:04	108-67-8	
1,3-Dichlorobenzene	**<0.0025**	mg/kg	0.069	0.0025	1	07/01/19 18:09	07/02/19 22:04	541-73-1	
1,4-Dichlorobenzene	**<0.0043**	mg/kg	0.069	0.0043	1	07/01/19 18:09	07/02/19 22:04	106-46-7	
2-Butanone (MEK)	**<0.037**	mg/kg	0.34	0.037	1	07/01/19 18:09	07/02/19 22:04	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.34	0.016	1	07/01/19 18:09	07/02/19 22:04	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.014**	mg/kg	0.34	0.014	1	07/01/19 18:09	07/02/19 22:04	108-10-1	
Acetone	**<0.43**	mg/kg	1.4	0.43	1	07/01/19 18:09	07/02/19 22:04	67-64-1	
Benzene	**<0.0039**	mg/kg	0.028	0.0039	1	07/01/19 18:09	07/02/19 22:04	71-43-2	
Bromodichloromethane	**<0.024**	mg/kg	0.069	0.024	1	07/01/19 18:09	07/02/19 22:04	75-27-4	
Bromoform	**<0.10**	mg/kg	0.28	0.10	1	07/01/19 18:09	07/02/19 22:04	75-25-2	
Bromomethane	**<0.080**	mg/kg	0.69	0.080	1	07/01/19 18:09	07/02/19 22:04	74-83-9	
Carbon tetrachloride	**<0.033**	mg/kg	0.069	0.033	1	07/01/19 18:09	07/02/19 22:04	56-23-5	
Chlorobenzene	**<0.0039**	mg/kg	0.069	0.0039	1	07/01/19 18:09	07/02/19 22:04	108-90-7	
Chloroethane	**<0.036**	mg/kg	0.69	0.036	1	07/01/19 18:09	07/02/19 22:04	75-00-3	
Chloroform	**<0.034**	mg/kg	0.28	0.034	1	07/01/19 18:09	07/02/19 22:04	67-66-3	
Chloromethane	**<0.017**	mg/kg	0.28	0.017	1	07/01/19 18:09	07/02/19 22:04	74-87-3	
Dibromochloromethane	**<0.0080**	mg/kg	0.28	0.0080	1	07/01/19 18:09	07/02/19 22:04	124-48-1	
Dichlorodifluoromethane	**<0.022**	mg/kg	0.28	0.022	1	07/01/19 18:09	07/02/19 22:04	75-71-8	
Ethylbenzene	**<0.0037**	mg/kg	0.069	0.0037	1	07/01/19 18:09	07/02/19 22:04	100-41-4	
Hexachloro-1,3-butadiene	**<0.017**	mg/kg	0.34	0.017	1	07/01/19 18:09	07/02/19 22:04	87-68-3	
Methyl-tert-butyl ether	**<0.0082**	mg/kg	0.069	0.0082	1	07/01/19 18:09	07/02/19 22:04	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.28	0.13	1	07/01/19 18:09	07/02/19 22:04	75-09-2	
Naphthalene	**<0.064**	mg/kg	0.28	0.064	1	07/01/19 18:09	07/02/19 22:04	91-20-3	
Styrene	**<0.0031**	mg/kg	0.069	0.0031	1	07/01/19 18:09	07/02/19 22:04	100-42-5	
Tetrachloroethene	**<0.024**	mg/kg	0.069	0.024	1	07/01/19 18:09	07/02/19 22:04	127-18-4	
Tetrahydrofuran	**<0.10**	mg/kg	2.8	0.10	1	07/01/19 18:09	07/02/19 22:04	109-99-9	
Toluene	**<0.017**	mg/kg	0.069	0.017	1	07/01/19 18:09	07/02/19 22:04	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.069	0.011	1	07/01/19 18:09	07/02/19 22:04	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.28	0.12	1	07/01/19 18:09	07/02/19 22:04	75-69-4	
Vinyl acetate	**<0.0080**	mg/kg	0.69	0.0080	1	07/01/19 18:09	07/02/19 22:04	108-05-4	
Vinyl chloride	**<0.014**	mg/kg	0.028	0.014	1	07/01/19 18:09	07/02/19 22:04	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-70' **Lab ID: 10480346014** Collected: 06/19/19 14:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.011**	mg/kg	0.069	0.011	1	07/01/19 18:09	07/02/19 22:04	156-59-2	
cis-1,3-Dichloropropene	**<0.0098**	mg/kg	0.069	0.0098	1	07/01/19 18:09	07/02/19 22:04	10061-01-5	
m&p-Xylene	**<0.0085**	mg/kg	0.14	0.0085	1	07/01/19 18:09	07/02/19 22:04	179601-23-1	
o-Xylene	**<0.016**	mg/kg	0.069	0.016	1	07/01/19 18:09	07/02/19 22:04	95-47-6	
trans-1,2-Dichloroethene	**<0.032**	mg/kg	0.069	0.032	1	07/01/19 18:09	07/02/19 22:04	156-60-5	
trans-1,3-Dichloropropene	**<0.0096**	mg/kg	0.069	0.0096	1	07/01/19 18:09	07/02/19 22:04	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-125		1	07/01/19 18:09	07/02/19 22:04	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1	07/01/19 18:09	07/02/19 22:04	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1	07/01/19 18:09	07/02/19 22:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-77' **Lab ID: 10480346015** Collected: 06/19/19 14:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**26.5**	%	0.10	0.10	1		07/05/19 11:39		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.032**	mg/kg	0.068	0.032	1	07/01/19 18:09	07/02/19 22:24	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.012**	mg/kg	0.068	0.012	1	07/01/19 18:09	07/02/19 22:24	79-34-5	
1,1,2-Trichloroethane	**<0.0082**	mg/kg	0.068	0.0082	1	07/01/19 18:09	07/02/19 22:24	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.079**	mg/kg	0.27	0.079	1	07/01/19 18:09	07/02/19 22:24	76-13-1	
1,1-Dichloroethane	**<0.0077**	mg/kg	0.068	0.0077	1	07/01/19 18:09	07/02/19 22:24	75-34-3	
1,1-Dichloroethene	**<0.020**	mg/kg	0.068	0.020	1	07/01/19 18:09	07/02/19 22:24	75-35-4	
1,2,4-Trichlorobenzene	**<0.015**	mg/kg	0.068	0.015	1	07/01/19 18:09	07/02/19 22:24	120-82-1	
1,2,4-Trimethylbenzene	**<0.014**	mg/kg	0.068	0.014	1	07/01/19 18:09	07/02/19 22:24	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0072**	mg/kg	0.068	0.0072	1	07/01/19 18:09	07/02/19 22:24	106-93-4	
1,2-Dichlorobenzene	**<0.0028**	mg/kg	0.068	0.0028	1	07/01/19 18:09	07/02/19 22:24	95-50-1	
1,2-Dichloroethane	**<0.0075**	mg/kg	0.068	0.0075	1	07/01/19 18:09	07/02/19 22:24	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.068	0.011	1	07/01/19 18:09	07/02/19 22:24	108-67-8	
1,3-Dichlorobenzene	**<0.0025**	mg/kg	0.068	0.0025	1	07/01/19 18:09	07/02/19 22:24	541-73-1	
1,4-Dichlorobenzene	**<0.0042**	mg/kg	0.068	0.0042	1	07/01/19 18:09	07/02/19 22:24	106-46-7	
2-Butanone (MEK)	**<0.036**	mg/kg	0.34	0.036	1	07/01/19 18:09	07/02/19 22:24	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.34	0.016	1	07/01/19 18:09	07/02/19 22:24	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.014**	mg/kg	0.34	0.014	1	07/01/19 18:09	07/02/19 22:24	108-10-1	
Acetone	**<0.42**	mg/kg	1.4	0.42	1	07/01/19 18:09	07/02/19 22:24	67-64-1	
Benzene	**<0.0038**	mg/kg	0.027	0.0038	1	07/01/19 18:09	07/02/19 22:24	71-43-2	
Bromodichloromethane	**<0.023**	mg/kg	0.068	0.023	1	07/01/19 18:09	07/02/19 22:24	75-27-4	
Bromoform	**<0.10**	mg/kg	0.27	0.10	1	07/01/19 18:09	07/02/19 22:24	75-25-2	
Bromomethane	**<0.080**	mg/kg	0.68	0.080	1	07/01/19 18:09	07/02/19 22:24	74-83-9	
Carbon tetrachloride	**<0.033**	mg/kg	0.068	0.033	1	07/01/19 18:09	07/02/19 22:24	56-23-5	
Chlorobenzene	**<0.0038**	mg/kg	0.068	0.0038	1	07/01/19 18:09	07/02/19 22:24	108-90-7	
Chloroethane	**<0.035**	mg/kg	0.68	0.035	1	07/01/19 18:09	07/02/19 22:24	75-00-3	
Chloroform	**<0.034**	mg/kg	0.27	0.034	1	07/01/19 18:09	07/02/19 22:24	67-66-3	
Chloromethane	**<0.016**	mg/kg	0.27	0.016	1	07/01/19 18:09	07/02/19 22:24	74-87-3	
Dibromochloromethane	**<0.0079**	mg/kg	0.27	0.0079	1	07/01/19 18:09	07/02/19 22:24	124-48-1	
Dichlorodifluoromethane	**<0.022**	mg/kg	0.27	0.022	1	07/01/19 18:09	07/02/19 22:24	75-71-8	
Ethylbenzene	**<0.0037**	mg/kg	0.068	0.0037	1	07/01/19 18:09	07/02/19 22:24	100-41-4	
Hexachloro-1,3-butadiene	**<0.017**	mg/kg	0.34	0.017	1	07/01/19 18:09	07/02/19 22:24	87-68-3	
Methyl-tert-butyl ether	**<0.0081**	mg/kg	0.068	0.0081	1	07/01/19 18:09	07/02/19 22:24	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.27	0.13	1	07/01/19 18:09	07/02/19 22:24	75-09-2	
Naphthalene	**<0.064**	mg/kg	0.27	0.064	1	07/01/19 18:09	07/02/19 22:24	91-20-3	
Styrene	**<0.0031**	mg/kg	0.068	0.0031	1	07/01/19 18:09	07/02/19 22:24	100-42-5	
Tetrachloroethene	**<0.024**	mg/kg	0.068	0.024	1	07/01/19 18:09	07/02/19 22:24	127-18-4	
Tetrahydrofuran	**<0.099**	mg/kg	2.7	0.099	1	07/01/19 18:09	07/02/19 22:24	109-99-9	
Toluene	**<0.017**	mg/kg	0.068	0.017	1	07/01/19 18:09	07/02/19 22:24	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.068	0.011	1	07/01/19 18:09	07/02/19 22:24	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.27	0.12	1	07/01/19 18:09	07/02/19 22:24	75-69-4	
Vinyl acetate	**<0.0079**	mg/kg	0.68	0.0079	1	07/01/19 18:09	07/02/19 22:24	108-05-4	
Vinyl chloride	**<0.013**	mg/kg	0.027	0.013	1	07/01/19 18:09	07/02/19 22:24	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-77' **Lab ID: 10480346015** Collected: 06/19/19 14:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.011**	mg/kg	0.068	0.011	1	07/01/19 18:09	07/02/19 22:24	156-59-2	
cis-1,3-Dichloropropene	**<0.0098**	mg/kg	0.068	0.0098	1	07/01/19 18:09	07/02/19 22:24	10061-01-5	
m&p-Xylene	**<0.0084**	mg/kg	0.14	0.0084	1	07/01/19 18:09	07/02/19 22:24	179601-23-1	
o-Xylene	**<0.016**	mg/kg	0.068	0.016	1	07/01/19 18:09	07/02/19 22:24	95-47-6	
trans-1,2-Dichloroethene	**<0.032**	mg/kg	0.068	0.032	1	07/01/19 18:09	07/02/19 22:24	156-60-5	
trans-1,3-Dichloropropene	**<0.0095**	mg/kg	0.068	0.0095	1	07/01/19 18:09	07/02/19 22:24	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-125		1	07/01/19 18:09	07/02/19 22:24	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1	07/01/19 18:09	07/02/19 22:24	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1	07/01/19 18:09	07/02/19 22:24	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-GW **Lab ID: 10480346016** Collected: 06/19/19 14:10 Received: 06/21/19 09:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		06/25/19 14:09	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		06/25/19 14:09	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		06/25/19 14:09	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		06/25/19 14:09	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		06/25/19 14:09	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		06/25/19 14:09	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		06/25/19 14:09	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		06/25/19 14:09	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		06/25/19 14:09	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		06/25/19 14:09	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		06/25/19 14:09	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		06/25/19 14:09	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		06/25/19 14:09	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		06/25/19 14:09	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		06/25/19 14:09	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		06/25/19 14:09	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		06/25/19 14:09	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		06/25/19 14:09	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		06/25/19 14:09	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		06/25/19 14:09	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		06/25/19 14:09	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/25/19 14:09	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		06/25/19 14:09	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		06/25/19 14:09	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		06/25/19 14:09	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		06/25/19 14:09	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		06/25/19 14:09	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		06/25/19 14:09	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		06/25/19 14:09	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		06/25/19 14:09	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		06/25/19 14:09	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		06/25/19 14:09	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		06/25/19 14:09	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		06/25/19 14:09	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		06/25/19 14:09	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		06/25/19 14:09	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		06/25/19 14:09	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		06/25/19 14:09	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		06/25/19 14:09	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		06/25/19 14:09	75-15-0	
Carbon tetrachloride	**0.50J**	ug/L	0.50	0.19	1		06/25/19 14:09	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/25/19 14:09	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		06/25/19 14:09	75-00-3	
Chloroform	**0.87J**	ug/L	1.0	0.45	1		06/25/19 14:09	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		06/25/19 14:09	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		06/25/19 14:09	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB206-GW **Lab ID: 10480346016** Collected: 06/19/19 14:10 Received: 06/21/19 09:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		06/25/19 14:09	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		06/25/19 14:09	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		06/25/19 14:09	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		06/25/19 14:09	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		06/25/19 14:09	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		06/25/19 14:09	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		06/25/19 14:09	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		06/25/19 14:09	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		06/25/19 14:09	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		06/25/19 14:09	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		06/25/19 14:09	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		06/25/19 14:09	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		06/25/19 14:09	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		06/25/19 14:09	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		06/25/19 14:09	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		06/25/19 14:09	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		06/25/19 14:09	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		06/25/19 14:09	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		06/25/19 14:09	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		06/25/19 14:09	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		06/25/19 14:09	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		06/25/19 14:09	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		06/25/19 14:09	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	1.0	0.24	1		06/25/19 14:09	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		06/25/19 14:09	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		06/25/19 14:09	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		06/25/19 14:09	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/25/19 14:09	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		06/25/19 14:09	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		06/25/19 14:09	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/25/19 14:09	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		06/25/19 14:09	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		06/25/19 14:09	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		06/25/19 14:09	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%.	75-136		1		06/25/19 14:09	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1		06/25/19 14:09	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		06/25/19 14:09	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: FD1 **Lab ID: 10480346017** Collected: 06/19/19 08:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**28.0**	%	0.10	0.10	1		07/05/19 11:39		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.034**	mg/kg	0.074	0.034	1	07/01/19 18:09	07/02/19 22:43	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.074	0.013	1	07/01/19 18:09	07/02/19 22:43	79-34-5	
1,1,2-Trichloroethane	**<0.0088**	mg/kg	0.074	0.0088	1	07/01/19 18:09	07/02/19 22:43	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.086**	mg/kg	0.30	0.086	1	07/01/19 18:09	07/02/19 22:43	76-13-1	
1,1-Dichloroethane	**<0.0083**	mg/kg	0.074	0.0083	1	07/01/19 18:09	07/02/19 22:43	75-34-3	
1,1-Dichloroethene	**<0.022**	mg/kg	0.074	0.022	1	07/01/19 18:09	07/02/19 22:43	75-35-4	
1,2,4-Trichlorobenzene	**<0.016**	mg/kg	0.074	0.016	1	07/01/19 18:09	07/02/19 22:43	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.074	0.015	1	07/01/19 18:09	07/02/19 22:43	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0078**	mg/kg	0.074	0.0078	1	07/01/19 18:09	07/02/19 22:43	106-93-4	
1,2-Dichlorobenzene	**<0.0030**	mg/kg	0.074	0.0030	1	07/01/19 18:09	07/02/19 22:43	95-50-1	
1,2-Dichloroethane	**<0.0081**	mg/kg	0.074	0.0081	1	07/01/19 18:09	07/02/19 22:43	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.074	0.012	1	07/01/19 18:09	07/02/19 22:43	108-67-8	
1,3-Dichlorobenzene	**<0.0027**	mg/kg	0.074	0.0027	1	07/01/19 18:09	07/02/19 22:43	541-73-1	
1,4-Dichlorobenzene	**<0.0046**	mg/kg	0.074	0.0046	1	07/01/19 18:09	07/02/19 22:43	106-46-7	
2-Butanone (MEK)	**<0.039**	mg/kg	0.37	0.039	1	07/01/19 18:09	07/02/19 22:43	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.37	0.017	1	07/01/19 18:09	07/02/19 22:43	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.015**	mg/kg	0.37	0.015	1	07/01/19 18:09	07/02/19 22:43	108-10-1	
Acetone	**<0.46**	mg/kg	1.5	0.46	1	07/01/19 18:09	07/02/19 22:43	67-64-1	
Benzene	**<0.0042**	mg/kg	0.030	0.0042	1	07/01/19 18:09	07/02/19 22:43	71-43-2	
Bromodichloromethane	**<0.025**	mg/kg	0.074	0.025	1	07/01/19 18:09	07/02/19 22:43	75-27-4	
Bromoform	**<0.11**	mg/kg	0.30	0.11	1	07/01/19 18:09	07/02/19 22:43	75-25-2	
Bromomethane	**<0.086**	mg/kg	0.74	0.086	1	07/01/19 18:09	07/02/19 22:43	74-83-9	
Carbon tetrachloride	**<0.035**	mg/kg	0.074	0.035	1	07/01/19 18:09	07/02/19 22:43	56-23-5	
Chlorobenzene	**<0.0042**	mg/kg	0.074	0.0042	1	07/01/19 18:09	07/02/19 22:43	108-90-7	
Chloroethane	**<0.038**	mg/kg	0.74	0.038	1	07/01/19 18:09	07/02/19 22:43	75-00-3	
Chloroform	**<0.037**	mg/kg	0.30	0.037	1	07/01/19 18:09	07/02/19 22:43	67-66-3	
Chloromethane	**<0.018**	mg/kg	0.30	0.018	1	07/01/19 18:09	07/02/19 22:43	74-87-3	
Dibromochloromethane	**<0.0086**	mg/kg	0.30	0.0086	1	07/01/19 18:09	07/02/19 22:43	124-48-1	
Dichlorodifluoromethane	**<0.024**	mg/kg	0.30	0.024	1	07/01/19 18:09	07/02/19 22:43	75-71-8	
Ethylbenzene	**<0.0040**	mg/kg	0.074	0.0040	1	07/01/19 18:09	07/02/19 22:43	100-41-4	
Hexachloro-1,3-butadiene	**<0.018**	mg/kg	0.37	0.018	1	07/01/19 18:09	07/02/19 22:43	87-68-3	
Methyl-tert-butyl ether	**<0.0088**	mg/kg	0.074	0.0088	1	07/01/19 18:09	07/02/19 22:43	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.30	0.14	1	07/01/19 18:09	07/02/19 22:43	75-09-2	
Naphthalene	**<0.069**	mg/kg	0.30	0.069	1	07/01/19 18:09	07/02/19 22:43	91-20-3	
Styrene	**<0.0034**	mg/kg	0.074	0.0034	1	07/01/19 18:09	07/02/19 22:43	100-42-5	
Tetrachloroethene	**<0.026**	mg/kg	0.074	0.026	1	07/01/19 18:09	07/02/19 22:43	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.0	0.11	1	07/01/19 18:09	07/02/19 22:43	109-99-9	
Toluene	**<0.018**	mg/kg	0.074	0.018	1	07/01/19 18:09	07/02/19 22:43	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.074	0.011	1	07/01/19 18:09	07/02/19 22:43	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.30	0.13	1	07/01/19 18:09	07/02/19 22:43	75-69-4	
Vinyl acetate	**<0.0085**	mg/kg	0.74	0.0085	1	07/01/19 18:09	07/02/19 22:43	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.030	0.015	1	07/01/19 18:09	07/02/19 22:43	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: FD1 **Lab ID: 10480346017** Collected: 06/19/19 08:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.074	0.012	1	07/01/19 18:09	07/02/19 22:43	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.074	0.011	1	07/01/19 18:09	07/02/19 22:43	10061-01-5	
m&p-Xylene	**<0.0091**	mg/kg	0.15	0.0091	1	07/01/19 18:09	07/02/19 22:43	179601-23-1	
o-Xylene	**<0.017**	mg/kg	0.074	0.017	1	07/01/19 18:09	07/02/19 22:43	95-47-6	
trans-1,2-Dichloroethene	**<0.035**	mg/kg	0.074	0.035	1	07/01/19 18:09	07/02/19 22:43	156-60-5	
trans-1,3-Dichloropropene	**<0.010**	mg/kg	0.074	0.010	1	07/01/19 18:09	07/02/19 22:43	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-125		1	07/01/19 18:09	07/02/19 22:43	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1	07/01/19 18:09	07/02/19 22:43	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1	07/01/19 18:09	07/02/19 22:43	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: FD2 **Lab ID: 10480346018** Collected: 06/19/19 08:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**16.1**	%	0.10	0.10	1		07/05/19 11:39		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.028**	mg/kg	0.060	0.028	1	07/01/19 18:09	07/02/19 23:02	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.060	0.011	1	07/01/19 18:09	07/02/19 23:02	79-34-5	
1,1,2-Trichloroethane	**<0.0072**	mg/kg	0.060	0.0072	1	07/01/19 18:09	07/02/19 23:02	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.069**	mg/kg	0.24	0.069	1	07/01/19 18:09	07/02/19 23:02	76-13-1	
1,1-Dichloroethane	**<0.0067**	mg/kg	0.060	0.0067	1	07/01/19 18:09	07/02/19 23:02	75-34-3	
1,1-Dichloroethene	**<0.018**	mg/kg	0.060	0.018	1	07/01/19 18:09	07/02/19 23:02	75-35-4	
1,2,4-Trichlorobenzene	**<0.013**	mg/kg	0.060	0.013	1	07/01/19 18:09	07/02/19 23:02	120-82-1	
1,2,4-Trimethylbenzene	**<0.012**	mg/kg	0.060	0.012	1	07/01/19 18:09	07/02/19 23:02	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0063**	mg/kg	0.060	0.0063	1	07/01/19 18:09	07/02/19 23:02	106-93-4	
1,2-Dichlorobenzene	**<0.0024**	mg/kg	0.060	0.0024	1	07/01/19 18:09	07/02/19 23:02	95-50-1	
1,2-Dichloroethane	**<0.0066**	mg/kg	0.060	0.0066	1	07/01/19 18:09	07/02/19 23:02	107-06-2	
1,3,5-Trimethylbenzene	**<0.0095**	mg/kg	0.060	0.0095	1	07/01/19 18:09	07/02/19 23:02	108-67-8	
1,3-Dichlorobenzene	**<0.0022**	mg/kg	0.060	0.0022	1	07/01/19 18:09	07/02/19 23:02	541-73-1	
1,4-Dichlorobenzene	**<0.0037**	mg/kg	0.060	0.0037	1	07/01/19 18:09	07/02/19 23:02	106-46-7	
2-Butanone (MEK)	**<0.032**	mg/kg	0.30	0.032	1	07/01/19 18:09	07/02/19 23:02	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.30	0.014	1	07/01/19 18:09	07/02/19 23:02	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.012**	mg/kg	0.30	0.012	1	07/01/19 18:09	07/02/19 23:02	108-10-1	
Acetone	**<0.37**	mg/kg	1.2	0.37	1	07/01/19 18:09	07/02/19 23:02	67-64-1	
Benzene	**<0.0034**	mg/kg	0.024	0.0034	1	07/01/19 18:09	07/02/19 23:02	71-43-2	
Bromodichloromethane	**<0.020**	mg/kg	0.060	0.020	1	07/01/19 18:09	07/02/19 23:02	75-27-4	
Bromoform	**<0.091**	mg/kg	0.24	0.091	1	07/01/19 18:09	07/02/19 23:02	75-25-2	
Bromomethane	**<0.070**	mg/kg	0.60	0.070	1	07/01/19 18:09	07/02/19 23:02	74-83-9	
Carbon tetrachloride	**<0.029**	mg/kg	0.060	0.029	1	07/01/19 18:09	07/02/19 23:02	56-23-5	
Chlorobenzene	**<0.0034**	mg/kg	0.060	0.0034	1	07/01/19 18:09	07/02/19 23:02	108-90-7	
Chloroethane	**<0.031**	mg/kg	0.60	0.031	1	07/01/19 18:09	07/02/19 23:02	75-00-3	
Chloroform	**<0.030**	mg/kg	0.24	0.030	1	07/01/19 18:09	07/02/19 23:02	67-66-3	
Chloromethane	**<0.014**	mg/kg	0.24	0.014	1	07/01/19 18:09	07/02/19 23:02	74-87-3	
Dibromochloromethane	**<0.0069**	mg/kg	0.24	0.0069	1	07/01/19 18:09	07/02/19 23:02	124-48-1	
Dichlorodifluoromethane	**<0.019**	mg/kg	0.24	0.019	1	07/01/19 18:09	07/02/19 23:02	75-71-8	
Ethylbenzene	**<0.0033**	mg/kg	0.060	0.0033	1	07/01/19 18:09	07/02/19 23:02	100-41-4	
Hexachloro-1,3-butadiene	**<0.015**	mg/kg	0.30	0.015	1	07/01/19 18:09	07/02/19 23:02	87-68-3	
Methyl-tert-butyl ether	**<0.0071**	mg/kg	0.060	0.0071	1	07/01/19 18:09	07/02/19 23:02	1634-04-4	
Methylene Chloride	**<0.11**	mg/kg	0.24	0.11	1	07/01/19 18:09	07/02/19 23:02	75-09-2	
Naphthalene	**<0.056**	mg/kg	0.24	0.056	1	07/01/19 18:09	07/02/19 23:02	91-20-3	
Styrene	**<0.0027**	mg/kg	0.060	0.0027	1	07/01/19 18:09	07/02/19 23:02	100-42-5	
Tetrachloroethene	**<0.021**	mg/kg	0.060	0.021	1	07/01/19 18:09	07/02/19 23:02	127-18-4	
Tetrahydrofuran	**<0.087**	mg/kg	2.4	0.087	1	07/01/19 18:09	07/02/19 23:02	109-99-9	
Toluene	**<0.015**	mg/kg	0.060	0.015	1	07/01/19 18:09	07/02/19 23:02	108-88-3	
Trichloroethene	**<0.0092**	mg/kg	0.060	0.0092	1	07/01/19 18:09	07/02/19 23:02	79-01-6	
Trichlorofluoromethane	**<0.10**	mg/kg	0.24	0.10	1	07/01/19 18:09	07/02/19 23:02	75-69-4	
Vinyl acetate	**<0.0069**	mg/kg	0.60	0.0069	1	07/01/19 18:09	07/02/19 23:02	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.024	0.012	1	07/01/19 18:09	07/02/19 23:02	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: FD2 **Lab ID: 10480346018** Collected: 06/19/19 08:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.0099**	mg/kg	0.060	0.0099	1	07/01/19 18:09	07/02/19 23:02	156-59-2	
cis-1,3-Dichloropropene	**<0.0086**	mg/kg	0.060	0.0086	1	07/01/19 18:09	07/02/19 23:02	10061-01-5	
m&p-Xylene	**<0.0074**	mg/kg	0.12	0.0074	1	07/01/19 18:09	07/02/19 23:02	179601-23-1	
o-Xylene	**<0.014**	mg/kg	0.060	0.014	1	07/01/19 18:09	07/02/19 23:02	95-47-6	
trans-1,2-Dichloroethene	**<0.028**	mg/kg	0.060	0.028	1	07/01/19 18:09	07/02/19 23:02	156-60-5	
trans-1,3-Dichloropropene	**<0.0083**	mg/kg	0.060	0.0083	1	07/01/19 18:09	07/02/19 23:02	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-125		1	07/01/19 18:09	07/02/19 23:02	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1	07/01/19 18:09	07/02/19 23:02	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1	07/01/19 18:09	07/02/19 23:02	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: TB1 **Lab ID: 10480346019** Collected: 06/19/19 07:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.023**	mg/kg	0.050	0.023	1	07/01/19 18:09	07/02/19 19:30	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.0088**	mg/kg	0.050	0.0088	1	07/01/19 18:09	07/02/19 19:30	79-34-5	
1,1,2-Trichloroethane	**<0.0060**	mg/kg	0.050	0.0060	1	07/01/19 18:09	07/02/19 19:30	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.058**	mg/kg	0.20	0.058	1	07/01/19 18:09	07/02/19 19:30	76-13-1	
1,1-Dichloroethane	**<0.0056**	mg/kg	0.050	0.0056	1	07/01/19 18:09	07/02/19 19:30	75-34-3	
1,1-Dichloroethene	**<0.015**	mg/kg	0.050	0.015	1	07/01/19 18:09	07/02/19 19:30	75-35-4	
1,2,4-Trichlorobenzene	**<0.011**	mg/kg	0.050	0.011	1	07/01/19 18:09	07/02/19 19:30	120-82-1	
1,2,4-Trimethylbenzene	**<0.010**	mg/kg	0.050	0.010	1	07/01/19 18:09	07/02/19 19:30	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0053**	mg/kg	0.050	0.0053	1	07/01/19 18:09	07/02/19 19:30	106-93-4	
1,2-Dichlorobenzene	**<0.0020**	mg/kg	0.050	0.0020	1	07/01/19 18:09	07/02/19 19:30	95-50-1	
1,2-Dichloroethane	**<0.0055**	mg/kg	0.050	0.0055	1	07/01/19 18:09	07/02/19 19:30	107-06-2	
1,3,5-Trimethylbenzene	**<0.0080**	mg/kg	0.050	0.0080	1	07/01/19 18:09	07/02/19 19:30	108-67-8	
1,3-Dichlorobenzene	**<0.0018**	mg/kg	0.050	0.0018	1	07/01/19 18:09	07/02/19 19:30	541-73-1	
1,4-Dichlorobenzene	**<0.0031**	mg/kg	0.050	0.0031	1	07/01/19 18:09	07/02/19 19:30	106-46-7	
2-Butanone (MEK)	**<0.027**	mg/kg	0.25	0.027	1	07/01/19 18:09	07/02/19 19:30	78-93-3	
2-Hexanone	**<0.012**	mg/kg	0.25	0.012	1	07/01/19 18:09	07/02/19 19:30	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.010**	mg/kg	0.25	0.010	1	07/01/19 18:09	07/02/19 19:30	108-10-1	
Acetone	**<0.31**	mg/kg	1.0	0.31	1	07/01/19 18:09	07/02/19 19:30	67-64-1	
Benzene	**<0.0028**	mg/kg	0.020	0.0028	1	07/01/19 18:09	07/02/19 19:30	71-43-2	
Bromodichloromethane	**<0.017**	mg/kg	0.050	0.017	1	07/01/19 18:09	07/02/19 19:30	75-27-4	
Bromoform	**<0.076**	mg/kg	0.20	0.076	1	07/01/19 18:09	07/02/19 19:30	75-25-2	
Bromomethane	**<0.058**	mg/kg	0.50	0.058	1	07/01/19 18:09	07/02/19 19:30	74-83-9	
Carbon tetrachloride	**<0.024**	mg/kg	0.050	0.024	1	07/01/19 18:09	07/02/19 19:30	56-23-5	
Chlorobenzene	**<0.0028**	mg/kg	0.050	0.0028	1	07/01/19 18:09	07/02/19 19:30	108-90-7	
Chloroethane	**<0.026**	mg/kg	0.50	0.026	1	07/01/19 18:09	07/02/19 19:30	75-00-3	
Chloroform	**<0.025**	mg/kg	0.20	0.025	1	07/01/19 18:09	07/02/19 19:30	67-66-3	
Chloromethane	**<0.012**	mg/kg	0.20	0.012	1	07/01/19 18:09	07/02/19 19:30	74-87-3	
Dibromochloromethane	**<0.0058**	mg/kg	0.20	0.0058	1	07/01/19 18:09	07/02/19 19:30	124-48-1	
Dichlorodifluoromethane	**<0.016**	mg/kg	0.20	0.016	1	07/01/19 18:09	07/02/19 19:30	75-71-8	
Ethylbenzene	**<0.0027**	mg/kg	0.050	0.0027	1	07/01/19 18:09	07/02/19 19:30	100-41-4	
Hexachloro-1,3-butadiene	**<0.012**	mg/kg	0.25	0.012	1	07/01/19 18:09	07/02/19 19:30	87-68-3	
Methyl-tert-butyl ether	**<0.0060**	mg/kg	0.050	0.0060	1	07/01/19 18:09	07/02/19 19:30	1634-04-4	
Methylene Chloride	**<0.094**	mg/kg	0.20	0.094	1	07/01/19 18:09	07/02/19 19:30	75-09-2	
Naphthalene	**<0.047**	mg/kg	0.20	0.047	1	07/01/19 18:09	07/02/19 19:30	91-20-3	
Styrene	**<0.0023**	mg/kg	0.050	0.0023	1	07/01/19 18:09	07/02/19 19:30	100-42-5	
Tetrachloroethene	**<0.018**	mg/kg	0.050	0.018	1	07/01/19 18:09	07/02/19 19:30	127-18-4	
Tetrahydrofuran	**<0.073**	mg/kg	2.0	0.073	1	07/01/19 18:09	07/02/19 19:30	109-99-9	
Toluene	**<0.012**	mg/kg	0.050	0.012	1	07/01/19 18:09	07/02/19 19:30	108-88-3	
Trichloroethene	**<0.0077**	mg/kg	0.050	0.0077	1	07/01/19 18:09	07/02/19 19:30	79-01-6	
Trichlorofluoromethane	**<0.087**	mg/kg	0.20	0.087	1	07/01/19 18:09	07/02/19 19:30	75-69-4	
Vinyl acetate	**<0.0058**	mg/kg	0.50	0.0058	1	07/01/19 18:09	07/02/19 19:30	108-05-4	
Vinyl chloride	**<0.0098**	mg/kg	0.020	0.0098	1	07/01/19 18:09	07/02/19 19:30	75-01-4	
cis-1,2-Dichloroethene	**<0.0083**	mg/kg	0.050	0.0083	1	07/01/19 18:09	07/02/19 19:30	156-59-2	
cis-1,3-Dichloropropene	**<0.0072**	mg/kg	0.050	0.0072	1	07/01/19 18:09	07/02/19 19:30	10061-01-5	
m&p-Xylene	**<0.0062**	mg/kg	0.10	0.0062	1	07/01/19 18:09	07/02/19 19:30	179601-23-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: TB1 **Lab ID: 10480346019** Collected: 06/19/19 07:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
o-Xylene	**<0.012**	mg/kg	0.050	0.012	1	07/01/19 18:09	07/02/19 19:30	95-47-6	
trans-1,2-Dichloroethene	**<0.023**	mg/kg	0.050	0.023	1	07/01/19 18:09	07/02/19 19:30	156-60-5	
trans-1,3-Dichloropropene	**<0.0070**	mg/kg	0.050	0.0070	1	07/01/19 18:09	07/02/19 19:30	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-125		1	07/01/19 18:09	07/02/19 19:30	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1	07/01/19 18:09	07/02/19 19:30	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1	07/01/19 18:09	07/02/19 19:30	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: TB2 **Lab ID: 10480346020** Collected: 06/19/19 07:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.023**	mg/kg	0.050	0.023	1	07/01/19 18:09	07/02/19 19:49	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.0088**	mg/kg	0.050	0.0088	1	07/01/19 18:09	07/02/19 19:49	79-34-5	
1,1,2-Trichloroethane	**<0.0060**	mg/kg	0.050	0.0060	1	07/01/19 18:09	07/02/19 19:49	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.058**	mg/kg	0.20	0.058	1	07/01/19 18:09	07/02/19 19:49	76-13-1	
1,1-Dichloroethane	**<0.0056**	mg/kg	0.050	0.0056	1	07/01/19 18:09	07/02/19 19:49	75-34-3	
1,1-Dichloroethene	**<0.015**	mg/kg	0.050	0.015	1	07/01/19 18:09	07/02/19 19:49	75-35-4	
1,2,4-Trichlorobenzene	**<0.011**	mg/kg	0.050	0.011	1	07/01/19 18:09	07/02/19 19:49	120-82-1	
1,2,4-Trimethylbenzene	**<0.010**	mg/kg	0.050	0.010	1	07/01/19 18:09	07/02/19 19:49	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0053**	mg/kg	0.050	0.0053	1	07/01/19 18:09	07/02/19 19:49	106-93-4	
1,2-Dichlorobenzene	**<0.0020**	mg/kg	0.050	0.0020	1	07/01/19 18:09	07/02/19 19:49	95-50-1	
1,2-Dichloroethane	**<0.0055**	mg/kg	0.050	0.0055	1	07/01/19 18:09	07/02/19 19:49	107-06-2	
1,3,5-Trimethylbenzene	**<0.0080**	mg/kg	0.050	0.0080	1	07/01/19 18:09	07/02/19 19:49	108-67-8	
1,3-Dichlorobenzene	**<0.0018**	mg/kg	0.050	0.0018	1	07/01/19 18:09	07/02/19 19:49	541-73-1	
1,4-Dichlorobenzene	**<0.0031**	mg/kg	0.050	0.0031	1	07/01/19 18:09	07/02/19 19:49	106-46-7	
2-Butanone (MEK)	**<0.027**	mg/kg	0.25	0.027	1	07/01/19 18:09	07/02/19 19:49	78-93-3	
2-Hexanone	**<0.012**	mg/kg	0.25	0.012	1	07/01/19 18:09	07/02/19 19:49	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.010**	mg/kg	0.25	0.010	1	07/01/19 18:09	07/02/19 19:49	108-10-1	
Acetone	**<0.31**	mg/kg	1.0	0.31	1	07/01/19 18:09	07/02/19 19:49	67-64-1	
Benzene	**<0.0028**	mg/kg	0.020	0.0028	1	07/01/19 18:09	07/02/19 19:49	71-43-2	
Bromodichloromethane	**<0.017**	mg/kg	0.050	0.017	1	07/01/19 18:09	07/02/19 19:49	75-27-4	
Bromoform	**<0.076**	mg/kg	0.20	0.076	1	07/01/19 18:09	07/02/19 19:49	75-25-2	
Bromomethane	**<0.058**	mg/kg	0.50	0.058	1	07/01/19 18:09	07/02/19 19:49	74-83-9	
Carbon tetrachloride	**<0.024**	mg/kg	0.050	0.024	1	07/01/19 18:09	07/02/19 19:49	56-23-5	
Chlorobenzene	**<0.0028**	mg/kg	0.050	0.0028	1	07/01/19 18:09	07/02/19 19:49	108-90-7	
Chloroethane	**<0.026**	mg/kg	0.50	0.026	1	07/01/19 18:09	07/02/19 19:49	75-00-3	
Chloroform	**<0.025**	mg/kg	0.20	0.025	1	07/01/19 18:09	07/02/19 19:49	67-66-3	
Chloromethane	**<0.012**	mg/kg	0.20	0.012	1	07/01/19 18:09	07/02/19 19:49	74-87-3	
Dibromochloromethane	**<0.0058**	mg/kg	0.20	0.0058	1	07/01/19 18:09	07/02/19 19:49	124-48-1	
Dichlorodifluoromethane	**<0.016**	mg/kg	0.20	0.016	1	07/01/19 18:09	07/02/19 19:49	75-71-8	
Ethylbenzene	**<0.0027**	mg/kg	0.050	0.0027	1	07/01/19 18:09	07/02/19 19:49	100-41-4	
Hexachloro-1,3-butadiene	**<0.012**	mg/kg	0.25	0.012	1	07/01/19 18:09	07/02/19 19:49	87-68-3	
Methyl-tert-butyl ether	**<0.0060**	mg/kg	0.050	0.0060	1	07/01/19 18:09	07/02/19 19:49	1634-04-4	
Methylene Chloride	**<0.094**	mg/kg	0.20	0.094	1	07/01/19 18:09	07/02/19 19:49	75-09-2	
Naphthalene	**<0.047**	mg/kg	0.20	0.047	1	07/01/19 18:09	07/02/19 19:49	91-20-3	
Styrene	**<0.0023**	mg/kg	0.050	0.0023	1	07/01/19 18:09	07/02/19 19:49	100-42-5	
Tetrachloroethene	**<0.018**	mg/kg	0.050	0.018	1	07/01/19 18:09	07/02/19 19:49	127-18-4	
Tetrahydrofuran	**<0.073**	mg/kg	2.0	0.073	1	07/01/19 18:09	07/02/19 19:49	109-99-9	
Toluene	**<0.012**	mg/kg	0.050	0.012	1	07/01/19 18:09	07/02/19 19:49	108-88-3	
Trichloroethene	**<0.0077**	mg/kg	0.050	0.0077	1	07/01/19 18:09	07/02/19 19:49	79-01-6	
Trichlorofluoromethane	**<0.087**	mg/kg	0.20	0.087	1	07/01/19 18:09	07/02/19 19:49	75-69-4	
Vinyl acetate	**<0.0058**	mg/kg	0.50	0.0058	1	07/01/19 18:09	07/02/19 19:49	108-05-4	
Vinyl chloride	**<0.0098**	mg/kg	0.020	0.0098	1	07/01/19 18:09	07/02/19 19:49	75-01-4	
cis-1,2-Dichloroethene	**<0.0083**	mg/kg	0.050	0.0083	1	07/01/19 18:09	07/02/19 19:49	156-59-2	
cis-1,3-Dichloropropene	**<0.0072**	mg/kg	0.050	0.0072	1	07/01/19 18:09	07/02/19 19:49	10061-01-5	
m&p-Xylene	**<0.0062**	mg/kg	0.10	0.0062	1	07/01/19 18:09	07/02/19 19:49	179601-23-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: TB2 **Lab ID: 10480346020** Collected: 06/19/19 07:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
o-Xylene	**<0.012**	mg/kg	0.050	0.012	1	07/01/19 18:09	07/02/19 19:49	95-47-6	
trans-1,2-Dichloroethene	**<0.023**	mg/kg	0.050	0.023	1	07/01/19 18:09	07/02/19 19:49	156-60-5	
trans-1,3-Dichloropropene	**<0.0070**	mg/kg	0.050	0.0070	1	07/01/19 18:09	07/02/19 19:49	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-125		1	07/01/19 18:09	07/02/19 19:49	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1	07/01/19 18:09	07/02/19 19:49	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1	07/01/19 18:09	07/02/19 19:49	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: TB3 **Lab ID: 10480346021** Collected: 06/19/19 07:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.023**	mg/kg	0.050	0.023	1	07/01/19 18:09	07/02/19 20:09	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.0088**	mg/kg	0.050	0.0088	1	07/01/19 18:09	07/02/19 20:09	79-34-5	
1,1,2-Trichloroethane	**<0.0060**	mg/kg	0.050	0.0060	1	07/01/19 18:09	07/02/19 20:09	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.058**	mg/kg	0.20	0.058	1	07/01/19 18:09	07/02/19 20:09	76-13-1	
1,1-Dichloroethane	**<0.0056**	mg/kg	0.050	0.0056	1	07/01/19 18:09	07/02/19 20:09	75-34-3	
1,1-Dichloroethene	**<0.015**	mg/kg	0.050	0.015	1	07/01/19 18:09	07/02/19 20:09	75-35-4	
1,2,4-Trichlorobenzene	**<0.011**	mg/kg	0.050	0.011	1	07/01/19 18:09	07/02/19 20:09	120-82-1	
1,2,4-Trimethylbenzene	**<0.010**	mg/kg	0.050	0.010	1	07/01/19 18:09	07/02/19 20:09	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0053**	mg/kg	0.050	0.0053	1	07/01/19 18:09	07/02/19 20:09	106-93-4	
1,2-Dichlorobenzene	**<0.0020**	mg/kg	0.050	0.0020	1	07/01/19 18:09	07/02/19 20:09	95-50-1	
1,2-Dichloroethane	**<0.0055**	mg/kg	0.050	0.0055	1	07/01/19 18:09	07/02/19 20:09	107-06-2	
1,3,5-Trimethylbenzene	**<0.0080**	mg/kg	0.050	0.0080	1	07/01/19 18:09	07/02/19 20:09	108-67-8	
1,3-Dichlorobenzene	**<0.0018**	mg/kg	0.050	0.0018	1	07/01/19 18:09	07/02/19 20:09	541-73-1	
1,4-Dichlorobenzene	**<0.0031**	mg/kg	0.050	0.0031	1	07/01/19 18:09	07/02/19 20:09	106-46-7	
2-Butanone (MEK)	**<0.027**	mg/kg	0.25	0.027	1	07/01/19 18:09	07/02/19 20:09	78-93-3	
2-Hexanone	**<0.012**	mg/kg	0.25	0.012	1	07/01/19 18:09	07/02/19 20:09	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.010**	mg/kg	0.25	0.010	1	07/01/19 18:09	07/02/19 20:09	108-10-1	
Acetone	**<0.31**	mg/kg	1.0	0.31	1	07/01/19 18:09	07/02/19 20:09	67-64-1	
Benzene	**<0.0028**	mg/kg	0.020	0.0028	1	07/01/19 18:09	07/02/19 20:09	71-43-2	
Bromodichloromethane	**<0.017**	mg/kg	0.050	0.017	1	07/01/19 18:09	07/02/19 20:09	75-27-4	
Bromoform	**<0.076**	mg/kg	0.20	0.076	1	07/01/19 18:09	07/02/19 20:09	75-25-2	
Bromomethane	**<0.058**	mg/kg	0.50	0.058	1	07/01/19 18:09	07/02/19 20:09	74-83-9	
Carbon tetrachloride	**<0.024**	mg/kg	0.050	0.024	1	07/01/19 18:09	07/02/19 20:09	56-23-5	
Chlorobenzene	**<0.0028**	mg/kg	0.050	0.0028	1	07/01/19 18:09	07/02/19 20:09	108-90-7	
Chloroethane	**<0.026**	mg/kg	0.50	0.026	1	07/01/19 18:09	07/02/19 20:09	75-00-3	
Chloroform	**<0.025**	mg/kg	0.20	0.025	1	07/01/19 18:09	07/02/19 20:09	67-66-3	
Chloromethane	**<0.012**	mg/kg	0.20	0.012	1	07/01/19 18:09	07/02/19 20:09	74-87-3	
Dibromochloromethane	**<0.0058**	mg/kg	0.20	0.0058	1	07/01/19 18:09	07/02/19 20:09	124-48-1	
Dichlorodifluoromethane	**<0.016**	mg/kg	0.20	0.016	1	07/01/19 18:09	07/02/19 20:09	75-71-8	
Ethylbenzene	**<0.0027**	mg/kg	0.050	0.0027	1	07/01/19 18:09	07/02/19 20:09	100-41-4	
Hexachloro-1,3-butadiene	**<0.012**	mg/kg	0.25	0.012	1	07/01/19 18:09	07/02/19 20:09	87-68-3	
Methyl-tert-butyl ether	**<0.0060**	mg/kg	0.050	0.0060	1	07/01/19 18:09	07/02/19 20:09	1634-04-4	
Methylene Chloride	**<0.094**	mg/kg	0.20	0.094	1	07/01/19 18:09	07/02/19 20:09	75-09-2	
Naphthalene	**<0.047**	mg/kg	0.20	0.047	1	07/01/19 18:09	07/02/19 20:09	91-20-3	
Styrene	**<0.0023**	mg/kg	0.050	0.0023	1	07/01/19 18:09	07/02/19 20:09	100-42-5	
Tetrachloroethene	**<0.018**	mg/kg	0.050	0.018	1	07/01/19 18:09	07/02/19 20:09	127-18-4	
Tetrahydrofuran	**<0.073**	mg/kg	2.0	0.073	1	07/01/19 18:09	07/02/19 20:09	109-99-9	
Toluene	**<0.012**	mg/kg	0.050	0.012	1	07/01/19 18:09	07/02/19 20:09	108-88-3	
Trichloroethene	**<0.0077**	mg/kg	0.050	0.0077	1	07/01/19 18:09	07/02/19 20:09	79-01-6	
Trichlorofluoromethane	**<0.087**	mg/kg	0.20	0.087	1	07/01/19 18:09	07/02/19 20:09	75-69-4	
Vinyl acetate	**<0.0058**	mg/kg	0.50	0.0058	1	07/01/19 18:09	07/02/19 20:09	108-05-4	
Vinyl chloride	**<0.0098**	mg/kg	0.020	0.0098	1	07/01/19 18:09	07/02/19 20:09	75-01-4	
cis-1,2-Dichloroethene	**<0.0083**	mg/kg	0.050	0.0083	1	07/01/19 18:09	07/02/19 20:09	156-59-2	
cis-1,3-Dichloropropene	**<0.0072**	mg/kg	0.050	0.0072	1	07/01/19 18:09	07/02/19 20:09	10061-01-5	
m&p-Xylene	**<0.0062**	mg/kg	0.10	0.0062	1	07/01/19 18:09	07/02/19 20:09	179601-23-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: TB3 **Lab ID: 10480346021** Collected: 06/19/19 07:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
o-Xylene	**<0.012**	mg/kg	0.050	0.012	1	07/01/19 18:09	07/02/19 20:09	95-47-6	
trans-1,2-Dichloroethene	**<0.023**	mg/kg	0.050	0.023	1	07/01/19 18:09	07/02/19 20:09	156-60-5	
trans-1,3-Dichloropropene	**<0.0070**	mg/kg	0.050	0.0070	1	07/01/19 18:09	07/02/19 20:09	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-125		1	07/01/19 18:09	07/02/19 20:09	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1	07/01/19 18:09	07/02/19 20:09	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1	07/01/19 18:09	07/02/19 20:09	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: TB4 **Lab ID: 10480346022** Collected: 06/20/19 07:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.023**	mg/kg	0.050	0.023	1	07/03/19 14:34	07/03/19 18:11	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.0088**	mg/kg	0.050	0.0088	1	07/03/19 14:34	07/03/19 18:11	79-34-5	
1,1,2-Trichloroethane	**<0.0060**	mg/kg	0.050	0.0060	1	07/03/19 14:34	07/03/19 18:11	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.058**	mg/kg	0.20	0.058	1	07/03/19 14:34	07/03/19 18:11	76-13-1	
1,1-Dichloroethane	**<0.0056**	mg/kg	0.050	0.0056	1	07/03/19 14:34	07/03/19 18:11	75-34-3	
1,1-Dichloroethene	**<0.015**	mg/kg	0.050	0.015	1	07/03/19 14:34	07/03/19 18:11	75-35-4	
1,2,4-Trichlorobenzene	**<0.011**	mg/kg	0.050	0.011	1	07/03/19 14:34	07/03/19 18:11	120-82-1	
1,2,4-Trimethylbenzene	**<0.010**	mg/kg	0.050	0.010	1	07/03/19 14:34	07/03/19 18:11	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0053**	mg/kg	0.050	0.0053	1	07/03/19 14:34	07/03/19 18:11	106-93-4	
1,2-Dichlorobenzene	**<0.0020**	mg/kg	0.050	0.0020	1	07/03/19 14:34	07/03/19 18:11	95-50-1	
1,2-Dichloroethane	**<0.0055**	mg/kg	0.050	0.0055	1	07/03/19 14:34	07/03/19 18:11	107-06-2	
1,3,5-Trimethylbenzene	**<0.0080**	mg/kg	0.050	0.0080	1	07/03/19 14:34	07/03/19 18:11	108-67-8	
1,3-Dichlorobenzene	**<0.0018**	mg/kg	0.050	0.0018	1	07/03/19 14:34	07/03/19 18:11	541-73-1	
1,4-Dichlorobenzene	**<0.0031**	mg/kg	0.050	0.0031	1	07/03/19 14:34	07/03/19 18:11	106-46-7	
2-Butanone (MEK)	**<0.027**	mg/kg	0.25	0.027	1	07/03/19 14:34	07/03/19 18:11	78-93-3	
2-Hexanone	**<0.012**	mg/kg	1.0	0.012	1	07/03/19 14:34	07/03/19 18:11	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.010**	mg/kg	0.25	0.010	1	07/03/19 14:34	07/03/19 18:11	108-10-1	
Acetone	**<0.31**	mg/kg	1.0	0.31	1	07/03/19 14:34	07/03/19 18:11	67-64-1	
Benzene	**<0.0028**	mg/kg	0.020	0.0028	1	07/03/19 14:34	07/03/19 18:11	71-43-2	
Bromodichloromethane	**<0.017**	mg/kg	0.050	0.017	1	07/03/19 14:34	07/03/19 18:11	75-27-4	
Bromoform	**<0.076**	mg/kg	0.20	0.076	1	07/03/19 14:34	07/03/19 18:11	75-25-2	
Bromomethane	**<0.058**	mg/kg	0.50	0.058	1	07/03/19 14:34	07/03/19 18:11	74-83-9	
Carbon tetrachloride	**<0.024**	mg/kg	0.050	0.024	1	07/03/19 14:34	07/03/19 18:11	56-23-5	
Chlorobenzene	**<0.0028**	mg/kg	0.050	0.0028	1	07/03/19 14:34	07/03/19 18:11	108-90-7	
Chloroethane	**<0.026**	mg/kg	0.50	0.026	1	07/03/19 14:34	07/03/19 18:11	75-00-3	
Chloroform	**<0.025**	mg/kg	0.050	0.025	1	07/03/19 14:34	07/03/19 18:11	67-66-3	
Chloromethane	**<0.012**	mg/kg	0.20	0.012	1	07/03/19 14:34	07/03/19 18:11	74-87-3	
Dibromochloromethane	**<0.0058**	mg/kg	0.20	0.0058	1	07/03/19 14:34	07/03/19 18:11	124-48-1	
Dichlorodifluoromethane	**<0.016**	mg/kg	0.20	0.016	1	07/03/19 14:34	07/03/19 18:11	75-71-8	
Ethylbenzene	**<0.0027**	mg/kg	0.050	0.0027	1	07/03/19 14:34	07/03/19 18:11	100-41-4	
Hexachloro-1,3-butadiene	**<0.012**	mg/kg	0.25	0.012	1	07/03/19 14:34	07/03/19 18:11	87-68-3	
Methyl-tert-butyl ether	**<0.0060**	mg/kg	0.050	0.0060	1	07/03/19 14:34	07/03/19 18:11	1634-04-4	
Methylene Chloride	**<0.094**	mg/kg	0.20	0.094	1	07/03/19 14:34	07/03/19 18:11	75-09-2	
Naphthalene	**<0.047**	mg/kg	0.20	0.047	1	07/03/19 14:34	07/03/19 18:11	91-20-3	
Styrene	**<0.0023**	mg/kg	0.050	0.0023	1	07/03/19 14:34	07/03/19 18:11	100-42-5	
Tetrachloroethene	**<0.018**	mg/kg	0.050	0.018	1	07/03/19 14:34	07/03/19 18:11	127-18-4	
Tetrahydrofuran	**<0.073**	mg/kg	2.0	0.073	1	07/03/19 14:34	07/03/19 18:11	109-99-9	
Toluene	**<0.012**	mg/kg	0.050	0.012	1	07/03/19 14:34	07/03/19 18:11	108-88-3	
Trichloroethene	**<0.0077**	mg/kg	0.050	0.0077	1	07/03/19 14:34	07/03/19 18:11	79-01-6	
Trichlorofluoromethane	**<0.087**	mg/kg	0.20	0.087	1	07/03/19 14:34	07/03/19 18:11	75-69-4	
Vinyl acetate	**<0.0058**	mg/kg	0.50	0.0058	1	07/03/19 14:34	07/03/19 18:11	108-05-4	
Vinyl chloride	**<0.0098**	mg/kg	0.050	0.0098	1	07/03/19 14:34	07/03/19 18:11	75-01-4	
cis-1,2-Dichloroethene	**<0.0083**	mg/kg	0.050	0.0083	1	07/03/19 14:34	07/03/19 18:11	156-59-2	
cis-1,3-Dichloropropene	**<0.0072**	mg/kg	0.050	0.0072	1	07/03/19 14:34	07/03/19 18:11	10061-01-5	
m&p-Xylene	**<0.0062**	mg/kg	0.10	0.0062	1	07/03/19 14:34	07/03/19 18:11	179601-23-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: TB4 **Lab ID: 10480346022** Collected: 06/20/19 07:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
o-Xylene	**<0.012**	mg/kg	0.050	0.012	1	07/03/19 14:34	07/03/19 18:11	95-47-6	
trans-1,2-Dichloroethene	**<0.023**	mg/kg	0.050	0.023	1	07/03/19 14:34	07/03/19 18:11	156-60-5	
trans-1,3-Dichloropropene	**<0.0070**	mg/kg	0.050	0.0070	1	07/03/19 14:34	07/03/19 18:11	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%.	75-125		1	07/03/19 14:34	07/03/19 18:11	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1	07/03/19 14:34	07/03/19 18:11	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1	07/03/19 14:34	07/03/19 18:11	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-5' **Lab ID: 10480346023** Collected: 06/20/19 09:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**16.0**	%	0.10	0.10	1		07/05/19 11:39		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.029**	mg/kg	0.063	0.029	1	07/03/19 14:34	07/04/19 13:44	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.063	0.011	1	07/03/19 14:34	07/04/19 13:44	79-34-5	
1,1,2-Trichloroethane	**<0.0075**	mg/kg	0.063	0.0075	1	07/03/19 14:34	07/04/19 13:44	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.073**	mg/kg	0.25	0.073	1	07/03/19 14:34	07/04/19 13:44	76-13-1	
1,1-Dichloroethane	**<0.0070**	mg/kg	0.063	0.0070	1	07/03/19 14:34	07/04/19 13:44	75-34-3	
1,1-Dichloroethene	**<0.019**	mg/kg	0.063	0.019	1	07/03/19 14:34	07/04/19 13:44	75-35-4	
1,2,4-Trichlorobenzene	**<0.014**	mg/kg	0.063	0.014	1	07/03/19 14:34	07/04/19 13:44	120-82-1	
1,2,4-Trimethylbenzene	**<0.013**	mg/kg	0.063	0.013	1	07/03/19 14:34	07/04/19 13:44	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0066**	mg/kg	0.063	0.0066	1	07/03/19 14:34	07/04/19 13:44	106-93-4	
1,2-Dichlorobenzene	**<0.0025**	mg/kg	0.063	0.0025	1	07/03/19 14:34	07/04/19 13:44	95-50-1	
1,2-Dichloroethane	**<0.0069**	mg/kg	0.063	0.0069	1	07/03/19 14:34	07/04/19 13:44	107-06-2	
1,3,5-Trimethylbenzene	**<0.010**	mg/kg	0.063	0.010	1	07/03/19 14:34	07/04/19 13:44	108-67-8	
1,3-Dichlorobenzene	**<0.0023**	mg/kg	0.063	0.0023	1	07/03/19 14:34	07/04/19 13:44	541-73-1	
1,4-Dichlorobenzene	**<0.0039**	mg/kg	0.063	0.0039	1	07/03/19 14:34	07/04/19 13:44	106-46-7	
2-Butanone (MEK)	**<0.033**	mg/kg	0.31	0.033	1	07/03/19 14:34	07/04/19 13:44	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.31	0.014	1	07/03/19 14:34	07/04/19 13:44	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.013**	mg/kg	0.31	0.013	1	07/03/19 14:34	07/04/19 13:44	108-10-1	
Acetone	**<0.39**	mg/kg	1.3	0.39	1	07/03/19 14:34	07/04/19 13:44	67-64-1	
Benzene	**0.0036J**	mg/kg	0.025	0.0035	1	07/03/19 14:34	07/04/19 13:44	71-43-2	
Bromodichloromethane	**<0.021**	mg/kg	0.063	0.021	1	07/03/19 14:34	07/04/19 13:44	75-27-4	
Bromoform	**<0.095**	mg/kg	0.25	0.095	1	07/03/19 14:34	07/04/19 13:44	75-25-2	
Bromomethane	**<0.073**	mg/kg	0.63	0.073	1	07/03/19 14:34	07/04/19 13:44	74-83-9	
Carbon tetrachloride	**<0.030**	mg/kg	0.063	0.030	1	07/03/19 14:34	07/04/19 13:44	56-23-5	
Chlorobenzene	**<0.0035**	mg/kg	0.063	0.0035	1	07/03/19 14:34	07/04/19 13:44	108-90-7	
Chloroethane	**<0.033**	mg/kg	0.63	0.033	1	07/03/19 14:34	07/04/19 13:44	75-00-3	
Chloroform	**<0.031**	mg/kg	0.063	0.031	1	07/03/19 14:34	07/04/19 13:44	67-66-3	
Chloromethane	**<0.015**	mg/kg	0.25	0.015	1	07/03/19 14:34	07/04/19 13:44	74-87-3	
Dibromochloromethane	**<0.0073**	mg/kg	0.25	0.0073	1	07/03/19 14:34	07/04/19 13:44	124-48-1	
Dichlorodifluoromethane	**<0.020**	mg/kg	0.25	0.020	1	07/03/19 14:34	07/04/19 13:44	75-71-8	
Ethylbenzene	**<0.0034**	mg/kg	0.063	0.0034	1	07/03/19 14:34	07/04/19 13:44	100-41-4	
Hexachloro-1,3-butadiene	**<0.015**	mg/kg	0.31	0.015	1	07/03/19 14:34	07/04/19 13:44	87-68-3	
Methyl-tert-butyl ether	**<0.0074**	mg/kg	0.063	0.0074	1	07/03/19 14:34	07/04/19 13:44	1634-04-4	
Methylene Chloride	**<0.12**	mg/kg	0.25	0.12	1	07/03/19 14:34	07/04/19 13:44	75-09-2	
Naphthalene	**<0.059**	mg/kg	0.25	0.059	1	07/03/19 14:34	07/04/19 13:44	91-20-3	
Styrene	**<0.0029**	mg/kg	0.063	0.0029	1	07/03/19 14:34	07/04/19 13:44	100-42-5	
Tetrachloroethene	**<0.022**	mg/kg	0.063	0.022	1	07/03/19 14:34	07/04/19 13:44	127-18-4	
Tetrahydrofuran	**<0.091**	mg/kg	2.5	0.091	1	07/03/19 14:34	07/04/19 13:44	109-99-9	
Toluene	**<0.015**	mg/kg	0.063	0.015	1	07/03/19 14:34	07/04/19 13:44	108-88-3	
Trichloroethene	**<0.0096**	mg/kg	0.063	0.0096	1	07/03/19 14:34	07/04/19 13:44	79-01-6	
Trichlorofluoromethane	**<0.11**	mg/kg	0.25	0.11	1	07/03/19 14:34	07/04/19 13:44	75-69-4	
Vinyl acetate	**<0.0072**	mg/kg	0.63	0.0072	1	07/03/19 14:34	07/04/19 13:44	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.025	0.012	1	07/03/19 14:34	07/04/19 13:44	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-5' **Lab ID: 10480346023** Collected: 06/20/19 09:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.010**	mg/kg	0.063	0.010	1	07/03/19 14:34	07/04/19 13:44	156-59-2	
cis-1,3-Dichloropropene	**<0.0090**	mg/kg	0.063	0.0090	1	07/03/19 14:34	07/04/19 13:44	10061-01-5	
m&p-Xylene	**<0.0077**	mg/kg	0.13	0.0077	1	07/03/19 14:34	07/04/19 13:44	179601-23-1	
o-Xylene	**<0.015**	mg/kg	0.063	0.015	1	07/03/19 14:34	07/04/19 13:44	95-47-6	
trans-1,2-Dichloroethene	**<0.029**	mg/kg	0.063	0.029	1	07/03/19 14:34	07/04/19 13:44	156-60-5	
trans-1,3-Dichloropropene	**<0.0087**	mg/kg	0.063	0.0087	1	07/03/19 14:34	07/04/19 13:44	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-125		1	07/03/19 14:34	07/04/19 13:44	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1	07/03/19 14:34	07/04/19 13:44	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1	07/03/19 14:34	07/04/19 13:44	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-10' **Lab ID: 10480346024** Collected: 06/20/19 09:35 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**22.5**	%	0.10	0.10	1		07/05/19 11:40		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.032**	mg/kg	0.068	0.032	1	07/03/19 14:34	07/04/19 13:26	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.012**	mg/kg	0.068	0.012	1	07/03/19 14:34	07/04/19 13:26	79-34-5	
1,1,2-Trichloroethane	**<0.0081**	mg/kg	0.068	0.0081	1	07/03/19 14:34	07/04/19 13:26	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.079**	mg/kg	0.27	0.079	1	07/03/19 14:34	07/04/19 13:26	76-13-1	
1,1-Dichloroethane	**<0.0076**	mg/kg	0.068	0.0076	1	07/03/19 14:34	07/04/19 13:26	75-34-3	
1,1-Dichloroethene	**<0.020**	mg/kg	0.068	0.020	1	07/03/19 14:34	07/04/19 13:26	75-35-4	
1,2,4-Trichlorobenzene	**<0.015**	mg/kg	0.068	0.015	1	07/03/19 14:34	07/04/19 13:26	120-82-1	
1,2,4-Trimethylbenzene	**<0.014**	mg/kg	0.068	0.014	1	07/03/19 14:34	07/04/19 13:26	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0072**	mg/kg	0.068	0.0072	1	07/03/19 14:34	07/04/19 13:26	106-93-4	
1,2-Dichlorobenzene	**<0.0027**	mg/kg	0.068	0.0027	1	07/03/19 14:34	07/04/19 13:26	95-50-1	
1,2-Dichloroethane	**<0.0075**	mg/kg	0.068	0.0075	1	07/03/19 14:34	07/04/19 13:26	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.068	0.011	1	07/03/19 14:34	07/04/19 13:26	108-67-8	
1,3-Dichlorobenzene	**<0.0025**	mg/kg	0.068	0.0025	1	07/03/19 14:34	07/04/19 13:26	541-73-1	
1,4-Dichlorobenzene	**<0.0042**	mg/kg	0.068	0.0042	1	07/03/19 14:34	07/04/19 13:26	106-46-7	
2-Butanone (MEK)	**<0.036**	mg/kg	0.34	0.036	1	07/03/19 14:34	07/04/19 13:26	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.34	0.016	1	07/03/19 14:34	07/04/19 13:26	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.014**	mg/kg	0.34	0.014	1	07/03/19 14:34	07/04/19 13:26	108-10-1	
Acetone	**<0.42**	mg/kg	1.4	0.42	1	07/03/19 14:34	07/04/19 13:26	67-64-1	
Benzene	**<0.0038**	mg/kg	0.027	0.0038	1	07/03/19 14:34	07/04/19 13:26	71-43-2	
Bromodichloromethane	**<0.023**	mg/kg	0.068	0.023	1	07/03/19 14:34	07/04/19 13:26	75-27-4	
Bromoform	**<0.10**	mg/kg	0.27	0.10	1	07/03/19 14:34	07/04/19 13:26	75-25-2	
Bromomethane	**<0.080**	mg/kg	0.68	0.080	1	07/03/19 14:34	07/04/19 13:26	74-83-9	
Carbon tetrachloride	**<0.033**	mg/kg	0.068	0.033	1	07/03/19 14:34	07/04/19 13:26	56-23-5	
Chlorobenzene	**<0.0038**	mg/kg	0.068	0.0038	1	07/03/19 14:34	07/04/19 13:26	108-90-7	
Chloroethane	**<0.035**	mg/kg	0.68	0.035	1	07/03/19 14:34	07/04/19 13:26	75-00-3	
Chloroform	**<0.034**	mg/kg	0.068	0.034	1	07/03/19 14:34	07/04/19 13:26	67-66-3	
Chloromethane	**<0.016**	mg/kg	0.27	0.016	1	07/03/19 14:34	07/04/19 13:26	74-87-3	
Dibromochloromethane	**<0.0079**	mg/kg	0.27	0.0079	1	07/03/19 14:34	07/04/19 13:26	124-48-1	
Dichlorodifluoromethane	**<0.022**	mg/kg	0.27	0.022	1	07/03/19 14:34	07/04/19 13:26	75-71-8	
Ethylbenzene	**<0.0037**	mg/kg	0.068	0.0037	1	07/03/19 14:34	07/04/19 13:26	100-41-4	
Hexachloro-1,3-butadiene	**<0.017**	mg/kg	0.34	0.017	1	07/03/19 14:34	07/04/19 13:26	87-68-3	
Methyl-tert-butyl ether	**<0.0081**	mg/kg	0.068	0.0081	1	07/03/19 14:34	07/04/19 13:26	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.27	0.13	1	07/03/19 14:34	07/04/19 13:26	75-09-2	
Naphthalene	**<0.064**	mg/kg	0.27	0.064	1	07/03/19 14:34	07/04/19 13:26	91-20-3	
Styrene	**<0.0031**	mg/kg	0.068	0.0031	1	07/03/19 14:34	07/04/19 13:26	100-42-5	
Tetrachloroethene	**<0.024**	mg/kg	0.068	0.024	1	07/03/19 14:34	07/04/19 13:26	127-18-4	
Tetrahydrofuran	**<0.099**	mg/kg	2.7	0.099	1	07/03/19 14:34	07/04/19 13:26	109-99-9	
Toluene	**<0.017**	mg/kg	0.068	0.017	1	07/03/19 14:34	07/04/19 13:26	108-88-3	
Trichloroethene	**<0.010**	mg/kg	0.068	0.010	1	07/03/19 14:34	07/04/19 13:26	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.27	0.12	1	07/03/19 14:34	07/04/19 13:26	75-69-4	
Vinyl acetate	**<0.0079**	mg/kg	0.68	0.0079	1	07/03/19 14:34	07/04/19 13:26	108-05-4	
Vinyl chloride	**<0.013**	mg/kg	0.027	0.013	1	07/03/19 14:34	07/04/19 13:26	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-10' **Lab ID: 10480346024** Collected: 06/20/19 09:35 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.011**	mg/kg	0.068	0.011	1	07/03/19 14:34	07/04/19 13:26	156-59-2	
cis-1,3-Dichloropropene	**<0.0097**	mg/kg	0.068	0.0097	1	07/03/19 14:34	07/04/19 13:26	10061-01-5	
m&p-Xylene	**<0.0084**	mg/kg	0.14	0.0084	1	07/03/19 14:34	07/04/19 13:26	179601-23-1	
o-Xylene	**<0.016**	mg/kg	0.068	0.016	1	07/03/19 14:34	07/04/19 13:26	95-47-6	
trans-1,2-Dichloroethene	**<0.032**	mg/kg	0.068	0.032	1	07/03/19 14:34	07/04/19 13:26	156-60-5	
trans-1,3-Dichloropropene	**<0.0095**	mg/kg	0.068	0.0095	1	07/03/19 14:34	07/04/19 13:26	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-125		1	07/03/19 14:34	07/04/19 13:26	17060-07-0	
Toluene-d8 (S)	95	%.	75-125		1	07/03/19 14:34	07/04/19 13:26	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1	07/03/19 14:34	07/04/19 13:26	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-15' **Lab ID: 10480346025** Collected: 06/20/19 09:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**17.0**	%	0.10	0.10	1		07/05/19 11:40		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.032**	mg/kg	0.068	0.032	1	07/03/19 11:42	07/03/19 17:43	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.012**	mg/kg	0.068	0.012	1	07/03/19 11:42	07/03/19 17:43	79-34-5	
1,1,2-Trichloroethane	**<0.0081**	mg/kg	0.068	0.0081	1	07/03/19 11:42	07/03/19 17:43	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.079**	mg/kg	0.27	0.079	1	07/03/19 11:42	07/03/19 17:43	76-13-1	
1,1-Dichloroethane	**<0.0076**	mg/kg	0.068	0.0076	1	07/03/19 11:42	07/03/19 17:43	75-34-3	
1,1-Dichloroethene	**<0.020**	mg/kg	0.068	0.020	1	07/03/19 11:42	07/03/19 17:43	75-35-4	
1,2,4-Trichlorobenzene	**<0.015**	mg/kg	0.068	0.015	1	07/03/19 11:42	07/03/19 17:43	120-82-1	
1,2,4-Trimethylbenzene	**<0.014**	mg/kg	0.068	0.014	1	07/03/19 11:42	07/03/19 17:43	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0071**	mg/kg	0.068	0.0071	1	07/03/19 11:42	07/03/19 17:43	106-93-4	
1,2-Dichlorobenzene	**<0.0027**	mg/kg	0.068	0.0027	1	07/03/19 11:42	07/03/19 17:43	95-50-1	
1,2-Dichloroethane	**<0.0075**	mg/kg	0.068	0.0075	1	07/03/19 11:42	07/03/19 17:43	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.068	0.011	1	07/03/19 11:42	07/03/19 17:43	108-67-8	
1,3-Dichlorobenzene	**<0.0025**	mg/kg	0.068	0.0025	1	07/03/19 11:42	07/03/19 17:43	541-73-1	
1,4-Dichlorobenzene	**<0.0042**	mg/kg	0.068	0.0042	1	07/03/19 11:42	07/03/19 17:43	106-46-7	
2-Butanone (MEK)	**<0.036**	mg/kg	0.34	0.036	1	07/03/19 11:42	07/03/19 17:43	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.34	0.016	1	07/03/19 11:42	07/03/19 17:43	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.014**	mg/kg	0.34	0.014	1	07/03/19 11:42	07/03/19 17:43	108-10-1	
Acetone	**<0.42**	mg/kg	1.4	0.42	1	07/03/19 11:42	07/03/19 17:43	67-64-1	
Benzene	**<0.0038**	mg/kg	0.027	0.0038	1	07/03/19 11:42	07/03/19 17:43	71-43-2	
Bromodichloromethane	**<0.023**	mg/kg	0.068	0.023	1	07/03/19 11:42	07/03/19 17:43	75-27-4	
Bromoform	**<0.10**	mg/kg	0.27	0.10	1	07/03/19 11:42	07/03/19 17:43	75-25-2	
Bromomethane	**<0.079**	mg/kg	0.68	0.079	1	07/03/19 11:42	07/03/19 17:43	74-83-9	
Carbon tetrachloride	**<0.032**	mg/kg	0.068	0.032	1	07/03/19 11:42	07/03/19 17:43	56-23-5	
Chlorobenzene	**<0.0038**	mg/kg	0.068	0.0038	1	07/03/19 11:42	07/03/19 17:43	108-90-7	
Chloroethane	**<0.035**	mg/kg	0.68	0.035	1	07/03/19 11:42	07/03/19 17:43	75-00-3	
Chloroform	**0.039J**	mg/kg	0.27	0.034	1	07/03/19 11:42	07/03/19 17:43	67-66-3	
Chloromethane	**<0.016**	mg/kg	0.27	0.016	1	07/03/19 11:42	07/03/19 17:43	74-87-3	
Dibromochloromethane	**<0.0079**	mg/kg	0.27	0.0079	1	07/03/19 11:42	07/03/19 17:43	124-48-1	
Dichlorodifluoromethane	**<0.022**	mg/kg	0.27	0.022	1	07/03/19 11:42	07/03/19 17:43	75-71-8	
Ethylbenzene	**<0.0037**	mg/kg	0.068	0.0037	1	07/03/19 11:42	07/03/19 17:43	100-41-4	
Hexachloro-1,3-butadiene	**<0.017**	mg/kg	0.34	0.017	1	07/03/19 11:42	07/03/19 17:43	87-68-3	
Methyl-tert-butyl ether	**<0.0081**	mg/kg	0.068	0.0081	1	07/03/19 11:42	07/03/19 17:43	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.27	0.13	1	07/03/19 11:42	07/03/19 17:43	75-09-2	
Naphthalene	**<0.064**	mg/kg	0.27	0.064	1	07/03/19 11:42	07/03/19 17:43	91-20-3	
Styrene	**<0.0031**	mg/kg	0.068	0.0031	1	07/03/19 11:42	07/03/19 17:43	100-42-5	
Tetrachloroethene	**<0.024**	mg/kg	0.068	0.024	1	07/03/19 11:42	07/03/19 17:43	127-18-4	
Tetrahydrofuran	**<0.099**	mg/kg	2.7	0.099	1	07/03/19 11:42	07/03/19 17:43	109-99-9	
Toluene	**<0.017**	mg/kg	0.068	0.017	1	07/03/19 11:42	07/03/19 17:43	108-88-3	
Trichloroethene	**<0.010**	mg/kg	0.068	0.010	1	07/03/19 11:42	07/03/19 17:43	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.27	0.12	1	07/03/19 11:42	07/03/19 17:43	75-69-4	
Vinyl acetate	**<0.0079**	mg/kg	0.68	0.0079	1	07/03/19 11:42	07/03/19 17:43	108-05-4	
Vinyl chloride	**<0.013**	mg/kg	0.027	0.013	1	07/03/19 11:42	07/03/19 17:43	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-15' **Lab ID: 10480346025** Collected: 06/20/19 09:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.011**	mg/kg	0.068	0.011	1	07/03/19 11:42	07/03/19 17:43	156-59-2	
cis-1,3-Dichloropropene	**<0.0097**	mg/kg	0.068	0.0097	1	07/03/19 11:42	07/03/19 17:43	10061-01-5	
m&p-Xylene	**<0.0084**	mg/kg	0.14	0.0084	1	07/03/19 11:42	07/03/19 17:43	179601-23-1	
o-Xylene	**<0.016**	mg/kg	0.068	0.016	1	07/03/19 11:42	07/03/19 17:43	95-47-6	
trans-1,2-Dichloroethene	**<0.032**	mg/kg	0.068	0.032	1	07/03/19 11:42	07/03/19 17:43	156-60-5	
trans-1,3-Dichloropropene	**<0.0094**	mg/kg	0.068	0.0094	1	07/03/19 11:42	07/03/19 17:43	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	119	%.	75-125		1	07/03/19 11:42	07/03/19 17:43	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1	07/03/19 11:42	07/03/19 17:43	2037-26-5	
4-Bromofluorobenzene (S)	111	%.	75-125		1	07/03/19 11:42	07/03/19 17:43	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-20' **Lab ID: 10480346026** Collected: 06/20/19 10:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**18.2**	%	0.10	0.10	1		07/05/19 11:40		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.029**	mg/kg	0.063	0.029	1	07/03/19 11:42	07/03/19 18:03	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.063	0.011	1	07/03/19 11:42	07/03/19 18:03	79-34-5	
1,1,2-Trichloroethane	**<0.0075**	mg/kg	0.063	0.0075	1	07/03/19 11:42	07/03/19 18:03	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.073**	mg/kg	0.25	0.073	1	07/03/19 11:42	07/03/19 18:03	76-13-1	
1,1-Dichloroethane	**<0.0071**	mg/kg	0.063	0.0071	1	07/03/19 11:42	07/03/19 18:03	75-34-3	
1,1-Dichloroethene	**<0.019**	mg/kg	0.063	0.019	1	07/03/19 11:42	07/03/19 18:03	75-35-4	
1,2,4-Trichlorobenzene	**<0.014**	mg/kg	0.063	0.014	1	07/03/19 11:42	07/03/19 18:03	120-82-1	
1,2,4-Trimethylbenzene	**<0.013**	mg/kg	0.063	0.013	1	07/03/19 11:42	07/03/19 18:03	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0066**	mg/kg	0.063	0.0066	1	07/03/19 11:42	07/03/19 18:03	106-93-4	
1,2-Dichlorobenzene	**<0.0025**	mg/kg	0.063	0.0025	1	07/03/19 11:42	07/03/19 18:03	95-50-1	
1,2-Dichloroethane	**<0.0069**	mg/kg	0.063	0.0069	1	07/03/19 11:42	07/03/19 18:03	107-06-2	
1,3,5-Trimethylbenzene	**<0.010**	mg/kg	0.063	0.010	1	07/03/19 11:42	07/03/19 18:03	108-67-8	
1,3-Dichlorobenzene	**<0.0023**	mg/kg	0.063	0.0023	1	07/03/19 11:42	07/03/19 18:03	541-73-1	
1,4-Dichlorobenzene	**<0.0039**	mg/kg	0.063	0.0039	1	07/03/19 11:42	07/03/19 18:03	106-46-7	
2-Butanone (MEK)	**<0.033**	mg/kg	0.31	0.033	1	07/03/19 11:42	07/03/19 18:03	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.31	0.014	1	07/03/19 11:42	07/03/19 18:03	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.013**	mg/kg	0.31	0.013	1	07/03/19 11:42	07/03/19 18:03	108-10-1	
Acetone	**<0.39**	mg/kg	1.3	0.39	1	07/03/19 11:42	07/03/19 18:03	67-64-1	
Benzene	**<0.0035**	mg/kg	0.025	0.0035	1	07/03/19 11:42	07/03/19 18:03	71-43-2	
Bromodichloromethane	**<0.022**	mg/kg	0.063	0.022	1	07/03/19 11:42	07/03/19 18:03	75-27-4	
Bromoform	**<0.095**	mg/kg	0.25	0.095	1	07/03/19 11:42	07/03/19 18:03	75-25-2	
Bromomethane	**<0.074**	mg/kg	0.63	0.074	1	07/03/19 11:42	07/03/19 18:03	74-83-9	
Carbon tetrachloride	**<0.030**	mg/kg	0.063	0.030	1	07/03/19 11:42	07/03/19 18:03	56-23-5	
Chlorobenzene	**<0.0035**	mg/kg	0.063	0.0035	1	07/03/19 11:42	07/03/19 18:03	108-90-7	
Chloroethane	**<0.033**	mg/kg	0.63	0.033	1	07/03/19 11:42	07/03/19 18:03	75-00-3	
Chloroform	**0.035J**	mg/kg	0.25	0.031	1	07/03/19 11:42	07/03/19 18:03	67-66-3	
Chloromethane	**<0.015**	mg/kg	0.25	0.015	1	07/03/19 11:42	07/03/19 18:03	74-87-3	
Dibromochloromethane	**<0.0073**	mg/kg	0.25	0.0073	1	07/03/19 11:42	07/03/19 18:03	124-48-1	
Dichlorodifluoromethane	**<0.020**	mg/kg	0.25	0.020	1	07/03/19 11:42	07/03/19 18:03	75-71-8	
Ethylbenzene	**<0.0034**	mg/kg	0.063	0.0034	1	07/03/19 11:42	07/03/19 18:03	100-41-4	
Hexachloro-1,3-butadiene	**<0.015**	mg/kg	0.31	0.015	1	07/03/19 11:42	07/03/19 18:03	87-68-3	
Methyl-tert-butyl ether	**<0.0075**	mg/kg	0.063	0.0075	1	07/03/19 11:42	07/03/19 18:03	1634-04-4	
Methylene Chloride	**<0.12**	mg/kg	0.25	0.12	1	07/03/19 11:42	07/03/19 18:03	75-09-2	
Naphthalene	**<0.059**	mg/kg	0.25	0.059	1	07/03/19 11:42	07/03/19 18:03	91-20-3	
Styrene	**<0.0029**	mg/kg	0.063	0.0029	1	07/03/19 11:42	07/03/19 18:03	100-42-5	
Tetrachloroethene	**<0.022**	mg/kg	0.063	0.022	1	07/03/19 11:42	07/03/19 18:03	127-18-4	
Tetrahydrofuran	**<0.091**	mg/kg	2.5	0.091	1	07/03/19 11:42	07/03/19 18:03	109-99-9	
Toluene	**<0.015**	mg/kg	0.063	0.015	1	07/03/19 11:42	07/03/19 18:03	108-88-3	
Trichloroethene	**<0.0097**	mg/kg	0.063	0.0097	1	07/03/19 11:42	07/03/19 18:03	79-01-6	
Trichlorofluoromethane	**<0.11**	mg/kg	0.25	0.11	1	07/03/19 11:42	07/03/19 18:03	75-69-4	
Vinyl acetate	**<0.0073**	mg/kg	0.63	0.0073	1	07/03/19 11:42	07/03/19 18:03	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.025	0.012	1	07/03/19 11:42	07/03/19 18:03	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-20' **Lab ID: 10480346026** Collected: 06/20/19 10:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.010**	mg/kg	0.063	0.010	1	07/03/19 11:42	07/03/19 18:03	156-59-2	
cis-1,3-Dichloropropene	**<0.0090**	mg/kg	0.063	0.0090	1	07/03/19 11:42	07/03/19 18:03	10061-01-5	
m&p-Xylene	**<0.0078**	mg/kg	0.13	0.0078	1	07/03/19 11:42	07/03/19 18:03	179601-23-1	
o-Xylene	**<0.015**	mg/kg	0.063	0.015	1	07/03/19 11:42	07/03/19 18:03	95-47-6	
trans-1,2-Dichloroethene	**<0.029**	mg/kg	0.063	0.029	1	07/03/19 11:42	07/03/19 18:03	156-60-5	
trans-1,3-Dichloropropene	**<0.0087**	mg/kg	0.063	0.0087	1	07/03/19 11:42	07/03/19 18:03	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	122	%.	75-125		1	07/03/19 11:42	07/03/19 18:03	17060-07-0	
Toluene-d8 (S)	106	%.	75-125		1	07/03/19 11:42	07/03/19 18:03	2037-26-5	
4-Bromofluorobenzene (S)	109	%.	75-125		1	07/03/19 11:42	07/03/19 18:03	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-25' **Lab ID: 10480346027** Collected: 06/20/19 10:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**16.1**	%	0.10	0.10	1		07/05/19 11:40		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.028**	mg/kg	0.060	0.028	1	07/03/19 11:42	07/03/19 18:22	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.060	0.011	1	07/03/19 11:42	07/03/19 18:22	79-34-5	
1,1,2-Trichloroethane	**<0.0072**	mg/kg	0.060	0.0072	1	07/03/19 11:42	07/03/19 18:22	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.070**	mg/kg	0.24	0.070	1	07/03/19 11:42	07/03/19 18:22	76-13-1	
1,1-Dichloroethane	**<0.0067**	mg/kg	0.060	0.0067	1	07/03/19 11:42	07/03/19 18:22	75-34-3	
1,1-Dichloroethene	**<0.018**	mg/kg	0.060	0.018	1	07/03/19 11:42	07/03/19 18:22	75-35-4	
1,2,4-Trichlorobenzene	**<0.013**	mg/kg	0.060	0.013	1	07/03/19 11:42	07/03/19 18:22	120-82-1	
1,2,4-Trimethylbenzene	**<0.012**	mg/kg	0.060	0.012	1	07/03/19 11:42	07/03/19 18:22	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0063**	mg/kg	0.060	0.0063	1	07/03/19 11:42	07/03/19 18:22	106-93-4	
1,2-Dichlorobenzene	**<0.0024**	mg/kg	0.060	0.0024	1	07/03/19 11:42	07/03/19 18:22	95-50-1	
1,2-Dichloroethane	**<0.0066**	mg/kg	0.060	0.0066	1	07/03/19 11:42	07/03/19 18:22	107-06-2	
1,3,5-Trimethylbenzene	**<0.0096**	mg/kg	0.060	0.0096	1	07/03/19 11:42	07/03/19 18:22	108-67-8	
1,3-Dichlorobenzene	**<0.0022**	mg/kg	0.060	0.0022	1	07/03/19 11:42	07/03/19 18:22	541-73-1	
1,4-Dichlorobenzene	**<0.0037**	mg/kg	0.060	0.0037	1	07/03/19 11:42	07/03/19 18:22	106-46-7	
2-Butanone (MEK)	**<0.032**	mg/kg	0.30	0.032	1	07/03/19 11:42	07/03/19 18:22	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.30	0.014	1	07/03/19 11:42	07/03/19 18:22	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.012**	mg/kg	0.30	0.012	1	07/03/19 11:42	07/03/19 18:22	108-10-1	
Acetone	**<0.37**	mg/kg	1.2	0.37	1	07/03/19 11:42	07/03/19 18:22	67-64-1	
Benzene	**<0.0034**	mg/kg	0.024	0.0034	1	07/03/19 11:42	07/03/19 18:22	71-43-2	
Bromodichloromethane	**<0.021**	mg/kg	0.060	0.021	1	07/03/19 11:42	07/03/19 18:22	75-27-4	
Bromoform	**<0.091**	mg/kg	0.24	0.091	1	07/03/19 11:42	07/03/19 18:22	75-25-2	
Bromomethane	**<0.070**	mg/kg	0.60	0.070	1	07/03/19 11:42	07/03/19 18:22	74-83-9	
Carbon tetrachloride	**<0.029**	mg/kg	0.060	0.029	1	07/03/19 11:42	07/03/19 18:22	56-23-5	
Chlorobenzene	**<0.0034**	mg/kg	0.060	0.0034	1	07/03/19 11:42	07/03/19 18:22	108-90-7	
Chloroethane	**<0.031**	mg/kg	0.60	0.031	1	07/03/19 11:42	07/03/19 18:22	75-00-3	
Chloroform	**<0.030**	mg/kg	0.24	0.030	1	07/03/19 11:42	07/03/19 18:22	67-66-3	
Chloromethane	**<0.014**	mg/kg	0.24	0.014	1	07/03/19 11:42	07/03/19 18:22	74-87-3	
Dibromochloromethane	**<0.0070**	mg/kg	0.24	0.0070	1	07/03/19 11:42	07/03/19 18:22	124-48-1	
Dichlorodifluoromethane	**<0.019**	mg/kg	0.24	0.019	1	07/03/19 11:42	07/03/19 18:22	75-71-8	
Ethylbenzene	**<0.0033**	mg/kg	0.060	0.0033	1	07/03/19 11:42	07/03/19 18:22	100-41-4	
Hexachloro-1,3-butadiene	**<0.015**	mg/kg	0.30	0.015	1	07/03/19 11:42	07/03/19 18:22	87-68-3	
Methyl-tert-butyl ether	**<0.0071**	mg/kg	0.060	0.0071	1	07/03/19 11:42	07/03/19 18:22	1634-04-4	
Methylene Chloride	**<0.11**	mg/kg	0.24	0.11	1	07/03/19 11:42	07/03/19 18:22	75-09-2	
Naphthalene	**<0.056**	mg/kg	0.24	0.056	1	07/03/19 11:42	07/03/19 18:22	91-20-3	
Styrene	**<0.0027**	mg/kg	0.060	0.0027	1	07/03/19 11:42	07/03/19 18:22	100-42-5	
Tetrachloroethene	**<0.021**	mg/kg	0.060	0.021	1	07/03/19 11:42	07/03/19 18:22	127-18-4	
Tetrahydrofuran	**<0.087**	mg/kg	2.4	0.087	1	07/03/19 11:42	07/03/19 18:22	109-99-9	
Toluene	**<0.015**	mg/kg	0.060	0.015	1	07/03/19 11:42	07/03/19 18:22	108-88-3	
Trichloroethene	**<0.0093**	mg/kg	0.060	0.0093	1	07/03/19 11:42	07/03/19 18:22	79-01-6	
Trichlorofluoromethane	**<0.10**	mg/kg	0.24	0.10	1	07/03/19 11:42	07/03/19 18:22	75-69-4	
Vinyl acetate	**<0.0069**	mg/kg	0.60	0.0069	1	07/03/19 11:42	07/03/19 18:22	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.024	0.012	1	07/03/19 11:42	07/03/19 18:22	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-25' **Lab ID: 10480346027** Collected: 06/20/19 10:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.0099**	mg/kg	0.060	0.0099	1	07/03/19 11:42	07/03/19 18:22	156-59-2	
cis-1,3-Dichloropropene	**<0.0086**	mg/kg	0.060	0.0086	1	07/03/19 11:42	07/03/19 18:22	10061-01-5	
m&p-Xylene	**<0.0074**	mg/kg	0.12	0.0074	1	07/03/19 11:42	07/03/19 18:22	179601-23-1	
o-Xylene	**<0.014**	mg/kg	0.060	0.014	1	07/03/19 11:42	07/03/19 18:22	95-47-6	
trans-1,2-Dichloroethene	**<0.028**	mg/kg	0.060	0.028	1	07/03/19 11:42	07/03/19 18:22	156-60-5	
trans-1,3-Dichloropropene	**<0.0083**	mg/kg	0.060	0.0083	1	07/03/19 11:42	07/03/19 18:22	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	126	%.	75-125		1	07/03/19 11:42	07/03/19 18:22	17060-07-0	S3
Toluene-d8 (S)	102	%.	75-125		1	07/03/19 11:42	07/03/19 18:22	2037-26-5	
4-Bromofluorobenzene (S)	107	%.	75-125		1	07/03/19 11:42	07/03/19 18:22	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-30' **Lab ID: 10480346028** Collected: 06/20/19 10:30 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**22.4**	%	0.10	0.10	1		07/05/19 11:40		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.031**	mg/kg	0.067	0.031	1	07/03/19 11:42	07/03/19 18:41	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.012**	mg/kg	0.067	0.012	1	07/03/19 11:42	07/03/19 18:41	79-34-5	
1,1,2-Trichloroethane	**<0.0081**	mg/kg	0.067	0.0081	1	07/03/19 11:42	07/03/19 18:41	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.078**	mg/kg	0.27	0.078	1	07/03/19 11:42	07/03/19 18:41	76-13-1	
1,1-Dichloroethane	**<0.0076**	mg/kg	0.067	0.0076	1	07/03/19 11:42	07/03/19 18:41	75-34-3	
1,1-Dichloroethene	**<0.020**	mg/kg	0.067	0.020	1	07/03/19 11:42	07/03/19 18:41	75-35-4	
1,2,4-Trichlorobenzene	**<0.015**	mg/kg	0.067	0.015	1	07/03/19 11:42	07/03/19 18:41	120-82-1	
1,2,4-Trimethylbenzene	**<0.013**	mg/kg	0.067	0.013	1	07/03/19 11:42	07/03/19 18:41	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0071**	mg/kg	0.067	0.0071	1	07/03/19 11:42	07/03/19 18:41	106-93-4	
1,2-Dichlorobenzene	**<0.0027**	mg/kg	0.067	0.0027	1	07/03/19 11:42	07/03/19 18:41	95-50-1	
1,2-Dichloroethane	**<0.0074**	mg/kg	0.067	0.0074	1	07/03/19 11:42	07/03/19 18:41	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.067	0.011	1	07/03/19 11:42	07/03/19 18:41	108-67-8	
1,3-Dichlorobenzene	**<0.0025**	mg/kg	0.067	0.0025	1	07/03/19 11:42	07/03/19 18:41	541-73-1	
1,4-Dichlorobenzene	**<0.0042**	mg/kg	0.067	0.0042	1	07/03/19 11:42	07/03/19 18:41	106-46-7	
2-Butanone (MEK)	**<0.036**	mg/kg	0.34	0.036	1	07/03/19 11:42	07/03/19 18:41	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.34	0.016	1	07/03/19 11:42	07/03/19 18:41	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.014**	mg/kg	0.34	0.014	1	07/03/19 11:42	07/03/19 18:41	108-10-1	
Acetone	**<0.42**	mg/kg	1.3	0.42	1	07/03/19 11:42	07/03/19 18:41	67-64-1	
Benzene	**<0.0038**	mg/kg	0.027	0.0038	1	07/03/19 11:42	07/03/19 18:41	71-43-2	
Bromodichloromethane	**<0.023**	mg/kg	0.067	0.023	1	07/03/19 11:42	07/03/19 18:41	75-27-4	
Bromoform	**<0.10**	mg/kg	0.27	0.10	1	07/03/19 11:42	07/03/19 18:41	75-25-2	
Bromomethane	**<0.079**	mg/kg	0.67	0.079	1	07/03/19 11:42	07/03/19 18:41	74-83-9	
Carbon tetrachloride	**<0.032**	mg/kg	0.067	0.032	1	07/03/19 11:42	07/03/19 18:41	56-23-5	
Chlorobenzene	**<0.0038**	mg/kg	0.067	0.0038	1	07/03/19 11:42	07/03/19 18:41	108-90-7	
Chloroethane	**<0.035**	mg/kg	0.67	0.035	1	07/03/19 11:42	07/03/19 18:41	75-00-3	
Chloroform	**<0.034**	mg/kg	0.27	0.034	1	07/03/19 11:42	07/03/19 18:41	67-66-3	
Chloromethane	**<0.016**	mg/kg	0.27	0.016	1	07/03/19 11:42	07/03/19 18:41	74-87-3	
Dibromochloromethane	**<0.0078**	mg/kg	0.27	0.0078	1	07/03/19 11:42	07/03/19 18:41	124-48-1	
Dichlorodifluoromethane	**<0.022**	mg/kg	0.27	0.022	1	07/03/19 11:42	07/03/19 18:41	75-71-8	
Ethylbenzene	**<0.0037**	mg/kg	0.067	0.0037	1	07/03/19 11:42	07/03/19 18:41	100-41-4	
Hexachloro-1,3-butadiene	**<0.016**	mg/kg	0.34	0.016	1	07/03/19 11:42	07/03/19 18:41	87-68-3	
Methyl-tert-butyl ether	**<0.0080**	mg/kg	0.067	0.0080	1	07/03/19 11:42	07/03/19 18:41	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.27	0.13	1	07/03/19 11:42	07/03/19 18:41	75-09-2	
Naphthalene	**<0.063**	mg/kg	0.27	0.063	1	07/03/19 11:42	07/03/19 18:41	91-20-3	
Styrene	**<0.0031**	mg/kg	0.067	0.0031	1	07/03/19 11:42	07/03/19 18:41	100-42-5	
Tetrachloroethene	**<0.024**	mg/kg	0.067	0.024	1	07/03/19 11:42	07/03/19 18:41	127-18-4	
Tetrahydrofuran	**<0.098**	mg/kg	2.7	0.098	1	07/03/19 11:42	07/03/19 18:41	109-99-9	
Toluene	**<0.016**	mg/kg	0.067	0.016	1	07/03/19 11:42	07/03/19 18:41	108-88-3	
Trichloroethene	**<0.010**	mg/kg	0.067	0.010	1	07/03/19 11:42	07/03/19 18:41	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.27	0.12	1	07/03/19 11:42	07/03/19 18:41	75-69-4	
Vinyl acetate	**<0.0078**	mg/kg	0.67	0.0078	1	07/03/19 11:42	07/03/19 18:41	108-05-4	
Vinyl chloride	**<0.013**	mg/kg	0.027	0.013	1	07/03/19 11:42	07/03/19 18:41	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-30' **Lab ID: 10480346028** Collected: 06/20/19 10:30 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.011**	mg/kg	0.067	0.011	1	07/03/19 11:42	07/03/19 18:41	156-59-2	
cis-1,3-Dichloropropene	**<0.0097**	mg/kg	0.067	0.0097	1	07/03/19 11:42	07/03/19 18:41	10061-01-5	
m&p-Xylene	**<0.0084**	mg/kg	0.13	0.0084	1	07/03/19 11:42	07/03/19 18:41	179601-23-1	
o-Xylene	**<0.016**	mg/kg	0.067	0.016	1	07/03/19 11:42	07/03/19 18:41	95-47-6	
trans-1,2-Dichloroethene	**<0.032**	mg/kg	0.067	0.032	1	07/03/19 11:42	07/03/19 18:41	156-60-5	
trans-1,3-Dichloropropene	**<0.0094**	mg/kg	0.067	0.0094	1	07/03/19 11:42	07/03/19 18:41	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	123	%.	75-125		1	07/03/19 11:42	07/03/19 18:41	17060-07-0	
Toluene-d8 (S)	104	%.	75-125		1	07/03/19 11:42	07/03/19 18:41	2037-26-5	
4-Bromofluorobenzene (S)	109	%.	75-125		1	07/03/19 11:42	07/03/19 18:41	460-00-4	

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-35' **Lab ID: 10480346029** Collected: 06/20/19 10:55 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**35.9**	%	0.10	0.10	1		07/05/19 12:43		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.036**	mg/kg	0.078	0.036	1	07/03/19 11:42	07/03/19 19:01	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.014**	mg/kg	0.078	0.014	1	07/03/19 11:42	07/03/19 19:01	79-34-5	
1,1,2-Trichloroethane	**<0.0093**	mg/kg	0.078	0.0093	1	07/03/19 11:42	07/03/19 19:01	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.091**	mg/kg	0.31	0.091	1	07/03/19 11:42	07/03/19 19:01	76-13-1	
1,1-Dichloroethane	**<0.0088**	mg/kg	0.078	0.0088	1	07/03/19 11:42	07/03/19 19:01	75-34-3	
1,1-Dichloroethene	**<0.023**	mg/kg	0.078	0.023	1	07/03/19 11:42	07/03/19 19:01	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.078	0.017	1	07/03/19 11:42	07/03/19 19:01	120-82-1	
1,2,4-Trimethylbenzene	**<0.016**	mg/kg	0.078	0.016	1	07/03/19 11:42	07/03/19 19:01	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0082**	mg/kg	0.078	0.0082	1	07/03/19 11:42	07/03/19 19:01	106-93-4	
1,2-Dichlorobenzene	**<0.0032**	mg/kg	0.078	0.0032	1	07/03/19 11:42	07/03/19 19:01	95-50-1	
1,2-Dichloroethane	**<0.0086**	mg/kg	0.078	0.0086	1	07/03/19 11:42	07/03/19 19:01	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.078	0.012	1	07/03/19 11:42	07/03/19 19:01	108-67-8	
1,3-Dichlorobenzene	**<0.0028**	mg/kg	0.078	0.0028	1	07/03/19 11:42	07/03/19 19:01	541-73-1	
1,4-Dichlorobenzene	**<0.0048**	mg/kg	0.078	0.0048	1	07/03/19 11:42	07/03/19 19:01	106-46-7	
2-Butanone (MEK)	**<0.042**	mg/kg	0.39	0.042	1	07/03/19 11:42	07/03/19 19:01	78-93-3	
2-Hexanone	**<0.018**	mg/kg	0.39	0.018	1	07/03/19 11:42	07/03/19 19:01	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.39	0.016	1	07/03/19 11:42	07/03/19 19:01	108-10-1	
Acetone	**<0.49**	mg/kg	1.6	0.49	1	07/03/19 11:42	07/03/19 19:01	67-64-1	
Benzene	**<0.0044**	mg/kg	0.031	0.0044	1	07/03/19 11:42	07/03/19 19:01	71-43-2	
Bromodichloromethane	**<0.027**	mg/kg	0.078	0.027	1	07/03/19 11:42	07/03/19 19:01	75-27-4	
Bromoform	**<0.12**	mg/kg	0.31	0.12	1	07/03/19 11:42	07/03/19 19:01	75-25-2	
Bromomethane	**<0.091**	mg/kg	0.78	0.091	1	07/03/19 11:42	07/03/19 19:01	74-83-9	
Carbon tetrachloride	**<0.037**	mg/kg	0.078	0.037	1	07/03/19 11:42	07/03/19 19:01	56-23-5	
Chlorobenzene	**<0.0044**	mg/kg	0.078	0.0044	1	07/03/19 11:42	07/03/19 19:01	108-90-7	
Chloroethane	**<0.041**	mg/kg	0.78	0.041	1	07/03/19 11:42	07/03/19 19:01	75-00-3	
Chloroform	**<0.039**	mg/kg	0.31	0.039	1	07/03/19 11:42	07/03/19 19:01	67-66-3	
Chloromethane	**<0.019**	mg/kg	0.31	0.019	1	07/03/19 11:42	07/03/19 19:01	74-87-3	
Dibromochloromethane	**<0.0091**	mg/kg	0.31	0.0091	1	07/03/19 11:42	07/03/19 19:01	124-48-1	
Dichlorodifluoromethane	**<0.025**	mg/kg	0.31	0.025	1	07/03/19 11:42	07/03/19 19:01	75-71-8	
Ethylbenzene	**<0.0043**	mg/kg	0.078	0.0043	1	07/03/19 11:42	07/03/19 19:01	100-41-4	
Hexachloro-1,3-butadiene	**<0.019**	mg/kg	0.39	0.019	1	07/03/19 11:42	07/03/19 19:01	87-68-3	
Methyl-tert-butyl ether	**<0.0093**	mg/kg	0.078	0.0093	1	07/03/19 11:42	07/03/19 19:01	1634-04-4	
Methylene Chloride	**<0.15**	mg/kg	0.31	0.15	1	07/03/19 11:42	07/03/19 19:01	75-09-2	
Naphthalene	**<0.073**	mg/kg	0.31	0.073	1	07/03/19 11:42	07/03/19 19:01	91-20-3	
Styrene	**<0.0036**	mg/kg	0.078	0.0036	1	07/03/19 11:42	07/03/19 19:01	100-42-5	
Tetrachloroethene	**<0.028**	mg/kg	0.078	0.028	1	07/03/19 11:42	07/03/19 19:01	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.1	0.11	1	07/03/19 11:42	07/03/19 19:01	109-99-9	
Toluene	**<0.019**	mg/kg	0.078	0.019	1	07/03/19 11:42	07/03/19 19:01	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.078	0.012	1	07/03/19 11:42	07/03/19 19:01	79-01-6	
Trichlorofluoromethane	**<0.14**	mg/kg	0.31	0.14	1	07/03/19 11:42	07/03/19 19:01	75-69-4	
Vinyl acetate	**<0.0091**	mg/kg	0.78	0.0091	1	07/03/19 11:42	07/03/19 19:01	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.031	0.015	1	07/03/19 11:42	07/03/19 19:01	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-35' **Lab ID: 10480346029** Collected: 06/20/19 10:55 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.078	0.013	1	07/03/19 11:42	07/03/19 19:01	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.078	0.011	1	07/03/19 11:42	07/03/19 19:01	10061-01-5	
m&p-Xylene	**<0.0097**	mg/kg	0.16	0.0097	1	07/03/19 11:42	07/03/19 19:01	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.078	0.018	1	07/03/19 11:42	07/03/19 19:01	95-47-6	
trans-1,2-Dichloroethene	**<0.037**	mg/kg	0.078	0.037	1	07/03/19 11:42	07/03/19 19:01	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.078	0.011	1	07/03/19 11:42	07/03/19 19:01	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	123	%.	75-125		1	07/03/19 11:42	07/03/19 19:01	17060-07-0	
Toluene-d8 (S)	104	%.	75-125		1	07/03/19 11:42	07/03/19 19:01	2037-26-5	
4-Bromofluorobenzene (S)	107	%.	75-125		1	07/03/19 11:42	07/03/19 19:01	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-40' **Lab ID: 10480346030** Collected: 06/20/19 11:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**30.0**	%	0.10	0.10	1		07/05/19 12:43		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.037**	mg/kg	0.079	0.037	1	07/03/19 11:42	07/03/19 19:20	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.014**	mg/kg	0.079	0.014	1	07/03/19 11:42	07/03/19 19:20	79-34-5	
1,1,2-Trichloroethane	**<0.0094**	mg/kg	0.079	0.0094	1	07/03/19 11:42	07/03/19 19:20	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.091**	mg/kg	0.32	0.091	1	07/03/19 11:42	07/03/19 19:20	76-13-1	
1,1-Dichloroethane	**<0.0088**	mg/kg	0.079	0.0088	1	07/03/19 11:42	07/03/19 19:20	75-34-3	
1,1-Dichloroethene	**<0.024**	mg/kg	0.079	0.024	1	07/03/19 11:42	07/03/19 19:20	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.079	0.017	1	07/03/19 11:42	07/03/19 19:20	120-82-1	
1,2,4-Trimethylbenzene	**<0.016**	mg/kg	0.079	0.016	1	07/03/19 11:42	07/03/19 19:20	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0083**	mg/kg	0.079	0.0083	1	07/03/19 11:42	07/03/19 19:20	106-93-4	
1,2-Dichlorobenzene	**<0.0032**	mg/kg	0.079	0.0032	1	07/03/19 11:42	07/03/19 19:20	95-50-1	
1,2-Dichloroethane	**<0.0087**	mg/kg	0.079	0.0087	1	07/03/19 11:42	07/03/19 19:20	107-06-2	
1,3,5-Trimethylbenzene	**<0.013**	mg/kg	0.079	0.013	1	07/03/19 11:42	07/03/19 19:20	108-67-8	
1,3-Dichlorobenzene	**<0.0029**	mg/kg	0.079	0.0029	1	07/03/19 11:42	07/03/19 19:20	541-73-1	
1,4-Dichlorobenzene	**<0.0049**	mg/kg	0.079	0.0049	1	07/03/19 11:42	07/03/19 19:20	106-46-7	
2-Butanone (MEK)	**<0.042**	mg/kg	0.39	0.042	1	07/03/19 11:42	07/03/19 19:20	78-93-3	
2-Hexanone	**<0.018**	mg/kg	0.39	0.018	1	07/03/19 11:42	07/03/19 19:20	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.39	0.016	1	07/03/19 11:42	07/03/19 19:20	108-10-1	
Acetone	**<0.49**	mg/kg	1.6	0.49	1	07/03/19 11:42	07/03/19 19:20	67-64-1	
Benzene	**<0.0044**	mg/kg	0.032	0.0044	1	07/03/19 11:42	07/03/19 19:20	71-43-2	
Bromodichloromethane	**<0.027**	mg/kg	0.079	0.027	1	07/03/19 11:42	07/03/19 19:20	75-27-4	
Bromoform	**<0.12**	mg/kg	0.32	0.12	1	07/03/19 11:42	07/03/19 19:20	75-25-2	
Bromomethane	**<0.092**	mg/kg	0.79	0.092	1	07/03/19 11:42	07/03/19 19:20	74-83-9	
Carbon tetrachloride	**<0.038**	mg/kg	0.079	0.038	1	07/03/19 11:42	07/03/19 19:20	56-23-5	
Chlorobenzene	**<0.0044**	mg/kg	0.079	0.0044	1	07/03/19 11:42	07/03/19 19:20	108-90-7	
Chloroethane	**<0.041**	mg/kg	0.79	0.041	1	07/03/19 11:42	07/03/19 19:20	75-00-3	
Chloroform	**<0.039**	mg/kg	0.32	0.039	1	07/03/19 11:42	07/03/19 19:20	67-66-3	
Chloromethane	**<0.019**	mg/kg	0.32	0.019	1	07/03/19 11:42	07/03/19 19:20	74-87-3	
Dibromochloromethane	**<0.0091**	mg/kg	0.32	0.0091	1	07/03/19 11:42	07/03/19 19:20	124-48-1	
Dichlorodifluoromethane	**<0.026**	mg/kg	0.32	0.026	1	07/03/19 11:42	07/03/19 19:20	75-71-8	
Ethylbenzene	**<0.0043**	mg/kg	0.079	0.0043	1	07/03/19 11:42	07/03/19 19:20	100-41-4	
Hexachloro-1,3-butadiene	**<0.019**	mg/kg	0.39	0.019	1	07/03/19 11:42	07/03/19 19:20	87-68-3	
Methyl-tert-butyl ether	**<0.0094**	mg/kg	0.079	0.0094	1	07/03/19 11:42	07/03/19 19:20	1634-04-4	
Methylene Chloride	**<0.15**	mg/kg	0.32	0.15	1	07/03/19 11:42	07/03/19 19:20	75-09-2	
Naphthalene	**<0.074**	mg/kg	0.32	0.074	1	07/03/19 11:42	07/03/19 19:20	91-20-3	
Styrene	**<0.0036**	mg/kg	0.079	0.0036	1	07/03/19 11:42	07/03/19 19:20	100-42-5	
Tetrachloroethene	**<0.028**	mg/kg	0.079	0.028	1	07/03/19 11:42	07/03/19 19:20	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.2	0.11	1	07/03/19 11:42	07/03/19 19:20	109-99-9	
Toluene	**<0.019**	mg/kg	0.079	0.019	1	07/03/19 11:42	07/03/19 19:20	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.079	0.012	1	07/03/19 11:42	07/03/19 19:20	79-01-6	
Trichlorofluoromethane	**<0.14**	mg/kg	0.32	0.14	1	07/03/19 11:42	07/03/19 19:20	75-69-4	
Vinyl acetate	**<0.0091**	mg/kg	0.79	0.0091	1	07/03/19 11:42	07/03/19 19:20	108-05-4	
Vinyl chloride	**<0.016**	mg/kg	0.032	0.016	1	07/03/19 11:42	07/03/19 19:20	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-40' **Lab ID: 10480346030** Collected: 06/20/19 11:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.079	0.013	1	07/03/19 11:42	07/03/19 19:20	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.079	0.011	1	07/03/19 11:42	07/03/19 19:20	10061-01-5	
m&p-Xylene	**<0.0098**	mg/kg	0.16	0.0098	1	07/03/19 11:42	07/03/19 19:20	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.079	0.018	1	07/03/19 11:42	07/03/19 19:20	95-47-6	
trans-1,2-Dichloroethene	**<0.037**	mg/kg	0.079	0.037	1	07/03/19 11:42	07/03/19 19:20	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.079	0.011	1	07/03/19 11:42	07/03/19 19:20	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	121	%.	75-125		1	07/03/19 11:42	07/03/19 19:20	17060-07-0	
Toluene-d8 (S)	104	%.	75-125		1	07/03/19 11:42	07/03/19 19:20	2037-26-5	
4-Bromofluorobenzene (S)	107	%.	75-125		1	07/03/19 11:42	07/03/19 19:20	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-45' **Lab ID: 10480346031** Collected: 06/20/19 11:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**29.7**	%	0.10	0.10	1		07/05/19 12:43		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.035**	mg/kg	0.076	0.035	1	07/03/19 11:42	07/03/19 19:40	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.076	0.013	1	07/03/19 11:42	07/03/19 19:40	79-34-5	
1,1,2-Trichloroethane	**<0.0091**	mg/kg	0.076	0.0091	1	07/03/19 11:42	07/03/19 19:40	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.088**	mg/kg	0.30	0.088	1	07/03/19 11:42	07/03/19 19:40	76-13-1	
1,1-Dichloroethane	**<0.0085**	mg/kg	0.076	0.0085	1	07/03/19 11:42	07/03/19 19:40	75-34-3	
1,1-Dichloroethene	**<0.023**	mg/kg	0.076	0.023	1	07/03/19 11:42	07/03/19 19:40	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.076	0.017	1	07/03/19 11:42	07/03/19 19:40	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.076	0.015	1	07/03/19 11:42	07/03/19 19:40	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0080**	mg/kg	0.076	0.0080	1	07/03/19 11:42	07/03/19 19:40	106-93-4	
1,2-Dichlorobenzene	**<0.0031**	mg/kg	0.076	0.0031	1	07/03/19 11:42	07/03/19 19:40	95-50-1	
1,2-Dichloroethane	**<0.0083**	mg/kg	0.076	0.0083	1	07/03/19 11:42	07/03/19 19:40	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.076	0.012	1	07/03/19 11:42	07/03/19 19:40	108-67-8	
1,3-Dichlorobenzene	**<0.0028**	mg/kg	0.076	0.0028	1	07/03/19 11:42	07/03/19 19:40	541-73-1	
1,4-Dichlorobenzene	**<0.0047**	mg/kg	0.076	0.0047	1	07/03/19 11:42	07/03/19 19:40	106-46-7	
2-Butanone (MEK)	**<0.040**	mg/kg	0.38	0.040	1	07/03/19 11:42	07/03/19 19:40	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.38	0.017	1	07/03/19 11:42	07/03/19 19:40	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.38	0.016	1	07/03/19 11:42	07/03/19 19:40	108-10-1	
Acetone	**<0.47**	mg/kg	1.5	0.47	1	07/03/19 11:42	07/03/19 19:40	67-64-1	
Benzene	**<0.0043**	mg/kg	0.030	0.0043	1	07/03/19 11:42	07/03/19 19:40	71-43-2	
Bromodichloromethane	**<0.026**	mg/kg	0.076	0.026	1	07/03/19 11:42	07/03/19 19:40	75-27-4	
Bromoform	**<0.11**	mg/kg	0.30	0.11	1	07/03/19 11:42	07/03/19 19:40	75-25-2	
Bromomethane	**<0.089**	mg/kg	0.76	0.089	1	07/03/19 11:42	07/03/19 19:40	74-83-9	
Carbon tetrachloride	**<0.036**	mg/kg	0.076	0.036	1	07/03/19 11:42	07/03/19 19:40	56-23-5	
Chlorobenzene	**<0.0043**	mg/kg	0.076	0.0043	1	07/03/19 11:42	07/03/19 19:40	108-90-7	
Chloroethane	**<0.039**	mg/kg	0.76	0.039	1	07/03/19 11:42	07/03/19 19:40	75-00-3	
Chloroform	**<0.038**	mg/kg	0.30	0.038	1	07/03/19 11:42	07/03/19 19:40	67-66-3	
Chloromethane	**<0.018**	mg/kg	0.30	0.018	1	07/03/19 11:42	07/03/19 19:40	74-87-3	
Dibromochloromethane	**<0.0088**	mg/kg	0.30	0.0088	1	07/03/19 11:42	07/03/19 19:40	124-48-1	
Dichlorodifluoromethane	**<0.025**	mg/kg	0.30	0.025	1	07/03/19 11:42	07/03/19 19:40	75-71-8	
Ethylbenzene	**<0.0041**	mg/kg	0.076	0.0041	1	07/03/19 11:42	07/03/19 19:40	100-41-4	
Hexachloro-1,3-butadiene	**<0.019**	mg/kg	0.38	0.019	1	07/03/19 11:42	07/03/19 19:40	87-68-3	
Methyl-tert-butyl ether	**<0.0090**	mg/kg	0.076	0.0090	1	07/03/19 11:42	07/03/19 19:40	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.30	0.14	1	07/03/19 11:42	07/03/19 19:40	75-09-2	
Naphthalene	**<0.071**	mg/kg	0.30	0.071	1	07/03/19 11:42	07/03/19 19:40	91-20-3	
Styrene	**<0.0035**	mg/kg	0.076	0.0035	1	07/03/19 11:42	07/03/19 19:40	100-42-5	
Tetrachloroethene	**<0.027**	mg/kg	0.076	0.027	1	07/03/19 11:42	07/03/19 19:40	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.0	0.11	1	07/03/19 11:42	07/03/19 19:40	109-99-9	
Toluene	**<0.019**	mg/kg	0.076	0.019	1	07/03/19 11:42	07/03/19 19:40	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.076	0.012	1	07/03/19 11:42	07/03/19 19:40	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.30	0.13	1	07/03/19 11:42	07/03/19 19:40	75-69-4	
Vinyl acetate	**<0.0088**	mg/kg	0.76	0.0088	1	07/03/19 11:42	07/03/19 19:40	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.030	0.015	1	07/03/19 11:42	07/03/19 19:40	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-45' **Lab ID: 10480346031** Collected: 06/20/19 11:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.076	0.013	1	07/03/19 11:42	07/03/19 19:40	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.076	0.011	1	07/03/19 11:42	07/03/19 19:40	10061-01-5	
m&p-Xylene	**<0.0094**	mg/kg	0.15	0.0094	1	07/03/19 11:42	07/03/19 19:40	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.076	0.018	1	07/03/19 11:42	07/03/19 19:40	95-47-6	
trans-1,2-Dichloroethene	**<0.035**	mg/kg	0.076	0.035	1	07/03/19 11:42	07/03/19 19:40	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.076	0.011	1	07/03/19 11:42	07/03/19 19:40	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	122	%.	75-125		1	07/03/19 11:42	07/03/19 19:40	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1	07/03/19 11:42	07/03/19 19:40	2037-26-5	
4-Bromofluorobenzene (S)	110	%.	75-125		1	07/03/19 11:42	07/03/19 19:40	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-50' **Lab ID: 10480346032** Collected: 06/20/19 11:35 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**22.1**	%	0.10	0.10	1		07/05/19 12:43		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.031**	mg/kg	0.067	0.031	1	07/03/19 11:42	07/03/19 17:24	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.012**	mg/kg	0.067	0.012	1	07/03/19 11:42	07/03/19 17:24	79-34-5	
1,1,2-Trichloroethane	**<0.0080**	mg/kg	0.067	0.0080	1	07/03/19 11:42	07/03/19 17:24	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.077**	mg/kg	0.27	0.077	1	07/03/19 11:42	07/03/19 17:24	76-13-1	
1,1-Dichloroethane	**<0.0075**	mg/kg	0.067	0.0075	1	07/03/19 11:42	07/03/19 17:24	75-34-3	
1,1-Dichloroethene	**<0.020**	mg/kg	0.067	0.020	1	07/03/19 11:42	07/03/19 17:24	75-35-4	
1,2,4-Trichlorobenzene	**<0.015**	mg/kg	0.067	0.015	1	07/03/19 11:42	07/03/19 17:24	120-82-1	
1,2,4-Trimethylbenzene	**<0.013**	mg/kg	0.067	0.013	1	07/03/19 11:42	07/03/19 17:24	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0070**	mg/kg	0.067	0.0070	1	07/03/19 11:42	07/03/19 17:24	106-93-4	
1,2-Dichlorobenzene	**<0.0027**	mg/kg	0.067	0.0027	1	07/03/19 11:42	07/03/19 17:24	95-50-1	
1,2-Dichloroethane	**<0.0073**	mg/kg	0.067	0.0073	1	07/03/19 11:42	07/03/19 17:24	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.067	0.011	1	07/03/19 11:42	07/03/19 17:24	108-67-8	
1,3-Dichlorobenzene	**<0.0024**	mg/kg	0.067	0.0024	1	07/03/19 11:42	07/03/19 17:24	541-73-1	
1,4-Dichlorobenzene	**<0.0041**	mg/kg	0.067	0.0041	1	07/03/19 11:42	07/03/19 17:24	106-46-7	
2-Butanone (MEK)	**<0.035**	mg/kg	0.33	0.035	1	07/03/19 11:42	07/03/19 17:24	78-93-3	
2-Hexanone	**<0.015**	mg/kg	0.33	0.015	1	07/03/19 11:42	07/03/19 17:24	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.014**	mg/kg	0.33	0.014	1	07/03/19 11:42	07/03/19 17:24	108-10-1	
Acetone	**<0.41**	mg/kg	1.3	0.41	1	07/03/19 11:42	07/03/19 17:24	67-64-1	
Benzene	**<0.0038**	mg/kg	0.027	0.0038	1	07/03/19 11:42	07/03/19 17:24	71-43-2	
Bromodichloromethane	**<0.023**	mg/kg	0.067	0.023	1	07/03/19 11:42	07/03/19 17:24	75-27-4	
Bromoform	**<0.10**	mg/kg	0.27	0.10	1	07/03/19 11:42	07/03/19 17:24	75-25-2	
Bromomethane	**<0.078**	mg/kg	0.67	0.078	1	07/03/19 11:42	07/03/19 17:24	74-83-9	
Carbon tetrachloride	**<0.032**	mg/kg	0.067	0.032	1	07/03/19 11:42	07/03/19 17:24	56-23-5	
Chlorobenzene	**<0.0038**	mg/kg	0.067	0.0038	1	07/03/19 11:42	07/03/19 17:24	108-90-7	
Chloroethane	**<0.035**	mg/kg	0.67	0.035	1	07/03/19 11:42	07/03/19 17:24	75-00-3	
Chloroform	**<0.033**	mg/kg	0.27	0.033	1	07/03/19 11:42	07/03/19 17:24	67-66-3	
Chloromethane	**<0.016**	mg/kg	0.27	0.016	1	07/03/19 11:42	07/03/19 17:24	74-87-3	
Dibromochloromethane	**<0.0077**	mg/kg	0.27	0.0077	1	07/03/19 11:42	07/03/19 17:24	124-48-1	
Dichlorodifluoromethane	**<0.022**	mg/kg	0.27	0.022	1	07/03/19 11:42	07/03/19 17:24	75-71-8	
Ethylbenzene	**<0.0036**	mg/kg	0.067	0.0036	1	07/03/19 11:42	07/03/19 17:24	100-41-4	
Hexachloro-1,3-butadiene	**<0.016**	mg/kg	0.33	0.016	1	07/03/19 11:42	07/03/19 17:24	87-68-3	
Methyl-tert-butyl ether	**<0.0079**	mg/kg	0.067	0.0079	1	07/03/19 11:42	07/03/19 17:24	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.27	0.13	1	07/03/19 11:42	07/03/19 17:24	75-09-2	
Naphthalene	**<0.062**	mg/kg	0.27	0.062	1	07/03/19 11:42	07/03/19 17:24	91-20-3	
Styrene	**<0.0030**	mg/kg	0.067	0.0030	1	07/03/19 11:42	07/03/19 17:24	100-42-5	
Tetrachloroethene	**<0.023**	mg/kg	0.067	0.023	1	07/03/19 11:42	07/03/19 17:24	127-18-4	
Tetrahydrofuran	**<0.097**	mg/kg	2.7	0.097	1	07/03/19 11:42	07/03/19 17:24	109-99-9	
Toluene	**<0.016**	mg/kg	0.067	0.016	1	07/03/19 11:42	07/03/19 17:24	108-88-3	
Trichloroethene	**<0.010**	mg/kg	0.067	0.010	1	07/03/19 11:42	07/03/19 17:24	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.27	0.12	1	07/03/19 11:42	07/03/19 17:24	75-69-4	
Vinyl acetate	**<0.0077**	mg/kg	0.67	0.0077	1	07/03/19 11:42	07/03/19 17:24	108-05-4	
Vinyl chloride	**<0.013**	mg/kg	0.027	0.013	1	07/03/19 11:42	07/03/19 17:24	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-50' **Lab ID: 10480346032** Collected: 06/20/19 11:35 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.011**	mg/kg	0.067	0.011	1	07/03/19 11:42	07/03/19 17:24	156-59-2	
cis-1,3-Dichloropropene	**<0.0095**	mg/kg	0.067	0.0095	1	07/03/19 11:42	07/03/19 17:24	10061-01-5	
m&p-Xylene	**<0.0082**	mg/kg	0.13	0.0082	1	07/03/19 11:42	07/03/19 17:24	179601-23-1	
o-Xylene	**<0.015**	mg/kg	0.067	0.015	1	07/03/19 11:42	07/03/19 17:24	95-47-6	
trans-1,2-Dichloroethene	**<0.031**	mg/kg	0.067	0.031	1	07/03/19 11:42	07/03/19 17:24	156-60-5	
trans-1,3-Dichloropropene	**<0.0092**	mg/kg	0.067	0.0092	1	07/03/19 11:42	07/03/19 17:24	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	124	%.	75-125		1	07/03/19 11:42	07/03/19 17:24	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1	07/03/19 11:42	07/03/19 17:24	2037-26-5	
4-Bromofluorobenzene (S)	109	%.	75-125		1	07/03/19 11:42	07/03/19 17:24	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-55' **Lab ID: 10480346033** Collected: 06/20/19 11:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**32.0**	%	0.10	0.10	1		07/05/19 12:44		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.038**	mg/kg	0.081	0.038	1	07/03/19 11:42	07/03/19 19:59	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.014**	mg/kg	0.081	0.014	1	07/03/19 11:42	07/03/19 19:59	79-34-5	
1,1,2-Trichloroethane	**<0.0097**	mg/kg	0.081	0.0097	1	07/03/19 11:42	07/03/19 19:59	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.094**	mg/kg	0.32	0.094	1	07/03/19 11:42	07/03/19 19:59	76-13-1	
1,1-Dichloroethane	**<0.0091**	mg/kg	0.081	0.0091	1	07/03/19 11:42	07/03/19 19:59	75-34-3	
1,1-Dichloroethene	**<0.024**	mg/kg	0.081	0.024	1	07/03/19 11:42	07/03/19 19:59	75-35-4	
1,2,4-Trichlorobenzene	**<0.018**	mg/kg	0.081	0.018	1	07/03/19 11:42	07/03/19 19:59	120-82-1	
1,2,4-Trimethylbenzene	**<0.016**	mg/kg	0.081	0.016	1	07/03/19 11:42	07/03/19 19:59	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0085**	mg/kg	0.081	0.0085	1	07/03/19 11:42	07/03/19 19:59	106-93-4	
1,2-Dichlorobenzene	**<0.0033**	mg/kg	0.081	0.0033	1	07/03/19 11:42	07/03/19 19:59	95-50-1	
1,2-Dichloroethane	**<0.0089**	mg/kg	0.081	0.0089	1	07/03/19 11:42	07/03/19 19:59	107-06-2	
1,3,5-Trimethylbenzene	**<0.013**	mg/kg	0.081	0.013	1	07/03/19 11:42	07/03/19 19:59	108-67-8	
1,3-Dichlorobenzene	**<0.0029**	mg/kg	0.081	0.0029	1	07/03/19 11:42	07/03/19 19:59	541-73-1	
1,4-Dichlorobenzene	**<0.0050**	mg/kg	0.081	0.0050	1	07/03/19 11:42	07/03/19 19:59	106-46-7	
2-Butanone (MEK)	**<0.043**	mg/kg	0.40	0.043	1	07/03/19 11:42	07/03/19 19:59	78-93-3	
2-Hexanone	**<0.019**	mg/kg	0.40	0.019	1	07/03/19 11:42	07/03/19 19:59	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.017**	mg/kg	0.40	0.017	1	07/03/19 11:42	07/03/19 19:59	108-10-1	
Acetone	**<0.50**	mg/kg	1.6	0.50	1	07/03/19 11:42	07/03/19 19:59	67-64-1	
Benzene	**<0.0046**	mg/kg	0.032	0.0046	1	07/03/19 11:42	07/03/19 19:59	71-43-2	
Bromodichloromethane	**<0.028**	mg/kg	0.081	0.028	1	07/03/19 11:42	07/03/19 19:59	75-27-4	
Bromoform	**<0.12**	mg/kg	0.32	0.12	1	07/03/19 11:42	07/03/19 19:59	75-25-2	
Bromomethane	**<0.095**	mg/kg	0.81	0.095	1	07/03/19 11:42	07/03/19 19:59	74-83-9	
Carbon tetrachloride	**<0.039**	mg/kg	0.081	0.039	1	07/03/19 11:42	07/03/19 19:59	56-23-5	
Chlorobenzene	**<0.0046**	mg/kg	0.081	0.0046	1	07/03/19 11:42	07/03/19 19:59	108-90-7	
Chloroethane	**<0.042**	mg/kg	0.81	0.042	1	07/03/19 11:42	07/03/19 19:59	75-00-3	
Chloroform	**<0.040**	mg/kg	0.32	0.040	1	07/03/19 11:42	07/03/19 19:59	67-66-3	
Chloromethane	**<0.019**	mg/kg	0.32	0.019	1	07/03/19 11:42	07/03/19 19:59	74-87-3	
Dibromochloromethane	**<0.0094**	mg/kg	0.32	0.0094	1	07/03/19 11:42	07/03/19 19:59	124-48-1	
Dichlorodifluoromethane	**<0.026**	mg/kg	0.32	0.026	1	07/03/19 11:42	07/03/19 19:59	75-71-8	
Ethylbenzene	**<0.0044**	mg/kg	0.081	0.0044	1	07/03/19 11:42	07/03/19 19:59	100-41-4	
Hexachloro-1,3-butadiene	**<0.020**	mg/kg	0.40	0.020	1	07/03/19 11:42	07/03/19 19:59	87-68-3	
Methyl-tert-butyl ether	**<0.0096**	mg/kg	0.081	0.0096	1	07/03/19 11:42	07/03/19 19:59	1634-04-4	
Methylene Chloride	**<0.15**	mg/kg	0.32	0.15	1	07/03/19 11:42	07/03/19 19:59	75-09-2	
Naphthalene	**<0.076**	mg/kg	0.32	0.076	1	07/03/19 11:42	07/03/19 19:59	91-20-3	
Styrene	**<0.0037**	mg/kg	0.081	0.0037	1	07/03/19 11:42	07/03/19 19:59	100-42-5	
Tetrachloroethene	**<0.028**	mg/kg	0.081	0.028	1	07/03/19 11:42	07/03/19 19:59	127-18-4	
Tetrahydrofuran	**<0.12**	mg/kg	3.2	0.12	1	07/03/19 11:42	07/03/19 19:59	109-99-9	
Toluene	**<0.020**	mg/kg	0.081	0.020	1	07/03/19 11:42	07/03/19 19:59	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.081	0.012	1	07/03/19 11:42	07/03/19 19:59	79-01-6	
Trichlorofluoromethane	**<0.14**	mg/kg	0.32	0.14	1	07/03/19 11:42	07/03/19 19:59	75-69-4	
Vinyl acetate	**<0.0094**	mg/kg	0.81	0.0094	1	07/03/19 11:42	07/03/19 19:59	108-05-4	
Vinyl chloride	**<0.016**	mg/kg	0.032	0.016	1	07/03/19 11:42	07/03/19 19:59	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-55' **Lab ID: 10480346033** Collected: 06/20/19 11:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.081	0.013	1	07/03/19 11:42	07/03/19 19:59	156-59-2	
cis-1,3-Dichloropropene	**<0.012**	mg/kg	0.081	0.012	1	07/03/19 11:42	07/03/19 19:59	10061-01-5	
m&p-Xylene	**<0.010**	mg/kg	0.16	0.010	1	07/03/19 11:42	07/03/19 19:59	179601-23-1	
o-Xylene	**<0.019**	mg/kg	0.081	0.019	1	07/03/19 11:42	07/03/19 19:59	95-47-6	
trans-1,2-Dichloroethene	**<0.038**	mg/kg	0.081	0.038	1	07/03/19 11:42	07/03/19 19:59	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.081	0.011	1	07/03/19 11:42	07/03/19 19:59	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	126	%.	75-125		1	07/03/19 11:42	07/03/19 19:59	17060-07-0	S3
Toluene-d8 (S)	103	%.	75-125		1	07/03/19 11:42	07/03/19 19:59	2037-26-5	
4-Bromofluorobenzene (S)	108	%.	75-125		1	07/03/19 11:42	07/03/19 19:59	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-60' **Lab ID: 10480346034** Collected: 06/20/19 12:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**36.8**	%	0.10	0.10	1		07/05/19 12:44		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.038**	mg/kg	0.082	0.038	1	07/03/19 11:42	07/03/19 20:19	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.014**	mg/kg	0.082	0.014	1	07/03/19 11:42	07/03/19 20:19	79-34-5	
1,1,2-Trichloroethane	**<0.0098**	mg/kg	0.082	0.0098	1	07/03/19 11:42	07/03/19 20:19	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.095**	mg/kg	0.33	0.095	1	07/03/19 11:42	07/03/19 20:19	76-13-1	
1,1-Dichloroethane	**<0.0092**	mg/kg	0.082	0.0092	1	07/03/19 11:42	07/03/19 20:19	75-34-3	
1,1-Dichloroethene	**<0.025**	mg/kg	0.082	0.025	1	07/03/19 11:42	07/03/19 20:19	75-35-4	
1,2,4-Trichlorobenzene	**<0.018**	mg/kg	0.082	0.018	1	07/03/19 11:42	07/03/19 20:19	120-82-1	
1,2,4-Trimethylbenzene	**<0.016**	mg/kg	0.082	0.016	1	07/03/19 11:42	07/03/19 20:19	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0086**	mg/kg	0.082	0.0086	1	07/03/19 11:42	07/03/19 20:19	106-93-4	
1,2-Dichlorobenzene	**<0.0033**	mg/kg	0.082	0.0033	1	07/03/19 11:42	07/03/19 20:19	95-50-1	
1,2-Dichloroethane	**<0.0090**	mg/kg	0.082	0.0090	1	07/03/19 11:42	07/03/19 20:19	107-06-2	
1,3,5-Trimethylbenzene	**<0.013**	mg/kg	0.082	0.013	1	07/03/19 11:42	07/03/19 20:19	108-67-8	
1,3-Dichlorobenzene	**<0.0030**	mg/kg	0.082	0.0030	1	07/03/19 11:42	07/03/19 20:19	541-73-1	
1,4-Dichlorobenzene	**<0.0051**	mg/kg	0.082	0.0051	1	07/03/19 11:42	07/03/19 20:19	106-46-7	
2-Butanone (MEK)	**<0.044**	mg/kg	0.41	0.044	1	07/03/19 11:42	07/03/19 20:19	78-93-3	
2-Hexanone	**<0.019**	mg/kg	0.41	0.019	1	07/03/19 11:42	07/03/19 20:19	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.017**	mg/kg	0.41	0.017	1	07/03/19 11:42	07/03/19 20:19	108-10-1	
Acetone	**<0.51**	mg/kg	1.6	0.51	1	07/03/19 11:42	07/03/19 20:19	67-64-1	
Benzene	**<0.0046**	mg/kg	0.033	0.0046	1	07/03/19 11:42	07/03/19 20:19	71-43-2	
Bromodichloromethane	**<0.028**	mg/kg	0.082	0.028	1	07/03/19 11:42	07/03/19 20:19	75-27-4	
Bromoform	**<0.12**	mg/kg	0.33	0.12	1	07/03/19 11:42	07/03/19 20:19	75-25-2	
Bromomethane	**<0.096**	mg/kg	0.82	0.096	1	07/03/19 11:42	07/03/19 20:19	74-83-9	
Carbon tetrachloride	**<0.039**	mg/kg	0.082	0.039	1	07/03/19 11:42	07/03/19 20:19	56-23-5	
Chlorobenzene	**<0.0046**	mg/kg	0.082	0.0046	1	07/03/19 11:42	07/03/19 20:19	108-90-7	
Chloroethane	**<0.043**	mg/kg	0.82	0.043	1	07/03/19 11:42	07/03/19 20:19	75-00-3	
Chloroform	**0.043J**	mg/kg	0.33	0.041	1	07/03/19 11:42	07/03/19 20:19	67-66-3	
Chloromethane	**<0.020**	mg/kg	0.33	0.020	1	07/03/19 11:42	07/03/19 20:19	74-87-3	
Dibromochloromethane	**<0.0095**	mg/kg	0.33	0.0095	1	07/03/19 11:42	07/03/19 20:19	124-48-1	
Dichlorodifluoromethane	**<0.027**	mg/kg	0.33	0.027	1	07/03/19 11:42	07/03/19 20:19	75-71-8	
Ethylbenzene	**<0.0045**	mg/kg	0.082	0.0045	1	07/03/19 11:42	07/03/19 20:19	100-41-4	
Hexachloro-1,3-butadiene	**<0.020**	mg/kg	0.41	0.020	1	07/03/19 11:42	07/03/19 20:19	87-68-3	
Methyl-tert-butyl ether	**<0.0097**	mg/kg	0.082	0.0097	1	07/03/19 11:42	07/03/19 20:19	1634-04-4	
Methylene Chloride	**<0.15**	mg/kg	0.33	0.15	1	07/03/19 11:42	07/03/19 20:19	75-09-2	
Naphthalene	**<0.077**	mg/kg	0.33	0.077	1	07/03/19 11:42	07/03/19 20:19	91-20-3	
Styrene	**<0.0037**	mg/kg	0.082	0.0037	1	07/03/19 11:42	07/03/19 20:19	100-42-5	
Tetrachloroethene	**<0.029**	mg/kg	0.082	0.029	1	07/03/19 11:42	07/03/19 20:19	127-18-4	
Tetrahydrofuran	**<0.12**	mg/kg	3.3	0.12	1	07/03/19 11:42	07/03/19 20:19	109-99-9	
Toluene	**<0.020**	mg/kg	0.082	0.020	1	07/03/19 11:42	07/03/19 20:19	108-88-3	
Trichloroethene	**<0.013**	mg/kg	0.082	0.013	1	07/03/19 11:42	07/03/19 20:19	79-01-6	
Trichlorofluoromethane	**<0.14**	mg/kg	0.33	0.14	1	07/03/19 11:42	07/03/19 20:19	75-69-4	
Vinyl acetate	**<0.0095**	mg/kg	0.82	0.0095	1	07/03/19 11:42	07/03/19 20:19	108-05-4	
Vinyl chloride	**<0.016**	mg/kg	0.033	0.016	1	07/03/19 11:42	07/03/19 20:19	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-60' **Lab ID: 10480346034** Collected: 06/20/19 12:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.014**	mg/kg	0.082	0.014	1	07/03/19 11:42	07/03/19 20:19	156-59-2	
cis-1,3-Dichloropropene	**<0.012**	mg/kg	0.082	0.012	1	07/03/19 11:42	07/03/19 20:19	10061-01-5	
m&p-Xylene	**<0.010**	mg/kg	0.16	0.010	1	07/03/19 11:42	07/03/19 20:19	179601-23-1	
o-Xylene	**<0.019**	mg/kg	0.082	0.019	1	07/03/19 11:42	07/03/19 20:19	95-47-6	
trans-1,2-Dichloroethene	**<0.038**	mg/kg	0.082	0.038	1	07/03/19 11:42	07/03/19 20:19	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.082	0.011	1	07/03/19 11:42	07/03/19 20:19	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	125	%.	75-125		1	07/03/19 11:42	07/03/19 20:19	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1	07/03/19 11:42	07/03/19 20:19	2037-26-5	
4-Bromofluorobenzene (S)	111	%.	75-125		1	07/03/19 11:42	07/03/19 20:19	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-65' **Lab ID: 10480346035** Collected: 06/20/19 12:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**36.2**	%	0.10	0.10	1		07/05/19 12:44		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.037**	mg/kg	0.080	0.037	1	07/03/19 11:42	07/03/19 20:38	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.014**	mg/kg	0.080	0.014	1	07/03/19 11:42	07/03/19 20:38	79-34-5	
1,1,2-Trichloroethane	**<0.0095**	mg/kg	0.080	0.0095	1	07/03/19 11:42	07/03/19 20:38	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.092**	mg/kg	0.32	0.092	1	07/03/19 11:42	07/03/19 20:38	76-13-1	
1,1-Dichloroethane	**<0.0089**	mg/kg	0.080	0.0089	1	07/03/19 11:42	07/03/19 20:38	75-34-3	
1,1-Dichloroethene	**<0.024**	mg/kg	0.080	0.024	1	07/03/19 11:42	07/03/19 20:38	75-35-4	
1,2,4-Trichlorobenzene	**<0.018**	mg/kg	0.080	0.018	1	07/03/19 11:42	07/03/19 20:38	120-82-1	
1,2,4-Trimethylbenzene	**<0.016**	mg/kg	0.080	0.016	1	07/03/19 11:42	07/03/19 20:38	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0084**	mg/kg	0.080	0.0084	1	07/03/19 11:42	07/03/19 20:38	106-93-4	
1,2-Dichlorobenzene	**<0.0032**	mg/kg	0.080	0.0032	1	07/03/19 11:42	07/03/19 20:38	95-50-1	
1,2-Dichloroethane	**<0.0088**	mg/kg	0.080	0.0088	1	07/03/19 11:42	07/03/19 20:38	107-06-2	
1,3,5-Trimethylbenzene	**<0.013**	mg/kg	0.080	0.013	1	07/03/19 11:42	07/03/19 20:38	108-67-8	
1,3-Dichlorobenzene	**<0.0029**	mg/kg	0.080	0.0029	1	07/03/19 11:42	07/03/19 20:38	541-73-1	
1,4-Dichlorobenzene	**<0.0049**	mg/kg	0.080	0.0049	1	07/03/19 11:42	07/03/19 20:38	106-46-7	
2-Butanone (MEK)	**<0.042**	mg/kg	0.40	0.042	1	07/03/19 11:42	07/03/19 20:38	78-93-3	
2-Hexanone	**<0.018**	mg/kg	0.40	0.018	1	07/03/19 11:42	07/03/19 20:38	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.017**	mg/kg	0.40	0.017	1	07/03/19 11:42	07/03/19 20:38	108-10-1	
Acetone	**<0.50**	mg/kg	1.6	0.50	1	07/03/19 11:42	07/03/19 20:38	67-64-1	
Benzene	**<0.0045**	mg/kg	0.032	0.0045	1	07/03/19 11:42	07/03/19 20:38	71-43-2	
Bromodichloromethane	**<0.027**	mg/kg	0.080	0.027	1	07/03/19 11:42	07/03/19 20:38	75-27-4	
Bromoform	**<0.12**	mg/kg	0.32	0.12	1	07/03/19 11:42	07/03/19 20:38	75-25-2	
Bromomethane	**<0.093**	mg/kg	0.80	0.093	1	07/03/19 11:42	07/03/19 20:38	74-83-9	
Carbon tetrachloride	**<0.038**	mg/kg	0.080	0.038	1	07/03/19 11:42	07/03/19 20:38	56-23-5	
Chlorobenzene	**<0.0045**	mg/kg	0.080	0.0045	1	07/03/19 11:42	07/03/19 20:38	108-90-7	
Chloroethane	**<0.041**	mg/kg	0.80	0.041	1	07/03/19 11:42	07/03/19 20:38	75-00-3	
Chloroform	**<0.040**	mg/kg	0.32	0.040	1	07/03/19 11:42	07/03/19 20:38	67-66-3	
Chloromethane	**<0.019**	mg/kg	0.32	0.019	1	07/03/19 11:42	07/03/19 20:38	74-87-3	
Dibromochloromethane	**<0.0092**	mg/kg	0.32	0.0092	1	07/03/19 11:42	07/03/19 20:38	124-48-1	
Dichlorodifluoromethane	**<0.026**	mg/kg	0.32	0.026	1	07/03/19 11:42	07/03/19 20:38	75-71-8	
Ethylbenzene	**<0.0043**	mg/kg	0.080	0.0043	1	07/03/19 11:42	07/03/19 20:38	100-41-4	
Hexachloro-1,3-butadiene	**<0.019**	mg/kg	0.40	0.019	1	07/03/19 11:42	07/03/19 20:38	87-68-3	
Methyl-tert-butyl ether	**<0.0095**	mg/kg	0.080	0.0095	1	07/03/19 11:42	07/03/19 20:38	1634-04-4	
Methylene Chloride	**<0.15**	mg/kg	0.32	0.15	1	07/03/19 11:42	07/03/19 20:38	75-09-2	
Naphthalene	**<0.075**	mg/kg	0.32	0.075	1	07/03/19 11:42	07/03/19 20:38	91-20-3	
Styrene	**<0.0036**	mg/kg	0.080	0.0036	1	07/03/19 11:42	07/03/19 20:38	100-42-5	
Tetrachloroethene	**<0.028**	mg/kg	0.080	0.028	1	07/03/19 11:42	07/03/19 20:38	127-18-4	
Tetrahydrofuran	**<0.12**	mg/kg	3.2	0.12	1	07/03/19 11:42	07/03/19 20:38	109-99-9	
Toluene	**<0.019**	mg/kg	0.080	0.019	1	07/03/19 11:42	07/03/19 20:38	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.080	0.012	1	07/03/19 11:42	07/03/19 20:38	79-01-6	
Trichlorofluoromethane	**<0.14**	mg/kg	0.32	0.14	1	07/03/19 11:42	07/03/19 20:38	75-69-4	
Vinyl acetate	**<0.0092**	mg/kg	0.80	0.0092	1	07/03/19 11:42	07/03/19 20:38	108-05-4	
Vinyl chloride	**<0.016**	mg/kg	0.032	0.016	1	07/03/19 11:42	07/03/19 20:38	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-65' **Lab ID: 10480346035** Collected: 06/20/19 12:10 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.080	0.013	1	07/03/19 11:42	07/03/19 20:38	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.080	0.011	1	07/03/19 11:42	07/03/19 20:38	10061-01-5	
m&p-Xylene	**<0.0099**	mg/kg	0.16	0.0099	1	07/03/19 11:42	07/03/19 20:38	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.080	0.018	1	07/03/19 11:42	07/03/19 20:38	95-47-6	
trans-1,2-Dichloroethene	**<0.037**	mg/kg	0.080	0.037	1	07/03/19 11:42	07/03/19 20:38	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.080	0.011	1	07/03/19 11:42	07/03/19 20:38	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	124	%.	75-125		1	07/03/19 11:42	07/03/19 20:38	17060-07-0	
Toluene-d8 (S)	106	%.	75-125		1	07/03/19 11:42	07/03/19 20:38	2037-26-5	
4-Bromofluorobenzene (S)	107	%.	75-125		1	07/03/19 11:42	07/03/19 20:38	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-70' **Lab ID: 10480346036** Collected: 06/20/19 12:50 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**33.5**	%	0.10	0.10	1		07/05/19 12:44		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.035**	mg/kg	0.074	0.035	1	07/03/19 11:42	07/03/19 20:57	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.074	0.013	1	07/03/19 11:42	07/03/19 20:57	79-34-5	
1,1,2-Trichloroethane	**<0.0089**	mg/kg	0.074	0.0089	1	07/03/19 11:42	07/03/19 20:57	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.086**	mg/kg	0.30	0.086	1	07/03/19 11:42	07/03/19 20:57	76-13-1	
1,1-Dichloroethane	**<0.0083**	mg/kg	0.074	0.0083	1	07/03/19 11:42	07/03/19 20:57	75-34-3	
1,1-Dichloroethene	**<0.022**	mg/kg	0.074	0.022	1	07/03/19 11:42	07/03/19 20:57	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.074	0.017	1	07/03/19 11:42	07/03/19 20:57	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.074	0.015	1	07/03/19 11:42	07/03/19 20:57	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0078**	mg/kg	0.074	0.0078	1	07/03/19 11:42	07/03/19 20:57	106-93-4	
1,2-Dichlorobenzene	**<0.0030**	mg/kg	0.074	0.0030	1	07/03/19 11:42	07/03/19 20:57	95-50-1	
1,2-Dichloroethane	**<0.0082**	mg/kg	0.074	0.0082	1	07/03/19 11:42	07/03/19 20:57	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.074	0.012	1	07/03/19 11:42	07/03/19 20:57	108-67-8	
1,3-Dichlorobenzene	**<0.0027**	mg/kg	0.074	0.0027	1	07/03/19 11:42	07/03/19 20:57	541-73-1	
1,4-Dichlorobenzene	**<0.0046**	mg/kg	0.074	0.0046	1	07/03/19 11:42	07/03/19 20:57	106-46-7	
2-Butanone (MEK)	**<0.040**	mg/kg	0.37	0.040	1	07/03/19 11:42	07/03/19 20:57	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.37	0.017	1	07/03/19 11:42	07/03/19 20:57	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.015**	mg/kg	0.37	0.015	1	07/03/19 11:42	07/03/19 20:57	108-10-1	
Acetone	**<0.46**	mg/kg	1.5	0.46	1	07/03/19 11:42	07/03/19 20:57	67-64-1	
Benzene	**<0.0042**	mg/kg	0.030	0.0042	1	07/03/19 11:42	07/03/19 20:57	71-43-2	
Bromodichloromethane	**<0.025**	mg/kg	0.074	0.025	1	07/03/19 11:42	07/03/19 20:57	75-27-4	
Bromoform	**<0.11**	mg/kg	0.30	0.11	1	07/03/19 11:42	07/03/19 20:57	75-25-2	
Bromomethane	**<0.087**	mg/kg	0.74	0.087	1	07/03/19 11:42	07/03/19 20:57	74-83-9	
Carbon tetrachloride	**<0.036**	mg/kg	0.074	0.036	1	07/03/19 11:42	07/03/19 20:57	56-23-5	
Chlorobenzene	**<0.0042**	mg/kg	0.074	0.0042	1	07/03/19 11:42	07/03/19 20:57	108-90-7	
Chloroethane	**<0.039**	mg/kg	0.74	0.039	1	07/03/19 11:42	07/03/19 20:57	75-00-3	
Chloroform	**<0.037**	mg/kg	0.30	0.037	1	07/03/19 11:42	07/03/19 20:57	67-66-3	
Chloromethane	**<0.018**	mg/kg	0.30	0.018	1	07/03/19 11:42	07/03/19 20:57	74-87-3	
Dibromochloromethane	**<0.0086**	mg/kg	0.30	0.0086	1	07/03/19 11:42	07/03/19 20:57	124-48-1	
Dichlorodifluoromethane	**<0.024**	mg/kg	0.30	0.024	1	07/03/19 11:42	07/03/19 20:57	75-71-8	
Ethylbenzene	**<0.0040**	mg/kg	0.074	0.0040	1	07/03/19 11:42	07/03/19 20:57	100-41-4	
Hexachloro-1,3-butadiene	**<0.018**	mg/kg	0.37	0.018	1	07/03/19 11:42	07/03/19 20:57	87-68-3	
Methyl-tert-butyl ether	**<0.0088**	mg/kg	0.074	0.0088	1	07/03/19 11:42	07/03/19 20:57	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.30	0.14	1	07/03/19 11:42	07/03/19 20:57	75-09-2	
Naphthalene	**<0.070**	mg/kg	0.30	0.070	1	07/03/19 11:42	07/03/19 20:57	91-20-3	
Styrene	**<0.0034**	mg/kg	0.074	0.0034	1	07/03/19 11:42	07/03/19 20:57	100-42-5	
Tetrachloroethene	**<0.026**	mg/kg	0.074	0.026	1	07/03/19 11:42	07/03/19 20:57	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.0	0.11	1	07/03/19 11:42	07/03/19 20:57	109-99-9	
Toluene	**<0.018**	mg/kg	0.074	0.018	1	07/03/19 11:42	07/03/19 20:57	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.074	0.011	1	07/03/19 11:42	07/03/19 20:57	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.30	0.13	1	07/03/19 11:42	07/03/19 20:57	75-69-4	
Vinyl acetate	**<0.0086**	mg/kg	0.74	0.0086	1	07/03/19 11:42	07/03/19 20:57	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.030	0.015	1	07/03/19 11:42	07/03/19 20:57	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-70' **Lab ID: 10480346036** Collected: 06/20/19 12:50 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.074	0.012	1	07/03/19 11:42	07/03/19 20:57	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.074	0.011	1	07/03/19 11:42	07/03/19 20:57	10061-01-5	
m&p-Xylene	**<0.0092**	mg/kg	0.15	0.0092	1	07/03/19 11:42	07/03/19 20:57	179601-23-1	
o-Xylene	**<0.017**	mg/kg	0.074	0.017	1	07/03/19 11:42	07/03/19 20:57	95-47-6	
trans-1,2-Dichloroethene	**<0.035**	mg/kg	0.074	0.035	1	07/03/19 11:42	07/03/19 20:57	156-60-5	
trans-1,3-Dichloropropene	**<0.010**	mg/kg	0.074	0.010	1	07/03/19 11:42	07/03/19 20:57	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	123	%.	75-125		1	07/03/19 11:42	07/03/19 20:57	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		1	07/03/19 11:42	07/03/19 20:57	2037-26-5	
4-Bromofluorobenzene (S)	107	%.	75-125		1	07/03/19 11:42	07/03/19 20:57	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-75' **Lab ID: 10480346037** Collected: 06/20/19 13:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**31.2**	%	0.10	0.10	1		07/05/19 12:44		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.034**	mg/kg	0.073	0.034	1	07/03/19 11:42	07/03/19 23:32	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.073	0.013	1	07/03/19 11:42	07/03/19 23:32	79-34-5	
1,1,2-Trichloroethane	**<0.0087**	mg/kg	0.073	0.0087	1	07/03/19 11:42	07/03/19 23:32	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.085**	mg/kg	0.29	0.085	1	07/03/19 11:42	07/03/19 23:32	76-13-1	
1,1-Dichloroethane	**<0.0082**	mg/kg	0.073	0.0082	1	07/03/19 11:42	07/03/19 23:32	75-34-3	
1,1-Dichloroethene	**<0.022**	mg/kg	0.073	0.022	1	07/03/19 11:42	07/03/19 23:32	75-35-4	
1,2,4-Trichlorobenzene	**<0.016**	mg/kg	0.073	0.016	1	07/03/19 11:42	07/03/19 23:32	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.073	0.015	1	07/03/19 11:42	07/03/19 23:32	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0077**	mg/kg	0.073	0.0077	1	07/03/19 11:42	07/03/19 23:32	106-93-4	
1,2-Dichlorobenzene	**<0.0030**	mg/kg	0.073	0.0030	1	07/03/19 11:42	07/03/19 23:32	95-50-1	
1,2-Dichloroethane	**<0.0080**	mg/kg	0.073	0.0080	1	07/03/19 11:42	07/03/19 23:32	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.073	0.012	1	07/03/19 11:42	07/03/19 23:32	108-67-8	
1,3-Dichlorobenzene	**<0.0027**	mg/kg	0.073	0.0027	1	07/03/19 11:42	07/03/19 23:32	541-73-1	
1,4-Dichlorobenzene	**<0.0045**	mg/kg	0.073	0.0045	1	07/03/19 11:42	07/03/19 23:32	106-46-7	
2-Butanone (MEK)	**<0.039**	mg/kg	0.37	0.039	1	07/03/19 11:42	07/03/19 23:32	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.37	0.017	1	07/03/19 11:42	07/03/19 23:32	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.015**	mg/kg	0.37	0.015	1	07/03/19 11:42	07/03/19 23:32	108-10-1	
Acetone	**<0.45**	mg/kg	1.5	0.45	1	07/03/19 11:42	07/03/19 23:32	67-64-1	
Benzene	**<0.0041**	mg/kg	0.029	0.0041	1	07/03/19 11:42	07/03/19 23:32	71-43-2	
Bromodichloromethane	**<0.025**	mg/kg	0.073	0.025	1	07/03/19 11:42	07/03/19 23:32	75-27-4	
Bromoform	**<0.11**	mg/kg	0.29	0.11	1	07/03/19 11:42	07/03/19 23:32	75-25-2	
Bromomethane	**<0.086**	mg/kg	0.73	0.086	1	07/03/19 11:42	07/03/19 23:32	74-83-9	
Carbon tetrachloride	**<0.035**	mg/kg	0.073	0.035	1	07/03/19 11:42	07/03/19 23:32	56-23-5	
Chlorobenzene	**<0.0041**	mg/kg	0.073	0.0041	1	07/03/19 11:42	07/03/19 23:32	108-90-7	
Chloroethane	**<0.038**	mg/kg	0.73	0.038	1	07/03/19 11:42	07/03/19 23:32	75-00-3	
Chloroform	**<0.037**	mg/kg	0.29	0.037	1	07/03/19 11:42	07/03/19 23:32	67-66-3	
Chloromethane	**<0.018**	mg/kg	0.29	0.018	1	07/03/19 11:42	07/03/19 23:32	74-87-3	
Dibromochloromethane	**<0.0085**	mg/kg	0.29	0.0085	1	07/03/19 11:42	07/03/19 23:32	124-48-1	
Dichlorodifluoromethane	**<0.024**	mg/kg	0.29	0.024	1	07/03/19 11:42	07/03/19 23:32	75-71-8	
Ethylbenzene	**<0.0040**	mg/kg	0.073	0.0040	1	07/03/19 11:42	07/03/19 23:32	100-41-4	
Hexachloro-1,3-butadiene	**<0.018**	mg/kg	0.37	0.018	1	07/03/19 11:42	07/03/19 23:32	87-68-3	
Methyl-tert-butyl ether	**<0.0087**	mg/kg	0.073	0.0087	1	07/03/19 11:42	07/03/19 23:32	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.29	0.14	1	07/03/19 11:42	07/03/19 23:32	75-09-2	
Naphthalene	**<0.068**	mg/kg	0.29	0.068	1	07/03/19 11:42	07/03/19 23:32	91-20-3	
Styrene	**<0.0033**	mg/kg	0.073	0.0033	1	07/03/19 11:42	07/03/19 23:32	100-42-5	
Tetrachloroethene	**<0.026**	mg/kg	0.073	0.026	1	07/03/19 11:42	07/03/19 23:32	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	2.9	0.11	1	07/03/19 11:42	07/03/19 23:32	109-99-9	
Toluene	**<0.018**	mg/kg	0.073	0.018	1	07/03/19 11:42	07/03/19 23:32	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.073	0.011	1	07/03/19 11:42	07/03/19 23:32	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.29	0.13	1	07/03/19 11:42	07/03/19 23:32	75-69-4	
Vinyl acetate	**<0.0085**	mg/kg	0.73	0.0085	1	07/03/19 11:42	07/03/19 23:32	108-05-4	
Vinyl chloride	**<0.014**	mg/kg	0.029	0.014	1	07/03/19 11:42	07/03/19 23:32	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-75' **Lab ID: 10480346037** Collected: 06/20/19 13:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.073	0.012	1	07/03/19 11:42	07/03/19 23:32	156-59-2	
cis-1,3-Dichloropropene	**<0.010**	mg/kg	0.073	0.010	1	07/03/19 11:42	07/03/19 23:32	10061-01-5	
m&p-Xylene	**<0.0091**	mg/kg	0.15	0.0091	1	07/03/19 11:42	07/03/19 23:32	179601-23-1	
o-Xylene	**<0.017**	mg/kg	0.073	0.017	1	07/03/19 11:42	07/03/19 23:32	95-47-6	
trans-1,2-Dichloroethene	**<0.034**	mg/kg	0.073	0.034	1	07/03/19 11:42	07/03/19 23:32	156-60-5	
trans-1,3-Dichloropropene	**<0.010**	mg/kg	0.073	0.010	1	07/03/19 11:42	07/03/19 23:32	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	124	%.	75-125		1	07/03/19 11:42	07/03/19 23:32	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		1	07/03/19 11:42	07/03/19 23:32	2037-26-5	
4-Bromofluorobenzene (S)	110	%.	75-125		1	07/03/19 11:42	07/03/19 23:32	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-80' **Lab ID: 10480346038** Collected: 06/20/19 13:55 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**30.3**	%	0.10	0.10	1		07/05/19 12:45		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.035**	mg/kg	0.075	0.035	1	07/03/19 11:42	07/03/19 21:16	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.075	0.013	1	07/03/19 11:42	07/03/19 21:16	79-34-5	
1,1,2-Trichloroethane	**<0.0089**	mg/kg	0.075	0.0089	1	07/03/19 11:42	07/03/19 21:16	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.087**	mg/kg	0.30	0.087	1	07/03/19 11:42	07/03/19 21:16	76-13-1	
1,1-Dichloroethane	**<0.0084**	mg/kg	0.075	0.0084	1	07/03/19 11:42	07/03/19 21:16	75-34-3	
1,1-Dichloroethene	**<0.022**	mg/kg	0.075	0.022	1	07/03/19 11:42	07/03/19 21:16	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.075	0.017	1	07/03/19 11:42	07/03/19 21:16	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.075	0.015	1	07/03/19 11:42	07/03/19 21:16	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0079**	mg/kg	0.075	0.0079	1	07/03/19 11:42	07/03/19 21:16	106-93-4	
1,2-Dichlorobenzene	**<0.0030**	mg/kg	0.075	0.0030	1	07/03/19 11:42	07/03/19 21:16	95-50-1	
1,2-Dichloroethane	**<0.0082**	mg/kg	0.075	0.0082	1	07/03/19 11:42	07/03/19 21:16	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.075	0.012	1	07/03/19 11:42	07/03/19 21:16	108-67-8	
1,3-Dichlorobenzene	**<0.0027**	mg/kg	0.075	0.0027	1	07/03/19 11:42	07/03/19 21:16	541-73-1	
1,4-Dichlorobenzene	**<0.0046**	mg/kg	0.075	0.0046	1	07/03/19 11:42	07/03/19 21:16	106-46-7	
2-Butanone (MEK)	**<0.040**	mg/kg	0.37	0.040	1	07/03/19 11:42	07/03/19 21:16	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.37	0.017	1	07/03/19 11:42	07/03/19 21:16	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.37	0.016	1	07/03/19 11:42	07/03/19 21:16	108-10-1	
Acetone	**<0.46**	mg/kg	1.5	0.46	1	07/03/19 11:42	07/03/19 21:16	67-64-1	
Benzene	**<0.0042**	mg/kg	0.030	0.0042	1	07/03/19 11:42	07/03/19 21:16	71-43-2	
Bromodichloromethane	**<0.026**	mg/kg	0.075	0.026	1	07/03/19 11:42	07/03/19 21:16	75-27-4	
Bromoform	**<0.11**	mg/kg	0.30	0.11	1	07/03/19 11:42	07/03/19 21:16	75-25-2	
Bromomethane	**<0.087**	mg/kg	0.75	0.087	1	07/03/19 11:42	07/03/19 21:16	74-83-9	
Carbon tetrachloride	**<0.036**	mg/kg	0.075	0.036	1	07/03/19 11:42	07/03/19 21:16	56-23-5	
Chlorobenzene	**<0.0042**	mg/kg	0.075	0.0042	1	07/03/19 11:42	07/03/19 21:16	108-90-7	
Chloroethane	**<0.039**	mg/kg	0.75	0.039	1	07/03/19 11:42	07/03/19 21:16	75-00-3	
Chloroform	**<0.037**	mg/kg	0.30	0.037	1	07/03/19 11:42	07/03/19 21:16	67-66-3	
Chloromethane	**<0.018**	mg/kg	0.30	0.018	1	07/03/19 11:42	07/03/19 21:16	74-87-3	
Dibromochloromethane	**<0.0087**	mg/kg	0.30	0.0087	1	07/03/19 11:42	07/03/19 21:16	124-48-1	
Dichlorodifluoromethane	**<0.024**	mg/kg	0.30	0.024	1	07/03/19 11:42	07/03/19 21:16	75-71-8	
Ethylbenzene	**<0.0041**	mg/kg	0.075	0.0041	1	07/03/19 11:42	07/03/19 21:16	100-41-4	
Hexachloro-1,3-butadiene	**<0.018**	mg/kg	0.37	0.018	1	07/03/19 11:42	07/03/19 21:16	87-68-3	
Methyl-tert-butyl ether	**<0.0089**	mg/kg	0.075	0.0089	1	07/03/19 11:42	07/03/19 21:16	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.30	0.14	1	07/03/19 11:42	07/03/19 21:16	75-09-2	
Naphthalene	**<0.070**	mg/kg	0.30	0.070	1	07/03/19 11:42	07/03/19 21:16	91-20-3	
Styrene	**<0.0034**	mg/kg	0.075	0.0034	1	07/03/19 11:42	07/03/19 21:16	100-42-5	
Tetrachloroethene	**<0.026**	mg/kg	0.075	0.026	1	07/03/19 11:42	07/03/19 21:16	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.0	0.11	1	07/03/19 11:42	07/03/19 21:16	109-99-9	
Toluene	**<0.018**	mg/kg	0.075	0.018	1	07/03/19 11:42	07/03/19 21:16	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.075	0.012	1	07/03/19 11:42	07/03/19 21:16	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.30	0.13	1	07/03/19 11:42	07/03/19 21:16	75-69-4	
Vinyl acetate	**<0.0086**	mg/kg	0.75	0.0086	1	07/03/19 11:42	07/03/19 21:16	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.030	0.015	1	07/03/19 11:42	07/03/19 21:16	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-80' **Lab ID: 10480346038** Collected: 06/20/19 13:55 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.075	0.012	1	07/03/19 11:42	07/03/19 21:16	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.075	0.011	1	07/03/19 11:42	07/03/19 21:16	10061-01-5	
m&p-Xylene	**<0.0092**	mg/kg	0.15	0.0092	1	07/03/19 11:42	07/03/19 21:16	179601-23-1	
o-Xylene	**<0.017**	mg/kg	0.075	0.017	1	07/03/19 11:42	07/03/19 21:16	95-47-6	
trans-1,2-Dichloroethene	**<0.035**	mg/kg	0.075	0.035	1	07/03/19 11:42	07/03/19 21:16	156-60-5	
trans-1,3-Dichloropropene	**<0.010**	mg/kg	0.075	0.010	1	07/03/19 11:42	07/03/19 21:16	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	127	%.	75-125		1	07/03/19 11:42	07/03/19 21:16	17060-07-0	S3
Toluene-d8 (S)	107	%.	75-125		1	07/03/19 11:42	07/03/19 21:16	2037-26-5	
4-Bromofluorobenzene (S)	109	%.	75-125		1	07/03/19 11:42	07/03/19 21:16	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-85' **Lab ID: 10480346039** Collected: 06/20/19 14:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**31.0**	%	0.10	0.10	1		07/05/19 12:45		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.033**	mg/kg	0.071	0.033	1	07/03/19 11:42	07/03/19 21:36	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.071	0.013	1	07/03/19 11:42	07/03/19 21:36	79-34-5	
1,1,2-Trichloroethane	**<0.0085**	mg/kg	0.071	0.0085	1	07/03/19 11:42	07/03/19 21:36	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.083**	mg/kg	0.29	0.083	1	07/03/19 11:42	07/03/19 21:36	76-13-1	
1,1-Dichloroethane	**<0.0080**	mg/kg	0.071	0.0080	1	07/03/19 11:42	07/03/19 21:36	75-34-3	
1,1-Dichloroethene	**<0.021**	mg/kg	0.071	0.021	1	07/03/19 11:42	07/03/19 21:36	75-35-4	
1,2,4-Trichlorobenzene	**<0.016**	mg/kg	0.071	0.016	1	07/03/19 11:42	07/03/19 21:36	120-82-1	
1,2,4-Trimethylbenzene	**<0.014**	mg/kg	0.071	0.014	1	07/03/19 11:42	07/03/19 21:36	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0075**	mg/kg	0.071	0.0075	1	07/03/19 11:42	07/03/19 21:36	106-93-4	
1,2-Dichlorobenzene	**<0.0029**	mg/kg	0.071	0.0029	1	07/03/19 11:42	07/03/19 21:36	95-50-1	
1,2-Dichloroethane	**<0.0078**	mg/kg	0.071	0.0078	1	07/03/19 11:42	07/03/19 21:36	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.071	0.011	1	07/03/19 11:42	07/03/19 21:36	108-67-8	
1,3-Dichlorobenzene	**<0.0026**	mg/kg	0.071	0.0026	1	07/03/19 11:42	07/03/19 21:36	541-73-1	
1,4-Dichlorobenzene	**<0.0044**	mg/kg	0.071	0.0044	1	07/03/19 11:42	07/03/19 21:36	106-46-7	
2-Butanone (MEK)	**<0.038**	mg/kg	0.36	0.038	1	07/03/19 11:42	07/03/19 21:36	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.36	0.016	1	07/03/19 11:42	07/03/19 21:36	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.015**	mg/kg	0.36	0.015	1	07/03/19 11:42	07/03/19 21:36	108-10-1	
Acetone	**<0.44**	mg/kg	1.4	0.44	1	07/03/19 11:42	07/03/19 21:36	67-64-1	
Benzene	**<0.0040**	mg/kg	0.029	0.0040	1	07/03/19 11:42	07/03/19 21:36	71-43-2	
Bromodichloromethane	**<0.024**	mg/kg	0.071	0.024	1	07/03/19 11:42	07/03/19 21:36	75-27-4	
Bromoform	**<0.11**	mg/kg	0.29	0.11	1	07/03/19 11:42	07/03/19 21:36	75-25-2	
Bromomethane	**<0.083**	mg/kg	0.71	0.083	1	07/03/19 11:42	07/03/19 21:36	74-83-9	
Carbon tetrachloride	**<0.034**	mg/kg	0.071	0.034	1	07/03/19 11:42	07/03/19 21:36	56-23-5	
Chlorobenzene	**<0.0040**	mg/kg	0.071	0.0040	1	07/03/19 11:42	07/03/19 21:36	108-90-7	
Chloroethane	**<0.037**	mg/kg	0.71	0.037	1	07/03/19 11:42	07/03/19 21:36	75-00-3	
Chloroform	**<0.036**	mg/kg	0.29	0.036	1	07/03/19 11:42	07/03/19 21:36	67-66-3	
Chloromethane	**<0.017**	mg/kg	0.29	0.017	1	07/03/19 11:42	07/03/19 21:36	74-87-3	
Dibromochloromethane	**<0.0083**	mg/kg	0.29	0.0083	1	07/03/19 11:42	07/03/19 21:36	124-48-1	
Dichlorodifluoromethane	**<0.023**	mg/kg	0.29	0.023	1	07/03/19 11:42	07/03/19 21:36	75-71-8	
Ethylbenzene	**<0.0039**	mg/kg	0.071	0.0039	1	07/03/19 11:42	07/03/19 21:36	100-41-4	
Hexachloro-1,3-butadiene	**<0.017**	mg/kg	0.36	0.017	1	07/03/19 11:42	07/03/19 21:36	87-68-3	
Methyl-tert-butyl ether	**<0.0085**	mg/kg	0.071	0.0085	1	07/03/19 11:42	07/03/19 21:36	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.29	0.13	1	07/03/19 11:42	07/03/19 21:36	75-09-2	
Naphthalene	**<0.067**	mg/kg	0.29	0.067	1	07/03/19 11:42	07/03/19 21:36	91-20-3	
Styrene	**<0.0033**	mg/kg	0.071	0.0033	1	07/03/19 11:42	07/03/19 21:36	100-42-5	
Tetrachloroethene	**<0.025**	mg/kg	0.071	0.025	1	07/03/19 11:42	07/03/19 21:36	127-18-4	
Tetrahydrofuran	**<0.10**	mg/kg	2.9	0.10	1	07/03/19 11:42	07/03/19 21:36	109-99-9	
Toluene	**<0.017**	mg/kg	0.071	0.017	1	07/03/19 11:42	07/03/19 21:36	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.071	0.011	1	07/03/19 11:42	07/03/19 21:36	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.29	0.12	1	07/03/19 11:42	07/03/19 21:36	75-69-4	
Vinyl acetate	**<0.0083**	mg/kg	0.71	0.0083	1	07/03/19 11:42	07/03/19 21:36	108-05-4	
Vinyl chloride	**<0.014**	mg/kg	0.029	0.014	1	07/03/19 11:42	07/03/19 21:36	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-85' **Lab ID: 10480346039** Collected: 06/20/19 14:05 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.071	0.012	1	07/03/19 11:42	07/03/19 21:36	156-59-2	
cis-1,3-Dichloropropene	**<0.010**	mg/kg	0.071	0.010	1	07/03/19 11:42	07/03/19 21:36	10061-01-5	
m&p-Xylene	**<0.0088**	mg/kg	0.14	0.0088	1	07/03/19 11:42	07/03/19 21:36	179601-23-1	
o-Xylene	**<0.017**	mg/kg	0.071	0.017	1	07/03/19 11:42	07/03/19 21:36	95-47-6	
trans-1,2-Dichloroethene	**<0.033**	mg/kg	0.071	0.033	1	07/03/19 11:42	07/03/19 21:36	156-60-5	
trans-1,3-Dichloropropene	**<0.0099**	mg/kg	0.071	0.0099	1	07/03/19 11:42	07/03/19 21:36	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	129	%.	75-125		1	07/03/19 11:42	07/03/19 21:36	17060-07-0	S3
Toluene-d8 (S)	104	%.	75-125		1	07/03/19 11:42	07/03/19 21:36	2037-26-5	
4-Bromofluorobenzene (S)	108	%.	75-125		1	07/03/19 11:42	07/03/19 21:36	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-90' **Lab ID: 10480346040** Collected: 06/20/19 14:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**28.8**	%	0.10	0.10	1		07/05/19 12:45		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.035**	mg/kg	0.074	0.035	1	07/03/19 11:42	07/03/19 23:12	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.074	0.013	1	07/03/19 11:42	07/03/19 23:12	79-34-5	
1,1,2-Trichloroethane	**<0.0089**	mg/kg	0.074	0.0089	1	07/03/19 11:42	07/03/19 23:12	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.086**	mg/kg	0.30	0.086	1	07/03/19 11:42	07/03/19 23:12	76-13-1	
1,1-Dichloroethane	**<0.0083**	mg/kg	0.074	0.0083	1	07/03/19 11:42	07/03/19 23:12	75-34-3	
1,1-Dichloroethene	**<0.022**	mg/kg	0.074	0.022	1	07/03/19 11:42	07/03/19 23:12	75-35-4	
1,2,4-Trichlorobenzene	**<0.016**	mg/kg	0.074	0.016	1	07/03/19 11:42	07/03/19 23:12	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.074	0.015	1	07/03/19 11:42	07/03/19 23:12	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0078**	mg/kg	0.074	0.0078	1	07/03/19 11:42	07/03/19 23:12	106-93-4	
1,2-Dichlorobenzene	**<0.0030**	mg/kg	0.074	0.0030	1	07/03/19 11:42	07/03/19 23:12	95-50-1	
1,2-Dichloroethane	**<0.0082**	mg/kg	0.074	0.0082	1	07/03/19 11:42	07/03/19 23:12	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.074	0.012	1	07/03/19 11:42	07/03/19 23:12	108-67-8	
1,3-Dichlorobenzene	**<0.0027**	mg/kg	0.074	0.0027	1	07/03/19 11:42	07/03/19 23:12	541-73-1	
1,4-Dichlorobenzene	**<0.0046**	mg/kg	0.074	0.0046	1	07/03/19 11:42	07/03/19 23:12	106-46-7	
2-Butanone (MEK)	**<0.039**	mg/kg	0.37	0.039	1	07/03/19 11:42	07/03/19 23:12	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.37	0.017	1	07/03/19 11:42	07/03/19 23:12	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.015**	mg/kg	0.37	0.015	1	07/03/19 11:42	07/03/19 23:12	108-10-1	
Acetone	**<0.46**	mg/kg	1.5	0.46	1	07/03/19 11:42	07/03/19 23:12	67-64-1	
Benzene	**<0.0042**	mg/kg	0.030	0.0042	1	07/03/19 11:42	07/03/19 23:12	71-43-2	
Bromodichloromethane	**<0.025**	mg/kg	0.074	0.025	1	07/03/19 11:42	07/03/19 23:12	75-27-4	
Bromoform	**<0.11**	mg/kg	0.30	0.11	1	07/03/19 11:42	07/03/19 23:12	75-25-2	
Bromomethane	**<0.087**	mg/kg	0.74	0.087	1	07/03/19 11:42	07/03/19 23:12	74-83-9	
Carbon tetrachloride	**<0.035**	mg/kg	0.074	0.035	1	07/03/19 11:42	07/03/19 23:12	56-23-5	
Chlorobenzene	**<0.0042**	mg/kg	0.074	0.0042	1	07/03/19 11:42	07/03/19 23:12	108-90-7	
Chloroethane	**<0.039**	mg/kg	0.74	0.039	1	07/03/19 11:42	07/03/19 23:12	75-00-3	
Chloroform	**<0.037**	mg/kg	0.30	0.037	1	07/03/19 11:42	07/03/19 23:12	67-66-3	
Chloromethane	**<0.018**	mg/kg	0.30	0.018	1	07/03/19 11:42	07/03/19 23:12	74-87-3	
Dibromochloromethane	**<0.0086**	mg/kg	0.30	0.0086	1	07/03/19 11:42	07/03/19 23:12	124-48-1	
Dichlorodifluoromethane	**<0.024**	mg/kg	0.30	0.024	1	07/03/19 11:42	07/03/19 23:12	75-71-8	
Ethylbenzene	**<0.0040**	mg/kg	0.074	0.0040	1	07/03/19 11:42	07/03/19 23:12	100-41-4	
Hexachloro-1,3-butadiene	**<0.018**	mg/kg	0.37	0.018	1	07/03/19 11:42	07/03/19 23:12	87-68-3	
Methyl-tert-butyl ether	**<0.0088**	mg/kg	0.074	0.0088	1	07/03/19 11:42	07/03/19 23:12	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.30	0.14	1	07/03/19 11:42	07/03/19 23:12	75-09-2	
Naphthalene	**<0.069**	mg/kg	0.30	0.069	1	07/03/19 11:42	07/03/19 23:12	91-20-3	
Styrene	**<0.0034**	mg/kg	0.074	0.0034	1	07/03/19 11:42	07/03/19 23:12	100-42-5	
Tetrachloroethene	**<0.026**	mg/kg	0.074	0.026	1	07/03/19 11:42	07/03/19 23:12	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.0	0.11	1	07/03/19 11:42	07/03/19 23:12	109-99-9	
Toluene	**<0.018**	mg/kg	0.074	0.018	1	07/03/19 11:42	07/03/19 23:12	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.074	0.011	1	07/03/19 11:42	07/03/19 23:12	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.30	0.13	1	07/03/19 11:42	07/03/19 23:12	75-69-4	
Vinyl acetate	**<0.0086**	mg/kg	0.74	0.0086	1	07/03/19 11:42	07/03/19 23:12	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.030	0.015	1	07/03/19 11:42	07/03/19 23:12	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-90' **Lab ID: 10480346040** Collected: 06/20/19 14:45 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.074	0.012	1	07/03/19 11:42	07/03/19 23:12	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.074	0.011	1	07/03/19 11:42	07/03/19 23:12	10061-01-5	
m&p-Xylene	**<0.0092**	mg/kg	0.15	0.0092	1	07/03/19 11:42	07/03/19 23:12	179601-23-1	
o-Xylene	**<0.017**	mg/kg	0.074	0.017	1	07/03/19 11:42	07/03/19 23:12	95-47-6	
trans-1,2-Dichloroethene	**<0.035**	mg/kg	0.074	0.035	1	07/03/19 11:42	07/03/19 23:12	156-60-5	
trans-1,3-Dichloropropene	**<0.010**	mg/kg	0.074	0.010	1	07/03/19 11:42	07/03/19 23:12	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	127	%.	75-125		1	07/03/19 11:42	07/03/19 23:12	17060-07-0	S3
Toluene-d8 (S)	103	%.	75-125		1	07/03/19 11:42	07/03/19 23:12	2037-26-5	
4-Bromofluorobenzene (S)	106	%.	75-125		1	07/03/19 11:42	07/03/19 23:12	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: FD3 **Lab ID: 10480346045** Collected: 06/20/19 08:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**35.4**	%	0.10	0.10	1		07/05/19 12:45		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.041**	mg/kg	0.088	0.041	1	07/03/19 11:42	07/03/19 21:55	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.016**	mg/kg	0.088	0.016	1	07/03/19 11:42	07/03/19 21:55	79-34-5	
1,1,2-Trichloroethane	**<0.011**	mg/kg	0.088	0.011	1	07/03/19 11:42	07/03/19 21:55	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.10**	mg/kg	0.35	0.10	1	07/03/19 11:42	07/03/19 21:55	76-13-1	
1,1-Dichloroethane	**<0.0099**	mg/kg	0.088	0.0099	1	07/03/19 11:42	07/03/19 21:55	75-34-3	
1,1-Dichloroethene	**<0.027**	mg/kg	0.088	0.027	1	07/03/19 11:42	07/03/19 21:55	75-35-4	
1,2,4-Trichlorobenzene	**<0.020**	mg/kg	0.088	0.020	1	07/03/19 11:42	07/03/19 21:55	120-82-1	
1,2,4-Trimethylbenzene	**<0.018**	mg/kg	0.088	0.018	1	07/03/19 11:42	07/03/19 21:55	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0093**	mg/kg	0.088	0.0093	1	07/03/19 11:42	07/03/19 21:55	106-93-4	
1,2-Dichlorobenzene	**<0.0036**	mg/kg	0.088	0.0036	1	07/03/19 11:42	07/03/19 21:55	95-50-1	
1,2-Dichloroethane	**<0.0097**	mg/kg	0.088	0.0097	1	07/03/19 11:42	07/03/19 21:55	107-06-2	
1,3,5-Trimethylbenzene	**<0.014**	mg/kg	0.088	0.014	1	07/03/19 11:42	07/03/19 21:55	108-67-8	
1,3-Dichlorobenzene	**<0.0032**	mg/kg	0.088	0.0032	1	07/03/19 11:42	07/03/19 21:55	541-73-1	
1,4-Dichlorobenzene	**<0.0055**	mg/kg	0.088	0.0055	1	07/03/19 11:42	07/03/19 21:55	106-46-7	
2-Butanone (MEK)	**<0.047**	mg/kg	0.44	0.047	1	07/03/19 11:42	07/03/19 21:55	78-93-3	
2-Hexanone	**<0.020**	mg/kg	0.44	0.020	1	07/03/19 11:42	07/03/19 21:55	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.018**	mg/kg	0.44	0.018	1	07/03/19 11:42	07/03/19 21:55	108-10-1	
Acetone	**<0.55**	mg/kg	1.8	0.55	1	07/03/19 11:42	07/03/19 21:55	67-64-1	
Benzene	**<0.0050**	mg/kg	0.035	0.0050	1	07/03/19 11:42	07/03/19 21:55	71-43-2	
Bromodichloromethane	**<0.030**	mg/kg	0.088	0.030	1	07/03/19 11:42	07/03/19 21:55	75-27-4	
Bromoform	**<0.13**	mg/kg	0.35	0.13	1	07/03/19 11:42	07/03/19 21:55	75-25-2	
Bromomethane	**<0.10**	mg/kg	0.88	0.10	1	07/03/19 11:42	07/03/19 21:55	74-83-9	
Carbon tetrachloride	**<0.042**	mg/kg	0.088	0.042	1	07/03/19 11:42	07/03/19 21:55	56-23-5	
Chlorobenzene	**<0.0050**	mg/kg	0.088	0.0050	1	07/03/19 11:42	07/03/19 21:55	108-90-7	
Chloroethane	**<0.046**	mg/kg	0.88	0.046	1	07/03/19 11:42	07/03/19 21:55	75-00-3	
Chloroform	**<0.044**	mg/kg	0.35	0.044	1	07/03/19 11:42	07/03/19 21:55	67-66-3	
Chloromethane	**<0.021**	mg/kg	0.35	0.021	1	07/03/19 11:42	07/03/19 21:55	74-87-3	
Dibromochloromethane	**<0.010**	mg/kg	0.35	0.010	1	07/03/19 11:42	07/03/19 21:55	124-48-1	
Dichlorodifluoromethane	**<0.029**	mg/kg	0.35	0.029	1	07/03/19 11:42	07/03/19 21:55	75-71-8	
Ethylbenzene	**<0.0048**	mg/kg	0.088	0.0048	1	07/03/19 11:42	07/03/19 21:55	100-41-4	
Hexachloro-1,3-butadiene	**<0.022**	mg/kg	0.44	0.022	1	07/03/19 11:42	07/03/19 21:55	87-68-3	
Methyl-tert-butyl ether	**<0.011**	mg/kg	0.088	0.011	1	07/03/19 11:42	07/03/19 21:55	1634-04-4	
Methylene Chloride	**<0.17**	mg/kg	0.35	0.17	1	07/03/19 11:42	07/03/19 21:55	75-09-2	
Naphthalene	**<0.083**	mg/kg	0.35	0.083	1	07/03/19 11:42	07/03/19 21:55	91-20-3	
Styrene	**<0.0040**	mg/kg	0.088	0.0040	1	07/03/19 11:42	07/03/19 21:55	100-42-5	
Tetrachloroethene	**<0.031**	mg/kg	0.088	0.031	1	07/03/19 11:42	07/03/19 21:55	127-18-4	
Tetrahydrofuran	**<0.13**	mg/kg	3.5	0.13	1	07/03/19 11:42	07/03/19 21:55	109-99-9	
Toluene	**<0.022**	mg/kg	0.088	0.022	1	07/03/19 11:42	07/03/19 21:55	108-88-3	
Trichloroethene	**<0.014**	mg/kg	0.088	0.014	1	07/03/19 11:42	07/03/19 21:55	79-01-6	
Trichlorofluoromethane	**<0.15**	mg/kg	0.35	0.15	1	07/03/19 11:42	07/03/19 21:55	75-69-4	
Vinyl acetate	**<0.010**	mg/kg	0.88	0.010	1	07/03/19 11:42	07/03/19 21:55	108-05-4	
Vinyl chloride	**<0.017**	mg/kg	0.035	0.017	1	07/03/19 11:42	07/03/19 21:55	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: FD3 **Lab ID: 10480346045** Collected: 06/20/19 08:00 Received: 06/21/19 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.015**	mg/kg	0.088	0.015	1	07/03/19 11:42	07/03/19 21:55	156-59-2	
cis-1,3-Dichloropropene	**<0.013**	mg/kg	0.088	0.013	1	07/03/19 11:42	07/03/19 21:55	10061-01-5	
m&p-Xylene	**<0.011**	mg/kg	0.18	0.011	1	07/03/19 11:42	07/03/19 21:55	179601-23-1	
o-Xylene	**<0.020**	mg/kg	0.088	0.020	1	07/03/19 11:42	07/03/19 21:55	95-47-6	
trans-1,2-Dichloroethene	**<0.041**	mg/kg	0.088	0.041	1	07/03/19 11:42	07/03/19 21:55	156-60-5	
trans-1,3-Dichloropropene	**<0.012**	mg/kg	0.088	0.012	1	07/03/19 11:42	07/03/19 21:55	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	126	%.	75-125		1	07/03/19 11:42	07/03/19 21:55	17060-07-0	S3
Toluene-d8 (S)	107	%.	75-125		1	07/03/19 11:42	07/03/19 21:55	2037-26-5	
4-Bromofluorobenzene (S)	111	%.	75-125		1	07/03/19 11:42	07/03/19 21:55	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-GW **Lab ID: 10480346046** Collected: 06/20/19 14:00 Received: 06/21/19 09:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.39**	ug/L	1.0	0.39	2		06/25/19 13:46	630-20-6	
1,1,1-Trichloroethane	**<0.27**	ug/L	1.0	0.27	2		06/25/19 13:46	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.34**	ug/L	1.0	0.34	2		06/25/19 13:46	79-34-5	
1,1,2-Trichloroethane	**<0.36**	ug/L	1.0	0.36	2		06/25/19 13:46	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.43**	ug/L	2.0	0.43	2		06/25/19 13:46	76-13-1	
1,1-Dichloroethane	**<0.34**	ug/L	1.0	0.34	2		06/25/19 13:46	75-34-3	
1,1-Dichloroethene	**<0.32**	ug/L	2.0	0.32	2		06/25/19 13:46	75-35-4	
1,1-Dichloropropene	**<0.40**	ug/L	1.0	0.40	2		06/25/19 13:46	563-58-6	
1,2,3-Trichlorobenzene	**<0.41**	ug/L	1.0	0.41	2		06/25/19 13:46	87-61-6	
1,2,3-Trichloropropane	**<0.51**	ug/L	8.0	0.51	2		06/25/19 13:46	96-18-4	
1,2,4-Trichlorobenzene	**<0.40**	ug/L	1.0	0.40	2		06/25/19 13:46	120-82-1	
1,2,4-Trimethylbenzene	**<0.39**	ug/L	2.0	0.39	2		06/25/19 13:46	95-63-6	
1,2-Dibromo-3-chloropropane	**<3.3**	ug/L	8.0	3.3	2		06/25/19 13:46	96-12-8	
1,2-Dibromoethane (EDB)	**<0.48**	ug/L	1.0	0.48	2		06/25/19 13:46	106-93-4	
1,2-Dichlorobenzene	**<0.27**	ug/L	1.0	0.27	2		06/25/19 13:46	95-50-1	
1,2-Dichloroethane	**<0.44**	ug/L	1.0	0.44	2		06/25/19 13:46	107-06-2	
1,2-Dichloroethene (Total)	**<0.54**	ug/L	2.0	0.54	2		06/25/19 13:46	540-59-0	N2
1,2-Dichloropropane	**<0.33**	ug/L	8.0	0.33	2		06/25/19 13:46	78-87-5	
1,3,5-Trimethylbenzene	**<0.24**	ug/L	1.0	0.24	2		06/25/19 13:46	108-67-8	
1,3-Dichlorobenzene	**<0.32**	ug/L	1.0	0.32	2		06/25/19 13:46	541-73-1	
1,3-Dichloropropane	**<0.14**	ug/L	1.0	0.14	2		06/25/19 13:46	142-28-9	
1,4-Dichlorobenzene	**<0.34**	ug/L	1.0	0.34	2		06/25/19 13:46	106-46-7	
1,4-Dioxane (p-Dioxane)	**<32.6**	ug/L	400	32.6	2		06/25/19 13:46	123-91-1	
2,2,4-Trimethylpentane	**<0.38**	ug/L	8.0	0.38	2		06/25/19 13:46	540-84-1	N2
2,2-Dichloropropane	**<0.34**	ug/L	2.0	0.34	2		06/25/19 13:46	594-20-7	
2-Butanone (MEK)	**<2.0**	ug/L	10.0	2.0	2		06/25/19 13:46	78-93-3	
2-Chlorotoluene	**<0.33**	ug/L	1.0	0.33	2		06/25/19 13:46	95-49-8	
2-Hexanone	**<1.8**	ug/L	10.0	1.8	2		06/25/19 13:46	591-78-6	
4-Chlorotoluene	**<0.27**	ug/L	1.0	0.27	2		06/25/19 13:46	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.84**	ug/L	10.0	0.84	2		06/25/19 13:46	108-10-1	
Acetone	**<18.5**	ug/L	40.0	18.5	2		06/25/19 13:46	67-64-1	
Acrolein	**<2.4**	ug/L	20.0	2.4	2		06/25/19 13:46	107-02-8	
Acrylonitrile	**<1.8**	ug/L	20.0	1.8	2		06/25/19 13:46	107-13-1	
Benzene	**2.3**	ug/L	1.0	0.20	2		06/25/19 13:46	71-43-2	
Bromobenzene	**<0.41**	ug/L	1.0	0.41	2		06/25/19 13:46	108-86-1	
Bromochloromethane	**<0.55**	ug/L	2.0	0.55	2		06/25/19 13:46	74-97-5	
Bromodichloromethane	**<0.43**	ug/L	1.0	0.43	2		06/25/19 13:46	75-27-4	
Bromoform	**<1.6**	ug/L	8.0	1.6	2		06/25/19 13:46	75-25-2	
Bromomethane	**<3.6**	ug/L	8.0	3.6	2		06/25/19 13:46	74-83-9	
Carbon disulfide	**<0.16**	ug/L	2.0	0.16	2		06/25/19 13:46	75-15-0	
Carbon tetrachloride	**<0.38**	ug/L	1.0	0.38	2		06/25/19 13:46	56-23-5	
Chlorobenzene	**<0.34**	ug/L	1.0	0.34	2		06/25/19 13:46	108-90-7	
Chloroethane	**<0.98**	ug/L	2.0	0.98	2		06/25/19 13:46	75-00-3	
Chloroform	**<0.90**	ug/L	2.0	0.90	2		06/25/19 13:46	67-66-3	
Chloromethane	**<0.31**	ug/L	8.0	0.31	2		06/25/19 13:46	74-87-3	
Dibromochloromethane	**<0.25**	ug/L	2.0	0.25	2		06/25/19 13:46	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Sample: SB208-GW **Lab ID: 10480346046** Collected: 06/20/19 14:00 Received: 06/21/19 09:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.33**	ug/L	2.0	0.33	2		06/25/19 13:46	74-95-3	
Dichlorodifluoromethane	**<0.47**	ug/L	2.0	0.47	2		06/25/19 13:46	75-71-8	
Dichlorofluoromethane	**<0.28**	ug/L	2.0	0.28	2		06/25/19 13:46	75-43-4	N2
Diisopropyl ether	**<0.27**	ug/L	2.0	0.27	2		06/25/19 13:46	108-20-3	
Ethyl-tert-butyl ether	**<0.36**	ug/L	1.0	0.36	2		06/25/19 13:46	637-92-3	
Ethylbenzene	**0.48J**	ug/L	1.0	0.28	2		06/25/19 13:46	100-41-4	
Hexachloro-1,3-butadiene	**<0.62**	ug/L	2.0	0.62	2		06/25/19 13:46	87-68-3	
Isopropylbenzene (Cumene)	**<0.37**	ug/L	2.0	0.37	2		06/25/19 13:46	98-82-8	
Methyl-tert-butyl ether	**<0.32**	ug/L	1.0	0.32	2		06/25/19 13:46	1634-04-4	
Methylene Chloride	**<2.0**	ug/L	8.0	2.0	2		06/25/19 13:46	75-09-2	
Naphthalene	**<0.96**	ug/L	2.0	0.96	2		06/25/19 13:46	91-20-3	
Styrene	**<0.37**	ug/L	1.0	0.37	2		06/25/19 13:46	100-42-5	
Tetrachloroethene	**<0.34**	ug/L	1.0	0.34	2		06/25/19 13:46	127-18-4	
Tetrahydrofuran	**<4.4**	ug/L	20.0	4.4	2		06/25/19 13:46	109-99-9	
Toluene	**2.4**	ug/L	1.0	0.17	2		06/25/19 13:46	108-88-3	
Trichloroethene	**<0.30**	ug/L	0.80	0.30	2		06/25/19 13:46	79-01-6	
Trichlorofluoromethane	**<0.46**	ug/L	1.0	0.46	2		06/25/19 13:46	75-69-4	
Vinyl acetate	**<2.2**	ug/L	20.0	2.2	2		06/25/19 13:46	108-05-4	
Vinyl chloride	**<0.18**	ug/L	0.40	0.18	2		06/25/19 13:46	75-01-4	
Xylene (Total)	**<0.62**	ug/L	3.0	0.62	2		06/25/19 13:46	1330-20-7	
cis-1,2-Dichloroethene	**<0.31**	ug/L	1.0	0.31	2		06/25/19 13:46	156-59-2	
cis-1,3-Dichloropropene	**<0.41**	ug/L	2.0	0.41	2		06/25/19 13:46	10061-01-5	
m&p-Xylene	**<0.62**	ug/L	2.0	0.62	2		06/25/19 13:46	179601-23-1	
n-Butylbenzene	**<0.48**	ug/L	2.0	0.48	2		06/25/19 13:46	104-51-8	
n-Propylbenzene	**<0.20**	ug/L	1.0	0.20	2		06/25/19 13:46	103-65-1	
o-Xylene	**<0.32**	ug/L	1.0	0.32	2		06/25/19 13:46	95-47-6	
p-Isopropyltoluene	**<0.30**	ug/L	2.0	0.30	2		06/25/19 13:46	99-87-6	
sec-Butylbenzene	**<0.30**	ug/L	1.0	0.30	2		06/25/19 13:46	135-98-8	
tert-Amylmethyl ether	**<0.22**	ug/L	1.0	0.22	2		06/25/19 13:46	994-05-8	
tert-Butyl Alcohol	**<2.5**	ug/L	20.0	2.5	2		06/25/19 13:46	75-65-0	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	2		06/25/19 13:46	98-06-6	
trans-1,2-Dichloroethene	**<0.23**	ug/L	1.0	0.23	2		06/25/19 13:46	156-60-5	
trans-1,3-Dichloropropene	**<0.36**	ug/L	2.0	0.36	2		06/25/19 13:46	10061-02-6	
trans-1,4-Dichloro-2-butene	**<4.1**	ug/L	20.0	4.1	2		06/25/19 13:46	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%.	75-136		2		06/25/19 13:46	17060-07-0	1M
Toluene-d8 (S)	101	%.	75-125		2		06/25/19 13:46	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		2		06/25/19 13:46	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

QC Batch: 617590 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
Associated Lab Samples: 10480346001, 10480346002, 10480346003

SAMPLE DUPLICATE: 3335988

Parameter	Units	10480337020 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	16.2	1	30	

SAMPLE DUPLICATE: 3335989

Parameter	Units	10480346003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	34.7	33.0	5	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

QC Batch: 617610 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
Associated Lab Samples: 10480346004, 10480346005, 10480346006, 10480346007, 10480346008, 10480346009, 10480346010, 10480346011, 10480346012, 10480346013, 10480346014, 10480346015, 10480346017, 10480346018, 10480346023, 10480346024, 10480346025, 10480346026, 10480346027, 10480346028

SAMPLE DUPLICATE: 3336073

Parameter	Units	10480346004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	36.6	36.6	0	30	

SAMPLE DUPLICATE: 3336074

Parameter	Units	10480346028 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.4	25.6	13	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

QC Batch: 617632 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
Associated Lab Samples: 10480346029, 10480346030, 10480346031, 10480346032, 10480346033, 10480346034, 10480346035, 10480346036, 10480346037, 10480346038, 10480346039, 10480346040, 10480346045

SAMPLE DUPLICATE: 3336134

Parameter	Units	10480346032 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.1	21.4	3	30	

SAMPLE DUPLICATE: 3336135

Parameter	Units	10480349007 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.0	7.5	7	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

QC Batch: 616710 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
Associated Lab Samples: 10480346001, 10480346002, 10480346003, 10480346004, 10480346005, 10480346006, 10480346007, 10480346008

METHOD BLANK: 3331464 Matrix: Solid
Associated Lab Samples: 10480346001, 10480346002, 10480346003, 10480346004, 10480346005, 10480346006, 10480346007, 10480346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/kg	<0.023	0.050	0.023	07/01/19 14:24	
1,1,2,2-Tetrachloroethane	mg/kg	<0.0088	0.050	0.0088	07/01/19 14:24	
1,1,2-Trichloroethane	mg/kg	<0.0060	0.050	0.0060	07/01/19 14:24	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.058	0.20	0.058	07/01/19 14:24	
1,1-Dichloroethane	mg/kg	<0.0056	0.050	0.0056	07/01/19 14:24	
1,1-Dichloroethene	mg/kg	<0.015	0.20	0.015	07/01/19 14:24	MN
1,2,4-Trichlorobenzene	mg/kg	<0.011	0.050	0.011	07/01/19 14:24	
1,2,4-Trimethylbenzene	mg/kg	<0.010	0.050	0.010	07/01/19 14:24	
1,2-Dibromoethane (EDB)	mg/kg	<0.0053	0.050	0.0053	07/01/19 14:24	
1,2-Dichlorobenzene	mg/kg	<0.0020	0.050	0.0020	07/01/19 14:24	
1,2-Dichloroethane	mg/kg	<0.0055	0.050	0.0055	07/01/19 14:24	
1,3,5-Trimethylbenzene	mg/kg	<0.0080	0.050	0.0080	07/01/19 14:24	
1,3-Dichlorobenzene	mg/kg	<0.0018	0.050	0.0018	07/01/19 14:24	
1,4-Dichlorobenzene	mg/kg	<0.0031	0.050	0.0031	07/01/19 14:24	
2-Butanone (MEK)	mg/kg	<0.027	0.25	0.027	07/01/19 14:24	
2-Hexanone	mg/kg	<0.012	0.25	0.012	07/01/19 14:24	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.010	0.25	0.010	07/01/19 14:24	
Acetone	mg/kg	<0.31	1.0	0.31	07/01/19 14:24	
Benzene	mg/kg	<0.0028	0.020	0.0028	07/01/19 14:24	
Bromodichloromethane	mg/kg	<0.017	0.050	0.017	07/01/19 14:24	
Bromoform	mg/kg	<0.076	0.20	0.076	07/01/19 14:24	
Bromomethane	mg/kg	<0.058	0.50	0.058	07/01/19 14:24	
Carbon tetrachloride	mg/kg	<0.024	0.20	0.024	07/01/19 14:24	MN
Chlorobenzene	mg/kg	<0.0028	0.050	0.0028	07/01/19 14:24	
Chloroethane	mg/kg	<0.026	0.50	0.026	07/01/19 14:24	
Chloroform	mg/kg	<0.025	0.050	0.025	07/01/19 14:24	
Chloromethane	mg/kg	<0.012	0.20	0.012	07/01/19 14:24	
cis-1,2-Dichloroethene	mg/kg	<0.0083	0.050	0.0083	07/01/19 14:24	
cis-1,3-Dichloropropene	mg/kg	<0.0072	0.050	0.0072	07/01/19 14:24	
Dibromochloromethane	mg/kg	<0.0058	0.20	0.0058	07/01/19 14:24	
Dichlorodifluoromethane	mg/kg	<0.016	0.20	0.016	07/01/19 14:24	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	07/01/19 14:24	
Hexachloro-1,3-butadiene	mg/kg	<0.012	0.25	0.012	07/01/19 14:24	
m&p-Xylene	mg/kg	<0.0062	0.10	0.0062	07/01/19 14:24	
Methyl-tert-butyl ether	mg/kg	<0.0060	0.050	0.0060	07/01/19 14:24	
Methylene Chloride	mg/kg	<0.094	0.20	0.094	07/01/19 14:24	
Naphthalene	mg/kg	<0.047	0.20	0.047	07/01/19 14:24	
o-Xylene	mg/kg	<0.012	0.050	0.012	07/01/19 14:24	
Styrene	mg/kg	<0.0023	0.050	0.0023	07/01/19 14:24	
Tetrachloroethene	mg/kg	<0.018	0.050	0.018	07/01/19 14:24	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

METHOD BLANK: 3331464 Matrix: Solid
Associated Lab Samples: 10480346001, 10480346002, 10480346003, 10480346004, 10480346005, 10480346006, 10480346007, 10480346008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Tetrahydrofuran	mg/kg	<0.073	2.0	0.073	07/01/19 14:24	
Toluene	mg/kg	<0.012	0.050	0.012	07/01/19 14:24	
trans-1,2-Dichloroethene	mg/kg	<0.023	0.050	0.023	07/01/19 14:24	
trans-1,3-Dichloropropene	mg/kg	<0.0070	0.050	0.0070	07/01/19 14:24	
Trichloroethene	mg/kg	<0.0077	0.050	0.0077	07/01/19 14:24	
Trichlorofluoromethane	mg/kg	<0.087	0.20	0.087	07/01/19 14:24	
Vinyl acetate	mg/kg	<0.0058	0.50	0.0058	07/01/19 14:24	
Vinyl chloride	mg/kg	<0.0098	0.020	0.0098	07/01/19 14:24	
1,2-Dichloroethane-d4 (S)	%.	121	75-125		07/01/19 14:24	
4-Bromofluorobenzene (S)	%.	103	75-125		07/01/19 14:24	
Toluene-d8 (S)	%.	99	75-125		07/01/19 14:24	

LABORATORY CONTROL SAMPLE: 3331465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	1	1.3	130	53-146	
1,1,2,2-Tetrachloroethane	mg/kg	1	0.83	83	51-125	
1,1,2-Trichloroethane	mg/kg	1	1.0	100	55-125	
1,1,2-Trichlorotrifluoroethane	mg/kg	1	1.2	121	49-150	
1,1-Dichloroethane	mg/kg	1	0.94	94	56-125	
1,1-Dichloroethene	mg/kg	1	1.2	119	48-148	
1,2,4-Trichlorobenzene	mg/kg	1	0.90	90	48-125	
1,2,4-Trimethylbenzene	mg/kg	1	1.1	112	51-126	
1,2-Dibromoethane (EDB)	mg/kg	1	1.0	100	52-125	
1,2-Dichlorobenzene	mg/kg	1	1.0	100	50-125	
1,2-Dichloroethane	mg/kg	1	1.1	110	51-125	
1,3,5-Trimethylbenzene	mg/kg	1	1.1	114	52-127	
1,3-Dichlorobenzene	mg/kg	1	1.1	106	50-128	
1,4-Dichlorobenzene	mg/kg	1	0.97	97	51-125	
2-Butanone (MEK)	mg/kg	5	3.7	74	43-125	
2-Hexanone	mg/kg	5	3.9	78	44-137	
4-Methyl-2-pentanone (MIBK)	mg/kg	5	4.0	81	39-125	
Acetone	mg/kg	5	4.1	82	46-136	
Benzene	mg/kg	1	0.86	86	48-125	
Bromodichloromethane	mg/kg	1	1.3	125	51-131	
Bromoform	mg/kg	1	1.2	119	52-125	
Bromomethane	mg/kg	1	1.2	119	30-150	CH
Carbon tetrachloride	mg/kg	1	1.3	135	59-129	CH,L3
Chlorobenzene	mg/kg	1	1.0	101	54-125	
Chloroethane	mg/kg	1	1.1	107	61-132	
Chloroform	mg/kg	1	1.1	107	52-125	
Chloromethane	mg/kg	1	0.63	63	46-125	
cis-1,2-Dichloroethene	mg/kg	1	0.88	88	54-127	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

LABORATORY CONTROL SAMPLE: 3331465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,3-Dichloropropene	mg/kg	1	1.1	111	50-134	
Dibromochloromethane	mg/kg	1	1.2	124	54-125	CH
Dichlorodifluoromethane	mg/kg	1	0.85	85	42-125	
Ethylbenzene	mg/kg	1	1.1	107	51-125	
Hexachloro-1,3-butadiene	mg/kg	1	1.2	125	41-133	
m&p-Xylene	mg/kg	2	2.1	103	51-128	
Methyl-tert-butyl ether	mg/kg	1	0.92	92	53-125	
Methylene Chloride	mg/kg	1	0.93	93	48-125	
Naphthalene	mg/kg	1	0.82	82	51-125	
o-Xylene	mg/kg	1	1.0	100	53-125	
Styrene	mg/kg	1	1.1	108	53-128	
Tetrachloroethene	mg/kg	1	1.2	122	54-131	
Tetrahydrofuran	mg/kg	10	8.7	87	42-145	
Toluene	mg/kg	1	1.0	101	51-125	
trans-1,2-Dichloroethene	mg/kg	1	1.0	103	50-130	
trans-1,3-Dichloropropene	mg/kg	1	1.1	108	52-125	
Trichloroethene	mg/kg	1	1.1	107	55-131	
Trichlorofluoromethane	mg/kg	1	1.4	145	30-150	CH
Vinyl acetate	mg/kg	1	0.91	91	46-125	
Vinyl chloride	mg/kg	1	0.77	77	58-125	
1,2-Dichloroethane-d4 (S)	%.			113	75-125	
4-Bromofluorobenzene (S)	%.			104	75-125	
Toluene-d8 (S)	%.			97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331466 3331467

Parameter	Units	10480917001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	mg/kg	ND	1.2	1.2	2.0	2.0	170	163	63-150	5	30	M1
1,1,2,2-Tetrachloroethane	mg/kg	ND	1.2	1.2	1.4	1.3	113	106	60-146	8	30	
1,1,2-Trichloroethane	mg/kg	ND	1.2	1.2	1.5	1.5	126	122	63-143	5	30	
1,1,2-Trichlorotrifluoroethane	mg/kg	ND	1.2	1.2	1.8	1.6	150	134	30-150	12	30	
1,1-Dichloroethane	mg/kg	ND	1.2	1.2	1.5	1.4	127	121	63-144	6	30	
1,1-Dichloroethene	mg/kg	ND	1.2	1.2	1.7	1.8	144	147	30-150	1	30	
1,2,4-Trichlorobenzene	mg/kg	ND	1.2	1.2	1.4	1.3	120	107	66-142	13	30	
1,2,4-Trimethylbenzene	mg/kg	ND	1.2	1.2	1.7	1.4	141	118	65-145	19	30	
1,2-Dibromoethane (EDB)	mg/kg	ND	1.2	1.2	1.6	1.5	129	126	67-135	3	30	
1,2-Dichlorobenzene	mg/kg	ND	1.2	1.2	1.5	1.4	128	113	68-141	13	30	
1,2-Dichloroethane	mg/kg	ND	1.2	1.2	1.8	1.7	147	144	56-132	3	30	M1
1,3,5-Trimethylbenzene	mg/kg	ND	1.2	1.2	1.8	1.5	148	126	66-148	17	30	
1,3-Dichlorobenzene	mg/kg	ND	1.2	1.2	1.6	1.4	129	117	63-148	11	30	
1,4-Dichlorobenzene	mg/kg	ND	1.2	1.2	1.5	1.3	124	107	68-140	16	30	
2-Butanone (MEK)	mg/kg	ND	6.1	6	6.6	6.0	109	101	53-138	8	30	
2-Hexanone	mg/kg	ND	6.1	6	6.9	6.3	114	106	57-150	8	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331466 3331467

Parameter	Units	10480917001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	6.1	6	6.9	6.4	114	108	47-150	7	30	
Acetone	mg/kg	ND	6.1	6	6.7	6.2	111	103	64-150	8	30	
Benzene	mg/kg	ND	1.2	1.2	1.4	1.3	112	111	63-136	2	30	
Bromodichloromethane	mg/kg	ND	1.2	1.2	2.0	1.8	162	152	63-150	8	30	M1
Bromoform	mg/kg	ND	1.2	1.2	1.8	1.7	151	139	64-140	9	30	M1
Bromomethane	mg/kg	ND	1.2	1.2	1.8	1.7	146	144	56-148	3	30	CH
Carbon tetrachloride	mg/kg	ND	1.2	1.2	2.2	2.1	180	177	75-148	3	30	CH,M0
Chlorobenzene	mg/kg	ND	1.2	1.2	1.6	1.4	131	117	62-147	12	30	
Chloroethane	mg/kg	ND	1.2	1.2	1.7	1.8	144	151	37-150	4	30	M1
Chloroform	mg/kg	ND	1.2	1.2	1.7	1.7	142	138	66-130	4	30	M1
Chloromethane	mg/kg	ND	1.2	1.2	0.91	0.91	75	76	35-131	0	30	
cis-1,2-Dichloroethene	mg/kg	ND	1.2	1.2	1.4	1.4	119	114	63-143	5	30	
cis-1,3-Dichloropropene	mg/kg	ND	1.2	1.2	1.7	1.6	140	134	60-150	6	30	
Dibromochloromethane	mg/kg	ND	1.2	1.2	1.9	1.8	157	147	64-144	8	30	CH,M1
Dichlorodifluoromethane	mg/kg	ND	1.2	1.2	1.1	1.2	91	101	30-125	9	30	
Ethylbenzene	mg/kg	ND	1.2	1.2	1.7	1.4	137	119	64-142	15	30	
Hexachloro-1,3-butadiene	mg/kg	ND	1.2	1.2	1.9	1.4	155	114	58-150	32	30	M1,R1
m&p-Xylene	mg/kg	ND	2.4	2.4	3.1	2.8	129	117	67-145	11	30	
Methyl-tert-butyl ether	mg/kg	ND	1.2	1.2	1.5	1.5	122	122	69-134	2	30	
Methylene Chloride	mg/kg	ND	1.2	1.2	1.4	1.4	109	108	56-134	2	30	
Naphthalene	mg/kg	ND	1.2	1.2	1.3	1.2	108	104	63-148	4	30	
o-Xylene	mg/kg	ND	1.2	1.2	1.5	1.3	128	112	63-148	15	30	
Styrene	mg/kg	ND	1.2	1.2	1.7	1.5	139	122	63-150	14	30	
Tetrachloroethene	mg/kg	ND	1.2	1.2	1.8	1.6	145	134	62-150	9	30	
Tetrahydrofuran	mg/kg	ND	12.1	12	12.7	12.7	105	106	53-150	0	30	
Toluene	mg/kg	ND	1.2	1.2	1.6	1.4	129	119	61-141	9	30	
trans-1,2-Dichloroethene	mg/kg	ND	1.2	1.2	1.5	1.5	126	127	52-148	0	30	
trans-1,3-Dichloropropene	mg/kg	ND	1.2	1.2	1.7	1.6	137	132	62-142	5	30	
Trichloroethene	mg/kg	ND	1.2	1.2	1.7	1.5	140	130	59-150	8	30	
Trichlorofluoromethane	mg/kg	ND	1.2	1.2	2.1	2.0	173	170	30-150	2	30	CH,M1
Vinyl acetate	mg/kg	ND	1.2	1.2	1.5	1.4	124	121	30-150	4	30	
Vinyl chloride	mg/kg	ND	1.2	1.2	1.1	1.1	92	95	44-144	2	30	
1,2-Dichloroethane-d4 (S)	%.						120	121	75-125			
4-Bromofluorobenzene (S)	%.						104	107	75-125			
Toluene-d8 (S)	%.						99	101	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

QC Batch: 616897 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
Associated Lab Samples: 10480346009, 10480346010, 10480346011, 10480346012, 10480346013, 10480346014, 10480346015, 10480346017, 10480346018, 10480346019, 10480346020, 10480346021

METHOD BLANK: 3332402 Matrix: Solid
Associated Lab Samples: 10480346009, 10480346010, 10480346011, 10480346012, 10480346013, 10480346014, 10480346015, 10480346017, 10480346018, 10480346019, 10480346020, 10480346021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/kg	<0.023	0.050	0.023	07/02/19 18:51	
1,1,2,2-Tetrachloroethane	mg/kg	<0.0088	0.050	0.0088	07/02/19 18:51	
1,1,2-Trichloroethane	mg/kg	<0.0060	0.050	0.0060	07/02/19 18:51	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.058	0.20	0.058	07/02/19 18:51	
1,1-Dichloroethane	mg/kg	<0.0056	0.050	0.0056	07/02/19 18:51	
1,1-Dichloroethene	mg/kg	<0.015	0.050	0.015	07/02/19 18:51	
1,2,4-Trichlorobenzene	mg/kg	<0.011	0.050	0.011	07/02/19 18:51	
1,2,4-Trimethylbenzene	mg/kg	<0.010	0.050	0.010	07/02/19 18:51	
1,2-Dibromoethane (EDB)	mg/kg	<0.0053	0.050	0.0053	07/02/19 18:51	
1,2-Dichlorobenzene	mg/kg	<0.0020	0.050	0.0020	07/02/19 18:51	
1,2-Dichloroethane	mg/kg	<0.0055	0.050	0.0055	07/02/19 18:51	
1,3,5-Trimethylbenzene	mg/kg	<0.0080	0.050	0.0080	07/02/19 18:51	
1,3-Dichlorobenzene	mg/kg	<0.0018	0.050	0.0018	07/02/19 18:51	
1,4-Dichlorobenzene	mg/kg	<0.0031	0.050	0.0031	07/02/19 18:51	
2-Butanone (MEK)	mg/kg	<0.027	0.25	0.027	07/02/19 18:51	
2-Hexanone	mg/kg	<0.012	0.25	0.012	07/02/19 18:51	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.010	0.25	0.010	07/02/19 18:51	
Acetone	mg/kg	<0.31	1.0	0.31	07/02/19 18:51	
Benzene	mg/kg	<0.0028	0.020	0.0028	07/02/19 18:51	
Bromodichloromethane	mg/kg	<0.017	0.050	0.017	07/02/19 18:51	
Bromoform	mg/kg	<0.076	0.20	0.076	07/02/19 18:51	
Bromomethane	mg/kg	<0.058	0.50	0.058	07/02/19 18:51	
Carbon tetrachloride	mg/kg	<0.024	0.050	0.024	07/02/19 18:51	
Chlorobenzene	mg/kg	<0.0028	0.050	0.0028	07/02/19 18:51	
Chloroethane	mg/kg	<0.026	0.50	0.026	07/02/19 18:51	
Chloroform	mg/kg	<0.025	0.20	0.025	07/02/19 18:51	MN
Chloromethane	mg/kg	<0.012	0.20	0.012	07/02/19 18:51	
cis-1,2-Dichloroethene	mg/kg	<0.0083	0.050	0.0083	07/02/19 18:51	
cis-1,3-Dichloropropene	mg/kg	<0.0072	0.050	0.0072	07/02/19 18:51	
Dibromochloromethane	mg/kg	<0.0058	0.20	0.0058	07/02/19 18:51	
Dichlorodifluoromethane	mg/kg	<0.016	0.20	0.016	07/02/19 18:51	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	07/02/19 18:51	
Hexachloro-1,3-butadiene	mg/kg	<0.012	0.25	0.012	07/02/19 18:51	
m&p-Xylene	mg/kg	<0.0062	0.10	0.0062	07/02/19 18:51	
Methyl-tert-butyl ether	mg/kg	<0.0060	0.050	0.0060	07/02/19 18:51	
Methylene Chloride	mg/kg	<0.094	0.20	0.094	07/02/19 18:51	
Naphthalene	mg/kg	<0.047	0.20	0.047	07/02/19 18:51	
o-Xylene	mg/kg	<0.012	0.050	0.012	07/02/19 18:51	
Styrene	mg/kg	<0.0023	0.050	0.0023	07/02/19 18:51	
Tetrachloroethene	mg/kg	<0.018	0.050	0.018	07/02/19 18:51	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

METHOD BLANK: 3332402 Matrix: Solid

Associated Lab Samples: 10480346009, 10480346010, 10480346011, 10480346012, 10480346013, 10480346014, 10480346015, 10480346017, 10480346018, 10480346019, 10480346020, 10480346021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Tetrahydrofuran	mg/kg	<0.073	2.0	0.073	07/02/19 18:51	
Toluene	mg/kg	<0.012	0.050	0.012	07/02/19 18:51	
trans-1,2-Dichloroethene	mg/kg	<0.023	0.050	0.023	07/02/19 18:51	
trans-1,3-Dichloropropene	mg/kg	<0.0070	0.050	0.0070	07/02/19 18:51	
Trichloroethene	mg/kg	<0.0077	0.050	0.0077	07/02/19 18:51	
Trichlorofluoromethane	mg/kg	<0.087	0.20	0.087	07/02/19 18:51	
Vinyl acetate	mg/kg	<0.0058	0.50	0.0058	07/02/19 18:51	
Vinyl chloride	mg/kg	<0.0098	0.020	0.0098	07/02/19 18:51	
1,2-Dichloroethane-d4 (S)	%.	95	75-125		07/02/19 18:51	
4-Bromofluorobenzene (S)	%.	97	75-125		07/02/19 18:51	
Toluene-d8 (S)	%.	98	75-125		07/02/19 18:51	

LABORATORY CONTROL SAMPLE: 3332403

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	1	0.81	81	53-146	
1,1,2,2-Tetrachloroethane	mg/kg	1	0.67	67	51-125	
1,1,2-Trichloroethane	mg/kg	1	0.68	68	55-125	
1,1,2-Trichlorotrifluoroethane	mg/kg	1	0.75	75	49-150	
1,1-Dichloroethane	mg/kg	1	0.66	66	56-125	
1,1-Dichloroethene	mg/kg	1	0.78	78	48-148	
1,2,4-Trichlorobenzene	mg/kg	1	0.70	70	48-125	
1,2,4-Trimethylbenzene	mg/kg	1	0.67	67	51-126	
1,2-Dibromoethane (EDB)	mg/kg	1	0.74	74	52-125	
1,2-Dichlorobenzene	mg/kg	1	0.67	67	50-125	
1,2-Dichloroethane	mg/kg	1	0.71	71	51-125	
1,3,5-Trimethylbenzene	mg/kg	1	0.71	71	52-127	
1,3-Dichlorobenzene	mg/kg	1	0.66	66	50-128	
1,4-Dichlorobenzene	mg/kg	1	0.70	70	51-125	
2-Butanone (MEK)	mg/kg	5	2.9	58	43-125	
2-Hexanone	mg/kg	5	3.0	61	44-137	
4-Methyl-2-pentanone (MIBK)	mg/kg	5	3.2	65	39-125	
Acetone	mg/kg	5	3.5	71	46-136	
Benzene	mg/kg	1	0.70	70	48-125	
Bromodichloromethane	mg/kg	1	0.67	67	51-131	
Bromoform	mg/kg	1	0.74	74	52-125	
Bromomethane	mg/kg	1	0.67	67	30-150	
Carbon tetrachloride	mg/kg	1	0.90	90	59-129	
Chlorobenzene	mg/kg	1	0.69	69	54-125	
Chloroethane	mg/kg	1	0.65	65	61-132	
Chloroform	mg/kg	1	0.75	75	52-125	
Chloromethane	mg/kg	1	0.56	56	46-125	
cis-1,2-Dichloroethene	mg/kg	1	0.82	82	54-127	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

LABORATORY CONTROL SAMPLE: 3332403

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,3-Dichloropropene	mg/kg	1	0.73	73	50-134	
Dibromochloromethane	mg/kg	1	0.73	73	54-125	
Dichlorodifluoromethane	mg/kg	1	0.56	56	42-125	
Ethylbenzene	mg/kg	1	0.73	73	51-125	
Hexachloro-1,3-butadiene	mg/kg	1	0.77	77	41-133	
m&p-Xylene	mg/kg	2	1.4	70	51-128	
Methyl-tert-butyl ether	mg/kg	1	0.68	68	53-125	
Methylene Chloride	mg/kg	1	0.75	75	48-125	
Naphthalene	mg/kg	1	0.60	60	51-125	
o-Xylene	mg/kg	1	0.74	74	53-125	
Styrene	mg/kg	1	0.74	74	53-128	
Tetrachloroethene	mg/kg	1	0.81	81	54-131	
Tetrahydrofuran	mg/kg	10	7.9	79	42-145	
Toluene	mg/kg	1	0.83	83	51-125	
trans-1,2-Dichloroethene	mg/kg	1	0.81	81	50-130	
trans-1,3-Dichloropropene	mg/kg	1	0.70	70	52-125	
Trichloroethene	mg/kg	1	0.79	79	55-131	
Trichlorofluoromethane	mg/kg	1	0.76	76	30-150	
Vinyl acetate	mg/kg	1	0.74	74	46-125	
Vinyl chloride	mg/kg	1	0.68	68	58-125	
1,2-Dichloroethane-d4 (S)	%.			92	75-125	
4-Bromofluorobenzene (S)	%.			98	75-125	
Toluene-d8 (S)	%.			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3332404 3332405

Parameter	Units	10480931002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	mg/kg	ND	1	1.1	1.4	1.5	140	141	63-150	4	30	
1,1,2,2-Tetrachloroethane	mg/kg	ND	1	1.1	1.2	1.3	118	120	60-146	5	30	
1,1,2-Trichloroethane	mg/kg	ND	1	1.1	1.3	1.3	124	120	63-143	0	30	
1,1,2-Trichlorotrifluoroethane	mg/kg	ND	1	1.1	1.5	1.6	142	145	30-150	5	30	
1,1-Dichloroethane	mg/kg	ND	1	1.1	1.2	1.2	120	117	63-144	1	30	
1,1-Dichloroethene	mg/kg	ND	1	1.1	1.5	1.5	141	137	30-150	1	30	
1,2,4-Trichlorobenzene	mg/kg	ND	1	1.1	1.3	1.4	126	129	66-142	6	30	
1,2,4-Trimethylbenzene	mg/kg	ND	1	1.1	1.3	1.3	123	123	65-145	3	30	
1,2-Dibromoethane (EDB)	mg/kg	ND	1	1.1	1.3	1.4	128	130	67-135	6	30	
1,2-Dichlorobenzene	mg/kg	ND	1	1.1	1.2	1.2	120	116	68-141	0	30	
1,2-Dichloroethane	mg/kg	ND	1	1.1	1.3	1.3	124	119	56-132	1	30	
1,3,5-Trimethylbenzene	mg/kg	ND	1	1.1	1.3	1.4	128	128	66-148	4	30	
1,3-Dichlorobenzene	mg/kg	ND	1	1.1	1.2	1.2	117	114	63-148	1	30	
1,4-Dichlorobenzene	mg/kg	ND	1	1.1	1.3	1.3	128	125	68-140	2	30	
2-Butanone (MEK)	mg/kg	ND	5.1	5.4	6.5	6.2	126	115	53-138	6	30	
2-Hexanone	mg/kg	ND	5.1	5.4	6.7	6.9	130	128	57-150	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3332404 3332405

Parameter	Units	10480931002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	5.1	5.4	6.0	6.2	117	115	47-150	3	30	
Acetone	mg/kg	ND	5.1	5.4	7.4	7.8	143	146	64-150	6	30	
Benzene	mg/kg	ND	1	1.1	1.3	1.3	126	124	63-136	2	30	
Bromodichloromethane	mg/kg	ND	1	1.1	1.3	1.4	127	128	63-150	4	30	
Bromoform	mg/kg	ND	1	1.1	1.4	1.5	138	141	64-140	5	30	M1
Bromomethane	mg/kg	ND	1	1.1	1.1	1.2	107	109	56-148	6	30	
Carbon tetrachloride	mg/kg	ND	1	1.1	1.6	1.7	154	155	75-148	4	30	M1
Chlorobenzene	mg/kg	ND	1	1.1	1.3	1.3	125	121	62-147	0	30	
Chloroethane	mg/kg	ND	1	1.1	1.0	0.86	100	81	37-150	18	30	
Chloroform	mg/kg	ND	1	1.1	1.3	1.3	129	123	66-130	1	30	
Chloromethane	mg/kg	ND	1	1.1	0.89	0.89	86	83	35-131	1	30	
cis-1,2-Dichloroethene	mg/kg	ND	1	1.1	1.4	1.5	136	138	63-143	5	30	
cis-1,3-Dichloropropene	mg/kg	ND	1	1.1	1.4	1.4	135	129	60-150	1	30	
Dibromochloromethane	mg/kg	ND	1	1.1	1.4	1.4	131	132	64-144	4	30	
Dichlorodifluoromethane	mg/kg	ND	1	1.1	0.92	0.87	89	81	30-125	6	30	
Ethylbenzene	mg/kg	ND	1	1.1	1.4	1.4	131	128	64-142	1	30	
Hexachloro-1,3-butadiene	mg/kg	ND	1	1.1	1.3	1.5	128	141	58-150	14	30	
m&p-Xylene	mg/kg	ND	2.1	2.1	2.6	2.8	128	129	67-145	5	30	
Methyl-tert-butyl ether	mg/kg	ND	1	1.1	1.3	1.3	127	122	69-134	1	30	
Methylene Chloride	mg/kg	ND	1	1.1	1.3	1.4	122	126	56-134	7	30	
Naphthalene	mg/kg	ND	1	1.1	1.2	1.3	117	120	63-148	6	30	
o-Xylene	mg/kg	ND	1	1.1	1.4	1.4	139	130	63-148	3	30	
Styrene	mg/kg	ND	1	1.1	1.4	1.4	135	131	63-150	1	30	
Tetrachloroethene	mg/kg	ND	1	1.1	1.5	1.6	143	148	62-150	7	30	
Tetrahydrofuran	mg/kg	ND	10.3	10.7	13.3	14.7	128	137	53-150	10	30	
Toluene	mg/kg	ND	1	1.1	1.5	1.5	143	144	61-141	5	30	M1
trans-1,2-Dichloroethene	mg/kg	ND	1	1.1	1.4	1.3	135	125	52-148	4	30	
trans-1,3-Dichloropropene	mg/kg	ND	1	1.1	1.3	1.4	127	128	62-142	4	30	
Trichloroethene	mg/kg	ND	1	1.1	1.5	1.5	143	139	59-150	1	30	
Trichlorofluoromethane	mg/kg	ND	1	1.1	1.2	1.1	115	100	30-150	11	30	
Vinyl acetate	mg/kg	ND	1	1.1	1.2	1.2	120	113	30-150	3	30	
Vinyl chloride	mg/kg	ND	1	1.1	1.0	1.0	101	95	44-144	3	30	
1,2-Dichloroethane-d4 (S)	%.						93	92	75-125			
4-Bromofluorobenzene (S)	%.						96	96	75-125			
Toluene-d8 (S)	%.						99	99	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

QC Batch: 617323 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
Associated Lab Samples: 10480346025, 10480346026, 10480346027, 10480346028, 10480346029, 10480346030, 10480346031, 10480346032, 10480346033, 10480346034, 10480346035, 10480346036, 10480346037, 10480346038, 10480346039, 10480346040, 10480346045

METHOD BLANK: 3334728 Matrix: Solid
Associated Lab Samples: 10480346025, 10480346026, 10480346027, 10480346028, 10480346029, 10480346030, 10480346031, 10480346032, 10480346033, 10480346034, 10480346035, 10480346036, 10480346037, 10480346038, 10480346039, 10480346040, 10480346045

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/kg	<0.023	0.050	0.023	07/03/19 17:05	
1,1,2,2-Tetrachloroethane	mg/kg	<0.0088	0.050	0.0088	07/03/19 17:05	
1,1,2-Trichloroethane	mg/kg	<0.0060	0.050	0.0060	07/03/19 17:05	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.058	0.20	0.058	07/03/19 17:05	
1,1-Dichloroethane	mg/kg	<0.0056	0.050	0.0056	07/03/19 17:05	
1,1-Dichloroethene	mg/kg	<0.015	0.050	0.015	07/03/19 17:05	
1,2,4-Trichlorobenzene	mg/kg	<0.011	0.050	0.011	07/03/19 17:05	
1,2,4-Trimethylbenzene	mg/kg	<0.010	0.050	0.010	07/03/19 17:05	
1,2-Dibromoethane (EDB)	mg/kg	<0.0053	0.050	0.0053	07/03/19 17:05	
1,2-Dichlorobenzene	mg/kg	<0.0020	0.050	0.0020	07/03/19 17:05	
1,2-Dichloroethane	mg/kg	<0.0055	0.050	0.0055	07/03/19 17:05	
1,3,5-Trimethylbenzene	mg/kg	<0.0080	0.050	0.0080	07/03/19 17:05	
1,3-Dichlorobenzene	mg/kg	<0.0018	0.050	0.0018	07/03/19 17:05	
1,4-Dichlorobenzene	mg/kg	<0.0031	0.050	0.0031	07/03/19 17:05	
2-Butanone (MEK)	mg/kg	<0.027	0.25	0.027	07/03/19 17:05	
2-Hexanone	mg/kg	<0.012	0.25	0.012	07/03/19 17:05	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.010	0.25	0.010	07/03/19 17:05	
Acetone	mg/kg	<0.31	1.0	0.31	07/03/19 17:05	
Benzene	mg/kg	<0.0028	0.020	0.0028	07/03/19 17:05	
Bromodichloromethane	mg/kg	<0.017	0.050	0.017	07/03/19 17:05	
Bromoform	mg/kg	<0.076	0.20	0.076	07/03/19 17:05	
Bromomethane	mg/kg	<0.058	0.50	0.058	07/03/19 17:05	
Carbon tetrachloride	mg/kg	<0.024	0.050	0.024	07/03/19 17:05	
Chlorobenzene	mg/kg	<0.0028	0.050	0.0028	07/03/19 17:05	
Chloroethane	mg/kg	<0.026	0.50	0.026	07/03/19 17:05	
Chloroform	mg/kg	<0.025	0.20	0.025	07/03/19 17:05	MN
Chloromethane	mg/kg	<0.012	0.20	0.012	07/03/19 17:05	
cis-1,2-Dichloroethene	mg/kg	<0.0083	0.050	0.0083	07/03/19 17:05	
cis-1,3-Dichloropropene	mg/kg	<0.0072	0.050	0.0072	07/03/19 17:05	
Dibromochloromethane	mg/kg	<0.0058	0.20	0.0058	07/03/19 17:05	
Dichlorodifluoromethane	mg/kg	<0.016	0.20	0.016	07/03/19 17:05	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	07/03/19 17:05	
Hexachloro-1,3-butadiene	mg/kg	<0.012	0.25	0.012	07/03/19 17:05	
m&p-Xylene	mg/kg	<0.0062	0.10	0.0062	07/03/19 17:05	
Methyl-tert-butyl ether	mg/kg	<0.0060	0.050	0.0060	07/03/19 17:05	
Methylene Chloride	mg/kg	<0.094	0.20	0.094	07/03/19 17:05	
Naphthalene	mg/kg	<0.047	0.20	0.047	07/03/19 17:05	
o-Xylene	mg/kg	<0.012	0.050	0.012	07/03/19 17:05	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

METHOD BLANK: 3334728 Matrix: Solid

Associated Lab Samples: 10480346025, 10480346026, 10480346027, 10480346028, 10480346029, 10480346030, 10480346031, 10480346032, 10480346033, 10480346034, 10480346035, 10480346036, 10480346037, 10480346038, 10480346039, 10480346040, 10480346045

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Styrene	mg/kg	<0.0023	0.050	0.0023	07/03/19 17:05	
Tetrachloroethene	mg/kg	<0.018	0.050	0.018	07/03/19 17:05	
Tetrahydrofuran	mg/kg	<0.073	2.0	0.073	07/03/19 17:05	
Toluene	mg/kg	<0.012	0.050	0.012	07/03/19 17:05	
trans-1,2-Dichloroethene	mg/kg	<0.023	0.050	0.023	07/03/19 17:05	
trans-1,3-Dichloropropene	mg/kg	<0.0070	0.050	0.0070	07/03/19 17:05	
Trichloroethene	mg/kg	<0.0077	0.050	0.0077	07/03/19 17:05	
Trichlorofluoromethane	mg/kg	<0.087	0.20	0.087	07/03/19 17:05	
Vinyl acetate	mg/kg	<0.0058	0.50	0.0058	07/03/19 17:05	
Vinyl chloride	mg/kg	<0.0098	0.020	0.0098	07/03/19 17:05	
1,2-Dichloroethane-d4 (S)	%.	116	75-125		07/03/19 17:05	
4-Bromofluorobenzene (S)	%.	109	75-125		07/03/19 17:05	
Toluene-d8 (S)	%.	104	75-125		07/03/19 17:05	

LABORATORY CONTROL SAMPLE: 3334729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	1	0.94	94	53-146	
1,1,2,2-Tetrachloroethane	mg/kg	1	0.75	75	51-125	
1,1,2-Trichloroethane	mg/kg	1	0.76	76	55-125	
1,1,2-Trichlorotrifluoroethane	mg/kg	1	0.92	92	49-150	
1,1-Dichloroethane	mg/kg	1	0.86	86	56-125	
1,1-Dichloroethene	mg/kg	1	0.91	91	48-148	
1,2,4-Trichlorobenzene	mg/kg	1	0.65	65	48-125	
1,2,4-Trimethylbenzene	mg/kg	1	0.75	75	51-126	
1,2-Dibromoethane (EDB)	mg/kg	1	0.73	73	52-125	
1,2-Dichlorobenzene	mg/kg	1	0.69	69	50-125	
1,2-Dichloroethane	mg/kg	1	0.85	85	51-125	
1,3,5-Trimethylbenzene	mg/kg	1	0.82	82	52-127	
1,3-Dichlorobenzene	mg/kg	1	0.67	67	50-128	
1,4-Dichlorobenzene	mg/kg	1	0.73	73	51-125	
2-Butanone (MEK)	mg/kg	5	3.6	73	43-125	
2-Hexanone	mg/kg	5	3.2	65	44-137	
4-Methyl-2-pentanone (MIBK)	mg/kg	5	3.2	64	39-125	
Acetone	mg/kg	5	4.1	83	46-136	
Benzene	mg/kg	1	0.89	89	48-125	
Bromodichloromethane	mg/kg	1	0.78	78	51-131	
Bromoform	mg/kg	1	0.63	63	52-125	
Bromomethane	mg/kg	1	1.1	112	30-150	
Carbon tetrachloride	mg/kg	1	1.1	106	59-129	
Chlorobenzene	mg/kg	1	0.71	71	54-125	
Chloroethane	mg/kg	1	1.2	118	61-132	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

LABORATORY CONTROL SAMPLE: 3334729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroform	mg/kg	1	0.92	92	52-125	
Chloromethane	mg/kg	1	1.1	112	46-125	
cis-1,2-Dichloroethene	mg/kg	1	0.97	97	54-127	
cis-1,3-Dichloropropene	mg/kg	1	0.81	81	50-134	
Dibromochloromethane	mg/kg	1	0.70	70	54-125	
Dichlorodifluoromethane	mg/kg	1	1.1	109	42-125	
Ethylbenzene	mg/kg	1	0.77	77	51-125	
Hexachloro-1,3-butadiene	mg/kg	1	0.83	83	41-133	
m&p-Xylene	mg/kg	2	1.4	72	51-128	
Methyl-tert-butyl ether	mg/kg	1	0.87	87	53-125	
Methylene Chloride	mg/kg	1	0.93	93	48-125	
Naphthalene	mg/kg	1	0.59	59	51-125	
o-Xylene	mg/kg	1	0.73	73	53-125	
Styrene	mg/kg	1	0.79	79	53-128	
Tetrachloroethene	mg/kg	1	0.74	74	54-131	
Tetrahydrofuran	mg/kg	10	6.8	68	42-145	
Toluene	mg/kg	1	0.89	89	51-125	
trans-1,2-Dichloroethene	mg/kg	1	1.1	106	50-130	
trans-1,3-Dichloropropene	mg/kg	1	0.76	76	52-125	
Trichloroethene	mg/kg	1	0.80	80	55-131	
Trichlorofluoromethane	mg/kg	1	1.1	108	30-150	
Vinyl acetate	mg/kg	1	0.90	90	46-125	
Vinyl chloride	mg/kg	1	1.3	125	58-125	
1,2-Dichloroethane-d4 (S)	%.			117	75-125	
4-Bromofluorobenzene (S)	%.			113	75-125	
Toluene-d8 (S)	%.			102	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334730 3334731

Parameter	Units	10480346032 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	mg/kg	<0.031	1.3	1.3	1.7	1.6	134	126	63-150	8	30	
1,1,2,2-Tetrachloroethane	mg/kg	<0.012	1.3	1.3	1.5	1.5	117	122	60-146	1	30	
1,1,2-Trichloroethane	mg/kg	<0.0080	1.3	1.3	1.3	1.4	103	107	63-143	2	30	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.077	1.3	1.3	1.5	1.5	117	118	30-150	1	30	
1,1-Dichloroethane	mg/kg	<0.0075	1.3	1.3	1.5	1.5	119	119	63-144	2	30	
1,1-Dichloroethene	mg/kg	<0.020	1.3	1.3	1.6	1.4	125	112	30-150	13	30	
1,2,4-Trichlorobenzene	mg/kg	<0.015	1.3	1.3	1.3	1.3	100	106	66-142	3	30	
1,2,4-Trimethylbenzene	mg/kg	<0.013	1.3	1.3	1.4	1.5	108	116	65-145	6	30	
1,2-Dibromoethane (EDB)	mg/kg	<0.0070	1.3	1.3	1.3	1.4	101	107	67-135	3	30	
1,2-Dichlorobenzene	mg/kg	<0.0027	1.3	1.3	1.3	1.3	99	106	68-141	4	30	
1,2-Dichloroethane	mg/kg	<0.0073	1.3	1.3	1.6	1.5	120	122	56-132	1	30	
1,3,5-Trimethylbenzene	mg/kg	<0.011	1.3	1.3	1.5	1.6	118	125	66-148	3	30	
1,3-Dichlorobenzene	mg/kg	<0.0024	1.3	1.3	1.3	1.3	97	101	63-148	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334730 3334731

Parameter	Units	10480346032 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dichlorobenzene	mg/kg	<0.0041	1.3	1.3	1.4	1.4	108	108	68-140	2	30	
2-Butanone (MEK)	mg/kg	<0.035	6.5	6.4	8.0	7.7	123	121	53-138	4	30	
2-Hexanone	mg/kg	<0.015	6.5	6.4	7.5	7.5	115	118	57-150	1	30	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.014	6.5	6.4	6.9	7.1	106	112	47-150	3	30	
Acetone	mg/kg	<0.41	6.5	6.4	7.1	6.9	109	109	64-150	2	30	
Benzene	mg/kg	<0.0038	1.3	1.3	1.5	1.5	116	117	63-136	1	30	
Bromodichloromethane	mg/kg	<0.023	1.3	1.3	1.5	1.5	113	115	63-150	0	30	
Bromoform	mg/kg	<0.10	1.3	1.3	1.2	1.3	96	103	64-140	5	30	
Bromomethane	mg/kg	<0.078	1.3	1.3	1.7	1.5	133	117	56-148	15	30	
Carbon tetrachloride	mg/kg	<0.032	1.3	1.3	1.8	1.8	136	138	75-148	1	30	
Chlorobenzene	mg/kg	<0.0038	1.3	1.3	1.3	1.3	98	103	62-147	3	30	
Chloroethane	mg/kg	<0.035	1.3	1.3	1.4	1.5	107	119	37-150	8	30	
Chloroform	mg/kg	<0.033	1.3	1.3	1.7	1.6	127	125	66-130	4	30	
Chloromethane	mg/kg	<0.016	1.3	1.3	1.4	1.4	111	114	35-131	0	30	
cis-1,2-Dichloroethene	mg/kg	<0.011	1.3	1.3	1.7	1.6	129	125	63-143	5	30	
cis-1,3-Dichloropropene	mg/kg	<0.0095	1.3	1.3	1.5	1.5	113	118	60-150	1	30	
Dibromochloromethane	mg/kg	<0.0077	1.3	1.3	1.3	1.4	103	107	64-144	1	30	
Dichlorodifluoromethane	mg/kg	<0.022	1.3	1.3	1.3	1.3	102	102	30-125	2	30	
Ethylbenzene	mg/kg	<0.0036	1.3	1.3	1.4	1.4	110	113	64-142	1	30	
Hexachloro-1,3-butadiene	mg/kg	<0.016	1.3	1.3	1.3	1.2	97	98	58-150	1	30	
m&p-Xylene	mg/kg	<0.0082	2.6	2.6	2.8	2.7	107	106	67-145	3	30	
Methyl-tert-butyl ether	mg/kg	<0.0079	1.3	1.3	1.6	1.6	123	125	69-134	1	30	
Methylene Chloride	mg/kg	<0.13	1.3	1.3	1.5	1.5	113	114	56-134	2	30	
Naphthalene	mg/kg	<0.062	1.3	1.3	1.2	1.4	92	106	63-148	12	30	
o-Xylene	mg/kg	<0.015	1.3	1.3	1.4	1.5	107	116	63-148	5	30	
Styrene	mg/kg	<0.0030	1.3	1.3	1.5	1.5	112	114	63-150	1	30	
Tetrachloroethene	mg/kg	<0.023	1.3	1.3	1.3	1.3	101	104	62-150	0	30	
Tetrahydrofuran	mg/kg	<0.097	13	12.7	13.4	13.6	103	107	53-150	1	30	
Toluene	mg/kg	<0.016	1.3	1.3	1.6	1.5	120	121	61-141	1	30	
trans-1,2-Dichloroethene	mg/kg	<0.031	1.3	1.3	1.5	1.6	119	123	52-148	2	30	
trans-1,3-Dichloropropene	mg/kg	<0.0092	1.3	1.3	1.5	1.4	114	112	62-142	4	30	
Trichloroethene	mg/kg	<0.010	1.3	1.3	1.4	1.4	109	112	59-150	0	30	
Trichlorofluoromethane	mg/kg	<0.12	1.3	1.3	1.6	1.4	119	108	30-150	13	30	
Vinyl acetate	mg/kg	<0.0077	1.3	1.3	1.8	1.8	141	140	30-150	3	30	
Vinyl chloride	mg/kg	<0.013	1.3	1.3	1.6	1.6	126	125	44-144	3	30	
1,2-Dichloroethane-d4 (S)	%.						120	114	75-125			
4-Bromofluorobenzene (S)	%.						106	111	75-125			
Toluene-d8 (S)	%.						102	104	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

QC Batch: 617652 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
Associated Lab Samples: 10480346022, 10480346023, 10480346024

METHOD BLANK: 3336180 Matrix: Solid
Associated Lab Samples: 10480346022, 10480346023, 10480346024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/kg	<0.023	0.050	0.023	07/03/19 17:50	
1,1,2,2-Tetrachloroethane	mg/kg	<0.0088	0.050	0.0088	07/03/19 17:50	
1,1,2-Trichloroethane	mg/kg	<0.0060	0.050	0.0060	07/03/19 17:50	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.058	0.20	0.058	07/03/19 17:50	
1,1-Dichloroethane	mg/kg	<0.0056	0.050	0.0056	07/03/19 17:50	
1,1-Dichloroethene	mg/kg	<0.015	0.050	0.015	07/03/19 17:50	
1,2,4-Trichlorobenzene	mg/kg	<0.011	0.050	0.011	07/03/19 17:50	
1,2,4-Trimethylbenzene	mg/kg	<0.010	0.050	0.010	07/03/19 17:50	
1,2-Dibromoethane (EDB)	mg/kg	<0.0053	0.050	0.0053	07/03/19 17:50	
1,2-Dichlorobenzene	mg/kg	<0.0020	0.050	0.0020	07/03/19 17:50	
1,2-Dichloroethane	mg/kg	<0.0055	0.050	0.0055	07/03/19 17:50	
1,3,5-Trimethylbenzene	mg/kg	<0.0080	0.050	0.0080	07/03/19 17:50	
1,3-Dichlorobenzene	mg/kg	<0.0018	0.050	0.0018	07/03/19 17:50	
1,4-Dichlorobenzene	mg/kg	<0.0031	0.050	0.0031	07/03/19 17:50	
2-Butanone (MEK)	mg/kg	<0.027	0.25	0.027	07/03/19 17:50	
2-Hexanone	mg/kg	<0.012	1.0	0.012	07/03/19 17:50	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.010	0.25	0.010	07/03/19 17:50	
Acetone	mg/kg	<0.31	1.0	0.31	07/03/19 17:50	
Benzene	mg/kg	<0.0028	0.020	0.0028	07/03/19 17:50	
Bromodichloromethane	mg/kg	<0.017	0.050	0.017	07/03/19 17:50	
Bromoform	mg/kg	<0.076	0.20	0.076	07/03/19 17:50	
Bromomethane	mg/kg	<0.058	0.50	0.058	07/03/19 17:50	
Carbon tetrachloride	mg/kg	<0.024	0.050	0.024	07/03/19 17:50	
Chlorobenzene	mg/kg	<0.0028	0.050	0.0028	07/03/19 17:50	
Chloroethane	mg/kg	<0.026	0.50	0.026	07/03/19 17:50	
Chloroform	mg/kg	<0.025	0.050	0.025	07/03/19 17:50	
Chloromethane	mg/kg	<0.012	0.20	0.012	07/03/19 17:50	
cis-1,2-Dichloroethene	mg/kg	<0.0083	0.050	0.0083	07/03/19 17:50	
cis-1,3-Dichloropropene	mg/kg	<0.0072	0.050	0.0072	07/03/19 17:50	
Dibromochloromethane	mg/kg	<0.0058	0.20	0.0058	07/03/19 17:50	
Dichlorodifluoromethane	mg/kg	<0.016	0.20	0.016	07/03/19 17:50	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	07/03/19 17:50	
Hexachloro-1,3-butadiene	mg/kg	<0.012	0.25	0.012	07/03/19 17:50	
m&p-Xylene	mg/kg	<0.0062	0.10	0.0062	07/03/19 17:50	
Methyl-tert-butyl ether	mg/kg	<0.0060	0.050	0.0060	07/03/19 17:50	
Methylene Chloride	mg/kg	<0.094	0.20	0.094	07/03/19 17:50	
Naphthalene	mg/kg	<0.047	0.20	0.047	07/03/19 17:50	
o-Xylene	mg/kg	<0.012	0.050	0.012	07/03/19 17:50	
Styrene	mg/kg	<0.0023	0.050	0.0023	07/03/19 17:50	
Tetrachloroethene	mg/kg	<0.018	0.050	0.018	07/03/19 17:50	
Tetrahydrofuran	mg/kg	<0.073	2.0	0.073	07/03/19 17:50	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

METHOD BLANK: 3336180 Matrix: Solid
Associated Lab Samples: 10480346022, 10480346023, 10480346024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Toluene	mg/kg	<0.012	0.050	0.012	07/03/19 17:50	
trans-1,2-Dichloroethene	mg/kg	<0.023	0.050	0.023	07/03/19 17:50	
trans-1,3-Dichloropropene	mg/kg	<0.0070	0.050	0.0070	07/03/19 17:50	
Trichloroethene	mg/kg	<0.0077	0.050	0.0077	07/03/19 17:50	
Trichlorofluoromethane	mg/kg	<0.087	0.20	0.087	07/03/19 17:50	
Vinyl acetate	mg/kg	<0.0058	0.50	0.0058	07/03/19 17:50	
Vinyl chloride	mg/kg	<0.0098	0.050	0.0098	07/03/19 17:50	
1,2-Dichloroethane-d4 (S)	%.	108	75-125		07/03/19 17:50	
4-Bromofluorobenzene (S)	%.	103	75-125		07/03/19 17:50	
Toluene-d8 (S)	%.	102	75-125		07/03/19 17:50	

LABORATORY CONTROL SAMPLE: 3336181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	1	0.74	74	53-146	
1,1,2,2-Tetrachloroethane	mg/kg	1	0.81	81	51-125	
1,1,2-Trichloroethane	mg/kg	1	0.79	79	55-125	
1,1,2-Trichlorotrifluoroethane	mg/kg	1	0.81	81	49-150	
1,1-Dichloroethane	mg/kg	1	0.85	85	56-125	
1,1-Dichloroethene	mg/kg	1	0.81	81	48-148	
1,2,4-Trichlorobenzene	mg/kg	1	0.65	65	48-125	
1,2,4-Trimethylbenzene	mg/kg	1	0.72	72	51-126	
1,2-Dibromoethane (EDB)	mg/kg	1	0.70	70	52-125	
1,2-Dichlorobenzene	mg/kg	1	0.70	70	50-125	
1,2-Dichloroethane	mg/kg	1	0.69	69	51-125	
1,3,5-Trimethylbenzene	mg/kg	1	0.73	73	52-127	
1,3-Dichlorobenzene	mg/kg	1	0.73	73	50-128	
1,4-Dichlorobenzene	mg/kg	1	0.68	68	51-125	
2-Butanone (MEK)	mg/kg	5	3.5	69	43-125	
2-Hexanone	mg/kg	5	3.4	68	44-137	
4-Methyl-2-pentanone (MIBK)	mg/kg	5	3.9	78	39-125	
Acetone	mg/kg	5	3.4	68	46-136	
Benzene	mg/kg	1	0.83	83	48-125	
Bromodichloromethane	mg/kg	1	0.73	73	51-131	
Bromoform	mg/kg	1	0.64	64	52-125	
Bromomethane	mg/kg	1	0.91	91	30-150	
Carbon tetrachloride	mg/kg	1	0.73	73	59-129	
Chlorobenzene	mg/kg	1	0.77	77	54-125	
Chloroethane	mg/kg	1	0.80	80	61-132	
Chloroform	mg/kg	1	0.76	76	52-125	
Chloromethane	mg/kg	1	0.88	88	46-125	
cis-1,2-Dichloroethene	mg/kg	1	0.82	82	54-127	
cis-1,3-Dichloropropene	mg/kg	1	0.79	79	50-134	
Dibromochloromethane	mg/kg	1	0.69	69	54-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

LABORATORY CONTROL SAMPLE: 3336181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dichlorodifluoromethane	mg/kg	1	0.81	81	42-125	
Ethylbenzene	mg/kg	1	0.74	74	51-125	
Hexachloro-1,3-butadiene	mg/kg	1	0.63	63	41-133	
m&p-Xylene	mg/kg	2	1.5	74	51-128	
Methyl-tert-butyl ether	mg/kg	1	0.78	78	53-125	
Methylene Chloride	mg/kg	1	0.88	88	48-125	
Naphthalene	mg/kg	1	0.66	66	51-125	
o-Xylene	mg/kg	1	0.72	72	53-125	
Styrene	mg/kg	1	0.71	71	53-128	
Tetrachloroethene	mg/kg	1	0.72	72	54-131	
Tetrahydrofuran	mg/kg	10	9.1	91	42-145	
Toluene	mg/kg	1	0.81	81	51-125	
trans-1,2-Dichloroethene	mg/kg	1	0.82	82	50-130	
trans-1,3-Dichloropropene	mg/kg	1	0.74	74	52-125	
Trichloroethene	mg/kg	1	0.78	78	55-131	
Trichlorofluoromethane	mg/kg	1	1.1	106	30-150	
Vinyl acetate	mg/kg	1	0.78	78	46-125	
Vinyl chloride	mg/kg	1	1.1	109	58-125	
1,2-Dichloroethane-d4 (S)	%.			94	75-125	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3336182 3336183

Parameter	Units	10481988001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	mg/kg	<0.037	1.3	1.5	1.5	1.5	112	103	63-150	1	30	
1,1,2,2-Tetrachloroethane	mg/kg	<0.014	1.3	1.5	1.7	1.7	126	113	60-146	1	30	
1,1,2-Trichloroethane	mg/kg	<0.0094	1.3	1.5	1.6	1.6	117	111	63-143	5	30	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.091	1.3	1.5	1.6	1.5	116	103	30-150	3	30	
1,1-Dichloroethane	mg/kg	<0.0088	1.3	1.5	1.7	1.8	128	120	63-144	3	30	
1,1-Dichloroethene	mg/kg	<0.024	1.3	1.5	1.6	1.6	117	111	30-150	4	30	
1,2,4-Trichlorobenzene	mg/kg	<0.018	1.3	1.5	1.4	1.4	108	91	66-142	7	30	
1,2,4-Trimethylbenzene	mg/kg	<0.016	1.3	1.5	1.5	1.5	113	101	65-145	2	30	
1,2-Dibromoethane (EDB)	mg/kg	<0.0083	1.3	1.5	1.5	1.5	111	101	67-135	0	30	
1,2-Dichlorobenzene	mg/kg	<0.0032	1.3	1.5	1.5	1.4	109	94	68-141	5	30	
1,2-Dichloroethane	mg/kg	<0.0087	1.3	1.5	1.4	1.5	107	98	56-132	1	30	
1,3,5-Trimethylbenzene	mg/kg	<0.013	1.3	1.5	1.6	1.5	116	101	66-148	4	30	
1,3-Dichlorobenzene	mg/kg	<0.0029	1.3	1.5	1.5	1.5	115	102	63-148	2	30	
1,4-Dichlorobenzene	mg/kg	<0.0049	1.3	1.5	1.4	1.4	107	95	68-140	2	30	
2-Butanone (MEK)	mg/kg	<0.042	6.7	7.4	7.5	7.3	111	99	53-138	2	30	
2-Hexanone	mg/kg	<0.018	6.7	7.4	7.3	7.3	108	99	57-150	0	30	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.016	6.7	7.4	8.1	8.2	120	111	47-150	2	30	
Acetone	mg/kg	<0.49	6.7	7.4	7.2	7.6	107	103	64-150	6	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3336182 3336183

Parameter	Units	10481988001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	mg/kg	<0.0044	1.3	1.5	1.7	1.8	130	119	63-136	1	30	
Bromodichloromethane	mg/kg	<0.027	1.3	1.5	1.5	1.6	113	106	63-150	3	30	
Bromoform	mg/kg	<0.12	1.3	1.5	1.3	1.4	100	93	64-140	3	30	
Bromomethane	mg/kg	<0.092	1.3	1.5	1.6	1.7	119	116	56-148	7	30	
Carbon tetrachloride	mg/kg	<0.038	1.3	1.5	1.5	1.5	111	101	75-148	1	30	
Chlorobenzene	mg/kg	<0.0044	1.3	1.5	1.6	1.6	117	106	62-147	1	30	
Chloroethane	mg/kg	<0.041	1.3	1.5	1.5	1.6	108	109	37-150	10	30	
Chloroform	mg/kg	<0.039	1.3	1.5	1.6	1.6	115	106	66-130	1	30	
Chloromethane	mg/kg	<0.019	1.3	1.5	1.4	1.6	108	108	35-131	10	30	
cis-1,2-Dichloroethene	mg/kg	<0.013	1.3	1.5	1.7	1.7	127	116	63-143	1	30	
cis-1,3-Dichloropropene	mg/kg	<0.011	1.3	1.5	1.6	1.7	121	116	60-150	5	30	
Dibromochloromethane	mg/kg	<0.0091	1.3	1.5	1.4	1.4	105	97	64-144	1	30	
Dichlorodifluoromethane	mg/kg	<0.026	1.3	1.5	1.2	1.3	86	90	30-125	14	30	
Ethylbenzene	mg/kg	<0.0043	1.3	1.5	1.6	1.6	116	106	64-142	1	30	
Hexachloro-1,3-butadiene	mg/kg	<0.019	1.3	1.5	1.4	1.3	106	90	58-150	7	30	
m&p-Xylene	mg/kg	<0.0098	2.7	3	3.1	3.0	117	102	67-145	4	30	
Methyl-tert-butyl ether	mg/kg	<0.0094	1.3	1.5	1.6	1.7	121	117	69-134	6	30	
Methylene Chloride	mg/kg	<0.15	1.3	1.5	1.8	1.8	128	118	56-134	1	30	
Naphthalene	mg/kg	<0.074	1.3	1.5	1.5	1.4	109	94	63-148	6	30	
o-Xylene	mg/kg	<0.018	1.3	1.5	1.6	1.5	116	104	63-148	1	30	
Styrene	mg/kg	<0.0036	1.3	1.5	1.5	1.5	113	102	63-150	0	30	
Tetrachloroethene	mg/kg	<0.028	1.3	1.5	1.5	1.4	110	96	62-150	4	30	
Tetrahydrofuran	mg/kg	<0.11	13.5	14.8	18.6	20.6	138	139	53-150	10	30	
Toluene	mg/kg	0.039J	1.3	1.5	1.7	1.7	120	111	61-141	1	30	
trans-1,2-Dichloroethene	mg/kg	<0.037	1.3	1.5	1.7	1.7	129	116	52-148	1	30	
trans-1,3-Dichloropropene	mg/kg	<0.011	1.3	1.5	1.5	1.6	112	106	62-142	5	30	
Trichloroethene	mg/kg	<0.012	1.3	1.5	1.6	1.6	121	108	59-150	2	30	
Trichlorofluoromethane	mg/kg	<0.14	1.3	1.5	2.1	2.3	158	157	30-150	9	30	M1
Vinyl acetate	mg/kg	<0.0091	1.3	1.5	1.7	1.7	125	117	30-150	3	30	
Vinyl chloride	mg/kg	<0.016	1.3	1.5	1.8	2.0	135	136	44-144	10	30	
1,2-Dichloroethane-d4 (S)	%.						96	94	75-125			
4-Bromofluorobenzene (S)	%.						102	103	75-125			
Toluene-d8 (S)	%.						103	103	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

QC Batch: 615244 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10480346016, 10480346046

METHOD BLANK: 3324037 Matrix: Water
Associated Lab Samples: 10480346016, 10480346046

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	06/25/19 09:25	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	06/25/19 09:25	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	06/25/19 09:25	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	06/25/19 09:25	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	06/25/19 09:25	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	06/25/19 09:25	
1,1-Dichloroethene	ug/L	<0.16	1.0	0.16	06/25/19 09:25	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	06/25/19 09:25	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	06/25/19 09:25	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	06/25/19 09:25	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	06/25/19 09:25	
1,2,4-Trimethylbenzene	ug/L	<0.20	1.0	0.20	06/25/19 09:25	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	06/25/19 09:25	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	06/25/19 09:25	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	06/25/19 09:25	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	06/25/19 09:25	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	06/25/19 09:25	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	06/25/19 09:25	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	06/25/19 09:25	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	06/25/19 09:25	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	06/25/19 09:25	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	06/25/19 09:25	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	06/25/19 09:25	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	06/25/19 09:25	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	06/25/19 09:25	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	06/25/19 09:25	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	06/25/19 09:25	
2-Hexanone	ug/L	<0.88	5.0	0.88	06/25/19 09:25	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	06/25/19 09:25	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	06/25/19 09:25	
Acetone	ug/L	<9.2	20.0	9.2	06/25/19 09:25	
Acrolein	ug/L	<1.2	10.0	1.2	06/25/19 09:25	
Acrylonitrile	ug/L	<0.91	10.0	0.91	06/25/19 09:25	
Benzene	ug/L	<0.10	0.50	0.10	06/25/19 09:25	
Bromobenzene	ug/L	<0.21	0.50	0.21	06/25/19 09:25	
Bromochloromethane	ug/L	<0.27	1.0	0.27	06/25/19 09:25	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	06/25/19 09:25	
Bromoform	ug/L	<0.80	4.0	0.80	06/25/19 09:25	
Bromomethane	ug/L	<1.8	4.0	1.8	06/25/19 09:25	
Carbon disulfide	ug/L	<0.078	1.0	0.078	06/25/19 09:25	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	06/25/19 09:25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

METHOD BLANK: 3324037 Matrix: Water
Associated Lab Samples: 10480346016, 10480346046

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	06/25/19 09:25	
Chloroethane	ug/L	<0.49	1.0	0.49	06/25/19 09:25	
Chloroform	ug/L	<0.45	1.0	0.45	06/25/19 09:25	
Chloromethane	ug/L	<0.16	4.0	0.16	06/25/19 09:25	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	06/25/19 09:25	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	0.20	06/25/19 09:25	
Dibromochloromethane	ug/L	<0.12	1.0	0.12	06/25/19 09:25	
Dibromomethane	ug/L	<0.16	1.0	0.16	06/25/19 09:25	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	06/25/19 09:25	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	06/25/19 09:25	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	06/25/19 09:25	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	06/25/19 09:25	
Ethylbenzene	ug/L	<0.14	0.50	0.14	06/25/19 09:25	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	06/25/19 09:25	
Isopropylbenzene (Cumene)	ug/L	<0.18	1.0	0.18	06/25/19 09:25	
m&p-Xylene	ug/L	<0.31	1.0	0.31	06/25/19 09:25	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	06/25/19 09:25	
Methylene Chloride	ug/L	<0.98	4.0	0.98	06/25/19 09:25	
n-Butylbenzene	ug/L	<0.24	1.0	0.24	06/25/19 09:25	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	06/25/19 09:25	
Naphthalene	ug/L	<0.48	1.0	0.48	06/25/19 09:25	
o-Xylene	ug/L	<0.16	0.50	0.16	06/25/19 09:25	
p-Isopropyltoluene	ug/L	<0.15	1.0	0.15	06/25/19 09:25	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	06/25/19 09:25	
Styrene	ug/L	<0.19	0.50	0.19	06/25/19 09:25	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	06/25/19 09:25	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	06/25/19 09:25	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	06/25/19 09:25	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	06/25/19 09:25	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	06/25/19 09:25	
Toluene	ug/L	<0.083	0.50	0.083	06/25/19 09:25	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	06/25/19 09:25	
trans-1,3-Dichloropropene	ug/L	<0.18	1.0	0.18	06/25/19 09:25	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	06/25/19 09:25	
Trichloroethene	ug/L	<0.15	0.40	0.15	06/25/19 09:25	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	06/25/19 09:25	
Vinyl acetate	ug/L	<1.1	10.0	1.1	06/25/19 09:25	
Vinyl chloride	ug/L	<0.092	0.20	0.092	06/25/19 09:25	
Xylene (Total)	ug/L	<0.31	1.5	0.31	06/25/19 09:25	
1,2-Dichloroethane-d4 (S)	%.	91	75-136		06/25/19 09:25	
4-Bromofluorobenzene (S)	%.	98	75-125		06/25/19 09:25	
Toluene-d8 (S)	%.	100	75-125		06/25/19 09:25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

LABORATORY CONTROL SAMPLE: 3324038

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.6	103	68-141	
1,1,1-Trichloroethane	ug/L	20	20.9	104	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	20.0	100	73-125	
1,1,2-Trichloroethane	ug/L	20	22.2	111	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.7	98	69-132	
1,1-Dichloroethane	ug/L	20	18.5	93	73-125	
1,1-Dichloroethene	ug/L	20	18.1	91	71-126	
1,1-Dichloropropene	ug/L	20	19.9	99	73-126	
1,2,3-Trichlorobenzene	ug/L	20	21.0	105	72-126	
1,2,3-Trichloropropane	ug/L	20	21.0	105	75-126	
1,2,4-Trichlorobenzene	ug/L	20	19.8	99	71-134	
1,2,4-Trimethylbenzene	ug/L	20	18.6	93	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	52.3	105	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	22.7	113	75-129	
1,2-Dichlorobenzene	ug/L	20	18.2	91	75-129	
1,2-Dichloroethane	ug/L	20	19.2	96	75-125	
1,2-Dichloroethene (Total)	ug/L	40	38.8	97	74-125	N2
1,2-Dichloropropane	ug/L	20	20.3	101	75-125	
1,3,5-Trimethylbenzene	ug/L	20	21.3	106	75-127	
1,3-Dichlorobenzene	ug/L	20	19.2	96	75-126	
1,3-Dichloropropane	ug/L	20	21.2	106	75-125	
1,4-Dichlorobenzene	ug/L	20	18.1	91	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	433	108	72-129	
2,2,4-Trimethylpentane	ug/L	20	18.6	93	72-128	N2
2,2-Dichloropropane	ug/L	20	22.0	110	65-138	
2-Butanone (MEK)	ug/L	100	99.2	99	59-144	
2-Chlorotoluene	ug/L	20	18.7	93	75-127	
2-Hexanone	ug/L	100	111	111	73-134	
4-Chlorotoluene	ug/L	20	18.6	93	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	110	110	62-141	
Acetone	ug/L	100	123	123	60-137	
Acrolein	ug/L	200	215	108	60-141	
Acrylonitrile	ug/L	200	187	94	75-129	
Benzene	ug/L	20	18.4	92	73-125	
Bromobenzene	ug/L	20	18.6	93	73-125	
Bromochloromethane	ug/L	20	19.9	100	75-135	
Bromodichloromethane	ug/L	20	21.8	109	75-125	
Bromoform	ug/L	20	24.2	121	67-136	
Bromomethane	ug/L	20	17.7	89	30-150	
Carbon disulfide	ug/L	20	16.3	81	47-137	
Carbon tetrachloride	ug/L	20	22.5	112	75-125	
Chlorobenzene	ug/L	20	18.8	94	75-125	
Chloroethane	ug/L	20	21.3	107	63-136	
Chloroform	ug/L	20	19.5	97	73-128	
Chloromethane	ug/L	20	19.3	96	55-130	
cis-1,2-Dichloroethene	ug/L	20	19.7	98	75-125	
cis-1,3-Dichloropropene	ug/L	20	20.1	101	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

LABORATORY CONTROL SAMPLE: 3324038

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	21.3	107	75-125	
Dibromomethane	ug/L	20	20.3	102	75-125	
Dichlorodifluoromethane	ug/L	20	20.7	104	63-132	
Dichlorofluoromethane	ug/L	20	19.7	98	68-127	N2
Diisopropyl ether	ug/L	20	17.3	86	71-131	
Ethyl-tert-butyl ether	ug/L	20	17.6	88	75-125	
Ethylbenzene	ug/L	20	19.9	100	75-125	
Hexachloro-1,3-butadiene	ug/L	20	20.6	103	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.5	97	75-125	
m&p-Xylene	ug/L	40	39.1	98	75-126	
Methyl-tert-butyl ether	ug/L	20	19.1	96	75-125	
Methylene Chloride	ug/L	20	16.8	84	70-125	
n-Butylbenzene	ug/L	20	19.1	95	75-126	
n-Propylbenzene	ug/L	20	18.8	94	73-127	
Naphthalene	ug/L	20	19.7	99	63-128	
o-Xylene	ug/L	20	19.4	97	75-128	
p-Isopropyltoluene	ug/L	20	19.4	97	75-125	
sec-Butylbenzene	ug/L	20	21.3	107	75-126	
Styrene	ug/L	20	20.8	104	75-125	
tert-Amylmethyl ether	ug/L	20	17.9	90	75-125	
tert-Butyl Alcohol	ug/L	200	211	106	75-130	
tert-Butylbenzene	ug/L	20	19.1	95	75-131	
Tetrachloroethene	ug/L	20	20.5	102	74-125	
Tetrahydrofuran	ug/L	200	246	123	64-138	
Toluene	ug/L	20	19.5	98	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.2	96	68-128	
trans-1,3-Dichloropropene	ug/L	20	19.8	99	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	58.5	117	60-127	
Trichloroethene	ug/L	20	19.2	96	75-127	
Trichlorofluoromethane	ug/L	20	20.3	102	72-133	
Vinyl acetate	ug/L	20	17.4	87	61-129	
Vinyl chloride	ug/L	20	19.7	99	75-128	
Xylene (Total)	ug/L	60	58.5	98	75-125	
1,2-Dichloroethane-d4 (S)	%.			99	75-136	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3326089 3326090

Parameter	Units	10480797001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	19.9	20.8	100	104	75-140	4	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	23.5	23.0	118	115	74-136	2	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	18.8	19.5	94	97	66-134	3	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	20.4	21.7	102	108	75-126	6	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3326089 3326090

Parameter	Units	10480797001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	22.2	23.1	111	115	65-146	4	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	20.2	19.0	101	95	68-132	6	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	20.6	19.5	103	98	66-139	5	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	21.7	21.1	109	106	67-134	3	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	22.7	23.3	114	117	67-129	3	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	19.1	20.2	96	101	69-128	5	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	23.1	23.5	116	118	65-140	2	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	19.0	17.5	95	88	71-133	8	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	48.0	51.9	96	104	54-138	8	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	21.5	21.9	107	110	68-125	2	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	18.7	20.2	93	101	74-136	8	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	17.6	18.9	88	95	68-125	7	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	41.2	39.8	103	100	71-126	3	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	22.5	22.5	113	112	67-125	0	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	17.2	0.27J	86	1	68-137		30	M1
1,3-Dichlorobenzene	ug/L	<0.16	20	20	19.3	21.1	97	105	75-131	8	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	21.0	20.9	105	105	71-125	0	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	18.5	20.4	92	102	74-126	10	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	423	422	106	105	68-125	0	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	22.7	20.0	113	100	54-129	13	30	N2
2,2-Dichloropropane	ug/L	<0.17	20	20	25.3	23.7	127	119	69-139	7	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	77.4	83.5	77	83	54-144	8	30	
2-Chlorotoluene	ug/L	<0.16	20	20	19.7	20.8	98	104	75-134	6	30	
2-Hexanone	ug/L	<0.88	100	100	92.2	98.2	92	98	58-137	6	30	
4-Chlorotoluene	ug/L	<0.13	20	20	19.1	21.1	96	106	72-133	10	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	93.5	102	94	102	60-129	9	30	
Acetone	ug/L	30.3	100	100	127	122	97	92	62-132	4	30	
Acrolein	ug/L	<1.2	200	200	276	265	138	133	30-150	4	30	
Acrylonitrile	ug/L	<0.91	200	200	177	180	89	90	68-125	1	30	
Benzene	ug/L	<0.10	20	20	19.4	19.4	97	97	68-125	0	30	
Bromobenzene	ug/L	<0.21	20	20	19.8	20.5	99	103	73-126	4	30	
Bromochloromethane	ug/L	<0.27	20	20	21.0	20.0	105	100	66-143	5	30	
Bromodichloromethane	ug/L	0.34J	20	20	23.4	23.1	115	114	74-125	1	30	
Bromoform	ug/L	<0.80	20	20	22.4	22.6	112	113	64-134	1	30	
Bromomethane	ug/L	<1.8	20	20	21.8	20.0	109	100	30-150	9	30	
Carbon disulfide	ug/L	<0.078	20	20	20.1	18.1	100	90	43-147	10	30	
Carbon tetrachloride	ug/L	<0.19	20	20	24.8	25.0	124	125	71-143	1	30	
Chlorobenzene	ug/L	<0.17	20	20	18.6	19.3	93	97	75-125	4	30	
Chloroethane	ug/L	<0.49	20	20	25.9	25.6	130	128	75-129	1	30	M1
Chloroform	ug/L	39.5	20	20	54.7	55.0	76	78	66-132	1	30	
Chloromethane	ug/L	<0.16	20	20	29.6	35.1	148	176	53-137	17	30	M1
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	20.6	20.1	103	101	67-133	2	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	19.7	19.4	99	97	66-125	1	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3326089 3326090

Parameter	Units	10480797001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	20.2	20.6	101	103	62-132	2	30	
Dibromomethane	ug/L	<0.16	20	20	21.4	21.5	107	107	67-125	0	30	
Dichlorodifluoromethane	ug/L	<0.23	20	20	25.7	24.4	128	122	71-142	5	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	23.3	22.0	117	110	70-131	6	30	N2
Diisopropyl ether	ug/L	<0.13	20	20	16.7	17.0	84	85	63-131	1	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	16.8	17.5	84	87	66-128	4	30	
Ethylbenzene	ug/L	<0.14	20	20	20.4	21.8	102	109	74-126	6	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	26.9	22.7	135	114	68-143	17	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	19.5	21.5	98	107	74-130	9	30	
m&p-Xylene	ug/L	<0.31	40	40	38.6	39.6	97	99	69-132	2	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	18.0	18.6	90	93	65-131	4	30	
Methylene Chloride	ug/L	<0.98	20	20	19.2	19.6	96	98	57-125	2	30	
n-Butylbenzene	ug/L	<0.24	20	20	22.0	21.8	110	109	71-131	1	30	
n-Propylbenzene	ug/L	<0.10	20	20	20.4	22.1	102	111	67-138	8	30	
Naphthalene	ug/L	<0.48	20	20	20.7	23.1	103	115	60-130	11	30	
o-Xylene	ug/L	<0.16	20	20	18.9	20.3	94	102	69-131	8	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	20.4	21.1	102	106	72-133	3	30	
sec-Butylbenzene	ug/L	<0.15	20	20	23.4	24.3	117	121	73-134	4	30	
Styrene	ug/L	<0.19	20	20	2.5	0.40J	12	2	72-125		30	M1
tert-Amylmethyl ether	ug/L	<0.11	20	20	16.9	17.5	84	87	67-125	3	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	205	228	103	114	64-137	11	30	
tert-Butylbenzene	ug/L	<0.15	20	20	21.0	21.8	105	109	70-143	4	30	
Tetrachloroethene	ug/L	<0.17	20	20	21.6	22.9	108	115	72-129	6	30	
Tetrahydrofuran	ug/L	<2.2	200	200	236	231	118	115	66-128	2	30	
Toluene	ug/L	<0.083	20	20	19.7	20.4	99	102	73-125	3	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	20.6	19.7	103	99	62-137	4	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	19.6	20.3	98	101	61-136	3	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	55.6	54.5	111	109	45-128	2	30	
Trichloroethene	ug/L	<0.15	20	20	22.2	22.5	111	112	74-132	1	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	24.9	24.4	125	122	75-139	2	30	
Vinyl acetate	ug/L	<1.1	20	20	11.2	2.5J	56	13	51-135		30	M1
Vinyl chloride	ug/L	<0.092	20	20	24.2	22.1	121	110	68-146	9	30	
Xylene (Total)	ug/L	<0.31	60	60	57.5	59.9	96	100	67-137	4	30	
1,2-Dichloroethane-d4 (S)	%.						95	99	75-136			
4-Bromofluorobenzene (S)	%.						101	97	75-125			
Toluene-d8 (S)	%.						95	95	75-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

1M	The sample was analyzed at a dilution due to a large amount of sediment in the vials.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
R1	RPD value was outside control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV 5030 Med Level	Solid	SW-846 8260B	SW-846 5030B
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10480346001	SB206-5'	ASTM D2974	617590		
10480346002	SB206-10'	ASTM D2974	617590		
10480346003	SB206-15'	ASTM D2974	617590		
10480346004	SB206-20'	ASTM D2974	617610		
10480346005	SB206-25'	ASTM D2974	617610		
10480346006	SB206-30'	ASTM D2974	617610		
10480346007	SB206-35'	ASTM D2974	617610		
10480346008	SB206-40'	ASTM D2974	617610		
10480346009	SB206-45'	ASTM D2974	617610		
10480346010	SB206-50'	ASTM D2974	617610		
10480346011	SB206-55'	ASTM D2974	617610		
10480346012	SB206-60'	ASTM D2974	617610		
10480346013	SB206-65'	ASTM D2974	617610		
10480346014	SB206-70'	ASTM D2974	617610		
10480346015	SB206-77'	ASTM D2974	617610		
10480346017	FD1	ASTM D2974	617610		
10480346018	FD2	ASTM D2974	617610		
10480346023	SB208-5'	ASTM D2974	617610		
10480346024	SB208-10'	ASTM D2974	617610		
10480346025	SB208-15'	ASTM D2974	617610		
10480346026	SB208-20'	ASTM D2974	617610		
10480346027	SB208-25'	ASTM D2974	617610		
10480346028	SB208-30'	ASTM D2974	617610		
10480346029	SB208-35'	ASTM D2974	617632		
10480346030	SB208-40'	ASTM D2974	617632		
10480346031	SB208-45'	ASTM D2974	617632		
10480346032	SB208-50'	ASTM D2974	617632		
10480346033	SB208-55'	ASTM D2974	617632		
10480346034	SB208-60'	ASTM D2974	617632		
10480346035	SB208-65'	ASTM D2974	617632		
10480346036	SB208-70'	ASTM D2974	617632		
10480346037	SB208-75'	ASTM D2974	617632		
10480346038	SB208-80'	ASTM D2974	617632		
10480346039	SB208-85'	ASTM D2974	617632		
10480346040	SB208-90'	ASTM D2974	617632		
10480346045	FD3	ASTM D2974	617632		
10480346001	SB206-5'	EPA 5035/5030B	616710	EPA 8260B	616841
10480346002	SB206-10'	EPA 5035/5030B	616710	EPA 8260B	616841
10480346003	SB206-15'	EPA 5035/5030B	616710	EPA 8260B	616841
10480346004	SB206-20'	EPA 5035/5030B	616710	EPA 8260B	616841
10480346005	SB206-25'	EPA 5035/5030B	616710	EPA 8260B	616841
10480346006	SB206-30'	EPA 5035/5030B	616710	EPA 8260B	616841
10480346007	SB206-35'	EPA 5035/5030B	616710	EPA 8260B	616841
10480346008	SB206-40'	EPA 5035/5030B	616710	EPA 8260B	616841
10480346009	SB206-45'	EPA 5035/5030B	616897	EPA 8260B	616975
10480346010	SB206-50'	EPA 5035/5030B	616897	EPA 8260B	616975
10480346011	SB206-55'	EPA 5035/5030B	616897	EPA 8260B	616975

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10480346

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10480346012	SB206-60'	EPA 5035/5030B	616897	EPA 8260B	616975
10480346013	SB206-65'	EPA 5035/5030B	616897	EPA 8260B	616975
10480346014	SB206-70'	EPA 5035/5030B	616897	EPA 8260B	616975
10480346015	SB206-77'	EPA 5035/5030B	616897	EPA 8260B	616975
10480346017	FD1	EPA 5035/5030B	616897	EPA 8260B	616975
10480346018	FD2	EPA 5035/5030B	616897	EPA 8260B	616975
10480346019	TB1	EPA 5035/5030B	616897	EPA 8260B	616975
10480346020	TB2	EPA 5035/5030B	616897	EPA 8260B	616975
10480346021	TB3	EPA 5035/5030B	616897	EPA 8260B	616975
10480346022	TB4	EPA 5035/5030B	617652	EPA 8260B	617710
10480346023	SB208-5'	EPA 5035/5030B	617652	EPA 8260B	617710
10480346024	SB208-10'	EPA 5035/5030B	617652	EPA 8260B	617710
10480346025	SB208-15'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346026	SB208-20'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346027	SB208-25'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346028	SB208-30'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346029	SB208-35'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346030	SB208-40'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346031	SB208-45'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346032	SB208-50'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346033	SB208-55'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346034	SB208-60'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346035	SB208-65'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346036	SB208-70'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346037	SB208-75'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346038	SB208-80'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346039	SB208-85'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346040	SB208-90'	EPA 5035/5030B	617323	EPA 8260B	617413
10480346045	FD3	EPA 5035/5030B	617323	EPA 8260B	617413
10480346016	SB206-GW	EPA 8260B	615244		
10480346046	SB208-GW	EPA 8260B	615244		

REPORT OF LABORATORY ANALYSIS

Pace Analytical

CHAIN-OF-CUSTODY / Analyti

The Chain-of-Custody is a LEGAL DOCUMENT.

WO# : 10480346

10480346

Of 4

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh	
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jon Espinoza	Company: UPRR	
	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	Regulatory Agency
Email:	Purchase Order # PEDD# 1497-45-Rev(0)	Pace Quote: Contract# 758938	
Phone: Fax:	Project Name: Freeman WA-Cenex Harvest Lease Site	Pace Project Manager: Jennifer Gross	State / Location
Requested Due Date: ~~10 Day Standard~~	Project #: 1497	Pace Profile #: 36447 / 10	WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	VOCs by 8260	Dry Weight	D422 Grain Size w/Hydrometer - SUB	TOC 9060 - SUB	MS/MSD Requested	Hold all grain size!
1	SB206-5'	SL	G	6/19	940	-	4	X					X		X	X		X		001
2	SB206-10'				950		5								X	X	X	X		002
3	SB206-15'				1000		5								X	X	X	X		003
4	SB206-20'				1015		5								X	X	X	X		004
5	SB206-25'				1020		5								X	X	X	X		005
6	SB206-30'				1035		4								X	X		X		006
7	SB206-35'				1045		4								X	X		X		007
8	SB206-40'				1115		4								X	X		X		008
9	SB206-45'				1125		4								X	X		X		009
10	SB206-50'				1145		4								X	X		X		010
11	SB206-55'				1210		4								X	X		X		011
12	SB206-60'				1240		4								X	X		X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Jacobs	6/20/19	1700	Pace	6/21/19	0945

SAMPLE CONDITIONS			
17.8	Y	N	Y
0.4			
1.0			
4.3			
4.2			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Espinoza

SIGNATURE of SAMPLER: Jonathan Espinoza DATE Signed: 6/19/19

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jon Espinoza	Company: UPRR
	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Email:	Purchase Order # PEDD# 1497-45-Rev(0)	Pace Quote: Contract# 758938
Phone: Fax:	Project Name: Freeman WA-Cenex Harvest Lease Site	Pace Project Manager: Jennifer Gross
Requested Due Date: 10 Day Standard	Project #: 1497	Pace Profile #: 36447 / 10

Regulatory Agency

State / Location: WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): VOCs by 8260	Dry Weight	D422 Grain Size w/Hydrometer - SUB	TOC 9060 - SUB	MS/MSD Requested	
1	SB206-65'	SL	G	6/19	1245	-	4	X					X		X	X		X		013
2	SB206-70'			6/19	1400	-	4	X					X		X	X		X		014
3	SB206-77'			6/19	1405	-	5	X					X		X	X	X	X		015
4	SB206-GW	WT	G	6/19	1410	-	3				X				X					016
5	FD1	SL	G	6/19	800	-	4	X					X		X	X		X		017
6	FD2			6/19	805	-	4	X					X		X	X		X		018
7	TB1	SL	G	6/19	700	-	2						X		X					019
8	TB2				705	-	2						X		X					020
9	TB3				710	-	2						X		X					021
10	TB4	SL	G	6/20	700	-	2						X		X					022
11	SB208-5'				910	-	4	X					X		X	X		X		023
12	SB208-10'				935	-	4	X					X		X	X		X		024

Hold all grain size!

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Jon Li / Jacobs	6/20/19	1700	Gaf Pac	~~6/21/19~~ 6/21/19	0945
					6/21/19	
					6/21/19	

SAMPLE CONDITIONS

17.3	Y	N	-
6.4			
4.5			
4.4, 17.2			

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Espinoza

SIGNATURE of SAMPLER: Jon Li DATE Signed: 6/19/19

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jon Espinoza	Company: UPRR
Email:	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Phone: Fax:	Purchase Order # PEDD# 1497-45-Rev(0)	Pace Quote: Contract# 758938
Requested Due Date: *10 Day Standard*	Project Name: Freeman WA-Cenex Harvest Lease Site	Pace Project Manager: Jennifer Gross
	Project #: 1497	Pace Profile #: *36447 / 10*

Regulatory Agency

State / Location: WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	VOCs by 8260	Dry Weight	D422 Grain Size w/Hydrometer - SUB	TOC 9060 - SUB	MS/MSD Requested	
1	SB208-15'	SL	G	6/20/19	945		4	X					X		X	X		X		025
2	SB208-20'				1000															026
3	SB208-25'				1005															027
4	SB208-30'				1030															028
5	SB208-35'				1055															029
6	SB208-40'				1105															030
7	SB208-45'				1110															031
8	SB208-50'				1135		13								X	X	X	X	MS/MSD	032
9	SB208-55'				1145		5													033
10	SB208-60'				1200		5													034
11	SB208-65'				1210		5													035
12	SB208-70'				1250		4								X	X		X		036

Hold all grain size! / E

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	JTC / Jacobs	6/20/19	1700	Pace	6/21/19	0945	17.8 Y N Y
							8.9
							1.0
							2.5
							4.4, 19.2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Espinoza

SIGNATURE of SAMPLER: JTC DATE Signed: 6/20/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh	
Address: 999 W. Riverside Ave, Suite 500	Copy To: Steve Demus, Jon Espinoza	Company: UPRR	
Spokane, WA 99201	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	Regulatory Agency
Email:	Purchase Order # PEDD# 1497-45-Rev(0)	Pace Quote: Contract# 758938	
Phone: Fax:	Project Name: Freeman WA-Cenex Harvest Lease Site	Pace Project Manager: Jennifer Gross	State / Location
Requested Due Date: *10 Day Standard*	Project #: 1497	Pace Profile #: *36447 / 10*	WA / Freeman

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): VOCs by 8260	Dry Weight	D422 Grain Size w/Hydrometer - SUB	TOC 9060 - SUB	MS/MSD Requested	
1	SB208-75'	SL	G	6/20	1300		4	X					X		X	X		X		37
2	SB208-80'				1355															
3	SB208-85'				1405															
4	SB208-90'				1445		↓	↓					↓		↓			↓		
5	SB208-63'				1208		1	X									X			
6	SB208-68'				1212															
7	SB208-72'				1252															
8	SB208-77'				1258		↓	↓									↓			
9	FD3				800		4	X					X		X	X		X		
10	SB208-GW	WT	G		1400		3				X				X					
11	–				–															
12																				

Hold 9/4 grain size! 2

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Jacobs	6/20/19	1700		6/21/19	0945	

SAMPLE CONDITIONS	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	0.4	Y	N	Y
	1.3			
	4.5			
	4.9, 1.2			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Espinoza

SIGNATURE of SAMPLER: Jonathan Espinoza DATE Signed: 6/20/19

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 09May2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.28**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt **Client Name:** JAcobs **Project #:** **WO#: 10480346**

PM: JMG **Due Date: 07/08/19**

CLIENT: UPRR_Jacobs

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exception** ☑

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☐ T1(0461) ☐ T2(1336) ☑ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** _____ °C **Average Corrected Temp (no temp blank only):** _____ °C **See Exceptions** ☐

Correction Factor: tme **Cooler Temp Corrected w/temp blank :** See Exception °C

USDA Regulated Soil: (☑ N/A, water sample/Other: dSC) **Date/Initials of Person Examining Contents:** RE 6/21/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other _____
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☑ Yes ☑ Yes	☐ No ☐ No		8.
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☑ Water ☑ Soil ☐ Oil ☐ Other _____	☑ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☑ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☑ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☑ No	☐ N/A	13. **See Exception** ☑
Trip Blank Present?	☐ Yes	☐ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased): N/A

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 06/23/19

Note: Whenever there is a discrepancy affecting No Jenni Gross nce samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect

Labeled by: CH/F.E

Pace Analytical	Document Name: SCUR Exception Form – Coolers Above 6°C	Document Revised: 08Apr2019 Page 1 of 1
	Document No.: F-MN-C-298-Rev.02	Issuing Authority: Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions: **Workorder #:** 10480346

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☑No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.
No ice for coolers with 17.8° & 19.2° temp.

Multiple Cooler Project? ☑Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp
18.0, 19.2	18.0, 19.2	17.8, 19.2
17.3, 19.2	17.3, 19.2	
17.8, 19.3	17.8, 19.3	
17.9, 19.2	17.9, 19.2	

Tracking Number/Temperature

7222 2740 1334	17.8 (No ICE)
7475 9638 1694	19.4
4934 3730 1814	1.0
7435 4685 1307	4.5
4934 3730 1786	4.4
4934 3730 1788	19.2 (No ICE)

Other Issues

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Pace Analytical	Document Name: **Headspace Exception**	Document Revised: 17Dec2018 Page 1 of 1
	Document No.: **F-MN-C-276-Rev.01**	Issuing Authority: Pace Minnesota Quality Office

Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
SB-208-GW	0	1	2	3	Y

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-87306-1
Client Project/Site: TOC

For:
Pace Analytical Services, LLC
1700 Elm Street
Suite 200
Minneapolis, Minnesota 55414

Attn: Jenni Gross

Authorized for release by:
7/10/2019 11:25:07 AM

Ashley Worthy, Project Manager I
(253)922-2310
ashley.worthy@testamericainc.com

Table of Contents

Job ID: 580-87306-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-87306-1

Comments
No additional comments.

Receipt
The samples were received on 6/29/2019 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8º C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-5'

Date Collected: 06/19/19 09:40
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-1

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	1400	J	2000	44	mg/Kg			07/09/19 10:56	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.9		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	16.1		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-10'

Date Collected: 06/19/19 09:50
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-2

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	2100		2000	44	mg/Kg			07/09/19 11:01	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.6		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	16.4		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-15'

Date Collected: 06/19/19 10:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-3

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	160	J	2000	44	mg/Kg			07/09/19 11:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	65.3		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	34.7		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-20'
Date Collected: 06/19/19 10:15
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-4
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:15	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**64.6**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**35.4**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-25'
Date Collected: 06/19/19 10:20
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-5
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:19	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**69.9**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**30.1**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-30'
Date Collected: 06/19/19 10:35
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-6
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:23	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**71.2**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**28.8**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-35'
Date Collected: 06/19/19 10:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-7
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:28	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**70.1**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**29.9**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-40'
Date Collected: 06/19/19 11:15
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-8
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:32	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**65.1**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**34.9**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-45'
Date Collected: 06/19/19 11:25
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-9
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**66.5**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**33.5**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-50'
Date Collected: 06/19/19 11:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-10
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**65.2**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**34.8**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-55'
Date Collected: 06/19/19 12:10
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-11
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:44	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**72.4**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**27.6**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-60'
Date Collected: 06/19/19 12:40
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-12
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**66.5**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**33.5**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-65'
Date Collected: 06/19/19 12:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-13
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 11:53	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**69.5**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**30.5**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-70'

Date Collected: 06/19/19 14:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-14

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	78	J	2000	44	mg/Kg			07/09/19 12:05	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	67.1		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	32.9		0.1	0.1	%			07/06/19 13:17	1

Client Sample Results

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-77'
Date Collected: 06/19/19 14:05
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-15
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 12:09	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**82.7**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**17.3**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: FD1
Date Collected: 06/19/19 08:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-16
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	770	J B	2000	44	mg/Kg			07/09/19 12:25	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	72.6		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	27.4		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: FD2

Date Collected: 06/19/19 08:05
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-17

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	250	J B	2000	44	mg/Kg			07/09/19 12:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.0		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	17.0		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-5'
Date Collected: 06/20/19 09:10
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-18
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	610	J B	2000	44	mg/Kg			07/09/19 12:44	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.8		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	16.2		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-10'

Date Collected: 06/20/19 09:35
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-19

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	430	J B	2000	44	mg/Kg			07/09/19 12:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.2		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	21.8		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-15'
Date Collected: 06/20/19 09:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-20
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	310	J B	2000	44	mg/Kg			07/09/19 13:08	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.6		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	17.4		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-20'

Date Collected: 06/20/19 10:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-21

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	300	J B	2000	44	mg/Kg			07/09/19 13:13	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.7		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	20.3		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-25'

Date Collected: 06/20/19 10:05
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-22

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	320	J B	2000	44	mg/Kg			07/09/19 13:18	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.6		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	18.4		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-30'
Date Collected: 06/20/19 10:30
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-23
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	620	J B	2000	44	mg/Kg			07/09/19 13:23	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	76.8		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	23.2		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-35'
Date Collected: 06/20/19 10:55
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-24
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	79	J B	2000	44	mg/Kg			07/09/19 13:28	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	65.0		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	35.0		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-40'

Date Collected: 06/20/19 11:05
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-25

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	150	J B	2000	44	mg/Kg			07/09/19 13:32	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	66.7		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	33.3		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-45'
Date Collected: 06/20/19 11:10
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-26
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 13:37	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**70.0**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**30.0**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-50'

Date Collected: 06/20/19 11:35
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-27

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	650	J	2000	44	mg/Kg			07/09/19 10:41	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	74.7		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	25.3		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-55'
Date Collected: 06/20/19 11:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-28
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 13:41	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**68.7**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**31.3**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-60'

Date Collected: 06/20/19 12:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-29

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	270	J B	2000	44	mg/Kg			07/09/19 13:45	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	63.7		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	36.3		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-65'
Date Collected: 06/20/19 12:10
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-30
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	98	J B	2000	44	mg/Kg			07/09/19 13:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	64.7		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	35.3		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-70'
Date Collected: 06/20/19 12:50
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-31
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	300	J B	2000	44	mg/Kg			07/09/19 13:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	65.0		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	35.0		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-75'
Date Collected: 06/20/19 13:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-32
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 14:03	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**66.9**		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	**33.1**		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-80'
Date Collected: 06/20/19 13:55
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-33
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	130	J B	2000	44	mg/Kg			07/09/19 14:08	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	67.9		0.1	0.1	%			07/06/19 13:17	1
Percent Moisture	32.1		0.1	0.1	%			07/06/19 13:17	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-85'

Date Collected: 06/20/19 14:05
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-34

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	91	J B	2000	44	mg/Kg			07/09/19 14:12	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	69.7		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	30.3		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB208-90'

Date Collected: 06/20/19 14:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-35

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	270	J B	2000	44	mg/Kg			07/09/19 14:17	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	69.6		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	30.4		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: FD3

Date Collected: 06/20/19 08:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-36

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	420	J B	2000	44	mg/Kg			07/09/19 14:21	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	66.0		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	34.0		0.1	0.1	%			07/06/19 13:30	1

Method: 2540G - SM 2540G

Lab Sample ID: 580-87306-1 DU
Matrix: Solid
Analysis Batch: 304893

Client Sample ID: SB206-5'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	83.9			83.4		%				0.6	20
Percent Solids	83.9			83.4		%				0.6	20
Percent Moisture	16.1			16.6		%				3	20
Percent Moisture	16.1			16.6		%				3	20

Lab Sample ID: 580-87306-33 DU
Matrix: Solid
Analysis Batch: 304893

Client Sample ID: SB208-80'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	67.9			68.6		%				1	20
Percent Solids	67.9			68.6		%				1	20
Percent Moisture	32.1			31.4		%				2	20
Percent Moisture	32.1			31.4		%				2	20

Lab Sample ID: 580-87306-34 DU
Matrix: Solid
Analysis Batch: 304894

Client Sample ID: SB208-85'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	69.7			69.6		%				0.3	20
Percent Moisture	30.3			30.4		%				0.6	20

Lab Sample ID: 580-87306-25 DU
Matrix: Solid
Analysis Batch: 304970

Client Sample ID: SB208-40'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	66.5			68.5		%				3	20
Percent Moisture	33.5			31.5		%				6	20

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-305141/3
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/09/19 10:34	1

Lab Sample ID: MB 580-305141/31
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	360	J	2000	44	mg/Kg			07/09/19 12:18	1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 580-305141/32
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average Dup	4270	4120		mg/Kg		96	40 - 180

Lab Sample ID: LCS 580-305141/4
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average Dup	4270	2870		mg/Kg		67	40 - 180

Lab Sample ID: LCSD 580-305141/33
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	4270	3740		mg/Kg		87	40 - 180	10	32

Lab Sample ID: LCSD 580-305141/5
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	4270	3200		mg/Kg		75	40 - 180	11	32

Lab Sample ID: 580-87306-16 MS
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: FD1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average Dup	770	J B	120000	117000		mg/Kg		97	68 - 149

Lab Sample ID: 580-87306-16 MSD
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: FD1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	770	J B	120000	122000		mg/Kg		101	68 - 149	4	32

Lab Sample ID: 580-87306-27 MS
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: SB208-50'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average Dup	650	J	120000	116000		mg/Kg		96	68 - 149

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 580-87306-27 MSD
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: SB208-50'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	650	J	120000	121000		mg/Kg		100	68 - 149	3	32

Lab Sample ID: 580-87306-16 DU
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: FD1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon - Average Dup	770	J B		358	J F5	mg/Kg				73	50

Lab Sample ID: 580-87306-27 DU
Matrix: Solid
Analysis Batch: 305141

Client Sample ID: SB208-50'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon - Average Dup	650	J		612	J	mg/Kg				5	50

Lab Chronicle

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Client Sample ID: SB206-5'
Lab Sample ID: 580-87306-1
Date Collected: 06/19/19 09:40
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 10:56	JKM	TAL SEA

Client Sample ID: SB206-10'
Lab Sample ID: 580-87306-2
Date Collected: 06/19/19 09:50
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:01	JKM	TAL SEA

Client Sample ID: SB206-15'
Lab Sample ID: 580-87306-3
Date Collected: 06/19/19 10:00
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:06	JKM	TAL SEA

Client Sample ID: SB206-20'
Lab Sample ID: 580-87306-4
Date Collected: 06/19/19 10:15
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:15	JKM	TAL SEA

Client Sample ID: SB206-25'
Lab Sample ID: 580-87306-5
Date Collected: 06/19/19 10:20
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:19	JKM	TAL SEA

Client Sample ID: SB206-30'
Lab Sample ID: 580-87306-6
Date Collected: 06/19/19 10:35
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:23	JKM	TAL SEA

Client Sample ID: SB206-35'
Date Collected: 06/19/19 10:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:28	JKM	TAL SEA

Client Sample ID: SB206-40'
Date Collected: 06/19/19 11:15
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:32	JKM	TAL SEA

Client Sample ID: SB206-45'
Date Collected: 06/19/19 11:25
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:36	JKM	TAL SEA

Client Sample ID: SB206-50'
Date Collected: 06/19/19 11:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:40	JKM	TAL SEA

Client Sample ID: SB206-55'
Date Collected: 06/19/19 12:10
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:44	JKM	TAL SEA

Client Sample ID: SB206-60'
Date Collected: 06/19/19 12:40
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:49	JKM	TAL SEA

Client Sample ID: SB206-65'
Lab Sample ID: 580-87306-13
Date Collected: 06/19/19 12:45
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 11:53	JKM	TAL SEA

Client Sample ID: SB206-70'
Lab Sample ID: 580-87306-14
Date Collected: 06/19/19 14:00
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 12:05	JKM	TAL SEA

Client Sample ID: SB206-77'
Lab Sample ID: 580-87306-15
Date Collected: 06/19/19 14:05
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 12:09	JKM	TAL SEA

Client Sample ID: FD1
Lab Sample ID: 580-87306-16
Date Collected: 06/19/19 08:00
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 12:25	JKM	TAL SEA

Client Sample ID: FD2
Lab Sample ID: 580-87306-17
Date Collected: 06/19/19 08:05
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 12:40	JKM	TAL SEA

Client Sample ID: SB208-5'
Lab Sample ID: 580-87306-18
Date Collected: 06/20/19 09:10
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 12:44	JKM	TAL SEA

Client Sample ID: SB208-10'
Lab Sample ID: 580-87306-19
Date Collected: 06/20/19 09:35
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 12:49	JKM	TAL SEA

Client Sample ID: SB208-15'
Lab Sample ID: 580-87306-20
Date Collected: 06/20/19 09:45
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:08	JKM	TAL SEA

Client Sample ID: SB208-20'
Lab Sample ID: 580-87306-21
Date Collected: 06/20/19 10:00
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:13	JKM	TAL SEA

Client Sample ID: SB208-25'
Lab Sample ID: 580-87306-22
Date Collected: 06/20/19 10:05
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:18	JKM	TAL SEA

Client Sample ID: SB208-30'
Lab Sample ID: 580-87306-23
Date Collected: 06/20/19 10:30
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:23	JKM	TAL SEA

Client Sample ID: SB208-35'
Lab Sample ID: 580-87306-24
Date Collected: 06/20/19 10:55
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:28	JKM	TAL SEA

Client Sample ID: SB208-40'
Date Collected: 06/20/19 11:05
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-25
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:32	JKM	TAL SEA

Client Sample ID: SB208-45'
Date Collected: 06/20/19 11:10
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-26
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:37	JKM	TAL SEA

Client Sample ID: SB208-50'
Date Collected: 06/20/19 11:35
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-27
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 10:41	JKM	TAL SEA

Client Sample ID: SB208-55'
Date Collected: 06/20/19 11:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-28
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:41	JKM	TAL SEA

Client Sample ID: SB208-60'
Date Collected: 06/20/19 12:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-29
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:45	JKM	TAL SEA

Client Sample ID: SB208-65'
Date Collected: 06/20/19 12:10
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-30
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:50	JKM	TAL SEA

Client Sample ID: SB208-70'
Date Collected: 06/20/19 12:50
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-31
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 13:59	JKM	TAL SEA

Client Sample ID: SB208-75'
Date Collected: 06/20/19 13:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-32
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 14:03	JKM	TAL SEA

Client Sample ID: SB208-80'
Date Collected: 06/20/19 13:55
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-33
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304893	07/06/19 13:17	TCH	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 14:08	JKM	TAL SEA

Client Sample ID: SB208-85'
Date Collected: 06/20/19 14:05
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-34
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 14:12	JKM	TAL SEA

Client Sample ID: SB208-90'
Date Collected: 06/20/19 14:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-35
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 14:17	JKM	TAL SEA

Client Sample ID: FD3
Date Collected: 06/20/19 08:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87306-36
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305141	07/09/19 14:21	JKM	TAL SEA

Laboratory References:
TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-20
ANAB	Dept. of Defense ELAP		L2236	01-19-22
ANAB	DoD		L2236	01-19-22
ANAB	ISO/IEC 17025		L2236	01-19-22
ANAB	ISO/IEC 17025		L2236	01-19-22
California	State Program	9	2901	11-05-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-19
Oregon	NELAP		WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-20

Sample Summary

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87306-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-87306-1	SB206-5'	Solid	06/19/19 09:40	06/29/19 10:15	
580-87306-2	SB206-10'	Solid	06/19/19 09:50	06/29/19 10:15	
580-87306-3	SB206-15'	Solid	06/19/19 10:00	06/29/19 10:15	
580-87306-4	SB206-20'	Solid	06/19/19 10:15	06/29/19 10:15	
580-87306-5	SB206-25'	Solid	06/19/19 10:20	06/29/19 10:15	
580-87306-6	SB206-30'	Solid	06/19/19 10:35	06/29/19 10:15	
580-87306-7	SB206-35'	Solid	06/19/19 10:45	06/29/19 10:15	
580-87306-8	SB206-40'	Solid	06/19/19 11:15	06/29/19 10:15	
580-87306-9	SB206-45'	Solid	06/19/19 11:25	06/29/19 10:15	
580-87306-10	SB206-50'	Solid	06/19/19 11:45	06/29/19 10:15	
580-87306-11	SB206-55'	Solid	06/19/19 12:10	06/29/19 10:15	
580-87306-12	SB206-60'	Solid	06/19/19 12:40	06/29/19 10:15	
580-87306-13	SB206-65'	Solid	06/19/19 12:45	06/29/19 10:15	
580-87306-14	SB206-70'	Solid	06/19/19 14:00	06/29/19 10:15	
580-87306-15	SB206-77'	Solid	06/19/19 14:05	06/29/19 10:15	
580-87306-16	FD1	Solid	06/19/19 08:00	06/29/19 10:15	
580-87306-17	FD2	Solid	06/19/19 08:05	06/29/19 10:15	
580-87306-18	SB208-5'	Solid	06/20/19 09:10	06/29/19 10:15	
580-87306-19	SB208-10'	Solid	06/20/19 09:35	06/29/19 10:15	
580-87306-20	SB208-15'	Solid	06/20/19 09:45	06/29/19 10:15	
580-87306-21	SB208-20'	Solid	06/20/19 10:00	06/29/19 10:15	
580-87306-22	SB208-25'	Solid	06/20/19 10:05	06/29/19 10:15	
580-87306-23	SB208-30'	Solid	06/20/19 10:30	06/29/19 10:15	
580-87306-24	SB208-35'	Solid	06/20/19 10:55	06/29/19 10:15	
580-87306-25	SB208-40'	Solid	06/20/19 11:05	06/29/19 10:15	
580-87306-26	SB208-45'	Solid	06/20/19 11:10	06/29/19 10:15	
580-87306-27	SB208-50'	Solid	06/20/19 11:35	06/29/19 10:15	
580-87306-28	SB208-55'	Solid	06/20/19 11:45	06/29/19 10:15	
580-87306-29	SB208-60'	Solid	06/20/19 12:00	06/29/19 10:15	
580-87306-30	SB208-65'	Solid	06/20/19 12:10	06/29/19 10:15	
580-87306-31	SB208-70'	Solid	06/20/19 12:50	06/29/19 10:15	
580-87306-32	SB208-75'	Solid	06/20/19 13:00	06/29/19 10:15	
580-87306-33	SB208-80'	Solid	06/20/19 13:55	06/29/19 10:15	
580-87306-34	SB208-85'	Solid	06/20/19 14:05	06/29/19 10:15	
580-87306-35	SB208-90'	Solid	06/20/19 14:45	06/29/19 10:15	
580-87306-36	FD3	Solid	06/20/19 08:00	06/29/19 10:15	

Chain of Custody

PASI Minnesota Laboratory

Pace Analytical®
www.pacelabs.com

Workorder: 10480346 Workorder Name: 1497 Freeman WA-Cenex Harvest Results Requested By: 7/8/2019 87306

Report / Invoice To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426 Email: jennifer.gross@pacelabs.com State of Sample Origin: WA	Test America P.O. 10480346 5755 8th Street E. Tacoma, WA 98424 Ashley Worthy 253-248-4965

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved JGFU	5632354 / 9060 TOC	dry weight	LAB USE ONLY
1	SB206-5'	6/19/2019 09:40	10480346001	Solid	1	X	X	
2	SB206-10'	6/19/2019 09:50	10480346002	Solid		X		
3	SB206-15'	6/19/2019 10:00	10480346003	Solid		X		
4	SB206-20'	6/19/2019 10:15	10480346004	Solid		X		
5	SB206-25'	6/19/2019 10:20	10480346005	Solid		X		
6	SB206-30'	6/19/2019 10:35	10480346006	Solid		X		
7	SB206-35'	6/19/2019 10:45	10480346007	Solid		X		
8	SB206-40'	6/19/2019 11:15	10480346008	Solid		X		
9	SB206-45'	6/19/2019 11:25	10480346009	Solid		X		
10	SB206-50'	6/19/2019 11:45	10480346010	Solid		X		
11	SB206-55'	6/19/2019 12:10	10480346011	Solid		X		
12	SB206-60'	6/19/2019 12:40	10480346012	Solid		X		
13	SB206-65'	6/19/2019 12:45	10480346013	Solid		X		
14	SB206-70'	6/19/2019 14:00	10480346014	Solid		X		
15	SB206-77'	6/19/2019 14:05	10480346015	Solid		X		
16	FD1	6/19/2019 08:00	10480346017	Solid		X		
17	FD2	6/19/2019 08:05	10480346018	Solid		X		
18	SB208-5'	6/20/2019 09:10	10480346023	Solid		X		
19	SB208-10'	6/20/2019 09:35	10480346024	Solid	1	X	X	

580-87306 Chain of Custody

Therm. ID: A2 Cor: 0.8 ° Unc: 1.1 °
Cooler Dsc: Lg Blue FedEx: PO
Packing: Bub UPS:
Cust. Seal: Yes No Lab Cour:
Blue Ice: Wet, Dry, None Other:

IR4 = -0.1/0.2

Chain of Custody

PASI Minnesota Laboratory

Pace Analytical®
www.pacelabs.com

87306

Workorder: 10480346 **Workorder Name:** 1497 Freeman WA-Cenex Harvest **Results Requested By:** 7/8/2019

Report / Invoice To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426 Email: jennifer.gross@pacelabs.com	Test America 5755 8th Street E. Tacoma, WA 98424 Ashley Worthy 253-248-4965 P.O. 10480346

State of Sample Origin: WA

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved 1GFU						Requested Analysis: 5632354 / 9060 TOC	dry weight											LAB USE ONLY
20	SB208-15'	6/20/2019 09:45	10480346025	Solid	1						X	X											
21	SB208-20'	6/20/2019 10:00	10480346026	Solid							X												
22	SB208-25'	6/20/2019 10:05	10480346027	Solid							X												
23	SB208-30'	6/20/2019 10:30	10480346028	Solid							X												
24	SB208-35'	6/20/2019 10:55	10480346029	Solid							X												
25	SB208-40'	6/20/2019 11:05	10480346030	Solid							X												
26	SB208-45'	6/20/2019 11:10	10480346031	Solid							X												
27	SB208-50'	6/20/2019 11:35	10480346032	Solid							X												MS/MSD
28	SB208-55'	6/20/2019 11:45	10480346033	Solid							X												
29	SB208-60'	6/20/2019 12:00	10480346034	Solid							X												
30	SB208-65'	6/20/2019 12:10	10480346035	Solid							X												
31	SB208-70'	6/20/2019 12:50	10480346036	Solid							X												
32	SB208-75'	6/20/2019 13:00	10480346037	Solid							X												
33	SB208-80'	6/20/2019 13:55	10480346038	Solid							X												
34	SB208-85'	6/20/2019 14:05	10480346039	Solid							X												
35	SB208-90'	6/20/2019 14:45	10480346040	Solid							X												
36	FD3	6/20/2019 08:00	10480346045	Solid	1						X	X											
37																							
38																							
39																							
40																							

87306

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1		6.28.19 1600		6/29/19 1015	Report to MDL GHD EQuIS EDD
2					
3					

Cooler Temperature on Receipt ____ °C	Custody Seal Y or N	Received on Ice Y or N	Samples Intact Y or N

Login Sample Receipt Checklist

Client: Pace Analytical Services, LLC

Job Number: 580-87306-1

Login Number: 87306
List Number: 1
Creator: Blankinship, Tom X

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

July 02, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on June 25, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10480558001	**Trip Blank 1**	Water	06/24/19 08:00	06/25/19 08:30
10480558002	**MW9U-GW-062419**	Water	06/24/19 12:25	06/25/19 08:30
10480558003	**FD1-GW-062419**	Water	06/24/19 12:30	06/25/19 08:30
10480558004	**MW9D-GW-062419**	Water	06/24/19 15:35	06/25/19 08:30

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10480558001	**Trip Blank 1**	EPA 8260B	AEZ	83	PASI-M
10480558002	**MW9U-GW-062419**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ, MJD	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10480558003	**FD1-GW-062419**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ, MJD	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10480558004	**MW9D-GW-062419**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ, MJD	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10480558002	**MW9U-GW-062419**					
EPA 6010D	Barium, Dissolved	21.8	ug/L	10.0	06/28/19 13:00	
EPA 6010D	Beryllium, Dissolved	0.16J	ug/L	5.0	06/28/19 13:00	
EPA 6010D	Chromium, Dissolved	24.8	ug/L	10.0	06/28/19 13:00	
EPA 6010D	Cobalt, Dissolved	1.0J	ug/L	10.0	06/28/19 13:00	
EPA 6010D	Lead, Dissolved	2.0J	ug/L	10.0	06/28/19 13:00	
EPA 6010D	Molybdenum, Dissolved	5.8J	ug/L	15.0	06/28/19 13:00	
EPA 6010D	Nickel, Dissolved	2.8J	ug/L	20.0	06/28/19 13:00	
EPA 6010D	Vanadium, Dissolved	8.2J	ug/L	15.0	06/28/19 13:00	
EPA 6010D	Zinc, Dissolved	13.6J	ug/L	20.0	06/28/19 13:00	B
EPA 8260B	1,2-Dichloroethane	0.24J	ug/L	0.50	06/27/19 17:31	
EPA 8260B	Carbon tetrachloride	378	ug/L	2.5	06/28/19 18:48	
EPA 8260B	Chloroform	10.1	ug/L	1.0	06/27/19 17:31	
SM 2320B	Alkalinity, Total as CaCO3	165	mg/L	5.0	07/01/19 08:50	
SM 2540C	Total Dissolved Solids	314	mg/L	10.0	07/01/19 08:39	
EPA 300.0	Chloride	15.1	mg/L	1.2	06/26/19 11:39	M1
EPA 300.0	Nitrate as N	5.0	mg/L	0.10	06/26/19 11:39	M1
EPA 300.0	Sulfate	33.4	mg/L	1.2	06/26/19 11:39	M1
EPA 353.2	Nitrogen, NO2 plus NO3	4.6	mg/L	0.50	06/27/19 09:42	FS
EPA 410.4	Chemical Oxygen Demand	42.7J	mg/L	50.0	07/01/19 14:53	
SM 5310C	Total Organic Carbon	1.7	mg/L	1.0	06/28/19 13:21	
10480558003	**FD1-GW-062419**					
EPA 6010D	Barium, Dissolved	23.6	ug/L	10.0	06/28/19 13:01	
EPA 6010D	Beryllium, Dissolved	0.12J	ug/L	5.0	06/28/19 13:01	
EPA 6010D	Chromium, Dissolved	17.7	ug/L	10.0	06/28/19 13:01	
EPA 6010D	Cobalt, Dissolved	2.3J	ug/L	10.0	06/28/19 13:01	
EPA 6010D	Molybdenum, Dissolved	5.0J	ug/L	15.0	06/28/19 13:01	
EPA 6010D	Nickel, Dissolved	4.7J	ug/L	20.0	06/28/19 13:01	
EPA 6010D	Vanadium, Dissolved	8.7J	ug/L	15.0	06/28/19 13:01	
EPA 6010D	Zinc, Dissolved	6.8J	ug/L	20.0	06/28/19 13:01	B
EPA 8260B	Carbon tetrachloride	386	ug/L	2.5	06/28/19 19:05	
EPA 8260B	Chloroform	11.0	ug/L	1.0	06/27/19 17:47	
SM 2320B	Alkalinity, Total as CaCO3	165	mg/L	5.0	07/01/19 08:54	
SM 2540C	Total Dissolved Solids	309	mg/L	10.0	07/01/19 08:39	
EPA 300.0	Chloride	16.6	mg/L	1.2	06/26/19 11:55	
EPA 300.0	Nitrate as N	5.2	mg/L	0.10	06/26/19 11:55	
EPA 300.0	Sulfate	37.3	mg/L	1.2	06/26/19 11:55	
EPA 353.2	Nitrogen, NO2 plus NO3	5.0	mg/L	0.50	06/27/19 09:44	FS
EPA 410.4	Chemical Oxygen Demand	21.9J	mg/L	50.0	07/01/19 14:54	
SM 5310C	Total Organic Carbon	1.6	mg/L	1.0	06/28/19 13:38	
10480558004	**MW9D-GW-062419**					
EPA 6010D	Barium, Dissolved	26.8	ug/L	10.0	06/28/19 13:03	
EPA 6010D	Beryllium, Dissolved	0.26J	ug/L	5.0	06/28/19 13:03	
EPA 6010D	Cobalt, Dissolved	1.8J	ug/L	10.0	06/28/19 13:03	
EPA 6010D	Nickel, Dissolved	2.9J	ug/L	20.0	06/28/19 13:03	
EPA 6010D	Vanadium, Dissolved	8.1J	ug/L	15.0	06/28/19 13:03	
EPA 6010D	Zinc, Dissolved	7.3J	ug/L	20.0	06/28/19 13:03	B

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10480558004	**MW9D-GW-062419**					
EPA 8260B	1,4-Dioxane (p-Dioxane)	34.8J	ug/L	200	06/27/19 18:21	
EPA 8260B	Carbon tetrachloride	119	ug/L	2.5	06/28/19 19:22	
EPA 8260B	Chloroform	4.4	ug/L	1.0	06/27/19 18:21	
SM 2320B	Alkalinity, Total as CaCO3	170	mg/L	5.0	07/01/19 08:58	
SM 2540C	Total Dissolved Solids	307	mg/L	10.0	07/01/19 08:39	
EPA 300.0	Chloride	11.4	mg/L	1.2	06/26/19 12:10	
EPA 300.0	Nitrate as N	4.6	mg/L	0.10	06/26/19 12:10	
EPA 300.0	Sulfate	36.6	mg/L	1.2	06/26/19 12:10	
EPA 353.2	Nitrogen, NO2 plus NO3	4.5	mg/L	0.50	06/27/19 09:45	
SM 5310C	Total Organic Carbon	1.2	mg/L	1.0	06/28/19 13:55	

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 615876

B: Analyte was detected in the associated method blank.
- BLANK for HBN 615876 [MPRP/941 (Lab ID: 3327178)
  - Zinc, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
4 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 616029

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480797002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3329533)
  - Acrolein
- MSD (Lab ID: 3329534)
  - Acrolein

Additional Comments:

Analyte Comments:

QC Batch: 616029

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3327750)
  - 1,2-Dichloroethene (Total)

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 02, 2019

Analyte Comments:

QC Batch: 616029

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3327750)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- FD1-GW-062419 (Lab ID: 10480558003)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3327751)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3329533)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3329534)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW9D-GW-062419 (Lab ID: 10480558004)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW9U-GW-062419 (Lab ID: 10480558002)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- Trip Blank 1 (Lab ID: 10480558001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 147701

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480825003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 652390)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 615585

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480558002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3325675)
  - Chloride
  - Nitrate as N
  - Sulfate
- MSD (Lab ID: 3325676)
  - Chloride
  - Nitrate as N
  - Sulfate

Additional Comments:

Pace Analytical Services, LLC
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(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 615695

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10479671003,10479671004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3326138)
  - Nitrogen, NO2 plus NO3
- MSD (Lab ID: 3326139)
  - Nitrogen, NO2 plus NO3

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: July 02, 2019

General Information:
3 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 169307

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 668799)
  - Total Organic Carbon
- MSD (Lab ID: 668800)
  - Total Organic Carbon

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: Trip Blank 1 **Lab ID: 10480558001** Collected: 06/24/19 08:00 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:14	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		06/27/19 17:14	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:14	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		06/27/19 17:14	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		06/27/19 17:14	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:14	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:14	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:14	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		06/27/19 17:14	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		06/27/19 17:14	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		06/27/19 17:14	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:14	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		06/27/19 17:14	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		06/27/19 17:14	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		06/27/19 17:14	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		06/27/19 17:14	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		06/27/19 17:14	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		06/27/19 17:14	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		06/27/19 17:14	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:14	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		06/27/19 17:14	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:14	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		06/27/19 17:14	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		06/27/19 17:14	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		06/27/19 17:14	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		06/27/19 17:14	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:14	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		06/27/19 17:14	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		06/27/19 17:14	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		06/27/19 17:14	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		06/27/19 17:14	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		06/27/19 17:14	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		06/27/19 17:14	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		06/27/19 17:14	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		06/27/19 17:14	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		06/27/19 17:14	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	1.0	0.22	1		06/27/19 17:14	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		06/27/19 17:14	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		06/27/19 17:14	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		06/27/19 17:14	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		06/27/19 17:14	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:14	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		06/27/19 17:14	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		06/27/19 17:14	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		06/27/19 17:14	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		06/27/19 17:14	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: Trip Blank 1 **Lab ID: 10480558001** Collected: 06/24/19 08:00 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		06/27/19 17:14	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		06/27/19 17:14	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		06/27/19 17:14	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		06/27/19 17:14	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		06/27/19 17:14	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		06/27/19 17:14	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		06/27/19 17:14	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		06/27/19 17:14	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:14	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		06/27/19 17:14	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		06/27/19 17:14	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		06/27/19 17:14	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:14	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		06/27/19 17:14	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		06/27/19 17:14	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		06/27/19 17:14	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		06/27/19 17:14	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		06/27/19 17:14	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		06/27/19 17:14	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		06/27/19 17:14	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:14	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:14	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		06/27/19 17:14	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		06/27/19 17:14	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		06/27/19 17:14	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:14	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:14	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:14	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		06/27/19 17:14	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		06/27/19 17:14	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:14	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		06/27/19 17:14	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		06/27/19 17:14	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		06/27/19 17:14	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		06/27/19 17:14	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		06/27/19 17:14	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		06/27/19 17:14	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: MW9U-GW-062419 **Lab ID: 10480558002** Collected: 06/24/19 12:25 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		06/26/19 18:12	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		06/26/19 18:12	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		06/26/19 18:12	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:00	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:00	7440-38-2	
Barium, Dissolved	**21.8**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:00	7440-39-3	
Beryllium, Dissolved	**0.16J**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:00	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:00	7440-43-9	
Chromium, Dissolved	**24.8**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:00	7440-47-3	
Cobalt, Dissolved	**1.0J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:00	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:00	7440-50-8	
Lead, Dissolved	**2.0J**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:00	7439-92-1	
Molybdenum, Dissolved	**5.8J**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:00	7439-98-7	
Nickel, Dissolved	**2.8J**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:00	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:00	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:00	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:00	7440-28-0	
Vanadium, Dissolved	**8.2J**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:00	7440-62-2	
Zinc, Dissolved	**13.6J**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:00	7440-66-6	B
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:20	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:31	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		06/27/19 17:31	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:31	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		06/27/19 17:31	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		06/27/19 17:31	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:31	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:31	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:31	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		06/27/19 17:31	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		06/27/19 17:31	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		06/27/19 17:31	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:31	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		06/27/19 17:31	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		06/27/19 17:31	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		06/27/19 17:31	95-50-1	
1,2-Dichloroethane	**0.24J**	ug/L	0.50	0.22	1		06/27/19 17:31	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		06/27/19 17:31	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		06/27/19 17:31	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		06/27/19 17:31	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:31	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: MW9U-GW-062419 **Lab ID: 10480558002** Collected: 06/24/19 12:25 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		06/27/19 17:31	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:31	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		06/27/19 17:31	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		06/27/19 17:31	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		06/27/19 17:31	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		06/27/19 17:31	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:31	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		06/27/19 17:31	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		06/27/19 17:31	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		06/27/19 17:31	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		06/27/19 17:31	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		06/27/19 17:31	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		06/27/19 17:31	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		06/27/19 17:31	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		06/27/19 17:31	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		06/27/19 17:31	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	1.0	0.22	1		06/27/19 17:31	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		06/27/19 17:31	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		06/27/19 17:31	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		06/27/19 17:31	75-15-0	
Carbon tetrachloride	**378**	ug/L	2.5	0.94	5		06/28/19 18:48	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:31	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		06/27/19 17:31	75-00-3	
Chloroform	**10.1**	ug/L	1.0	0.45	1		06/27/19 17:31	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		06/27/19 17:31	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		06/27/19 17:31	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		06/27/19 17:31	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		06/27/19 17:31	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		06/27/19 17:31	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		06/27/19 17:31	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		06/27/19 17:31	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		06/27/19 17:31	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		06/27/19 17:31	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		06/27/19 17:31	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:31	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		06/27/19 17:31	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		06/27/19 17:31	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		06/27/19 17:31	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:31	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		06/27/19 17:31	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		06/27/19 17:31	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		06/27/19 17:31	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		06/27/19 17:31	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		06/27/19 17:31	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		06/27/19 17:31	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		06/27/19 17:31	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: MW9U-GW-062419 **Lab ID: 10480558002** Collected: 06/24/19 12:25 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:31	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:31	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		06/27/19 17:31	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		06/27/19 17:31	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		06/27/19 17:31	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:31	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:31	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:31	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		06/27/19 17:31	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		06/27/19 17:31	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:31	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		06/27/19 17:31	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		06/27/19 17:31	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		06/27/19 17:31	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		06/27/19 17:31	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		06/27/19 17:31	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		06/27/19 17:31	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**165**	mg/L	5.0	2.0	1		07/01/19 08:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**314**	mg/L	10.0	5.0	1		07/01/19 08:39		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/28/19 16:11	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**15.1**	mg/L	1.2	0.12	1		06/26/19 11:39	16887-00-6	M1
Nitrate as N	**5.0**	mg/L	0.10	0.012	1		06/26/19 11:39	14797-55-8	M1
Sulfate	**33.4**	mg/L	1.2	0.28	1		06/26/19 11:39	14808-79-8	M1
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**4.6**	mg/L	0.50	0.088	5		06/27/19 09:42		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**42.7J**	mg/L	50.0	17.0	1	07/01/19 10:33	07/01/19 14:53		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.7**	mg/L	1.0	0.39	1		06/28/19 13:21	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: FD1-GW-062419 **Lab ID: 10480558003** Collected: 06/24/19 12:30 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		06/26/19 17:58	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		06/26/19 17:58	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		06/26/19 17:58	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:01	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:01	7440-38-2	
Barium, Dissolved	**23.6**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:01	7440-39-3	
Beryllium, Dissolved	**0.12J**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:01	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:01	7440-43-9	
Chromium, Dissolved	**17.7**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:01	7440-47-3	
Cobalt, Dissolved	**2.3J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:01	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:01	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:01	7439-92-1	
Molybdenum, Dissolved	**5.0J**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:01	7439-98-7	
Nickel, Dissolved	**4.7J**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:01	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:01	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:01	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:01	7440-28-0	
Vanadium, Dissolved	**8.7J**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:01	7440-62-2	
Zinc, Dissolved	**6.8J**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:01	7440-66-6	B
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:22	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:47	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		06/27/19 17:47	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:47	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		06/27/19 17:47	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		06/27/19 17:47	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:47	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:47	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:47	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		06/27/19 17:47	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		06/27/19 17:47	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		06/27/19 17:47	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:47	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		06/27/19 17:47	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		06/27/19 17:47	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		06/27/19 17:47	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		06/27/19 17:47	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		06/27/19 17:47	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		06/27/19 17:47	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		06/27/19 17:47	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:47	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: FD1-GW-062419 **Lab ID: 10480558003** Collected: 06/24/19 12:30 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		06/27/19 17:47	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:47	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		06/27/19 17:47	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		06/27/19 17:47	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		06/27/19 17:47	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		06/27/19 17:47	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:47	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		06/27/19 17:47	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		06/27/19 17:47	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		06/27/19 17:47	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		06/27/19 17:47	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		06/27/19 17:47	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		06/27/19 17:47	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		06/27/19 17:47	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		06/27/19 17:47	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		06/27/19 17:47	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	1.0	0.22	1		06/27/19 17:47	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		06/27/19 17:47	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		06/27/19 17:47	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		06/27/19 17:47	75-15-0	
Carbon tetrachloride	**386**	ug/L	2.5	0.94	5		06/28/19 19:05	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:47	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		06/27/19 17:47	75-00-3	
Chloroform	**11.0**	ug/L	1.0	0.45	1		06/27/19 17:47	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		06/27/19 17:47	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		06/27/19 17:47	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		06/27/19 17:47	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		06/27/19 17:47	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		06/27/19 17:47	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		06/27/19 17:47	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		06/27/19 17:47	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		06/27/19 17:47	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		06/27/19 17:47	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		06/27/19 17:47	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:47	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		06/27/19 17:47	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		06/27/19 17:47	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		06/27/19 17:47	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 17:47	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		06/27/19 17:47	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		06/27/19 17:47	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		06/27/19 17:47	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		06/27/19 17:47	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		06/27/19 17:47	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		06/27/19 17:47	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		06/27/19 17:47	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: FD1-GW-062419 **Lab ID: 10480558003** Collected: 06/24/19 12:30 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:47	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 17:47	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		06/27/19 17:47	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		06/27/19 17:47	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		06/27/19 17:47	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 17:47	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:47	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:47	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		06/27/19 17:47	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		06/27/19 17:47	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 17:47	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		06/27/19 17:47	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		06/27/19 17:47	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		06/27/19 17:47	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		06/27/19 17:47	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		06/27/19 17:47	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		06/27/19 17:47	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**165**	mg/L	5.0	2.0	1		07/01/19 08:54		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**309**	mg/L	10.0	5.0	1		07/01/19 08:39		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/28/19 16:11	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**16.6**	mg/L	1.2	0.12	1		06/26/19 11:55	16887-00-6	
Nitrate as N	**5.2**	mg/L	0.10	0.012	1		06/26/19 11:55	14797-55-8	
Sulfate	**37.3**	mg/L	1.2	0.28	1		06/26/19 11:55	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**5.0**	mg/L	0.50	0.088	5		06/27/19 09:44		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**21.9J**	mg/L	50.0	17.0	1	07/01/19 10:33	07/01/19 14:54		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.6**	mg/L	1.0	0.39	1		06/28/19 13:38	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: MW9D-GW-062419 **Lab ID: 10480558004** Collected: 06/24/19 15:35 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		06/26/19 18:19	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		06/26/19 18:19	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		06/26/19 18:19	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:03	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:03	7440-38-2	
Barium, Dissolved	**26.8**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:03	7440-39-3	
Beryllium, Dissolved	**0.26J**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:03	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:03	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:03	7440-47-3	
Cobalt, Dissolved	**1.8J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:03	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:03	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:03	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:03	7439-98-7	
Nickel, Dissolved	**2.9J**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:03	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:03	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:03	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:03	7440-28-0	
Vanadium, Dissolved	**8.1J**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:03	7440-62-2	
Zinc, Dissolved	**7.3J**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:03	7440-66-6	B
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:25	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		06/27/19 18:21	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		06/27/19 18:21	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		06/27/19 18:21	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		06/27/19 18:21	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		06/27/19 18:21	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		06/27/19 18:21	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 18:21	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 18:21	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		06/27/19 18:21	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		06/27/19 18:21	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		06/27/19 18:21	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 18:21	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		06/27/19 18:21	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		06/27/19 18:21	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		06/27/19 18:21	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		06/27/19 18:21	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		06/27/19 18:21	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		06/27/19 18:21	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		06/27/19 18:21	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 18:21	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: MW9D-GW-062419 **Lab ID: 10480558004** Collected: 06/24/19 15:35 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		06/27/19 18:21	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 18:21	106-46-7	
1,4-Dioxane (p-Dioxane)	**34.8J**	ug/L	200	16.3	1		06/27/19 18:21	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		06/27/19 18:21	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		06/27/19 18:21	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		06/27/19 18:21	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 18:21	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		06/27/19 18:21	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		06/27/19 18:21	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		06/27/19 18:21	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		06/27/19 18:21	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		06/27/19 18:21	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		06/27/19 18:21	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		06/27/19 18:21	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		06/27/19 18:21	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		06/27/19 18:21	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	1.0	0.22	1		06/27/19 18:21	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		06/27/19 18:21	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		06/27/19 18:21	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		06/27/19 18:21	75-15-0	
Carbon tetrachloride	**119**	ug/L	2.5	0.94	5		06/28/19 19:22	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 18:21	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		06/27/19 18:21	75-00-3	
Chloroform	**4.4**	ug/L	1.0	0.45	1		06/27/19 18:21	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		06/27/19 18:21	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		06/27/19 18:21	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		06/27/19 18:21	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		06/27/19 18:21	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		06/27/19 18:21	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		06/27/19 18:21	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		06/27/19 18:21	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		06/27/19 18:21	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		06/27/19 18:21	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		06/27/19 18:21	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		06/27/19 18:21	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		06/27/19 18:21	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		06/27/19 18:21	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		06/27/19 18:21	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		06/27/19 18:21	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		06/27/19 18:21	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		06/27/19 18:21	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		06/27/19 18:21	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		06/27/19 18:21	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		06/27/19 18:21	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		06/27/19 18:21	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		06/27/19 18:21	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Sample: MW9D-GW-062419 **Lab ID: 10480558004** Collected: 06/24/19 15:35 Received: 06/25/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 18:21	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		06/27/19 18:21	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		06/27/19 18:21	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		06/27/19 18:21	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		06/27/19 18:21	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		06/27/19 18:21	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 18:21	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 18:21	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		06/27/19 18:21	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		06/27/19 18:21	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		06/27/19 18:21	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		06/27/19 18:21	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		06/27/19 18:21	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		06/27/19 18:21	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		06/27/19 18:21	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		06/27/19 18:21	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		06/27/19 18:21	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**170**	mg/L	5.0	2.0	1		07/01/19 08:58		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**307**	mg/L	10.0	5.0	1		07/01/19 08:39		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/28/19 16:12	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**11.4**	mg/L	1.2	0.12	1		06/26/19 12:10	16887-00-6	
Nitrate as N	**4.6**	mg/L	0.10	0.012	1		06/26/19 12:10	14797-55-8	
Sulfate	**36.6**	mg/L	1.2	0.28	1		06/26/19 12:10	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**4.5**	mg/L	0.50	0.088	5		06/27/19 09:45		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/01/19 10:33	07/01/19 14:54		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.2**	mg/L	1.0	0.39	1		06/28/19 13:55	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 615593 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 3325694 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	06/26/19 16:00	
Ethene	ug/L	<2.9	10.0	2.9	06/26/19 16:00	
Methane	ug/L	<4.9	10.0	4.9	06/26/19 16:00	

LABORATORY CONTROL SAMPLE & LCSD: 3325695 3325696

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	98.9	116	87	102	85-115	16	20	
Ethene	ug/L	106	92.1	108	87	102	85-115	16	20	
Methane	ug/L	60.7	54.2	59.8	89	99	85-115	10	20	

SAMPLE DUPLICATE: 3326685

Parameter	Units	10479671054 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

SAMPLE DUPLICATE: 3326686

Parameter	Units	10480558003 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 615914 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 3327348 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/01/19 14:13	

LABORATORY CONTROL SAMPLE: 3327349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.1	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327350 3327351

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	4.9	4.8	97	96	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327352 3327353

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.0	4.9	101	99	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 615876 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 3327178 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	06/28/19 12:56	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	06/28/19 12:56	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	06/28/19 12:56	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	06/28/19 12:56	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	06/28/19 12:56	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	06/28/19 12:56	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	06/28/19 12:56	
Copper, Dissolved	ug/L	1.8J	10.0	1.2	06/28/19 12:56	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	06/28/19 12:56	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	06/28/19 12:56	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	06/28/19 12:56	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	06/28/19 12:56	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	06/28/19 12:56	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	06/28/19 12:56	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	06/28/19 12:56	
Zinc, Dissolved	ug/L	7.1J	20.0	6.3	06/28/19 12:56	

LABORATORY CONTROL SAMPLE: 3327179

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	979	98	80-120	
Arsenic, Dissolved	ug/L	1000	999	100	80-120	
Barium, Dissolved	ug/L	1000	1010	101	80-120	
Beryllium, Dissolved	ug/L	1000	1020	102	80-120	
Cadmium, Dissolved	ug/L	1000	1020	102	80-120	
Chromium, Dissolved	ug/L	1000	1000	100	80-120	
Cobalt, Dissolved	ug/L	1000	1010	101	80-120	
Copper, Dissolved	ug/L	1000	981	98	80-120	
Lead, Dissolved	ug/L	1000	1010	101	80-120	
Molybdenum, Dissolved	ug/L	1000	994	99	80-120	
Nickel, Dissolved	ug/L	1000	999	100	80-120	
Selenium, Dissolved	ug/L	1000	1030	103	80-120	
Silver, Dissolved	ug/L	500	501	100	80-120	
Thallium, Dissolved	ug/L	1000	990	99	80-120	
Vanadium, Dissolved	ug/L	1000	1000	100	80-120	
Zinc, Dissolved	ug/L	1000	1020	102	80-120	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327180 3327181

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	996	996	99	99	75-125	0	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	999	1010	100	101	75-125	1	20	
Barium, Dissolved	ug/L	19.0	1000	1000	1010	1020	99	100	75-125	1	20	
Beryllium, Dissolved	ug/L	0.13J	1000	1000	1020	1030	102	103	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1000	1010	100	101	75-125	1	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	989	998	99	100	75-125	1	20	
Cobalt, Dissolved	ug/L	1.8J	1000	1000	976	986	97	98	75-125	1	20	
Copper, Dissolved	ug/L	<1.2	1000	1000	982	993	98	99	75-125	1	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	992	1000	99	100	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	993	998	99	100	75-125	0	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	963	974	96	97	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1020	1030	102	103	75-125	1	20	
Silver, Dissolved	ug/L	<0.40	500	500	504	509	101	102	75-125	1	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	981	992	98	99	75-125	1	20	
Vanadium, Dissolved	ug/L	5.1J	1000	1000	1000	1010	100	101	75-125	1	20	
Zinc, Dissolved	ug/L	8.7J	1000	1000	995	1000	99	100	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327182 3327183

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	1010	992	101	99	75-125	2	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1020	1000	102	100	75-125	2	20	
Barium, Dissolved	ug/L	50.4	1000	1000	1070	1050	102	100	75-125	2	20	
Beryllium, Dissolved	ug/L	0.45J	1000	1000	1040	1020	104	102	75-125	2	20	
Cadmium, Dissolved	ug/L	0.28J	1000	1000	1030	1010	103	101	75-125	2	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1020	995	102	100	75-125	2	20	
Cobalt, Dissolved	ug/L	0.83J	1000	1000	1010	986	101	98	75-125	2	20	
Copper, Dissolved	ug/L	<1.2	1000	1000	1000	981	100	98	75-125	2	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1020	999	102	100	75-125	2	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	1030	1010	102	101	75-125	2	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	999	978	100	98	75-125	2	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1050	1030	105	103	75-125	2	20	
Silver, Dissolved	ug/L	<0.40	500	500	515	505	103	101	75-125	2	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	1010	987	101	98	75-125	2	20	
Vanadium, Dissolved	ug/L	<0.43	1000	1000	1020	996	102	100	75-125	2	20	
Zinc, Dissolved	ug/L	<6.3	1000	1000	1020	1000	102	100	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 616029 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10480558001, 10480558002, 10480558003, 10480558004

METHOD BLANK: 3327750 Matrix: Water
Associated Lab Samples: 10480558001, 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	06/27/19 12:29	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	06/27/19 12:29	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	06/27/19 12:29	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	06/27/19 12:29	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	06/27/19 12:29	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	06/27/19 12:29	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	06/27/19 12:29	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	06/27/19 12:29	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	06/27/19 12:29	MN
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	06/27/19 12:29	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	06/27/19 12:29	MN
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	06/27/19 12:29	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	10.0	1.7	06/27/19 12:29	MN
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	06/27/19 12:29	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	06/27/19 12:29	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	06/27/19 12:29	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	06/27/19 12:29	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	06/27/19 12:29	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	06/27/19 12:29	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	06/27/19 12:29	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	06/27/19 12:29	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	06/27/19 12:29	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	06/27/19 12:29	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	06/27/19 12:29	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	06/27/19 12:29	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	06/27/19 12:29	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	06/27/19 12:29	
2-Hexanone	ug/L	<0.88	5.0	0.88	06/27/19 12:29	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	06/27/19 12:29	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	06/27/19 12:29	
Acetone	ug/L	<9.2	20.0	9.2	06/27/19 12:29	
Acrolein	ug/L	<1.2	10.0	1.2	06/27/19 12:29	
Acrylonitrile	ug/L	<0.91	10.0	0.91	06/27/19 12:29	
Benzene	ug/L	<0.10	0.50	0.10	06/27/19 12:29	
Bromobenzene	ug/L	<0.21	0.50	0.21	06/27/19 12:29	
Bromochloromethane	ug/L	<0.27	1.0	0.27	06/27/19 12:29	
Bromodichloromethane	ug/L	<0.22	1.0	0.22	06/27/19 12:29	MN
Bromoform	ug/L	<0.80	4.0	0.80	06/27/19 12:29	
Bromomethane	ug/L	<1.8	4.0	1.8	06/27/19 12:29	
Carbon disulfide	ug/L	<0.078	1.0	0.078	06/27/19 12:29	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	06/27/19 12:29	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

METHOD BLANK: 3327750 Matrix: Water
Associated Lab Samples: 10480558001, 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	06/27/19 12:29	
Chloroethane	ug/L	<0.49	1.0	0.49	06/27/19 12:29	
Chloroform	ug/L	<0.45	1.0	0.45	06/27/19 12:29	
Chloromethane	ug/L	<0.16	4.0	0.16	06/27/19 12:29	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	06/27/19 12:29	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	06/27/19 12:29	
Dibromochloromethane	ug/L	<0.12	1.0	0.12	06/27/19 12:29	MN
Dibromomethane	ug/L	<0.16	1.0	0.16	06/27/19 12:29	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	06/27/19 12:29	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	06/27/19 12:29	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	06/27/19 12:29	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	06/27/19 12:29	
Ethylbenzene	ug/L	<0.14	0.50	0.14	06/27/19 12:29	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	06/27/19 12:29	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	06/27/19 12:29	
m&p-Xylene	ug/L	<0.31	1.0	0.31	06/27/19 12:29	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	06/27/19 12:29	
Methylene Chloride	ug/L	<0.98	4.0	0.98	06/27/19 12:29	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	06/27/19 12:29	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	06/27/19 12:29	
Naphthalene	ug/L	<0.48	1.0	0.48	06/27/19 12:29	
o-Xylene	ug/L	<0.16	0.50	0.16	06/27/19 12:29	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	06/27/19 12:29	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	06/27/19 12:29	
Styrene	ug/L	<0.19	0.50	0.19	06/27/19 12:29	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	06/27/19 12:29	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	06/27/19 12:29	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	06/27/19 12:29	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	06/27/19 12:29	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	06/27/19 12:29	
Toluene	ug/L	<0.083	0.50	0.083	06/27/19 12:29	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	06/27/19 12:29	
trans-1,3-Dichloropropene	ug/L	<0.18	1.0	0.18	06/27/19 12:29	MN
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	06/27/19 12:29	
Trichloroethene	ug/L	<0.15	0.40	0.15	06/27/19 12:29	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	06/27/19 12:29	
Vinyl acetate	ug/L	<1.1	10.0	1.1	06/27/19 12:29	
Vinyl chloride	ug/L	<0.092	0.20	0.092	06/27/19 12:29	
Xylene (Total)	ug/L	<0.31	1.5	0.31	06/27/19 12:29	
1,2-Dichloroethane-d4 (S)	%.	101	75-136		06/27/19 12:29	
4-Bromofluorobenzene (S)	%.	102	75-125		06/27/19 12:29	
Toluene-d8 (S)	%.	97	75-125		06/27/19 12:29	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

LABORATORY CONTROL SAMPLE: 3327751

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.9	99	68-141	
1,1,1-Trichloroethane	ug/L	20	20.7	103	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.7	108	73-125	
1,1,2-Trichloroethane	ug/L	20	19.9	100	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	18.7	94	69-132	
1,1-Dichloroethane	ug/L	20	21.5	108	73-125	
1,1-Dichloroethene	ug/L	20	20.0	100	71-126	
1,1-Dichloropropene	ug/L	20	19.4	97	73-126	
1,2,3-Trichlorobenzene	ug/L	20	18.5	92	72-126	
1,2,3-Trichloropropane	ug/L	20	20.8	104	75-126	
1,2,4-Trichlorobenzene	ug/L	20	18.1	90	71-134	
1,2,4-Trimethylbenzene	ug/L	20	20.5	103	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	51.4	103	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	20.8	104	75-129	
1,2-Dichlorobenzene	ug/L	20	21.0	105	75-129	
1,2-Dichloroethane	ug/L	20	19.2	96	75-125	
1,2-Dichloroethene (Total)	ug/L	40	39.0	97	74-125	N2
1,2-Dichloropropane	ug/L	20	20.2	101	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.9	104	75-127	
1,3-Dichlorobenzene	ug/L	20	20.9	104	75-126	
1,3-Dichloropropane	ug/L	20	21.6	108	75-125	
1,4-Dichlorobenzene	ug/L	20	19.7	98	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	419	105	72-129	
2,2,4-Trimethylpentane	ug/L	20	19.8	99	72-128	N2
2,2-Dichloropropane	ug/L	20	21.3	106	65-138	
2-Butanone (MEK)	ug/L	100	81.1	81	59-144	
2-Chlorotoluene	ug/L	20	21.1	105	75-127	
2-Hexanone	ug/L	100	99.2	99	73-134	
4-Chlorotoluene	ug/L	20	20.9	104	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	62-141	
Acetone	ug/L	100	96.7	97	60-137	
Acrolein	ug/L	200	200	100	60-141	
Acrylonitrile	ug/L	200	213	106	75-129	
Benzene	ug/L	20	21.1	105	73-125	
Bromobenzene	ug/L	20	22.1	111	73-125	
Bromochloromethane	ug/L	20	21.3	107	75-135	
Bromodichloromethane	ug/L	20	19.5	97	75-125	
Bromoform	ug/L	20	21.0	105	67-136	
Bromomethane	ug/L	20	21.0	105	30-150	
Carbon disulfide	ug/L	20	19.2	96	47-137	
Carbon tetrachloride	ug/L	20	19.5	98	75-125	
Chlorobenzene	ug/L	20	20.8	104	75-125	
Chloroethane	ug/L	20	23.4	117	63-136	
Chloroform	ug/L	20	19.6	98	73-128	
Chloromethane	ug/L	20	24.3	122	55-130	
cis-1,2-Dichloroethene	ug/L	20	19.7	98	75-125	
cis-1,3-Dichloropropene	ug/L	20	20.3	101	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

LABORATORY CONTROL SAMPLE: 3327751

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.9	105	75-125	
Dibromomethane	ug/L	20	20.2	101	75-125	
Dichlorodifluoromethane	ug/L	20	21.3	107	63-132	
Dichlorofluoromethane	ug/L	20	23.5	117	68-127	N2
Diisopropyl ether	ug/L	20	20.7	104	71-131	
Ethyl-tert-butyl ether	ug/L	20	22.1	110	75-125	
Ethylbenzene	ug/L	20	20.5	102	75-125	
Hexachloro-1,3-butadiene	ug/L	20	19.0	95	72-134	
Isopropylbenzene (Cumene)	ug/L	20	22.5	112	75-125	
m&p-Xylene	ug/L	40	41.4	103	75-126	
Methyl-tert-butyl ether	ug/L	20	21.7	108	75-125	
Methylene Chloride	ug/L	20	20.2	101	70-125	
n-Butylbenzene	ug/L	20	19.3	97	75-126	
n-Propylbenzene	ug/L	20	20.1	100	73-127	
Naphthalene	ug/L	20	17.9	89	63-128	
o-Xylene	ug/L	20	19.8	99	75-128	
p-Isopropyltoluene	ug/L	20	19.6	98	75-125	
sec-Butylbenzene	ug/L	20	20.6	103	75-126	
Styrene	ug/L	20	20.1	101	75-125	
tert-Amylmethyl ether	ug/L	20	21.6	108	75-125	
tert-Butyl Alcohol	ug/L	200	220	110	75-130	
tert-Butylbenzene	ug/L	20	20.9	104	75-131	
Tetrachloroethene	ug/L	20	20.4	102	74-125	
Tetrahydrofuran	ug/L	200	226	113	64-138	
Toluene	ug/L	20	20.9	104	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.3	97	68-128	
trans-1,3-Dichloropropene	ug/L	20	20.2	101	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	54.0	108	60-127	
Trichloroethene	ug/L	20	21.0	105	75-127	
Trichlorofluoromethane	ug/L	20	21.8	109	72-133	
Vinyl acetate	ug/L	20	20.6	103	61-129	
Vinyl chloride	ug/L	20	23.0	115	75-128	
Xylene (Total)	ug/L	60	61.2	102	75-125	
1,2-Dichloroethane-d4 (S)	%.			104	75-136	
4-Bromofluorobenzene (S)	%.			100	75-125	
Toluene-d8 (S)	%.			102	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3329533 3329534

Parameter	Units	10480797002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	17.5	19.0	88	95	75-140	8	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	21.7	22.2	108	111	74-136	3	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	20.6	21.0	103	105	66-134	2	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	17.7	17.9	89	89	75-126	1	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3329533 3329534

Parameter	Units	10480797002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	20.8	22.7	104	114	65-146	9	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	20.6	21.9	103	110	68-132	6	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	22.2	23.2	111	116	66-139	4	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	20.4	20.3	102	101	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	19.3	16.4	97	82	67-129	17	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	18.9	18.7	94	94	69-128	1	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	18.0	15.1	90	76	65-140	17	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	18.7	19.0	93	95	71-133	2	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	47.8	45.3	96	91	54-138	5	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	18.2	19.2	91	96	68-125	5	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	18.6	17.6	93	88	74-136	6	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	17.5	18.5	88	92	68-125	5	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	38.7	39.7	97	99	71-126	3	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	19.0	19.8	95	99	67-125	4	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	19.1	19.5	95	97	68-137	2	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	18.6	17.2	93	86	75-131	8	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	19.3	19.7	97	99	71-125	2	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	17.7	16.2	89	81	74-126	9	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	392	361	98	90	68-125	8	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	22.8	20.5	114	103	54-129	11	30	N2
2,2-Dichloropropane	ug/L	<0.17	20	20	21.4	23.1	107	115	69-139	8	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	69.0	71.2	69	71	54-144	3	30	
2-Chlorotoluene	ug/L	<0.16	20	20	18.5	18.1	93	90	75-134	3	30	
2-Hexanone	ug/L	<0.88	100	100	89.3	95.2	89	95	58-137	6	30	
4-Chlorotoluene	ug/L	<0.13	20	20	18.7	17.8	94	89	72-133	5	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	97.5	103	97	103	60-129	5	30	
Acetone	ug/L	<9.2	100	100	71.7	82.4	68	79	62-132	14	30	
Acrolein	ug/L	<1.2	200	200	503	536	251	268	30-150	6	30	M1
Acrylonitrile	ug/L	<0.91	200	200	195	207	97	104	68-125	6	30	
Benzene	ug/L	<0.10	20	20	20.0	20.3	100	102	68-125	2	30	
Bromobenzene	ug/L	<0.21	20	20	19.6	18.5	98	93	73-126	6	30	
Bromochloromethane	ug/L	<0.27	20	20	19.4	20.3	97	101	66-143	4	30	
Bromodichloromethane	ug/L	<0.22	20	20	17.8	19.4	89	97	74-125	8	30	
Bromoform	ug/L	<0.80	20	20	18.5	19.4	92	97	64-134	5	30	
Bromomethane	ug/L	<1.8	20	20	22.1	22.2	110	111	30-150	0	30	
Carbon disulfide	ug/L	0.46J	20	20	20.2	21.2	99	104	43-147	5	30	
Carbon tetrachloride	ug/L	<0.19	20	20	21.4	22.3	107	112	71-143	4	30	
Chlorobenzene	ug/L	<0.17	20	20	19.0	19.3	95	97	75-125	2	30	
Chloroethane	ug/L	<0.49	20	20	21.1	22.9	106	115	75-129	8	30	
Chloroform	ug/L	<0.45	20	20	18.0	19.1	90	95	66-132	6	30	
Chloromethane	ug/L	<0.16	20	20	22.3	24.8	112	124	53-137	11	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	18.8	19.0	94	95	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	18.9	20.1	95	101	66-125	6	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3329533 3329534

Parameter	Units	10480797002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	18.1	19.3	90	96	62-132	6	30	
Dibromomethane	ug/L	<0.16	20	20	19.2	20.6	96	103	67-125	7	30	
Dichlorodifluoromethane	ug/L	<0.23	20	20	21.6	23.9	108	120	71-142	10	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	21.3	22.7	106	114	70-131	6	30	N2
Diisopropyl ether	ug/L	<0.13	20	20	16.7	18.1	84	91	63-131	8	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	17.7	18.4	88	92	66-128	4	30	
Ethylbenzene	ug/L	<0.14	20	20	18.6	19.8	93	99	74-126	6	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	21.7	18.2	109	91	68-143	17	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	20.8	22.2	104	111	74-130	6	30	
m&p-Xylene	ug/L	<0.31	40	40	38.0	39.3	95	98	69-132	3	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	19.1	20.0	95	100	65-131	5	30	
Methylene Chloride	ug/L	<0.98	20	20	18.7	19.9	94	99	57-125	6	30	
n-Butylbenzene	ug/L	<0.24	20	20	20.1	18.7	100	94	71-131	7	30	
n-Propylbenzene	ug/L	<0.10	20	20	19.5	19.3	98	97	67-138	1	30	
Naphthalene	ug/L	<0.48	20	20	18.1	15.4	90	77	60-130	16	30	
o-Xylene	ug/L	<0.16	20	20	18.2	18.5	91	92	69-131	2	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	19.1	19.3	95	96	72-133	1	30	
sec-Butylbenzene	ug/L	<0.15	20	20	20.4	20.2	102	101	73-134	1	30	
Styrene	ug/L	<0.19	20	20	17.8	17.7	89	88	72-125	0	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	17.8	18.8	89	94	67-125	5	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	186	192	93	96	64-137	3	30	
tert-Butylbenzene	ug/L	<0.15	20	20	19.9	20.3	99	102	70-143	2	30	
Tetrachloroethene	ug/L	<0.17	20	20	19.0	20.4	95	102	72-129	7	30	
Tetrahydrofuran	ug/L	<2.2	200	200	184	208	92	104	66-128	12	30	
Toluene	ug/L	<0.083	20	20	19.7	20.4	99	102	73-125	3	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	19.9	20.8	99	104	62-137	4	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	18.2	18.4	91	92	61-136	1	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	49.2	48.7	98	97	45-128	1	30	
Trichloroethene	ug/L	<0.15	20	20	21.0	20.9	105	105	74-132	0	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	21.4	23.3	107	117	75-139	9	30	
Vinyl acetate	ug/L	<1.1	20	20	18.3	19.5	92	98	51-135	6	30	
Vinyl chloride	ug/L	<0.092	20	20	22.0	24.2	110	121	68-146	9	30	
Xylene (Total)	ug/L	<0.31	60	60	56.2	57.8	94	96	67-137	3	30	
1,2-Dichloroethane-d4 (S)	%.						104	103	75-136			
4-Bromofluorobenzene (S)	%.						101	101	75-125			
Toluene-d8 (S)	%.						102	102	75-125			

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 616630 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 3331111 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/01/19 06:56	

LABORATORY CONTROL SAMPLE & LCSD: 3331112 3331113

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.9	42.7	107	107	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331114 3331115

Parameter	Units	10480065043 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	53.9	40	40	97.5	97.1	109	108	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331116 3331117

Parameter	Units	10480065044 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	71.2	40	40	111	114	100	106	80-120	2	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 616491 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 3330158 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	07/01/19 08:39	

LABORATORY CONTROL SAMPLE: 3330159

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	996	100	80-120	

SAMPLE DUPLICATE: 3330160

Parameter	Units	10480558003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	309	313	1	5	

SAMPLE DUPLICATE: 3330161

Parameter	Units	10480916003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	137	138	1	5	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 147701 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 652387 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	06/28/19 16:09	

LABORATORY CONTROL SAMPLE: 652388

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.21	106	90-110	

MATRIX SPIKE SAMPLE: 652390

Parameter	Units	10480825003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.022	11	75-125	M1

SAMPLE DUPLICATE: 652389

Parameter	Units	10480825003 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 615585 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 3325673 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	06/26/19 11:24	
Nitrate as N	mg/L	<0.012	0.10	0.012	06/26/19 11:24	
Sulfate	mg/L	0.49J	1.2	0.28	06/26/19 11:24	

LABORATORY CONTROL SAMPLE: 3325674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	13.0	104	90-110	
Nitrate as N	mg/L	1	1.0	100	90-110	
Sulfate	mg/L	12.5	13.6	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3325675 3325676

Parameter	Units	10480558002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	15.1	12.5	12.5	25.8	25.7	86	86	90-110	0	20	M1
Nitrate as N	mg/L	5.0	1	1	5.4	5.3	31	29	90-110	0	20	M1
Sulfate	mg/L	33.4	12.5	12.5	41.5	41.5	65	65	90-110	0	20	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 615695 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 3326136 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	06/27/19 09:36	FS

LABORATORY CONTROL SAMPLE: 3326137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	101	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3326138 3326139

Parameter	Units	10479671003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	0.85	0.87	85	87	90-110	3	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3326140 3326141

Parameter	Units	10479671004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	1.0	1.0	105	100	90-110	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 616677 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 3331314 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/01/19 14:50	

LABORATORY CONTROL SAMPLE: 3331315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	308	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331316 3331317

Parameter	Units	10479596001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	245	245	97	97	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331318 3331319

Parameter	Units	10479596002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	246	241	98	96	90-110	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

QC Batch: 169307 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10480558002, 10480558003, 10480558004

METHOD BLANK: 668797 Matrix: Water
Associated Lab Samples: 10480558002, 10480558003, 10480558004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	06/28/19 12:47	

LABORATORY CONTROL SAMPLE: 668798

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	26.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 668799 668800

Parameter	Units	10480450002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	177	125	125	302	307	100	104	80-120	2	20	E

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
FS	The sample was filtered in the laboratory prior to analysis.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480558

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10480558002	**MW9U-GW-062419**	RSK 175	615593		
10480558003	**FD1-GW-062419**	RSK 175	615593		
10480558004	**MW9D-GW-062419**	RSK 175	615593		
10480558002	**MW9U-GW-062419**	EPA 3010	615876	EPA 6010D	616271
10480558003	**FD1-GW-062419**	EPA 3010	615876	EPA 6010D	616271
10480558004	**MW9D-GW-062419**	EPA 3010	615876	EPA 6010D	616271
10480558002	**MW9U-GW-062419**	EPA 7470A	615914	EPA 7470A	616313
10480558003	**FD1-GW-062419**	EPA 7470A	615914	EPA 7470A	616313
10480558004	**MW9D-GW-062419**	EPA 7470A	615914	EPA 7470A	616313
10480558001	**Trip Blank 1**	EPA 8260B	616029		
10480558002	**MW9U-GW-062419**	EPA 8260B	616029		
10480558003	**FD1-GW-062419**	EPA 8260B	616029		
10480558004	**MW9D-GW-062419**	EPA 8260B	616029		
10480558002	**MW9U-GW-062419**	SM 2320B	616630		
10480558003	**FD1-GW-062419**	SM 2320B	616630		
10480558004	**MW9D-GW-062419**	SM 2320B	616630		
10480558002	**MW9U-GW-062419**	SM 2540C	616491		
10480558003	**FD1-GW-062419**	SM 2540C	616491		
10480558004	**MW9D-GW-062419**	SM 2540C	616491		
10480558002	**MW9U-GW-062419**	SM 4500-S-2 D	147701		
10480558003	**FD1-GW-062419**	SM 4500-S-2 D	147701		
10480558004	**MW9D-GW-062419**	SM 4500-S-2 D	147701		
10480558002	**MW9U-GW-062419**	EPA 300.0	615585		
10480558003	**FD1-GW-062419**	EPA 300.0	615585		
10480558004	**MW9D-GW-062419**	EPA 300.0	615585		
10480558002	**MW9U-GW-062419**	EPA 353.2	615695		
10480558003	**FD1-GW-062419**	EPA 353.2	615695		
10480558004	**MW9D-GW-062419**	EPA 353.2	615695		
10480558002	**MW9U-GW-062419**	EPA 410.4	616677	EPA 410.4	616802
10480558003	**FD1-GW-062419**	EPA 410.4	616677	EPA 410.4	616802
10480558004	**MW9D-GW-062419**	EPA 410.4	616677	EPA 410.4	616802
10480558002	**MW9U-GW-062419**	SM 5310C	169307		
10480558003	**FD1-GW-062419**	SM 5310C	169307		
10480558004	**MW9D-GW-062419**	SM 5310C	169307		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical R

The Chain-of-Custody is a LEGAL DOCUMENT. All rele

WO# : 10480558

10480558

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: CH2M Hill	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR
Email:	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Phone: Fax:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 758938
Requested Due Date: *10 Day Standard*	Project Name: Freeman WA-Grain Handling Facility	Pace Project Manager: Jennifer Gross
	Project #: 1497	Pace Profile #: *36447 / 4*

Regulatory Agency

State / Location: WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test: Y/N	Requested Analysis Filtered (Y/N): Y	Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	
1	TRIP BLANK 1			06/24/19	0800		3					#1																001
2	MW9U-GW-062419			06/24/19	1225		13																					002
3	FD1-GW-062419			06/24/19	1230		13																					003
4	MW9D-GW-062419			06/24/19	1535		13																					004
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Short hold analyses are in bold	Natalie Dowdy/JACOBS	06/24/19	1700	[signature] Pace	6/25/19	0830	0.4	Y	Y	Y
*Field filtered by client										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Natalie Dowdy

SIGNATURE of SAMPLER: Natalie Dowdy

DATE Signed: 06/24/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 09May2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.28**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Upper Chesapeake Hill

Project #: **WO#: 10480558**

PM: JMG **Due Date: 07/02/19**

CLIENT: UPRR_Jacobs

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exception** ☐

Tracking Number: 4934 3730 1799

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☐ T1(0461) ☑ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.5 °C

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 0.4 °C

Average Corrected Temp (no temp blank only): _____ °C **See Exceptions** ☐

USDA Regulated Soil: (☑ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: FC 6/25/19

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☑ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☑ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☑ Yes ☑ Yes	☐ No ☐ No		8.
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☑ Yes	☐ No	☐ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other	☑ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☐ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	☐ NaOH ☑ HNO_3 24:1 ☑ H_2SO_4 1:1 ☐ Zinc Acetate 1:1
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☑ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine: 0-6 Roll 220416A; 0-6 Strip: ; 0-14 Strip: 16D3581
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☑ No	☐ N/A	13. **See Exception** ☐
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 213047

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 06/25/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: _____

WO# : 12131061

12131061

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☒ Yes ☐ ...

Workorder: 10480558 **Workorder Name:** 1497 Freeman WA-Grain Handling **Owner Received Date:** 6/25/2019 **Results Requested By:** 7/2/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4	DG9S					Requested Analysis: TOC												LAB USE ONLY
1	MW9U-GW-062419	PS	6/24/2019 12:25	10480558002	Water	2						X												
2	FD1-GW-062419	PS	6/24/2019 12:30	10480558003	Water	2						X												
3	MW9D-GW-062419	PS	6/24/2019 15:35	10480558004	Water	2						X												
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	6/25/19 1655	[signature] 6/25/19	1914
2	[signature] 6/25/19	2355	B. Mathews	6/26/19 0630
3				

Comments

Cooler Temperature on Receipt 0.7 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #:

WO#: 12131061

PM: CLJ **Due Date: 07/02/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.4 Cooler Temp Corrected °C: 0.7 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 6/25/19 DL

Comments: BM 6/26/19

Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☒ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation properly preserved?	☒ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Nikki Jarvis Date: 6/26/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☒ Yes ☐ No
Owner Received Date: 6/25/2019 Results Requested By: 7/2/2019

Pace Analytical®
www.pacelabs.com

Workorder: 10480558 **Workorder Name:** 1497 Freeman WA-Grain Handling

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

WO#:20110060

20110060

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	BP3Z	Sulfide	Requested Analysis	LAB USE ONLY
1	MW9U-GW-062419	PS	6/24/2019 12:25	10480558002	Water	1		X		
2	FD1-GW-062419	PS	6/24/2019 12:30	10480558003	Water	1		X		
3	MW9D-GW-062419	PS	6/24/2019 15:35	10480558004	Water	1		X		
4										
5										

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Pace	6/25/19 1740		
2	[illegible] FedEx	6-25-19 0835	[illegible] Pace	6-25-19
3				

Comments: 0835

Cooler Temperature on Receipt 0.8 °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Recei

Project

WO#: 20110060

PM: CMM Due Date: 07/11/19

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6/26/19 CMM

Temp must be measured from Temperature blank when present

		Comments:
Temperature Blank Present*?	☑Yes ☐No ☐N/A	1
Chain of Custody Present:	☑Yes ☐No ☐N/A	2
Chain of Custody Complete:	☑Yes ☐No ☐N/A	3
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	4
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	5
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	6
Sufficient Volume:	☑Yes ☐No ☐N/A	7
Correct Containers Used:	☑Yes ☐No ☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes ☐No ☑N/A	9
Sample Labels match COC:	☐Yes ☐No ☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes ☐No ☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☐Yes ☐No ☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14
Trip Blank Present:	☐Yes ☑No	15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 15, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on June 25, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

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(612)607-1700

SAMPLE SUMMARY

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10480680001	**SB207-5'**	Solid	06/21/19 09:10	06/25/19 09:50
10480680002	**SB207-10'**	Solid	06/21/19 09:20	06/25/19 09:50
10480680003	**SB207-15'**	Solid	06/21/19 09:25	06/25/19 09:50
10480680004	**SB207-20'**	Solid	06/21/19 09:30	06/25/19 09:50
10480680005	**SB207-25'**	Solid	06/21/19 09:35	06/25/19 09:50
10480680006	**SB207-30'**	Solid	06/21/19 09:55	06/25/19 09:50
10480680007	**SB207-35'**	Solid	06/21/19 10:00	06/25/19 09:50
10480680008	**SB207-40'**	Solid	06/21/19 10:20	06/25/19 09:50
10480680009	**SB207-45'**	Solid	06/21/19 10:30	06/25/19 09:50
10480680010	**SB207-50'**	Solid	06/21/19 10:45	06/25/19 09:50
10480680011	**SB207-55'**	Solid	06/21/19 10:55	06/25/19 09:50
10480680012	**SB207-60'**	Solid	06/21/19 11:35	06/25/19 09:50
10480680013	**SB207-65'**	Solid	06/21/19 11:45	06/25/19 09:50
10480680014	**SB207-70'**	Solid	06/21/19 12:00	06/25/19 09:50
10480680015	**SB207-75'**	Solid	06/21/19 12:10	06/25/19 09:50
10480680016	**SB207-62'**	Solid	06/21/19 12:11	06/25/19 09:50
10480680017	**SB207-67'**	Solid	06/21/19 12:12	06/25/19 09:50
10480680018	**SB207-71'**	Solid	06/21/19 12:13	06/25/19 09:50
10480680019	**SB207-76'**	Solid	06/21/19 12:51	06/25/19 09:50
10480680020	**FD4**	Solid	06/21/19 08:00	06/25/19 09:50
10480680021	**TB1**	Solid	06/21/19 07:00	06/25/19 09:50
10480680022	**TB2**	Solid	06/21/19 07:05	06/25/19 09:50

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SAMPLE ANALYTE COUNT

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10480680001	**SB207-5'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680002	**SB207-10'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680003	**SB207-15'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680004	**SB207-20'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680005	**SB207-25'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680006	**SB207-30'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680007	**SB207-35'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680008	**SB207-40'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680009	**SB207-45'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680010	**SB207-50'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680011	**SB207-55'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680012	**SB207-60'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680013	**SB207-65'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680014	**SB207-70'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680015	**SB207-75'**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680020	**FD4**	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	51	PASI-M
10480680021	**TB1**	EPA 8260B	CD2	51	PASI-M
10480680022	**TB2**	EPA 8260B	CD2	51	PASI-M

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SUMMARY OF DETECTION

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10480680001	**SB207-5'**					
ASTM D2974	Percent Moisture	16.5	%	0.10	07/09/19 11:09	
10480680002	**SB207-10'**					
ASTM D2974	Percent Moisture	15.4	%	0.10	07/09/19 11:09	
10480680003	**SB207-15'**					
ASTM D2974	Percent Moisture	16.9	%	0.10	07/09/19 11:09	
10480680004	**SB207-20'**					
ASTM D2974	Percent Moisture	16.6	%	0.10	07/09/19 11:09	
10480680005	**SB207-25'**					
ASTM D2974	Percent Moisture	19.0	%	0.10	07/09/19 11:09	
10480680006	**SB207-30'**					
ASTM D2974	Percent Moisture	19.2	%	0.10	07/09/19 11:10	
10480680007	**SB207-35'**					
ASTM D2974	Percent Moisture	20.9	%	0.10	07/09/19 11:10	
10480680008	**SB207-40'**					
ASTM D2974	Percent Moisture	22.8	%	0.10	07/09/19 11:10	
10480680009	**SB207-45'**					
ASTM D2974	Percent Moisture	30.7	%	0.10	07/09/19 11:10	
10480680010	**SB207-50'**					
ASTM D2974	Percent Moisture	31.2	%	0.10	07/09/19 11:10	
EPA 8260B	Benzene	0.0041J	mg/kg	0.028	07/04/19 10:58	B
10480680011	**SB207-55'**					
ASTM D2974	Percent Moisture	35.9	%	0.10	07/09/19 11:10	
10480680012	**SB207-60'**					
ASTM D2974	Percent Moisture	35.9	%	0.10	07/09/19 11:11	
10480680013	**SB207-65'**					
ASTM D2974	Percent Moisture	33.1	%	0.10	07/09/19 11:11	
10480680014	**SB207-70'**					
ASTM D2974	Percent Moisture	34.8	%	0.10	07/09/19 11:11	
10480680015	**SB207-75'**					
ASTM D2974	Percent Moisture	30.4	%	0.10	07/09/19 11:11	
10480680020	**FD4**					
ASTM D2974	Percent Moisture	34.7	%	0.10	07/09/19 11:11	

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PROJECT NARRATIVE

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Method: **EPA 8260B**
Description: 8260B MSV 5030 Med Level
Client: UPRR_Jacobs
Date: July 15, 2019

General Information:
18 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 5035/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 617325

B: Analyte was detected in the associated method blank.

- BLANK for HBN 617325 [MSV/4963 (Lab ID: 3334732)
  - Benzene

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-5' **Lab ID: 10480680001** Collected: 06/21/19 09:10 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**16.5**	%	0.10	0.10	1		07/09/19 11:09		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.029**	mg/kg	0.062	0.029	1	07/03/19 16:04	07/04/19 18:18	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.062	0.011	1	07/03/19 16:04	07/04/19 18:18	79-34-5	
1,1,2-Trichloroethane	**<0.0075**	mg/kg	0.062	0.0075	1	07/03/19 16:04	07/04/19 18:18	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.072**	mg/kg	0.25	0.072	1	07/03/19 16:04	07/04/19 18:18	76-13-1	
1,1-Dichloroethane	**<0.0070**	mg/kg	0.062	0.0070	1	07/03/19 16:04	07/04/19 18:18	75-34-3	
1,1-Dichloroethene	**<0.019**	mg/kg	0.062	0.019	1	07/03/19 16:04	07/04/19 18:18	75-35-4	
1,2,4-Trichlorobenzene	**<0.014**	mg/kg	0.062	0.014	1	07/03/19 16:04	07/04/19 18:18	120-82-1	
1,2,4-Trimethylbenzene	**<0.012**	mg/kg	0.062	0.012	1	07/03/19 16:04	07/04/19 18:18	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0066**	mg/kg	0.062	0.0066	1	07/03/19 16:04	07/04/19 18:18	106-93-4	
1,2-Dichlorobenzene	**<0.0025**	mg/kg	0.062	0.0025	1	07/03/19 16:04	07/04/19 18:18	95-50-1	
1,2-Dichloroethane	**<0.0069**	mg/kg	0.062	0.0069	1	07/03/19 16:04	07/04/19 18:18	107-06-2	
1,3,5-Trimethylbenzene	**<0.010**	mg/kg	0.062	0.010	1	07/03/19 16:04	07/04/19 18:18	108-67-8	
1,3-Dichlorobenzene	**<0.0023**	mg/kg	0.062	0.0023	1	07/03/19 16:04	07/04/19 18:18	541-73-1	
1,4-Dichlorobenzene	**<0.0039**	mg/kg	0.062	0.0039	1	07/03/19 16:04	07/04/19 18:18	106-46-7	
2-Butanone (MEK)	**<0.033**	mg/kg	0.31	0.033	1	07/03/19 16:04	07/04/19 18:18	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.31	0.014	1	07/03/19 16:04	07/04/19 18:18	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.013**	mg/kg	0.31	0.013	1	07/03/19 16:04	07/04/19 18:18	108-10-1	
Acetone	**<0.39**	mg/kg	1.2	0.39	1	07/03/19 16:04	07/04/19 18:18	67-64-1	
Benzene	**<0.0035**	mg/kg	0.025	0.0035	1	07/03/19 16:04	07/04/19 18:18	71-43-2	
Bromodichloromethane	**<0.021**	mg/kg	0.062	0.021	1	07/03/19 16:04	07/04/19 18:18	75-27-4	
Bromoform	**<0.095**	mg/kg	0.25	0.095	1	07/03/19 16:04	07/04/19 18:18	75-25-2	
Bromomethane	**<0.073**	mg/kg	0.62	0.073	1	07/03/19 16:04	07/04/19 18:18	74-83-9	
Carbon tetrachloride	**<0.030**	mg/kg	0.062	0.030	1	07/03/19 16:04	07/04/19 18:18	56-23-5	
Chlorobenzene	**<0.0035**	mg/kg	0.062	0.0035	1	07/03/19 16:04	07/04/19 18:18	108-90-7	
Chloroethane	**<0.032**	mg/kg	0.62	0.032	1	07/03/19 16:04	07/04/19 18:18	75-00-3	
Chloroform	**<0.031**	mg/kg	0.062	0.031	1	07/03/19 16:04	07/04/19 18:18	67-66-3	
Chloromethane	**<0.015**	mg/kg	0.25	0.015	1	07/03/19 16:04	07/04/19 18:18	74-87-3	
Dibromochloromethane	**<0.0072**	mg/kg	0.25	0.0072	1	07/03/19 16:04	07/04/19 18:18	124-48-1	
Dichlorodifluoromethane	**<0.020**	mg/kg	0.25	0.020	1	07/03/19 16:04	07/04/19 18:18	75-71-8	
Ethylbenzene	**<0.0034**	mg/kg	0.062	0.0034	1	07/03/19 16:04	07/04/19 18:18	100-41-4	
Hexachloro-1,3-butadiene	**<0.015**	mg/kg	0.31	0.015	1	07/03/19 16:04	07/04/19 18:18	87-68-3	
Methyl-tert-butyl ether	**<0.0074**	mg/kg	0.062	0.0074	1	07/03/19 16:04	07/04/19 18:18	1634-04-4	
Methylene Chloride	**<0.12**	mg/kg	0.25	0.12	1	07/03/19 16:04	07/04/19 18:18	75-09-2	
Naphthalene	**<0.058**	mg/kg	0.25	0.058	1	07/03/19 16:04	07/04/19 18:18	91-20-3	
Styrene	**<0.0028**	mg/kg	0.062	0.0028	1	07/03/19 16:04	07/04/19 18:18	100-42-5	
Tetrachloroethene	**<0.022**	mg/kg	0.062	0.022	1	07/03/19 16:04	07/04/19 18:18	127-18-4	
Tetrahydrofuran	**<0.091**	mg/kg	2.5	0.091	1	07/03/19 16:04	07/04/19 18:18	109-99-9	
Toluene	**<0.015**	mg/kg	0.062	0.015	1	07/03/19 16:04	07/04/19 18:18	108-88-3	
Trichloroethene	**<0.0096**	mg/kg	0.062	0.0096	1	07/03/19 16:04	07/04/19 18:18	79-01-6	
Trichlorofluoromethane	**<0.11**	mg/kg	0.25	0.11	1	07/03/19 16:04	07/04/19 18:18	75-69-4	
Vinyl acetate	**<0.0072**	mg/kg	0.62	0.0072	1	07/03/19 16:04	07/04/19 18:18	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.025	0.012	1	07/03/19 16:04	07/04/19 18:18	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-5' **Lab ID: 10480680001** Collected: 06/21/19 09:10 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.010**	mg/kg	0.062	0.010	1	07/03/19 16:04	07/04/19 18:18	156-59-2	
cis-1,3-Dichloropropene	**<0.0089**	mg/kg	0.062	0.0089	1	07/03/19 16:04	07/04/19 18:18	10061-01-5	
m&p-Xylene	**<0.0077**	mg/kg	0.12	0.0077	1	07/03/19 16:04	07/04/19 18:18	179601-23-1	
o-Xylene	**<0.014**	mg/kg	0.062	0.014	1	07/03/19 16:04	07/04/19 18:18	95-47-6	
trans-1,2-Dichloroethene	**<0.029**	mg/kg	0.062	0.029	1	07/03/19 16:04	07/04/19 18:18	156-60-5	
trans-1,3-Dichloropropene	**<0.0087**	mg/kg	0.062	0.0087	1	07/03/19 16:04	07/04/19 18:18	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-125		1	07/03/19 16:04	07/04/19 18:18	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1	07/03/19 16:04	07/04/19 18:18	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1	07/03/19 16:04	07/04/19 18:18	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-10' **Lab ID: 10480680002** Collected: 06/21/19 09:20 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**15.4**	%	0.10	0.10	1		07/09/19 11:09		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.028**	mg/kg	0.059	0.028	1	07/03/19 16:04	07/04/19 18:36	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.010**	mg/kg	0.059	0.010	1	07/03/19 16:04	07/04/19 18:36	79-34-5	
1,1,2-Trichloroethane	**<0.0071**	mg/kg	0.059	0.0071	1	07/03/19 16:04	07/04/19 18:36	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.069**	mg/kg	0.24	0.069	1	07/03/19 16:04	07/04/19 18:36	76-13-1	
1,1-Dichloroethane	**<0.0067**	mg/kg	0.059	0.0067	1	07/03/19 16:04	07/04/19 18:36	75-34-3	
1,1-Dichloroethene	**<0.018**	mg/kg	0.059	0.018	1	07/03/19 16:04	07/04/19 18:36	75-35-4	
1,2,4-Trichlorobenzene	**<0.013**	mg/kg	0.059	0.013	1	07/03/19 16:04	07/04/19 18:36	120-82-1	
1,2,4-Trimethylbenzene	**<0.012**	mg/kg	0.059	0.012	1	07/03/19 16:04	07/04/19 18:36	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0062**	mg/kg	0.059	0.0062	1	07/03/19 16:04	07/04/19 18:36	106-93-4	
1,2-Dichlorobenzene	**<0.0024**	mg/kg	0.059	0.0024	1	07/03/19 16:04	07/04/19 18:36	95-50-1	
1,2-Dichloroethane	**<0.0065**	mg/kg	0.059	0.0065	1	07/03/19 16:04	07/04/19 18:36	107-06-2	
1,3,5-Trimethylbenzene	**<0.0095**	mg/kg	0.059	0.0095	1	07/03/19 16:04	07/04/19 18:36	108-67-8	
1,3-Dichlorobenzene	**<0.0022**	mg/kg	0.059	0.0022	1	07/03/19 16:04	07/04/19 18:36	541-73-1	
1,4-Dichlorobenzene	**<0.0037**	mg/kg	0.059	0.0037	1	07/03/19 16:04	07/04/19 18:36	106-46-7	
2-Butanone (MEK)	**<0.032**	mg/kg	0.30	0.032	1	07/03/19 16:04	07/04/19 18:36	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.30	0.014	1	07/03/19 16:04	07/04/19 18:36	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.012**	mg/kg	0.30	0.012	1	07/03/19 16:04	07/04/19 18:36	108-10-1	
Acetone	**<0.37**	mg/kg	1.2	0.37	1	07/03/19 16:04	07/04/19 18:36	67-64-1	
Benzene	**<0.0033**	mg/kg	0.024	0.0033	1	07/03/19 16:04	07/04/19 18:36	71-43-2	
Bromodichloromethane	**<0.020**	mg/kg	0.059	0.020	1	07/03/19 16:04	07/04/19 18:36	75-27-4	
Bromoform	**<0.090**	mg/kg	0.24	0.090	1	07/03/19 16:04	07/04/19 18:36	75-25-2	
Bromomethane	**<0.069**	mg/kg	0.59	0.069	1	07/03/19 16:04	07/04/19 18:36	74-83-9	
Carbon tetrachloride	**<0.028**	mg/kg	0.059	0.028	1	07/03/19 16:04	07/04/19 18:36	56-23-5	
Chlorobenzene	**<0.0033**	mg/kg	0.059	0.0033	1	07/03/19 16:04	07/04/19 18:36	108-90-7	
Chloroethane	**<0.031**	mg/kg	0.59	0.031	1	07/03/19 16:04	07/04/19 18:36	75-00-3	
Chloroform	**<0.030**	mg/kg	0.059	0.030	1	07/03/19 16:04	07/04/19 18:36	67-66-3	
Chloromethane	**<0.014**	mg/kg	0.24	0.014	1	07/03/19 16:04	07/04/19 18:36	74-87-3	
Dibromochloromethane	**<0.0069**	mg/kg	0.24	0.0069	1	07/03/19 16:04	07/04/19 18:36	124-48-1	
Dichlorodifluoromethane	**<0.019**	mg/kg	0.24	0.019	1	07/03/19 16:04	07/04/19 18:36	75-71-8	
Ethylbenzene	**<0.0032**	mg/kg	0.059	0.0032	1	07/03/19 16:04	07/04/19 18:36	100-41-4	
Hexachloro-1,3-butadiene	**<0.014**	mg/kg	0.30	0.014	1	07/03/19 16:04	07/04/19 18:36	87-68-3	
Methyl-tert-butyl ether	**<0.0071**	mg/kg	0.059	0.0071	1	07/03/19 16:04	07/04/19 18:36	1634-04-4	
Methylene Chloride	**<0.11**	mg/kg	0.24	0.11	1	07/03/19 16:04	07/04/19 18:36	75-09-2	
Naphthalene	**<0.056**	mg/kg	0.24	0.056	1	07/03/19 16:04	07/04/19 18:36	91-20-3	
Styrene	**<0.0027**	mg/kg	0.059	0.0027	1	07/03/19 16:04	07/04/19 18:36	100-42-5	
Tetrachloroethene	**<0.021**	mg/kg	0.059	0.021	1	07/03/19 16:04	07/04/19 18:36	127-18-4	
Tetrahydrofuran	**<0.086**	mg/kg	2.4	0.086	1	07/03/19 16:04	07/04/19 18:36	109-99-9	
Toluene	**<0.014**	mg/kg	0.059	0.014	1	07/03/19 16:04	07/04/19 18:36	108-88-3	
Trichloroethene	**<0.0091**	mg/kg	0.059	0.0091	1	07/03/19 16:04	07/04/19 18:36	79-01-6	
Trichlorofluoromethane	**<0.10**	mg/kg	0.24	0.10	1	07/03/19 16:04	07/04/19 18:36	75-69-4	
Vinyl acetate	**<0.0069**	mg/kg	0.59	0.0069	1	07/03/19 16:04	07/04/19 18:36	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.024	0.012	1	07/03/19 16:04	07/04/19 18:36	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-10' **Lab ID: 10480680002** Collected: 06/21/19 09:20 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.0098**	mg/kg	0.059	0.0098	1	07/03/19 16:04	07/04/19 18:36	156-59-2	
cis-1,3-Dichloropropene	**<0.0085**	mg/kg	0.059	0.0085	1	07/03/19 16:04	07/04/19 18:36	10061-01-5	
m&p-Xylene	**<0.0073**	mg/kg	0.12	0.0073	1	07/03/19 16:04	07/04/19 18:36	179601-23-1	
o-Xylene	**<0.014**	mg/kg	0.059	0.014	1	07/03/19 16:04	07/04/19 18:36	95-47-6	
trans-1,2-Dichloroethene	**<0.028**	mg/kg	0.059	0.028	1	07/03/19 16:04	07/04/19 18:36	156-60-5	
trans-1,3-Dichloropropene	**<0.0082**	mg/kg	0.059	0.0082	1	07/03/19 16:04	07/04/19 18:36	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-125		1	07/03/19 16:04	07/04/19 18:36	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1	07/03/19 16:04	07/04/19 18:36	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1	07/03/19 16:04	07/04/19 18:36	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-15' **Lab ID: 10480680003** Collected: 06/21/19 09:25 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**16.9**	%	0.10	0.10	1		07/09/19 11:09		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.029**	mg/kg	0.062	0.029	1	07/03/19 16:04	07/04/19 18:54	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.062	0.011	1	07/03/19 16:04	07/04/19 18:54	79-34-5	
1,1,2-Trichloroethane	**<0.0074**	mg/kg	0.062	0.0074	1	07/03/19 16:04	07/04/19 18:54	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.072**	mg/kg	0.25	0.072	1	07/03/19 16:04	07/04/19 18:54	76-13-1	
1,1-Dichloroethane	**<0.0070**	mg/kg	0.062	0.0070	1	07/03/19 16:04	07/04/19 18:54	75-34-3	
1,1-Dichloroethene	**<0.019**	mg/kg	0.062	0.019	1	07/03/19 16:04	07/04/19 18:54	75-35-4	
1,2,4-Trichlorobenzene	**<0.014**	mg/kg	0.062	0.014	1	07/03/19 16:04	07/04/19 18:54	120-82-1	
1,2,4-Trimethylbenzene	**<0.012**	mg/kg	0.062	0.012	1	07/03/19 16:04	07/04/19 18:54	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0065**	mg/kg	0.062	0.0065	1	07/03/19 16:04	07/04/19 18:54	106-93-4	
1,2-Dichlorobenzene	**<0.0025**	mg/kg	0.062	0.0025	1	07/03/19 16:04	07/04/19 18:54	95-50-1	
1,2-Dichloroethane	**<0.0068**	mg/kg	0.062	0.0068	1	07/03/19 16:04	07/04/19 18:54	107-06-2	
1,3,5-Trimethylbenzene	**<0.0099**	mg/kg	0.062	0.0099	1	07/03/19 16:04	07/04/19 18:54	108-67-8	
1,3-Dichlorobenzene	**<0.0023**	mg/kg	0.062	0.0023	1	07/03/19 16:04	07/04/19 18:54	541-73-1	
1,4-Dichlorobenzene	**<0.0038**	mg/kg	0.062	0.0038	1	07/03/19 16:04	07/04/19 18:54	106-46-7	
2-Butanone (MEK)	**<0.033**	mg/kg	0.31	0.033	1	07/03/19 16:04	07/04/19 18:54	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.31	0.014	1	07/03/19 16:04	07/04/19 18:54	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.013**	mg/kg	0.31	0.013	1	07/03/19 16:04	07/04/19 18:54	108-10-1	
Acetone	**<0.39**	mg/kg	1.2	0.39	1	07/03/19 16:04	07/04/19 18:54	67-64-1	
Benzene	**<0.0035**	mg/kg	0.025	0.0035	1	07/03/19 16:04	07/04/19 18:54	71-43-2	
Bromodichloromethane	**<0.021**	mg/kg	0.062	0.021	1	07/03/19 16:04	07/04/19 18:54	75-27-4	
Bromoform	**<0.094**	mg/kg	0.25	0.094	1	07/03/19 16:04	07/04/19 18:54	75-25-2	
Bromomethane	**<0.073**	mg/kg	0.62	0.073	1	07/03/19 16:04	07/04/19 18:54	74-83-9	
Carbon tetrachloride	**<0.030**	mg/kg	0.062	0.030	1	07/03/19 16:04	07/04/19 18:54	56-23-5	
Chlorobenzene	**<0.0035**	mg/kg	0.062	0.0035	1	07/03/19 16:04	07/04/19 18:54	108-90-7	
Chloroethane	**<0.032**	mg/kg	0.62	0.032	1	07/03/19 16:04	07/04/19 18:54	75-00-3	
Chloroform	**<0.031**	mg/kg	0.062	0.031	1	07/03/19 16:04	07/04/19 18:54	67-66-3	
Chloromethane	**<0.015**	mg/kg	0.25	0.015	1	07/03/19 16:04	07/04/19 18:54	74-87-3	
Dibromochloromethane	**<0.0072**	mg/kg	0.25	0.0072	1	07/03/19 16:04	07/04/19 18:54	124-48-1	
Dichlorodifluoromethane	**<0.020**	mg/kg	0.25	0.020	1	07/03/19 16:04	07/04/19 18:54	75-71-8	
Ethylbenzene	**<0.0034**	mg/kg	0.062	0.0034	1	07/03/19 16:04	07/04/19 18:54	100-41-4	
Hexachloro-1,3-butadiene	**<0.015**	mg/kg	0.31	0.015	1	07/03/19 16:04	07/04/19 18:54	87-68-3	
Methyl-tert-butyl ether	**<0.0074**	mg/kg	0.062	0.0074	1	07/03/19 16:04	07/04/19 18:54	1634-04-4	
Methylene Chloride	**<0.12**	mg/kg	0.25	0.12	1	07/03/19 16:04	07/04/19 18:54	75-09-2	
Naphthalene	**<0.058**	mg/kg	0.25	0.058	1	07/03/19 16:04	07/04/19 18:54	91-20-3	
Styrene	**<0.0028**	mg/kg	0.062	0.0028	1	07/03/19 16:04	07/04/19 18:54	100-42-5	
Tetrachloroethene	**<0.022**	mg/kg	0.062	0.022	1	07/03/19 16:04	07/04/19 18:54	127-18-4	
Tetrahydrofuran	**<0.090**	mg/kg	2.5	0.090	1	07/03/19 16:04	07/04/19 18:54	109-99-9	
Toluene	**<0.015**	mg/kg	0.062	0.015	1	07/03/19 16:04	07/04/19 18:54	108-88-3	
Trichloroethene	**<0.0096**	mg/kg	0.062	0.0096	1	07/03/19 16:04	07/04/19 18:54	79-01-6	
Trichlorofluoromethane	**<0.11**	mg/kg	0.25	0.11	1	07/03/19 16:04	07/04/19 18:54	75-69-4	
Vinyl acetate	**<0.0072**	mg/kg	0.62	0.0072	1	07/03/19 16:04	07/04/19 18:54	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.025	0.012	1	07/03/19 16:04	07/04/19 18:54	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-15' **Lab ID: 10480680003** Collected: 06/21/19 09:25 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.010**	mg/kg	0.062	0.010	1	07/03/19 16:04	07/04/19 18:54	156-59-2	
cis-1,3-Dichloropropene	**<0.0089**	mg/kg	0.062	0.0089	1	07/03/19 16:04	07/04/19 18:54	10061-01-5	
m&p-Xylene	**<0.0077**	mg/kg	0.12	0.0077	1	07/03/19 16:04	07/04/19 18:54	179601-23-1	
o-Xylene	**<0.014**	mg/kg	0.062	0.014	1	07/03/19 16:04	07/04/19 18:54	95-47-6	
trans-1,2-Dichloroethene	**<0.029**	mg/kg	0.062	0.029	1	07/03/19 16:04	07/04/19 18:54	156-60-5	
trans-1,3-Dichloropropene	**<0.0086**	mg/kg	0.062	0.0086	1	07/03/19 16:04	07/04/19 18:54	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-125		1	07/03/19 16:04	07/04/19 18:54	17060-07-0	
Toluene-d8 (S)	96	%.	75-125		1	07/03/19 16:04	07/04/19 18:54	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1	07/03/19 16:04	07/04/19 18:54	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-20' **Lab ID: 10480680004** Collected: 06/21/19 09:30 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**16.6**	%	0.10	0.10	1		07/09/19 11:09		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.028**	mg/kg	0.059	0.028	1	07/03/19 16:04	07/04/19 19:12	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.010**	mg/kg	0.059	0.010	1	07/03/19 16:04	07/04/19 19:12	79-34-5	
1,1,2-Trichloroethane	**<0.0071**	mg/kg	0.059	0.0071	1	07/03/19 16:04	07/04/19 19:12	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.069**	mg/kg	0.24	0.069	1	07/03/19 16:04	07/04/19 19:12	76-13-1	
1,1-Dichloroethane	**<0.0067**	mg/kg	0.059	0.0067	1	07/03/19 16:04	07/04/19 19:12	75-34-3	
1,1-Dichloroethene	**<0.018**	mg/kg	0.059	0.018	1	07/03/19 16:04	07/04/19 19:12	75-35-4	
1,2,4-Trichlorobenzene	**<0.013**	mg/kg	0.059	0.013	1	07/03/19 16:04	07/04/19 19:12	120-82-1	
1,2,4-Trimethylbenzene	**<0.012**	mg/kg	0.059	0.012	1	07/03/19 16:04	07/04/19 19:12	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0062**	mg/kg	0.059	0.0062	1	07/03/19 16:04	07/04/19 19:12	106-93-4	
1,2-Dichlorobenzene	**<0.0024**	mg/kg	0.059	0.0024	1	07/03/19 16:04	07/04/19 19:12	95-50-1	
1,2-Dichloroethane	**<0.0065**	mg/kg	0.059	0.0065	1	07/03/19 16:04	07/04/19 19:12	107-06-2	
1,3,5-Trimethylbenzene	**<0.0094**	mg/kg	0.059	0.0094	1	07/03/19 16:04	07/04/19 19:12	108-67-8	
1,3-Dichlorobenzene	**<0.0022**	mg/kg	0.059	0.0022	1	07/03/19 16:04	07/04/19 19:12	541-73-1	
1,4-Dichlorobenzene	**<0.0037**	mg/kg	0.059	0.0037	1	07/03/19 16:04	07/04/19 19:12	106-46-7	
2-Butanone (MEK)	**<0.032**	mg/kg	0.30	0.032	1	07/03/19 16:04	07/04/19 19:12	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.30	0.014	1	07/03/19 16:04	07/04/19 19:12	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.012**	mg/kg	0.30	0.012	1	07/03/19 16:04	07/04/19 19:12	108-10-1	
Acetone	**<0.37**	mg/kg	1.2	0.37	1	07/03/19 16:04	07/04/19 19:12	67-64-1	
Benzene	**<0.0033**	mg/kg	0.024	0.0033	1	07/03/19 16:04	07/04/19 19:12	71-43-2	
Bromodichloromethane	**<0.020**	mg/kg	0.059	0.020	1	07/03/19 16:04	07/04/19 19:12	75-27-4	
Bromoform	**<0.090**	mg/kg	0.24	0.090	1	07/03/19 16:04	07/04/19 19:12	75-25-2	
Bromomethane	**<0.069**	mg/kg	0.59	0.069	1	07/03/19 16:04	07/04/19 19:12	74-83-9	
Carbon tetrachloride	**<0.028**	mg/kg	0.059	0.028	1	07/03/19 16:04	07/04/19 19:12	56-23-5	
Chlorobenzene	**<0.0033**	mg/kg	0.059	0.0033	1	07/03/19 16:04	07/04/19 19:12	108-90-7	
Chloroethane	**<0.031**	mg/kg	0.59	0.031	1	07/03/19 16:04	07/04/19 19:12	75-00-3	
Chloroform	**<0.030**	mg/kg	0.059	0.030	1	07/03/19 16:04	07/04/19 19:12	67-66-3	
Chloromethane	**<0.014**	mg/kg	0.24	0.014	1	07/03/19 16:04	07/04/19 19:12	74-87-3	
Dibromochloromethane	**<0.0069**	mg/kg	0.24	0.0069	1	07/03/19 16:04	07/04/19 19:12	124-48-1	
Dichlorodifluoromethane	**<0.019**	mg/kg	0.24	0.019	1	07/03/19 16:04	07/04/19 19:12	75-71-8	
Ethylbenzene	**<0.0032**	mg/kg	0.059	0.0032	1	07/03/19 16:04	07/04/19 19:12	100-41-4	
Hexachloro-1,3-butadiene	**<0.014**	mg/kg	0.30	0.014	1	07/03/19 16:04	07/04/19 19:12	87-68-3	
Methyl-tert-butyl ether	**<0.0071**	mg/kg	0.059	0.0071	1	07/03/19 16:04	07/04/19 19:12	1634-04-4	
Methylene Chloride	**<0.11**	mg/kg	0.24	0.11	1	07/03/19 16:04	07/04/19 19:12	75-09-2	
Naphthalene	**<0.055**	mg/kg	0.24	0.055	1	07/03/19 16:04	07/04/19 19:12	91-20-3	
Styrene	**<0.0027**	mg/kg	0.059	0.0027	1	07/03/19 16:04	07/04/19 19:12	100-42-5	
Tetrachloroethene	**<0.021**	mg/kg	0.059	0.021	1	07/03/19 16:04	07/04/19 19:12	127-18-4	
Tetrahydrofuran	**<0.086**	mg/kg	2.4	0.086	1	07/03/19 16:04	07/04/19 19:12	109-99-9	
Toluene	**<0.014**	mg/kg	0.059	0.014	1	07/03/19 16:04	07/04/19 19:12	108-88-3	
Trichloroethene	**<0.0091**	mg/kg	0.059	0.0091	1	07/03/19 16:04	07/04/19 19:12	79-01-6	
Trichlorofluoromethane	**<0.10**	mg/kg	0.24	0.10	1	07/03/19 16:04	07/04/19 19:12	75-69-4	
Vinyl acetate	**<0.0069**	mg/kg	0.59	0.0069	1	07/03/19 16:04	07/04/19 19:12	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.024	0.012	1	07/03/19 16:04	07/04/19 19:12	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-20' **Lab ID: 10480680004** Collected: 06/21/19 09:30 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.0098**	mg/kg	0.059	0.0098	1	07/03/19 16:04	07/04/19 19:12	156-59-2	
cis-1,3-Dichloropropene	**<0.0085**	mg/kg	0.059	0.0085	1	07/03/19 16:04	07/04/19 19:12	10061-01-5	
m&p-Xylene	**<0.0073**	mg/kg	0.12	0.0073	1	07/03/19 16:04	07/04/19 19:12	179601-23-1	
o-Xylene	**<0.014**	mg/kg	0.059	0.014	1	07/03/19 16:04	07/04/19 19:12	95-47-6	
trans-1,2-Dichloroethene	**<0.028**	mg/kg	0.059	0.028	1	07/03/19 16:04	07/04/19 19:12	156-60-5	
trans-1,3-Dichloropropene	**<0.0082**	mg/kg	0.059	0.0082	1	07/03/19 16:04	07/04/19 19:12	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%.	75-125		1	07/03/19 16:04	07/04/19 19:12	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1	07/03/19 16:04	07/04/19 19:12	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1	07/03/19 16:04	07/04/19 19:12	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-25' **Lab ID: 10480680005** Collected: 06/21/19 09:35 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**19.0**	%	0.10	0.10	1		07/09/19 11:09		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.028**	mg/kg	0.061	0.028	1	07/03/19 16:04	07/04/19 19:30	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.061	0.011	1	07/03/19 16:04	07/04/19 19:30	79-34-5	
1,1,2-Trichloroethane	**<0.0073**	mg/kg	0.061	0.0073	1	07/03/19 16:04	07/04/19 19:30	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.071**	mg/kg	0.24	0.071	1	07/03/19 16:04	07/04/19 19:30	76-13-1	
1,1-Dichloroethane	**<0.0068**	mg/kg	0.061	0.0068	1	07/03/19 16:04	07/04/19 19:30	75-34-3	
1,1-Dichloroethene	**<0.018**	mg/kg	0.061	0.018	1	07/03/19 16:04	07/04/19 19:30	75-35-4	
1,2,4-Trichlorobenzene	**<0.014**	mg/kg	0.061	0.014	1	07/03/19 16:04	07/04/19 19:30	120-82-1	
1,2,4-Trimethylbenzene	**<0.012**	mg/kg	0.061	0.012	1	07/03/19 16:04	07/04/19 19:30	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0064**	mg/kg	0.061	0.0064	1	07/03/19 16:04	07/04/19 19:30	106-93-4	
1,2-Dichlorobenzene	**<0.0025**	mg/kg	0.061	0.0025	1	07/03/19 16:04	07/04/19 19:30	95-50-1	
1,2-Dichloroethane	**<0.0067**	mg/kg	0.061	0.0067	1	07/03/19 16:04	07/04/19 19:30	107-06-2	
1,3,5-Trimethylbenzene	**<0.0097**	mg/kg	0.061	0.0097	1	07/03/19 16:04	07/04/19 19:30	108-67-8	
1,3-Dichlorobenzene	**<0.0022**	mg/kg	0.061	0.0022	1	07/03/19 16:04	07/04/19 19:30	541-73-1	
1,4-Dichlorobenzene	**<0.0038**	mg/kg	0.061	0.0038	1	07/03/19 16:04	07/04/19 19:30	106-46-7	
2-Butanone (MEK)	**<0.032**	mg/kg	0.30	0.032	1	07/03/19 16:04	07/04/19 19:30	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.30	0.014	1	07/03/19 16:04	07/04/19 19:30	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.013**	mg/kg	0.30	0.013	1	07/03/19 16:04	07/04/19 19:30	108-10-1	
Acetone	**<0.38**	mg/kg	1.2	0.38	1	07/03/19 16:04	07/04/19 19:30	67-64-1	
Benzene	**<0.0034**	mg/kg	0.024	0.0034	1	07/03/19 16:04	07/04/19 19:30	71-43-2	
Bromodichloromethane	**<0.021**	mg/kg	0.061	0.021	1	07/03/19 16:04	07/04/19 19:30	75-27-4	
Bromoform	**<0.092**	mg/kg	0.24	0.092	1	07/03/19 16:04	07/04/19 19:30	75-25-2	
Bromomethane	**<0.071**	mg/kg	0.61	0.071	1	07/03/19 16:04	07/04/19 19:30	74-83-9	
Carbon tetrachloride	**<0.029**	mg/kg	0.061	0.029	1	07/03/19 16:04	07/04/19 19:30	56-23-5	
Chlorobenzene	**<0.0034**	mg/kg	0.061	0.0034	1	07/03/19 16:04	07/04/19 19:30	108-90-7	
Chloroethane	**<0.032**	mg/kg	0.61	0.032	1	07/03/19 16:04	07/04/19 19:30	75-00-3	
Chloroform	**<0.030**	mg/kg	0.061	0.030	1	07/03/19 16:04	07/04/19 19:30	67-66-3	
Chloromethane	**<0.015**	mg/kg	0.24	0.015	1	07/03/19 16:04	07/04/19 19:30	74-87-3	
Dibromochloromethane	**<0.0071**	mg/kg	0.24	0.0071	1	07/03/19 16:04	07/04/19 19:30	124-48-1	
Dichlorodifluoromethane	**<0.020**	mg/kg	0.24	0.020	1	07/03/19 16:04	07/04/19 19:30	75-71-8	
Ethylbenzene	**<0.0033**	mg/kg	0.061	0.0033	1	07/03/19 16:04	07/04/19 19:30	100-41-4	
Hexachloro-1,3-butadiene	**<0.015**	mg/kg	0.30	0.015	1	07/03/19 16:04	07/04/19 19:30	87-68-3	
Methyl-tert-butyl ether	**<0.0073**	mg/kg	0.061	0.0073	1	07/03/19 16:04	07/04/19 19:30	1634-04-4	
Methylene Chloride	**<0.11**	mg/kg	0.24	0.11	1	07/03/19 16:04	07/04/19 19:30	75-09-2	
Naphthalene	**<0.057**	mg/kg	0.24	0.057	1	07/03/19 16:04	07/04/19 19:30	91-20-3	
Styrene	**<0.0028**	mg/kg	0.061	0.0028	1	07/03/19 16:04	07/04/19 19:30	100-42-5	
Tetrachloroethene	**<0.021**	mg/kg	0.061	0.021	1	07/03/19 16:04	07/04/19 19:30	127-18-4	
Tetrahydrofuran	**<0.089**	mg/kg	2.4	0.089	1	07/03/19 16:04	07/04/19 19:30	109-99-9	
Toluene	**<0.015**	mg/kg	0.061	0.015	1	07/03/19 16:04	07/04/19 19:30	108-88-3	
Trichloroethene	**<0.0094**	mg/kg	0.061	0.0094	1	07/03/19 16:04	07/04/19 19:30	79-01-6	
Trichlorofluoromethane	**<0.11**	mg/kg	0.24	0.11	1	07/03/19 16:04	07/04/19 19:30	75-69-4	
Vinyl acetate	**<0.0071**	mg/kg	0.61	0.0071	1	07/03/19 16:04	07/04/19 19:30	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.024	0.012	1	07/03/19 16:04	07/04/19 19:30	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-25' **Lab ID: 10480680005** Collected: 06/21/19 09:35 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.010**	mg/kg	0.061	0.010	1	07/03/19 16:04	07/04/19 19:30	156-59-2	
cis-1,3-Dichloropropene	**<0.0087**	mg/kg	0.061	0.0087	1	07/03/19 16:04	07/04/19 19:30	10061-01-5	
m&p-Xylene	**<0.0075**	mg/kg	0.12	0.0075	1	07/03/19 16:04	07/04/19 19:30	179601-23-1	
o-Xylene	**<0.014**	mg/kg	0.061	0.014	1	07/03/19 16:04	07/04/19 19:30	95-47-6	
trans-1,2-Dichloroethene	**<0.029**	mg/kg	0.061	0.029	1	07/03/19 16:04	07/04/19 19:30	156-60-5	
trans-1,3-Dichloropropene	**<0.0085**	mg/kg	0.061	0.0085	1	07/03/19 16:04	07/04/19 19:30	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-125		1	07/03/19 16:04	07/04/19 19:30	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1	07/03/19 16:04	07/04/19 19:30	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1	07/03/19 16:04	07/04/19 19:30	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-30' **Lab ID: 10480680006** Collected: 06/21/19 09:55 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**19.2**	%	0.10	0.10	1		07/09/19 11:10		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.028**	mg/kg	0.061	0.028	1	07/03/19 16:04	07/04/19 19:48	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.061	0.011	1	07/03/19 16:04	07/04/19 19:48	79-34-5	
1,1,2-Trichloroethane	**<0.0072**	mg/kg	0.061	0.0072	1	07/03/19 16:04	07/04/19 19:48	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.070**	mg/kg	0.24	0.070	1	07/03/19 16:04	07/04/19 19:48	76-13-1	
1,1-Dichloroethane	**<0.0068**	mg/kg	0.061	0.0068	1	07/03/19 16:04	07/04/19 19:48	75-34-3	
1,1-Dichloroethene	**<0.018**	mg/kg	0.061	0.018	1	07/03/19 16:04	07/04/19 19:48	75-35-4	
1,2,4-Trichlorobenzene	**<0.013**	mg/kg	0.061	0.013	1	07/03/19 16:04	07/04/19 19:48	120-82-1	
1,2,4-Trimethylbenzene	**<0.012**	mg/kg	0.061	0.012	1	07/03/19 16:04	07/04/19 19:48	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0064**	mg/kg	0.061	0.0064	1	07/03/19 16:04	07/04/19 19:48	106-93-4	
1,2-Dichlorobenzene	**<0.0024**	mg/kg	0.061	0.0024	1	07/03/19 16:04	07/04/19 19:48	95-50-1	
1,2-Dichloroethane	**<0.0067**	mg/kg	0.061	0.0067	1	07/03/19 16:04	07/04/19 19:48	107-06-2	
1,3,5-Trimethylbenzene	**<0.0097**	mg/kg	0.061	0.0097	1	07/03/19 16:04	07/04/19 19:48	108-67-8	
1,3-Dichlorobenzene	**<0.0022**	mg/kg	0.061	0.0022	1	07/03/19 16:04	07/04/19 19:48	541-73-1	
1,4-Dichlorobenzene	**<0.0038**	mg/kg	0.061	0.0038	1	07/03/19 16:04	07/04/19 19:48	106-46-7	
2-Butanone (MEK)	**<0.032**	mg/kg	0.30	0.032	1	07/03/19 16:04	07/04/19 19:48	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.30	0.014	1	07/03/19 16:04	07/04/19 19:48	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.013**	mg/kg	0.30	0.013	1	07/03/19 16:04	07/04/19 19:48	108-10-1	
Acetone	**<0.38**	mg/kg	1.2	0.38	1	07/03/19 16:04	07/04/19 19:48	67-64-1	
Benzene	**<0.0034**	mg/kg	0.024	0.0034	1	07/03/19 16:04	07/04/19 19:48	71-43-2	
Bromodichloromethane	**<0.021**	mg/kg	0.061	0.021	1	07/03/19 16:04	07/04/19 19:48	75-27-4	
Bromoform	**<0.092**	mg/kg	0.24	0.092	1	07/03/19 16:04	07/04/19 19:48	75-25-2	
Bromomethane	**<0.071**	mg/kg	0.61	0.071	1	07/03/19 16:04	07/04/19 19:48	74-83-9	
Carbon tetrachloride	**<0.029**	mg/kg	0.061	0.029	1	07/03/19 16:04	07/04/19 19:48	56-23-5	
Chlorobenzene	**<0.0034**	mg/kg	0.061	0.0034	1	07/03/19 16:04	07/04/19 19:48	108-90-7	
Chloroethane	**<0.032**	mg/kg	0.61	0.032	1	07/03/19 16:04	07/04/19 19:48	75-00-3	
Chloroform	**<0.030**	mg/kg	0.061	0.030	1	07/03/19 16:04	07/04/19 19:48	67-66-3	
Chloromethane	**<0.015**	mg/kg	0.24	0.015	1	07/03/19 16:04	07/04/19 19:48	74-87-3	
Dibromochloromethane	**<0.0070**	mg/kg	0.24	0.0070	1	07/03/19 16:04	07/04/19 19:48	124-48-1	
Dichlorodifluoromethane	**<0.020**	mg/kg	0.24	0.020	1	07/03/19 16:04	07/04/19 19:48	75-71-8	
Ethylbenzene	**<0.0033**	mg/kg	0.061	0.0033	1	07/03/19 16:04	07/04/19 19:48	100-41-4	
Hexachloro-1,3-butadiene	**<0.015**	mg/kg	0.30	0.015	1	07/03/19 16:04	07/04/19 19:48	87-68-3	
Methyl-tert-butyl ether	**<0.0072**	mg/kg	0.061	0.0072	1	07/03/19 16:04	07/04/19 19:48	1634-04-4	
Methylene Chloride	**<0.11**	mg/kg	0.24	0.11	1	07/03/19 16:04	07/04/19 19:48	75-09-2	
Naphthalene	**<0.057**	mg/kg	0.24	0.057	1	07/03/19 16:04	07/04/19 19:48	91-20-3	
Styrene	**<0.0028**	mg/kg	0.061	0.0028	1	07/03/19 16:04	07/04/19 19:48	100-42-5	
Tetrachloroethene	**<0.021**	mg/kg	0.061	0.021	1	07/03/19 16:04	07/04/19 19:48	127-18-4	
Tetrahydrofuran	**<0.088**	mg/kg	2.4	0.088	1	07/03/19 16:04	07/04/19 19:48	109-99-9	
Toluene	**<0.015**	mg/kg	0.061	0.015	1	07/03/19 16:04	07/04/19 19:48	108-88-3	
Trichloroethene	**<0.0093**	mg/kg	0.061	0.0093	1	07/03/19 16:04	07/04/19 19:48	79-01-6	
Trichlorofluoromethane	**<0.11**	mg/kg	0.24	0.11	1	07/03/19 16:04	07/04/19 19:48	75-69-4	
Vinyl acetate	**<0.0070**	mg/kg	0.61	0.0070	1	07/03/19 16:04	07/04/19 19:48	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.024	0.012	1	07/03/19 16:04	07/04/19 19:48	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-30' **Lab ID: 10480680006** Collected: 06/21/19 09:55 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.010**	mg/kg	0.061	0.010	1	07/03/19 16:04	07/04/19 19:48	156-59-2	
cis-1,3-Dichloropropene	**<0.0087**	mg/kg	0.061	0.0087	1	07/03/19 16:04	07/04/19 19:48	10061-01-5	
m&p-Xylene	**<0.0075**	mg/kg	0.12	0.0075	1	07/03/19 16:04	07/04/19 19:48	179601-23-1	
o-Xylene	**<0.014**	mg/kg	0.061	0.014	1	07/03/19 16:04	07/04/19 19:48	95-47-6	
trans-1,2-Dichloroethene	**<0.028**	mg/kg	0.061	0.028	1	07/03/19 16:04	07/04/19 19:48	156-60-5	
trans-1,3-Dichloropropene	**<0.0084**	mg/kg	0.061	0.0084	1	07/03/19 16:04	07/04/19 19:48	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-125		1	07/03/19 16:04	07/04/19 19:48	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1	07/03/19 16:04	07/04/19 19:48	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1	07/03/19 16:04	07/04/19 19:48	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-35' **Lab ID: 10480680007** Collected: 06/21/19 10:00 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**20.9**	%	0.10	0.10	1		07/09/19 11:10		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.029**	mg/kg	0.062	0.029	1	07/03/19 16:04	07/04/19 20:07	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.062	0.011	1	07/03/19 16:04	07/04/19 20:07	79-34-5	
1,1,2-Trichloroethane	**<0.0074**	mg/kg	0.062	0.0074	1	07/03/19 16:04	07/04/19 20:07	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.071**	mg/kg	0.25	0.071	1	07/03/19 16:04	07/04/19 20:07	76-13-1	
1,1-Dichloroethane	**<0.0069**	mg/kg	0.062	0.0069	1	07/03/19 16:04	07/04/19 20:07	75-34-3	
1,1-Dichloroethene	**<0.018**	mg/kg	0.062	0.018	1	07/03/19 16:04	07/04/19 20:07	75-35-4	
1,2,4-Trichlorobenzene	**<0.014**	mg/kg	0.062	0.014	1	07/03/19 16:04	07/04/19 20:07	120-82-1	
1,2,4-Trimethylbenzene	**<0.012**	mg/kg	0.062	0.012	1	07/03/19 16:04	07/04/19 20:07	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0065**	mg/kg	0.062	0.0065	1	07/03/19 16:04	07/04/19 20:07	106-93-4	
1,2-Dichlorobenzene	**<0.0025**	mg/kg	0.062	0.0025	1	07/03/19 16:04	07/04/19 20:07	95-50-1	
1,2-Dichloroethane	**<0.0068**	mg/kg	0.062	0.0068	1	07/03/19 16:04	07/04/19 20:07	107-06-2	
1,3,5-Trimethylbenzene	**<0.0098**	mg/kg	0.062	0.0098	1	07/03/19 16:04	07/04/19 20:07	108-67-8	
1,3-Dichlorobenzene	**<0.0022**	mg/kg	0.062	0.0022	1	07/03/19 16:04	07/04/19 20:07	541-73-1	
1,4-Dichlorobenzene	**<0.0038**	mg/kg	0.062	0.0038	1	07/03/19 16:04	07/04/19 20:07	106-46-7	
2-Butanone (MEK)	**<0.033**	mg/kg	0.31	0.033	1	07/03/19 16:04	07/04/19 20:07	78-93-3	
2-Hexanone	**<0.014**	mg/kg	0.31	0.014	1	07/03/19 16:04	07/04/19 20:07	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.013**	mg/kg	0.31	0.013	1	07/03/19 16:04	07/04/19 20:07	108-10-1	
Acetone	**<0.38**	mg/kg	1.2	0.38	1	07/03/19 16:04	07/04/19 20:07	67-64-1	
Benzene	**<0.0035**	mg/kg	0.025	0.0035	1	07/03/19 16:04	07/04/19 20:07	71-43-2	
Bromodichloromethane	**<0.021**	mg/kg	0.062	0.021	1	07/03/19 16:04	07/04/19 20:07	75-27-4	
Bromoform	**<0.093**	mg/kg	0.25	0.093	1	07/03/19 16:04	07/04/19 20:07	75-25-2	
Bromomethane	**<0.072**	mg/kg	0.62	0.072	1	07/03/19 16:04	07/04/19 20:07	74-83-9	
Carbon tetrachloride	**<0.029**	mg/kg	0.062	0.029	1	07/03/19 16:04	07/04/19 20:07	56-23-5	
Chlorobenzene	**<0.0035**	mg/kg	0.062	0.0035	1	07/03/19 16:04	07/04/19 20:07	108-90-7	
Chloroethane	**<0.032**	mg/kg	0.62	0.032	1	07/03/19 16:04	07/04/19 20:07	75-00-3	
Chloroform	**<0.031**	mg/kg	0.062	0.031	1	07/03/19 16:04	07/04/19 20:07	67-66-3	
Chloromethane	**<0.015**	mg/kg	0.25	0.015	1	07/03/19 16:04	07/04/19 20:07	74-87-3	
Dibromochloromethane	**<0.0071**	mg/kg	0.25	0.0071	1	07/03/19 16:04	07/04/19 20:07	124-48-1	
Dichlorodifluoromethane	**<0.020**	mg/kg	0.25	0.020	1	07/03/19 16:04	07/04/19 20:07	75-71-8	
Ethylbenzene	**<0.0033**	mg/kg	0.062	0.0033	1	07/03/19 16:04	07/04/19 20:07	100-41-4	
Hexachloro-1,3-butadiene	**<0.015**	mg/kg	0.31	0.015	1	07/03/19 16:04	07/04/19 20:07	87-68-3	
Methyl-tert-butyl ether	**<0.0073**	mg/kg	0.062	0.0073	1	07/03/19 16:04	07/04/19 20:07	1634-04-4	
Methylene Chloride	**<0.12**	mg/kg	0.25	0.12	1	07/03/19 16:04	07/04/19 20:07	75-09-2	
Naphthalene	**<0.058**	mg/kg	0.25	0.058	1	07/03/19 16:04	07/04/19 20:07	91-20-3	
Styrene	**<0.0028**	mg/kg	0.062	0.0028	1	07/03/19 16:04	07/04/19 20:07	100-42-5	
Tetrachloroethene	**<0.022**	mg/kg	0.062	0.022	1	07/03/19 16:04	07/04/19 20:07	127-18-4	
Tetrahydrofuran	**<0.090**	mg/kg	2.5	0.090	1	07/03/19 16:04	07/04/19 20:07	109-99-9	
Toluene	**<0.015**	mg/kg	0.062	0.015	1	07/03/19 16:04	07/04/19 20:07	108-88-3	
Trichloroethene	**<0.0095**	mg/kg	0.062	0.0095	1	07/03/19 16:04	07/04/19 20:07	79-01-6	
Trichlorofluoromethane	**<0.11**	mg/kg	0.25	0.11	1	07/03/19 16:04	07/04/19 20:07	75-69-4	
Vinyl acetate	**<0.0071**	mg/kg	0.62	0.0071	1	07/03/19 16:04	07/04/19 20:07	108-05-4	
Vinyl chloride	**<0.012**	mg/kg	0.025	0.012	1	07/03/19 16:04	07/04/19 20:07	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-35' **Lab ID: 10480680007** Collected: 06/21/19 10:00 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.010**	mg/kg	0.062	0.010	1	07/03/19 16:04	07/04/19 20:07	156-59-2	
cis-1,3-Dichloropropene	**<0.0088**	mg/kg	0.062	0.0088	1	07/03/19 16:04	07/04/19 20:07	10061-01-5	
m&p-Xylene	**<0.0076**	mg/kg	0.12	0.0076	1	07/03/19 16:04	07/04/19 20:07	179601-23-1	
o-Xylene	**<0.014**	mg/kg	0.062	0.014	1	07/03/19 16:04	07/04/19 20:07	95-47-6	
trans-1,2-Dichloroethene	**<0.029**	mg/kg	0.062	0.029	1	07/03/19 16:04	07/04/19 20:07	156-60-5	
trans-1,3-Dichloropropene	**<0.0086**	mg/kg	0.062	0.0086	1	07/03/19 16:04	07/04/19 20:07	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-125		1	07/03/19 16:04	07/04/19 20:07	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1	07/03/19 16:04	07/04/19 20:07	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1	07/03/19 16:04	07/04/19 20:07	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-40' **Lab ID: 10480680008** Collected: 06/21/19 10:20 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**22.8**	%	0.10	0.10	1		07/09/19 11:10		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.030**	mg/kg	0.064	0.030	1	07/03/19 16:04	07/04/19 20:25	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.011**	mg/kg	0.064	0.011	1	07/03/19 16:04	07/04/19 20:25	79-34-5	
1,1,2-Trichloroethane	**<0.0076**	mg/kg	0.064	0.0076	1	07/03/19 16:04	07/04/19 20:25	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.074**	mg/kg	0.25	0.074	1	07/03/19 16:04	07/04/19 20:25	76-13-1	
1,1-Dichloroethane	**<0.0071**	mg/kg	0.064	0.0071	1	07/03/19 16:04	07/04/19 20:25	75-34-3	
1,1-Dichloroethene	**<0.019**	mg/kg	0.064	0.019	1	07/03/19 16:04	07/04/19 20:25	75-35-4	
1,2,4-Trichlorobenzene	**<0.014**	mg/kg	0.064	0.014	1	07/03/19 16:04	07/04/19 20:25	120-82-1	
1,2,4-Trimethylbenzene	**<0.013**	mg/kg	0.064	0.013	1	07/03/19 16:04	07/04/19 20:25	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0067**	mg/kg	0.064	0.0067	1	07/03/19 16:04	07/04/19 20:25	106-93-4	
1,2-Dichlorobenzene	**<0.0026**	mg/kg	0.064	0.0026	1	07/03/19 16:04	07/04/19 20:25	95-50-1	
1,2-Dichloroethane	**<0.0070**	mg/kg	0.064	0.0070	1	07/03/19 16:04	07/04/19 20:25	107-06-2	
1,3,5-Trimethylbenzene	**<0.010**	mg/kg	0.064	0.010	1	07/03/19 16:04	07/04/19 20:25	108-67-8	
1,3-Dichlorobenzene	**<0.0023**	mg/kg	0.064	0.0023	1	07/03/19 16:04	07/04/19 20:25	541-73-1	
1,4-Dichlorobenzene	**<0.0039**	mg/kg	0.064	0.0039	1	07/03/19 16:04	07/04/19 20:25	106-46-7	
2-Butanone (MEK)	**<0.034**	mg/kg	0.32	0.034	1	07/03/19 16:04	07/04/19 20:25	78-93-3	
2-Hexanone	**<0.015**	mg/kg	0.32	0.015	1	07/03/19 16:04	07/04/19 20:25	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.013**	mg/kg	0.32	0.013	1	07/03/19 16:04	07/04/19 20:25	108-10-1	
Acetone	**<0.40**	mg/kg	1.3	0.40	1	07/03/19 16:04	07/04/19 20:25	67-64-1	
Benzene	**<0.0036**	mg/kg	0.025	0.0036	1	07/03/19 16:04	07/04/19 20:25	71-43-2	
Bromodichloromethane	**<0.022**	mg/kg	0.064	0.022	1	07/03/19 16:04	07/04/19 20:25	75-27-4	
Bromoform	**<0.096**	mg/kg	0.25	0.096	1	07/03/19 16:04	07/04/19 20:25	75-25-2	
Bromomethane	**<0.074**	mg/kg	0.64	0.074	1	07/03/19 16:04	07/04/19 20:25	74-83-9	
Carbon tetrachloride	**<0.030**	mg/kg	0.064	0.030	1	07/03/19 16:04	07/04/19 20:25	56-23-5	
Chlorobenzene	**<0.0036**	mg/kg	0.064	0.0036	1	07/03/19 16:04	07/04/19 20:25	108-90-7	
Chloroethane	**<0.033**	mg/kg	0.64	0.033	1	07/03/19 16:04	07/04/19 20:25	75-00-3	
Chloroform	**<0.032**	mg/kg	0.064	0.032	1	07/03/19 16:04	07/04/19 20:25	67-66-3	
Chloromethane	**<0.015**	mg/kg	0.25	0.015	1	07/03/19 16:04	07/04/19 20:25	74-87-3	
Dibromochloromethane	**<0.0074**	mg/kg	0.25	0.0074	1	07/03/19 16:04	07/04/19 20:25	124-48-1	
Dichlorodifluoromethane	**<0.021**	mg/kg	0.25	0.021	1	07/03/19 16:04	07/04/19 20:25	75-71-8	
Ethylbenzene	**<0.0035**	mg/kg	0.064	0.0035	1	07/03/19 16:04	07/04/19 20:25	100-41-4	
Hexachloro-1,3-butadiene	**<0.016**	mg/kg	0.32	0.016	1	07/03/19 16:04	07/04/19 20:25	87-68-3	
Methyl-tert-butyl ether	**<0.0076**	mg/kg	0.064	0.0076	1	07/03/19 16:04	07/04/19 20:25	1634-04-4	
Methylene Chloride	**<0.12**	mg/kg	0.25	0.12	1	07/03/19 16:04	07/04/19 20:25	75-09-2	
Naphthalene	**<0.060**	mg/kg	0.25	0.060	1	07/03/19 16:04	07/04/19 20:25	91-20-3	
Styrene	**<0.0029**	mg/kg	0.064	0.0029	1	07/03/19 16:04	07/04/19 20:25	100-42-5	
Tetrachloroethene	**<0.022**	mg/kg	0.064	0.022	1	07/03/19 16:04	07/04/19 20:25	127-18-4	
Tetrahydrofuran	**<0.092**	mg/kg	2.5	0.092	1	07/03/19 16:04	07/04/19 20:25	109-99-9	
Toluene	**<0.016**	mg/kg	0.064	0.016	1	07/03/19 16:04	07/04/19 20:25	108-88-3	
Trichloroethene	**<0.0098**	mg/kg	0.064	0.0098	1	07/03/19 16:04	07/04/19 20:25	79-01-6	
Trichlorofluoromethane	**<0.11**	mg/kg	0.25	0.11	1	07/03/19 16:04	07/04/19 20:25	75-69-4	
Vinyl acetate	**<0.0074**	mg/kg	0.64	0.0074	1	07/03/19 16:04	07/04/19 20:25	108-05-4	
Vinyl chloride	**<0.013**	mg/kg	0.025	0.013	1	07/03/19 16:04	07/04/19 20:25	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-40' **Lab ID: 10480680008** Collected: 06/21/19 10:20 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.011**	mg/kg	0.064	0.011	1	07/03/19 16:04	07/04/19 20:25	156-59-2	
cis-1,3-Dichloropropene	**<0.0091**	mg/kg	0.064	0.0091	1	07/03/19 16:04	07/04/19 20:25	10061-01-5	
m&p-Xylene	**<0.0079**	mg/kg	0.13	0.0079	1	07/03/19 16:04	07/04/19 20:25	179601-23-1	
o-Xylene	**<0.015**	mg/kg	0.064	0.015	1	07/03/19 16:04	07/04/19 20:25	95-47-6	
trans-1,2-Dichloroethene	**<0.030**	mg/kg	0.064	0.030	1	07/03/19 16:04	07/04/19 20:25	156-60-5	
trans-1,3-Dichloropropene	**<0.0088**	mg/kg	0.064	0.0088	1	07/03/19 16:04	07/04/19 20:25	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%.	75-125		1	07/03/19 16:04	07/04/19 20:25	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1	07/03/19 16:04	07/04/19 20:25	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1	07/03/19 16:04	07/04/19 20:25	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-45' **Lab ID: 10480680009** Collected: 06/21/19 10:30 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**30.7**	%	0.10	0.10	1		07/09/19 11:10		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.035**	mg/kg	0.076	0.035	1	07/05/19 08:44	07/05/19 12:15	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.076	0.013	1	07/05/19 08:44	07/05/19 12:15	79-34-5	
1,1,2-Trichloroethane	**<0.0091**	mg/kg	0.076	0.0091	1	07/05/19 08:44	07/05/19 12:15	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.088**	mg/kg	0.30	0.088	1	07/05/19 08:44	07/05/19 12:15	76-13-1	
1,1-Dichloroethane	**<0.0085**	mg/kg	0.076	0.0085	1	07/05/19 08:44	07/05/19 12:15	75-34-3	
1,1-Dichloroethene	**<0.023**	mg/kg	0.076	0.023	1	07/05/19 08:44	07/05/19 12:15	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.076	0.017	1	07/05/19 08:44	07/05/19 12:15	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.076	0.015	1	07/05/19 08:44	07/05/19 12:15	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0080**	mg/kg	0.076	0.0080	1	07/05/19 08:44	07/05/19 12:15	106-93-4	
1,2-Dichlorobenzene	**<0.0031**	mg/kg	0.076	0.0031	1	07/05/19 08:44	07/05/19 12:15	95-50-1	
1,2-Dichloroethane	**<0.0084**	mg/kg	0.076	0.0084	1	07/05/19 08:44	07/05/19 12:15	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.076	0.012	1	07/05/19 08:44	07/05/19 12:15	108-67-8	
1,3-Dichlorobenzene	**<0.0028**	mg/kg	0.076	0.0028	1	07/05/19 08:44	07/05/19 12:15	541-73-1	
1,4-Dichlorobenzene	**<0.0047**	mg/kg	0.076	0.0047	1	07/05/19 08:44	07/05/19 12:15	106-46-7	
2-Butanone (MEK)	**<0.040**	mg/kg	0.38	0.040	1	07/05/19 08:44	07/05/19 12:15	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.38	0.017	1	07/05/19 08:44	07/05/19 12:15	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.38	0.016	1	07/05/19 08:44	07/05/19 12:15	108-10-1	
Acetone	**<0.47**	mg/kg	1.5	0.47	1	07/05/19 08:44	07/05/19 12:15	67-64-1	
Benzene	**<0.0043**	mg/kg	0.030	0.0043	1	07/05/19 08:44	07/05/19 12:15	71-43-2	
Bromodichloromethane	**<0.026**	mg/kg	0.076	0.026	1	07/05/19 08:44	07/05/19 12:15	75-27-4	
Bromoform	**<0.12**	mg/kg	0.30	0.12	1	07/05/19 08:44	07/05/19 12:15	75-25-2	
Bromomethane	**<0.089**	mg/kg	0.76	0.089	1	07/05/19 08:44	07/05/19 12:15	74-83-9	
Carbon tetrachloride	**<0.036**	mg/kg	0.076	0.036	1	07/05/19 08:44	07/05/19 12:15	56-23-5	
Chlorobenzene	**<0.0043**	mg/kg	0.076	0.0043	1	07/05/19 08:44	07/05/19 12:15	108-90-7	
Chloroethane	**<0.040**	mg/kg	0.76	0.040	1	07/05/19 08:44	07/05/19 12:15	75-00-3	
Chloroform	**<0.038**	mg/kg	0.076	0.038	1	07/05/19 08:44	07/05/19 12:15	67-66-3	
Chloromethane	**<0.018**	mg/kg	0.30	0.018	1	07/05/19 08:44	07/05/19 12:15	74-87-3	
Dibromochloromethane	**<0.0088**	mg/kg	0.30	0.0088	1	07/05/19 08:44	07/05/19 12:15	124-48-1	
Dichlorodifluoromethane	**<0.025**	mg/kg	0.30	0.025	1	07/05/19 08:44	07/05/19 12:15	75-71-8	
Ethylbenzene	**<0.0041**	mg/kg	0.076	0.0041	1	07/05/19 08:44	07/05/19 12:15	100-41-4	
Hexachloro-1,3-butadiene	**<0.019**	mg/kg	0.38	0.019	1	07/05/19 08:44	07/05/19 12:15	87-68-3	
Methyl-tert-butyl ether	**<0.0090**	mg/kg	0.076	0.0090	1	07/05/19 08:44	07/05/19 12:15	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.30	0.14	1	07/05/19 08:44	07/05/19 12:15	75-09-2	
Naphthalene	**<0.071**	mg/kg	0.30	0.071	1	07/05/19 08:44	07/05/19 12:15	91-20-3	
Styrene	**<0.0035**	mg/kg	0.076	0.0035	1	07/05/19 08:44	07/05/19 12:15	100-42-5	
Tetrachloroethene	**<0.027**	mg/kg	0.076	0.027	1	07/05/19 08:44	07/05/19 12:15	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.0	0.11	1	07/05/19 08:44	07/05/19 12:15	109-99-9	
Toluene	**<0.019**	mg/kg	0.076	0.019	1	07/05/19 08:44	07/05/19 12:15	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.076	0.012	1	07/05/19 08:44	07/05/19 12:15	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.30	0.13	1	07/05/19 08:44	07/05/19 12:15	75-69-4	
Vinyl acetate	**<0.0088**	mg/kg	0.76	0.0088	1	07/05/19 08:44	07/05/19 12:15	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.030	0.015	1	07/05/19 08:44	07/05/19 12:15	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-45' **Lab ID: 10480680009** Collected: 06/21/19 10:30 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.076	0.013	1	07/05/19 08:44	07/05/19 12:15	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.076	0.011	1	07/05/19 08:44	07/05/19 12:15	10061-01-5	
m&p-Xylene	**<0.0094**	mg/kg	0.15	0.0094	1	07/05/19 08:44	07/05/19 12:15	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.076	0.018	1	07/05/19 08:44	07/05/19 12:15	95-47-6	
trans-1,2-Dichloroethene	**<0.036**	mg/kg	0.076	0.036	1	07/05/19 08:44	07/05/19 12:15	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.076	0.011	1	07/05/19 08:44	07/05/19 12:15	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%.	75-125		1	07/05/19 08:44	07/05/19 12:15	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1	07/05/19 08:44	07/05/19 12:15	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1	07/05/19 08:44	07/05/19 12:15	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-50' **Lab ID: 10480680010** Collected: 06/21/19 10:45 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**31.2**	%	0.10	0.10	1		07/09/19 11:10		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.033**	mg/kg	0.071	0.033	1	07/03/19 16:04	07/04/19 10:58	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.012**	mg/kg	0.071	0.012	1	07/03/19 16:04	07/04/19 10:58	79-34-5	
1,1,2-Trichloroethane	**<0.0085**	mg/kg	0.071	0.0085	1	07/03/19 16:04	07/04/19 10:58	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.082**	mg/kg	0.28	0.082	1	07/03/19 16:04	07/04/19 10:58	76-13-1	
1,1-Dichloroethane	**<0.0080**	mg/kg	0.071	0.0080	1	07/03/19 16:04	07/04/19 10:58	75-34-3	
1,1-Dichloroethene	**<0.021**	mg/kg	0.071	0.021	1	07/03/19 16:04	07/04/19 10:58	75-35-4	
1,2,4-Trichlorobenzene	**<0.016**	mg/kg	0.071	0.016	1	07/03/19 16:04	07/04/19 10:58	120-82-1	
1,2,4-Trimethylbenzene	**<0.014**	mg/kg	0.071	0.014	1	07/03/19 16:04	07/04/19 10:58	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0075**	mg/kg	0.071	0.0075	1	07/03/19 16:04	07/04/19 10:58	106-93-4	
1,2-Dichlorobenzene	**<0.0029**	mg/kg	0.071	0.0029	1	07/03/19 16:04	07/04/19 10:58	95-50-1	
1,2-Dichloroethane	**<0.0078**	mg/kg	0.071	0.0078	1	07/03/19 16:04	07/04/19 10:58	107-06-2	
1,3,5-Trimethylbenzene	**<0.011**	mg/kg	0.071	0.011	1	07/03/19 16:04	07/04/19 10:58	108-67-8	
1,3-Dichlorobenzene	**<0.0026**	mg/kg	0.071	0.0026	1	07/03/19 16:04	07/04/19 10:58	541-73-1	
1,4-Dichlorobenzene	**<0.0044**	mg/kg	0.071	0.0044	1	07/03/19 16:04	07/04/19 10:58	106-46-7	
2-Butanone (MEK)	**<0.038**	mg/kg	0.35	0.038	1	07/03/19 16:04	07/04/19 10:58	78-93-3	
2-Hexanone	**<0.016**	mg/kg	0.35	0.016	1	07/03/19 16:04	07/04/19 10:58	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.015**	mg/kg	0.35	0.015	1	07/03/19 16:04	07/04/19 10:58	108-10-1	
Acetone	**<0.44**	mg/kg	1.4	0.44	1	07/03/19 16:04	07/04/19 10:58	67-64-1	
Benzene	**0.0041J**	mg/kg	0.028	0.0040	1	07/03/19 16:04	07/04/19 10:58	71-43-2	B
Bromodichloromethane	**<0.024**	mg/kg	0.071	0.024	1	07/03/19 16:04	07/04/19 10:58	75-27-4	
Bromoform	**<0.11**	mg/kg	0.28	0.11	1	07/03/19 16:04	07/04/19 10:58	75-25-2	
Bromomethane	**<0.083**	mg/kg	0.71	0.083	1	07/03/19 16:04	07/04/19 10:58	74-83-9	
Carbon tetrachloride	**<0.034**	mg/kg	0.071	0.034	1	07/03/19 16:04	07/04/19 10:58	56-23-5	
Chlorobenzene	**<0.0040**	mg/kg	0.071	0.0040	1	07/03/19 16:04	07/04/19 10:58	108-90-7	
Chloroethane	**<0.037**	mg/kg	0.71	0.037	1	07/03/19 16:04	07/04/19 10:58	75-00-3	
Chloroform	**<0.035**	mg/kg	0.071	0.035	1	07/03/19 16:04	07/04/19 10:58	67-66-3	
Chloromethane	**<0.017**	mg/kg	0.28	0.017	1	07/03/19 16:04	07/04/19 10:58	74-87-3	
Dibromochloromethane	**<0.0082**	mg/kg	0.28	0.0082	1	07/03/19 16:04	07/04/19 10:58	124-48-1	
Dichlorodifluoromethane	**<0.023**	mg/kg	0.28	0.023	1	07/03/19 16:04	07/04/19 10:58	75-71-8	
Ethylbenzene	**<0.0039**	mg/kg	0.071	0.0039	1	07/03/19 16:04	07/04/19 10:58	100-41-4	
Hexachloro-1,3-butadiene	**<0.017**	mg/kg	0.35	0.017	1	07/03/19 16:04	07/04/19 10:58	87-68-3	
Methyl-tert-butyl ether	**<0.0084**	mg/kg	0.071	0.0084	1	07/03/19 16:04	07/04/19 10:58	1634-04-4	
Methylene Chloride	**<0.13**	mg/kg	0.28	0.13	1	07/03/19 16:04	07/04/19 10:58	75-09-2	
Naphthalene	**<0.066**	mg/kg	0.28	0.066	1	07/03/19 16:04	07/04/19 10:58	91-20-3	
Styrene	**<0.0032**	mg/kg	0.071	0.0032	1	07/03/19 16:04	07/04/19 10:58	100-42-5	
Tetrachloroethene	**<0.025**	mg/kg	0.071	0.025	1	07/03/19 16:04	07/04/19 10:58	127-18-4	
Tetrahydrofuran	**<0.10**	mg/kg	2.8	0.10	1	07/03/19 16:04	07/04/19 10:58	109-99-9	
Toluene	**<0.017**	mg/kg	0.071	0.017	1	07/03/19 16:04	07/04/19 10:58	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.071	0.011	1	07/03/19 16:04	07/04/19 10:58	79-01-6	
Trichlorofluoromethane	**<0.12**	mg/kg	0.28	0.12	1	07/03/19 16:04	07/04/19 10:58	75-69-4	
Vinyl acetate	**<0.0082**	mg/kg	0.71	0.0082	1	07/03/19 16:04	07/04/19 10:58	108-05-4	
Vinyl chloride	**<0.014**	mg/kg	0.028	0.014	1	07/03/19 16:04	07/04/19 10:58	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-50' **Lab ID: 10480680010** Collected: 06/21/19 10:45 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.071	0.012	1	07/03/19 16:04	07/04/19 10:58	156-59-2	
cis-1,3-Dichloropropene	**<0.010**	mg/kg	0.071	0.010	1	07/03/19 16:04	07/04/19 10:58	10061-01-5	
m&p-Xylene	**<0.0088**	mg/kg	0.14	0.0088	1	07/03/19 16:04	07/04/19 10:58	179601-23-1	
o-Xylene	**<0.016**	mg/kg	0.071	0.016	1	07/03/19 16:04	07/04/19 10:58	95-47-6	
trans-1,2-Dichloroethene	**<0.033**	mg/kg	0.071	0.033	1	07/03/19 16:04	07/04/19 10:58	156-60-5	
trans-1,3-Dichloropropene	**<0.0099**	mg/kg	0.071	0.0099	1	07/03/19 16:04	07/04/19 10:58	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-125		1	07/03/19 16:04	07/04/19 10:58	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1	07/03/19 16:04	07/04/19 10:58	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1	07/03/19 16:04	07/04/19 10:58	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-55' **Lab ID: 10480680011** Collected: 06/21/19 10:55 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**35.9**	%	0.10	0.10	1		07/09/19 11:10		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.037**	mg/kg	0.079	0.037	1	07/05/19 08:44	07/05/19 12:33	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.014**	mg/kg	0.079	0.014	1	07/05/19 08:44	07/05/19 12:33	79-34-5	
1,1,2-Trichloroethane	**<0.0095**	mg/kg	0.079	0.0095	1	07/05/19 08:44	07/05/19 12:33	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.092**	mg/kg	0.32	0.092	1	07/05/19 08:44	07/05/19 12:33	76-13-1	
1,1-Dichloroethane	**<0.0089**	mg/kg	0.079	0.0089	1	07/05/19 08:44	07/05/19 12:33	75-34-3	
1,1-Dichloroethene	**<0.024**	mg/kg	0.079	0.024	1	07/05/19 08:44	07/05/19 12:33	75-35-4	
1,2,4-Trichlorobenzene	**<0.018**	mg/kg	0.079	0.018	1	07/05/19 08:44	07/05/19 12:33	120-82-1	
1,2,4-Trimethylbenzene	**<0.016**	mg/kg	0.079	0.016	1	07/05/19 08:44	07/05/19 12:33	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0083**	mg/kg	0.079	0.0083	1	07/05/19 08:44	07/05/19 12:33	106-93-4	
1,2-Dichlorobenzene	**<0.0032**	mg/kg	0.079	0.0032	1	07/05/19 08:44	07/05/19 12:33	95-50-1	
1,2-Dichloroethane	**<0.0087**	mg/kg	0.079	0.0087	1	07/05/19 08:44	07/05/19 12:33	107-06-2	
1,3,5-Trimethylbenzene	**<0.013**	mg/kg	0.079	0.013	1	07/05/19 08:44	07/05/19 12:33	108-67-8	
1,3-Dichlorobenzene	**<0.0029**	mg/kg	0.079	0.0029	1	07/05/19 08:44	07/05/19 12:33	541-73-1	
1,4-Dichlorobenzene	**<0.0049**	mg/kg	0.079	0.0049	1	07/05/19 08:44	07/05/19 12:33	106-46-7	
2-Butanone (MEK)	**<0.042**	mg/kg	0.40	0.042	1	07/05/19 08:44	07/05/19 12:33	78-93-3	
2-Hexanone	**<0.018**	mg/kg	0.40	0.018	1	07/05/19 08:44	07/05/19 12:33	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.40	0.016	1	07/05/19 08:44	07/05/19 12:33	108-10-1	
Acetone	**<0.49**	mg/kg	1.6	0.49	1	07/05/19 08:44	07/05/19 12:33	67-64-1	
Benzene	**<0.0045**	mg/kg	0.032	0.0045	1	07/05/19 08:44	07/05/19 12:33	71-43-2	
Bromodichloromethane	**<0.027**	mg/kg	0.079	0.027	1	07/05/19 08:44	07/05/19 12:33	75-27-4	
Bromoform	**<0.12**	mg/kg	0.32	0.12	1	07/05/19 08:44	07/05/19 12:33	75-25-2	
Bromomethane	**<0.093**	mg/kg	0.79	0.093	1	07/05/19 08:44	07/05/19 12:33	74-83-9	
Carbon tetrachloride	**<0.038**	mg/kg	0.079	0.038	1	07/05/19 08:44	07/05/19 12:33	56-23-5	
Chlorobenzene	**<0.0045**	mg/kg	0.079	0.0045	1	07/05/19 08:44	07/05/19 12:33	108-90-7	
Chloroethane	**<0.041**	mg/kg	0.79	0.041	1	07/05/19 08:44	07/05/19 12:33	75-00-3	
Chloroform	**<0.040**	mg/kg	0.079	0.040	1	07/05/19 08:44	07/05/19 12:33	67-66-3	
Chloromethane	**<0.019**	mg/kg	0.32	0.019	1	07/05/19 08:44	07/05/19 12:33	74-87-3	
Dibromochloromethane	**<0.0092**	mg/kg	0.32	0.0092	1	07/05/19 08:44	07/05/19 12:33	124-48-1	
Dichlorodifluoromethane	**<0.026**	mg/kg	0.32	0.026	1	07/05/19 08:44	07/05/19 12:33	75-71-8	
Ethylbenzene	**<0.0043**	mg/kg	0.079	0.0043	1	07/05/19 08:44	07/05/19 12:33	100-41-4	
Hexachloro-1,3-butadiene	**<0.019**	mg/kg	0.40	0.019	1	07/05/19 08:44	07/05/19 12:33	87-68-3	
Methyl-tert-butyl ether	**<0.0094**	mg/kg	0.079	0.0094	1	07/05/19 08:44	07/05/19 12:33	1634-04-4	
Methylene Chloride	**<0.15**	mg/kg	0.32	0.15	1	07/05/19 08:44	07/05/19 12:33	75-09-2	
Naphthalene	**<0.074**	mg/kg	0.32	0.074	1	07/05/19 08:44	07/05/19 12:33	91-20-3	
Styrene	**<0.0036**	mg/kg	0.079	0.0036	1	07/05/19 08:44	07/05/19 12:33	100-42-5	
Tetrachloroethene	**<0.028**	mg/kg	0.079	0.028	1	07/05/19 08:44	07/05/19 12:33	127-18-4	
Tetrahydrofuran	**<0.12**	mg/kg	3.2	0.12	1	07/05/19 08:44	07/05/19 12:33	109-99-9	
Toluene	**<0.019**	mg/kg	0.079	0.019	1	07/05/19 08:44	07/05/19 12:33	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.079	0.012	1	07/05/19 08:44	07/05/19 12:33	79-01-6	
Trichlorofluoromethane	**<0.14**	mg/kg	0.32	0.14	1	07/05/19 08:44	07/05/19 12:33	75-69-4	
Vinyl acetate	**<0.0092**	mg/kg	0.79	0.0092	1	07/05/19 08:44	07/05/19 12:33	108-05-4	
Vinyl chloride	**<0.016**	mg/kg	0.032	0.016	1	07/05/19 08:44	07/05/19 12:33	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-55' **Lab ID: 10480680011** Collected: 06/21/19 10:55 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.079	0.013	1	07/05/19 08:44	07/05/19 12:33	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.079	0.011	1	07/05/19 08:44	07/05/19 12:33	10061-01-5	
m&p-Xylene	**<0.0098**	mg/kg	0.16	0.0098	1	07/05/19 08:44	07/05/19 12:33	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.079	0.018	1	07/05/19 08:44	07/05/19 12:33	95-47-6	
trans-1,2-Dichloroethene	**<0.037**	mg/kg	0.079	0.037	1	07/05/19 08:44	07/05/19 12:33	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.079	0.011	1	07/05/19 08:44	07/05/19 12:33	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%.	75-125		1	07/05/19 08:44	07/05/19 12:33	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1	07/05/19 08:44	07/05/19 12:33	2037-26-5	
4-Bromofluorobenzene (S)	94	%.	75-125		1	07/05/19 08:44	07/05/19 12:33	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-60' **Lab ID: 10480680012** Collected: 06/21/19 11:35 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**35.9**	%	0.10	0.10	1		07/09/19 11:11		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.045**	mg/kg	0.096	0.045	1	07/05/19 08:44	07/05/19 12:51	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.017**	mg/kg	0.096	0.017	1	07/05/19 08:44	07/05/19 12:51	79-34-5	
1,1,2-Trichloroethane	**<0.011**	mg/kg	0.096	0.011	1	07/05/19 08:44	07/05/19 12:51	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.11**	mg/kg	0.38	0.11	1	07/05/19 08:44	07/05/19 12:51	76-13-1	
1,1-Dichloroethane	**<0.011**	mg/kg	0.096	0.011	1	07/05/19 08:44	07/05/19 12:51	75-34-3	
1,1-Dichloroethene	**<0.029**	mg/kg	0.096	0.029	1	07/05/19 08:44	07/05/19 12:51	75-35-4	
1,2,4-Trichlorobenzene	**<0.021**	mg/kg	0.096	0.021	1	07/05/19 08:44	07/05/19 12:51	120-82-1	
1,2,4-Trimethylbenzene	**<0.019**	mg/kg	0.096	0.019	1	07/05/19 08:44	07/05/19 12:51	95-63-6	
1,2-Dibromoethane (EDB)	**<0.010**	mg/kg	0.096	0.010	1	07/05/19 08:44	07/05/19 12:51	106-93-4	
1,2-Dichlorobenzene	**<0.0039**	mg/kg	0.096	0.0039	1	07/05/19 08:44	07/05/19 12:51	95-50-1	
1,2-Dichloroethane	**<0.011**	mg/kg	0.096	0.011	1	07/05/19 08:44	07/05/19 12:51	107-06-2	
1,3,5-Trimethylbenzene	**<0.015**	mg/kg	0.096	0.015	1	07/05/19 08:44	07/05/19 12:51	108-67-8	
1,3-Dichlorobenzene	**<0.0035**	mg/kg	0.096	0.0035	1	07/05/19 08:44	07/05/19 12:51	541-73-1	
1,4-Dichlorobenzene	**<0.0059**	mg/kg	0.096	0.0059	1	07/05/19 08:44	07/05/19 12:51	106-46-7	
2-Butanone (MEK)	**<0.051**	mg/kg	0.48	0.051	1	07/05/19 08:44	07/05/19 12:51	78-93-3	
2-Hexanone	**<0.022**	mg/kg	0.48	0.022	1	07/05/19 08:44	07/05/19 12:51	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.020**	mg/kg	0.48	0.020	1	07/05/19 08:44	07/05/19 12:51	108-10-1	
Acetone	**<0.60**	mg/kg	1.9	0.60	1	07/05/19 08:44	07/05/19 12:51	67-64-1	
Benzene	**<0.0054**	mg/kg	0.038	0.0054	1	07/05/19 08:44	07/05/19 12:51	71-43-2	
Bromodichloromethane	**<0.033**	mg/kg	0.096	0.033	1	07/05/19 08:44	07/05/19 12:51	75-27-4	
Bromoform	**<0.14**	mg/kg	0.38	0.14	1	07/05/19 08:44	07/05/19 12:51	75-25-2	
Bromomethane	**<0.11**	mg/kg	0.96	0.11	1	07/05/19 08:44	07/05/19 12:51	74-83-9	
Carbon tetrachloride	**<0.046**	mg/kg	0.096	0.046	1	07/05/19 08:44	07/05/19 12:51	56-23-5	
Chlorobenzene	**<0.0054**	mg/kg	0.096	0.0054	1	07/05/19 08:44	07/05/19 12:51	108-90-7	
Chloroethane	**<0.050**	mg/kg	0.96	0.050	1	07/05/19 08:44	07/05/19 12:51	75-00-3	
Chloroform	**<0.048**	mg/kg	0.096	0.048	1	07/05/19 08:44	07/05/19 12:51	67-66-3	
Chloromethane	**<0.023**	mg/kg	0.38	0.023	1	07/05/19 08:44	07/05/19 12:51	74-87-3	
Dibromochloromethane	**<0.011**	mg/kg	0.38	0.011	1	07/05/19 08:44	07/05/19 12:51	124-48-1	
Dichlorodifluoromethane	**<0.031**	mg/kg	0.38	0.031	1	07/05/19 08:44	07/05/19 12:51	75-71-8	
Ethylbenzene	**<0.0052**	mg/kg	0.096	0.0052	1	07/05/19 08:44	07/05/19 12:51	100-41-4	
Hexachloro-1,3-butadiene	**<0.023**	mg/kg	0.48	0.023	1	07/05/19 08:44	07/05/19 12:51	87-68-3	
Methyl-tert-butyl ether	**<0.011**	mg/kg	0.096	0.011	1	07/05/19 08:44	07/05/19 12:51	1634-04-4	
Methylene Chloride	**<0.18**	mg/kg	0.38	0.18	1	07/05/19 08:44	07/05/19 12:51	75-09-2	
Naphthalene	**<0.090**	mg/kg	0.38	0.090	1	07/05/19 08:44	07/05/19 12:51	91-20-3	
Styrene	**<0.0044**	mg/kg	0.096	0.0044	1	07/05/19 08:44	07/05/19 12:51	100-42-5	
Tetrachloroethene	**<0.034**	mg/kg	0.096	0.034	1	07/05/19 08:44	07/05/19 12:51	127-18-4	
Tetrahydrofuran	**<0.14**	mg/kg	3.8	0.14	1	07/05/19 08:44	07/05/19 12:51	109-99-9	
Toluene	**<0.023**	mg/kg	0.096	0.023	1	07/05/19 08:44	07/05/19 12:51	108-88-3	
Trichloroethene	**<0.015**	mg/kg	0.096	0.015	1	07/05/19 08:44	07/05/19 12:51	79-01-6	
Trichlorofluoromethane	**<0.17**	mg/kg	0.38	0.17	1	07/05/19 08:44	07/05/19 12:51	75-69-4	
Vinyl acetate	**<0.011**	mg/kg	0.96	0.011	1	07/05/19 08:44	07/05/19 12:51	108-05-4	
Vinyl chloride	**<0.019**	mg/kg	0.038	0.019	1	07/05/19 08:44	07/05/19 12:51	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-60' **Lab ID: 10480680012** Collected: 06/21/19 11:35 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.016**	mg/kg	0.096	0.016	1	07/05/19 08:44	07/05/19 12:51	156-59-2	
cis-1,3-Dichloropropene	**<0.014**	mg/kg	0.096	0.014	1	07/05/19 08:44	07/05/19 12:51	10061-01-5	
m&p-Xylene	**<0.012**	mg/kg	0.19	0.012	1	07/05/19 08:44	07/05/19 12:51	179601-23-1	
o-Xylene	**<0.022**	mg/kg	0.096	0.022	1	07/05/19 08:44	07/05/19 12:51	95-47-6	
trans-1,2-Dichloroethene	**<0.045**	mg/kg	0.096	0.045	1	07/05/19 08:44	07/05/19 12:51	156-60-5	
trans-1,3-Dichloropropene	**<0.013**	mg/kg	0.096	0.013	1	07/05/19 08:44	07/05/19 12:51	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%.	75-125		1	07/05/19 08:44	07/05/19 12:51	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1	07/05/19 08:44	07/05/19 12:51	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1	07/05/19 08:44	07/05/19 12:51	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-65' **Lab ID: 10480680013** Collected: 06/21/19 11:45 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**33.1**	%	0.10	0.10	1		07/09/19 11:11		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.035**	mg/kg	0.076	0.035	1	07/05/19 08:44	07/05/19 13:09	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.076	0.013	1	07/05/19 08:44	07/05/19 13:09	79-34-5	
1,1,2-Trichloroethane	**<0.0090**	mg/kg	0.076	0.0090	1	07/05/19 08:44	07/05/19 13:09	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.088**	mg/kg	0.30	0.088	1	07/05/19 08:44	07/05/19 13:09	76-13-1	
1,1-Dichloroethane	**<0.0085**	mg/kg	0.076	0.0085	1	07/05/19 08:44	07/05/19 13:09	75-34-3	
1,1-Dichloroethene	**<0.023**	mg/kg	0.076	0.023	1	07/05/19 08:44	07/05/19 13:09	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.076	0.017	1	07/05/19 08:44	07/05/19 13:09	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.076	0.015	1	07/05/19 08:44	07/05/19 13:09	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0080**	mg/kg	0.076	0.0080	1	07/05/19 08:44	07/05/19 13:09	106-93-4	
1,2-Dichlorobenzene	**<0.0031**	mg/kg	0.076	0.0031	1	07/05/19 08:44	07/05/19 13:09	95-50-1	
1,2-Dichloroethane	**<0.0083**	mg/kg	0.076	0.0083	1	07/05/19 08:44	07/05/19 13:09	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.076	0.012	1	07/05/19 08:44	07/05/19 13:09	108-67-8	
1,3-Dichlorobenzene	**<0.0028**	mg/kg	0.076	0.0028	1	07/05/19 08:44	07/05/19 13:09	541-73-1	
1,4-Dichlorobenzene	**<0.0047**	mg/kg	0.076	0.0047	1	07/05/19 08:44	07/05/19 13:09	106-46-7	
2-Butanone (MEK)	**<0.040**	mg/kg	0.38	0.040	1	07/05/19 08:44	07/05/19 13:09	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.38	0.017	1	07/05/19 08:44	07/05/19 13:09	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.38	0.016	1	07/05/19 08:44	07/05/19 13:09	108-10-1	
Acetone	**<0.47**	mg/kg	1.5	0.47	1	07/05/19 08:44	07/05/19 13:09	67-64-1	
Benzene	**<0.0043**	mg/kg	0.030	0.0043	1	07/05/19 08:44	07/05/19 13:09	71-43-2	
Bromodichloromethane	**<0.026**	mg/kg	0.076	0.026	1	07/05/19 08:44	07/05/19 13:09	75-27-4	
Bromoform	**<0.11**	mg/kg	0.30	0.11	1	07/05/19 08:44	07/05/19 13:09	75-25-2	
Bromomethane	**<0.088**	mg/kg	0.76	0.088	1	07/05/19 08:44	07/05/19 13:09	74-83-9	
Carbon tetrachloride	**<0.036**	mg/kg	0.076	0.036	1	07/05/19 08:44	07/05/19 13:09	56-23-5	
Chlorobenzene	**<0.0043**	mg/kg	0.076	0.0043	1	07/05/19 08:44	07/05/19 13:09	108-90-7	
Chloroethane	**<0.039**	mg/kg	0.76	0.039	1	07/05/19 08:44	07/05/19 13:09	75-00-3	
Chloroform	**<0.038**	mg/kg	0.076	0.038	1	07/05/19 08:44	07/05/19 13:09	67-66-3	
Chloromethane	**<0.018**	mg/kg	0.30	0.018	1	07/05/19 08:44	07/05/19 13:09	74-87-3	
Dibromochloromethane	**<0.0088**	mg/kg	0.30	0.0088	1	07/05/19 08:44	07/05/19 13:09	124-48-1	
Dichlorodifluoromethane	**<0.024**	mg/kg	0.30	0.024	1	07/05/19 08:44	07/05/19 13:09	75-71-8	
Ethylbenzene	**<0.0041**	mg/kg	0.076	0.0041	1	07/05/19 08:44	07/05/19 13:09	100-41-4	
Hexachloro-1,3-butadiene	**<0.018**	mg/kg	0.38	0.018	1	07/05/19 08:44	07/05/19 13:09	87-68-3	
Methyl-tert-butyl ether	**<0.0090**	mg/kg	0.076	0.0090	1	07/05/19 08:44	07/05/19 13:09	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.30	0.14	1	07/05/19 08:44	07/05/19 13:09	75-09-2	
Naphthalene	**<0.071**	mg/kg	0.30	0.071	1	07/05/19 08:44	07/05/19 13:09	91-20-3	
Styrene	**<0.0034**	mg/kg	0.076	0.0034	1	07/05/19 08:44	07/05/19 13:09	100-42-5	
Tetrachloroethene	**<0.027**	mg/kg	0.076	0.027	1	07/05/19 08:44	07/05/19 13:09	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.0	0.11	1	07/05/19 08:44	07/05/19 13:09	109-99-9	
Toluene	**<0.018**	mg/kg	0.076	0.018	1	07/05/19 08:44	07/05/19 13:09	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.076	0.012	1	07/05/19 08:44	07/05/19 13:09	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.30	0.13	1	07/05/19 08:44	07/05/19 13:09	75-69-4	
Vinyl acetate	**<0.0088**	mg/kg	0.76	0.0088	1	07/05/19 08:44	07/05/19 13:09	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.030	0.015	1	07/05/19 08:44	07/05/19 13:09	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-65' **Lab ID: 10480680013** Collected: 06/21/19 11:45 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.076	0.013	1	07/05/19 08:44	07/05/19 13:09	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.076	0.011	1	07/05/19 08:44	07/05/19 13:09	10061-01-5	
m&p-Xylene	**<0.0094**	mg/kg	0.15	0.0094	1	07/05/19 08:44	07/05/19 13:09	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.076	0.018	1	07/05/19 08:44	07/05/19 13:09	95-47-6	
trans-1,2-Dichloroethene	**<0.035**	mg/kg	0.076	0.035	1	07/05/19 08:44	07/05/19 13:09	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.076	0.011	1	07/05/19 08:44	07/05/19 13:09	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%.	75-125		1	07/05/19 08:44	07/05/19 13:09	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1	07/05/19 08:44	07/05/19 13:09	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1	07/05/19 08:44	07/05/19 13:09	460-00-4	

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-70' **Lab ID: 10480680014** Collected: 06/21/19 12:00 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**34.8**	%	0.10	0.10	1		07/09/19 11:11		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.037**	mg/kg	0.078	0.037	1	07/05/19 08:44	07/05/19 13:27	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.014**	mg/kg	0.078	0.014	1	07/05/19 08:44	07/05/19 13:27	79-34-5	
1,1,2-Trichloroethane	**<0.0094**	mg/kg	0.078	0.0094	1	07/05/19 08:44	07/05/19 13:27	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.091**	mg/kg	0.31	0.091	1	07/05/19 08:44	07/05/19 13:27	76-13-1	
1,1-Dichloroethane	**<0.0088**	mg/kg	0.078	0.0088	1	07/05/19 08:44	07/05/19 13:27	75-34-3	
1,1-Dichloroethene	**<0.024**	mg/kg	0.078	0.024	1	07/05/19 08:44	07/05/19 13:27	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.078	0.017	1	07/05/19 08:44	07/05/19 13:27	120-82-1	
1,2,4-Trimethylbenzene	**<0.016**	mg/kg	0.078	0.016	1	07/05/19 08:44	07/05/19 13:27	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0082**	mg/kg	0.078	0.0082	1	07/05/19 08:44	07/05/19 13:27	106-93-4	
1,2-Dichlorobenzene	**<0.0032**	mg/kg	0.078	0.0032	1	07/05/19 08:44	07/05/19 13:27	95-50-1	
1,2-Dichloroethane	**<0.0086**	mg/kg	0.078	0.0086	1	07/05/19 08:44	07/05/19 13:27	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.078	0.012	1	07/05/19 08:44	07/05/19 13:27	108-67-8	
1,3-Dichlorobenzene	**<0.0029**	mg/kg	0.078	0.0029	1	07/05/19 08:44	07/05/19 13:27	541-73-1	
1,4-Dichlorobenzene	**<0.0049**	mg/kg	0.078	0.0049	1	07/05/19 08:44	07/05/19 13:27	106-46-7	
2-Butanone (MEK)	**<0.042**	mg/kg	0.39	0.042	1	07/05/19 08:44	07/05/19 13:27	78-93-3	
2-Hexanone	**<0.018**	mg/kg	0.39	0.018	1	07/05/19 08:44	07/05/19 13:27	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.39	0.016	1	07/05/19 08:44	07/05/19 13:27	108-10-1	
Acetone	**<0.49**	mg/kg	1.6	0.49	1	07/05/19 08:44	07/05/19 13:27	67-64-1	
Benzene	**<0.0044**	mg/kg	0.031	0.0044	1	07/05/19 08:44	07/05/19 13:27	71-43-2	
Bromodichloromethane	**<0.027**	mg/kg	0.078	0.027	1	07/05/19 08:44	07/05/19 13:27	75-27-4	
Bromoform	**<0.12**	mg/kg	0.31	0.12	1	07/05/19 08:44	07/05/19 13:27	75-25-2	
Bromomethane	**<0.092**	mg/kg	0.78	0.092	1	07/05/19 08:44	07/05/19 13:27	74-83-9	
Carbon tetrachloride	**<0.037**	mg/kg	0.078	0.037	1	07/05/19 08:44	07/05/19 13:27	56-23-5	
Chlorobenzene	**<0.0044**	mg/kg	0.078	0.0044	1	07/05/19 08:44	07/05/19 13:27	108-90-7	
Chloroethane	**<0.041**	mg/kg	0.78	0.041	1	07/05/19 08:44	07/05/19 13:27	75-00-3	
Chloroform	**<0.039**	mg/kg	0.078	0.039	1	07/05/19 08:44	07/05/19 13:27	67-66-3	
Chloromethane	**<0.019**	mg/kg	0.31	0.019	1	07/05/19 08:44	07/05/19 13:27	74-87-3	
Dibromochloromethane	**<0.0091**	mg/kg	0.31	0.0091	1	07/05/19 08:44	07/05/19 13:27	124-48-1	
Dichlorodifluoromethane	**<0.025**	mg/kg	0.31	0.025	1	07/05/19 08:44	07/05/19 13:27	75-71-8	
Ethylbenzene	**<0.0043**	mg/kg	0.078	0.0043	1	07/05/19 08:44	07/05/19 13:27	100-41-4	
Hexachloro-1,3-butadiene	**<0.019**	mg/kg	0.39	0.019	1	07/05/19 08:44	07/05/19 13:27	87-68-3	
Methyl-tert-butyl ether	**<0.0093**	mg/kg	0.078	0.0093	1	07/05/19 08:44	07/05/19 13:27	1634-04-4	
Methylene Chloride	**<0.15**	mg/kg	0.31	0.15	1	07/05/19 08:44	07/05/19 13:27	75-09-2	
Naphthalene	**<0.073**	mg/kg	0.31	0.073	1	07/05/19 08:44	07/05/19 13:27	91-20-3	
Styrene	**<0.0036**	mg/kg	0.078	0.0036	1	07/05/19 08:44	07/05/19 13:27	100-42-5	
Tetrachloroethene	**<0.028**	mg/kg	0.078	0.028	1	07/05/19 08:44	07/05/19 13:27	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.1	0.11	1	07/05/19 08:44	07/05/19 13:27	109-99-9	
Toluene	**<0.019**	mg/kg	0.078	0.019	1	07/05/19 08:44	07/05/19 13:27	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.078	0.012	1	07/05/19 08:44	07/05/19 13:27	79-01-6	
Trichlorofluoromethane	**<0.14**	mg/kg	0.31	0.14	1	07/05/19 08:44	07/05/19 13:27	75-69-4	
Vinyl acetate	**<0.0091**	mg/kg	0.78	0.0091	1	07/05/19 08:44	07/05/19 13:27	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.031	0.015	1	07/05/19 08:44	07/05/19 13:27	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-70' **Lab ID: 10480680014** Collected: 06/21/19 12:00 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.013**	mg/kg	0.078	0.013	1	07/05/19 08:44	07/05/19 13:27	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.078	0.011	1	07/05/19 08:44	07/05/19 13:27	10061-01-5	
m&p-Xylene	**<0.0097**	mg/kg	0.16	0.0097	1	07/05/19 08:44	07/05/19 13:27	179601-23-1	
o-Xylene	**<0.018**	mg/kg	0.078	0.018	1	07/05/19 08:44	07/05/19 13:27	95-47-6	
trans-1,2-Dichloroethene	**<0.037**	mg/kg	0.078	0.037	1	07/05/19 08:44	07/05/19 13:27	156-60-5	
trans-1,3-Dichloropropene	**<0.011**	mg/kg	0.078	0.011	1	07/05/19 08:44	07/05/19 13:27	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	95	%.	75-125		1	07/05/19 08:44	07/05/19 13:27	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		1	07/05/19 08:44	07/05/19 13:27	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1	07/05/19 08:44	07/05/19 13:27	460-00-4	

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-75' **Lab ID: 10480680015** Collected: 06/21/19 12:10 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**30.4**	%	0.10	0.10	1		07/09/19 11:11		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.034**	mg/kg	0.073	0.034	1	07/05/19 08:44	07/05/19 13:45	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.073	0.013	1	07/05/19 08:44	07/05/19 13:45	79-34-5	
1,1,2-Trichloroethane	**<0.0087**	mg/kg	0.073	0.0087	1	07/05/19 08:44	07/05/19 13:45	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.084**	mg/kg	0.29	0.084	1	07/05/19 08:44	07/05/19 13:45	76-13-1	
1,1-Dichloroethane	**<0.0082**	mg/kg	0.073	0.0082	1	07/05/19 08:44	07/05/19 13:45	75-34-3	
1,1-Dichloroethene	**<0.022**	mg/kg	0.073	0.022	1	07/05/19 08:44	07/05/19 13:45	75-35-4	
1,2,4-Trichlorobenzene	**<0.016**	mg/kg	0.073	0.016	1	07/05/19 08:44	07/05/19 13:45	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.073	0.015	1	07/05/19 08:44	07/05/19 13:45	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0076**	mg/kg	0.073	0.0076	1	07/05/19 08:44	07/05/19 13:45	106-93-4	
1,2-Dichlorobenzene	**<0.0029**	mg/kg	0.073	0.0029	1	07/05/19 08:44	07/05/19 13:45	95-50-1	
1,2-Dichloroethane	**<0.0080**	mg/kg	0.073	0.0080	1	07/05/19 08:44	07/05/19 13:45	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.073	0.012	1	07/05/19 08:44	07/05/19 13:45	108-67-8	
1,3-Dichlorobenzene	**<0.0026**	mg/kg	0.073	0.0026	1	07/05/19 08:44	07/05/19 13:45	541-73-1	
1,4-Dichlorobenzene	**<0.0045**	mg/kg	0.073	0.0045	1	07/05/19 08:44	07/05/19 13:45	106-46-7	
2-Butanone (MEK)	**<0.039**	mg/kg	0.36	0.039	1	07/05/19 08:44	07/05/19 13:45	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.36	0.017	1	07/05/19 08:44	07/05/19 13:45	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.015**	mg/kg	0.36	0.015	1	07/05/19 08:44	07/05/19 13:45	108-10-1	
Acetone	**<0.45**	mg/kg	1.5	0.45	1	07/05/19 08:44	07/05/19 13:45	67-64-1	
Benzene	**<0.0041**	mg/kg	0.029	0.0041	1	07/05/19 08:44	07/05/19 13:45	71-43-2	
Bromodichloromethane	**<0.025**	mg/kg	0.073	0.025	1	07/05/19 08:44	07/05/19 13:45	75-27-4	
Bromoform	**<0.11**	mg/kg	0.29	0.11	1	07/05/19 08:44	07/05/19 13:45	75-25-2	
Bromomethane	**<0.085**	mg/kg	0.73	0.085	1	07/05/19 08:44	07/05/19 13:45	74-83-9	
Carbon tetrachloride	**<0.035**	mg/kg	0.073	0.035	1	07/05/19 08:44	07/05/19 13:45	56-23-5	
Chlorobenzene	**<0.0041**	mg/kg	0.073	0.0041	1	07/05/19 08:44	07/05/19 13:45	108-90-7	
Chloroethane	**<0.038**	mg/kg	0.73	0.038	1	07/05/19 08:44	07/05/19 13:45	75-00-3	
Chloroform	**<0.036**	mg/kg	0.073	0.036	1	07/05/19 08:44	07/05/19 13:45	67-66-3	
Chloromethane	**<0.017**	mg/kg	0.29	0.017	1	07/05/19 08:44	07/05/19 13:45	74-87-3	
Dibromochloromethane	**<0.0084**	mg/kg	0.29	0.0084	1	07/05/19 08:44	07/05/19 13:45	124-48-1	
Dichlorodifluoromethane	**<0.024**	mg/kg	0.29	0.024	1	07/05/19 08:44	07/05/19 13:45	75-71-8	
Ethylbenzene	**<0.0040**	mg/kg	0.073	0.0040	1	07/05/19 08:44	07/05/19 13:45	100-41-4	
Hexachloro-1,3-butadiene	**<0.018**	mg/kg	0.36	0.018	1	07/05/19 08:44	07/05/19 13:45	87-68-3	
Methyl-tert-butyl ether	**<0.0087**	mg/kg	0.073	0.0087	1	07/05/19 08:44	07/05/19 13:45	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.29	0.14	1	07/05/19 08:44	07/05/19 13:45	75-09-2	
Naphthalene	**<0.068**	mg/kg	0.29	0.068	1	07/05/19 08:44	07/05/19 13:45	91-20-3	
Styrene	**<0.0033**	mg/kg	0.073	0.0033	1	07/05/19 08:44	07/05/19 13:45	100-42-5	
Tetrachloroethene	**<0.026**	mg/kg	0.073	0.026	1	07/05/19 08:44	07/05/19 13:45	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	2.9	0.11	1	07/05/19 08:44	07/05/19 13:45	109-99-9	
Toluene	**<0.018**	mg/kg	0.073	0.018	1	07/05/19 08:44	07/05/19 13:45	108-88-3	
Trichloroethene	**<0.011**	mg/kg	0.073	0.011	1	07/05/19 08:44	07/05/19 13:45	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.29	0.13	1	07/05/19 08:44	07/05/19 13:45	75-69-4	
Vinyl acetate	**<0.0084**	mg/kg	0.73	0.0084	1	07/05/19 08:44	07/05/19 13:45	108-05-4	
Vinyl chloride	**<0.014**	mg/kg	0.029	0.014	1	07/05/19 08:44	07/05/19 13:45	75-01-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: SB207-75' **Lab ID: 10480680015** Collected: 06/21/19 12:10 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.073	0.012	1	07/05/19 08:44	07/05/19 13:45	156-59-2	
cis-1,3-Dichloropropene	**<0.010**	mg/kg	0.073	0.010	1	07/05/19 08:44	07/05/19 13:45	10061-01-5	
m&p-Xylene	**<0.0090**	mg/kg	0.15	0.0090	1	07/05/19 08:44	07/05/19 13:45	179601-23-1	
o-Xylene	**<0.017**	mg/kg	0.073	0.017	1	07/05/19 08:44	07/05/19 13:45	95-47-6	
trans-1,2-Dichloroethene	**<0.034**	mg/kg	0.073	0.034	1	07/05/19 08:44	07/05/19 13:45	156-60-5	
trans-1,3-Dichloropropene	**<0.010**	mg/kg	0.073	0.010	1	07/05/19 08:44	07/05/19 13:45	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-125		1	07/05/19 08:44	07/05/19 13:45	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1	07/05/19 08:44	07/05/19 13:45	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1	07/05/19 08:44	07/05/19 13:45	460-00-4	

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: FD4 **Lab ID: 10480680020** Collected: 06/21/19 08:00 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974								
Percent Moisture	**34.7**	%	0.10	0.10	1		07/09/19 11:11		
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.035**	mg/kg	0.075	0.035	1	07/05/19 08:44	07/05/19 14:03	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.013**	mg/kg	0.075	0.013	1	07/05/19 08:44	07/05/19 14:03	79-34-5	
1,1,2-Trichloroethane	**<0.0090**	mg/kg	0.075	0.0090	1	07/05/19 08:44	07/05/19 14:03	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.087**	mg/kg	0.30	0.087	1	07/05/19 08:44	07/05/19 14:03	76-13-1	
1,1-Dichloroethane	**<0.0085**	mg/kg	0.075	0.0085	1	07/05/19 08:44	07/05/19 14:03	75-34-3	
1,1-Dichloroethene	**<0.023**	mg/kg	0.075	0.023	1	07/05/19 08:44	07/05/19 14:03	75-35-4	
1,2,4-Trichlorobenzene	**<0.017**	mg/kg	0.075	0.017	1	07/05/19 08:44	07/05/19 14:03	120-82-1	
1,2,4-Trimethylbenzene	**<0.015**	mg/kg	0.075	0.015	1	07/05/19 08:44	07/05/19 14:03	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0079**	mg/kg	0.075	0.0079	1	07/05/19 08:44	07/05/19 14:03	106-93-4	
1,2-Dichlorobenzene	**<0.0030**	mg/kg	0.075	0.0030	1	07/05/19 08:44	07/05/19 14:03	95-50-1	
1,2-Dichloroethane	**<0.0083**	mg/kg	0.075	0.0083	1	07/05/19 08:44	07/05/19 14:03	107-06-2	
1,3,5-Trimethylbenzene	**<0.012**	mg/kg	0.075	0.012	1	07/05/19 08:44	07/05/19 14:03	108-67-8	
1,3-Dichlorobenzene	**<0.0027**	mg/kg	0.075	0.0027	1	07/05/19 08:44	07/05/19 14:03	541-73-1	
1,4-Dichlorobenzene	**<0.0047**	mg/kg	0.075	0.0047	1	07/05/19 08:44	07/05/19 14:03	106-46-7	
2-Butanone (MEK)	**<0.040**	mg/kg	0.38	0.040	1	07/05/19 08:44	07/05/19 14:03	78-93-3	
2-Hexanone	**<0.017**	mg/kg	0.38	0.017	1	07/05/19 08:44	07/05/19 14:03	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.016**	mg/kg	0.38	0.016	1	07/05/19 08:44	07/05/19 14:03	108-10-1	
Acetone	**<0.47**	mg/kg	1.5	0.47	1	07/05/19 08:44	07/05/19 14:03	67-64-1	
Benzene	**<0.0043**	mg/kg	0.030	0.0043	1	07/05/19 08:44	07/05/19 14:03	71-43-2	
Bromodichloromethane	**<0.026**	mg/kg	0.075	0.026	1	07/05/19 08:44	07/05/19 14:03	75-27-4	
Bromoform	**<0.11**	mg/kg	0.30	0.11	1	07/05/19 08:44	07/05/19 14:03	75-25-2	
Bromomethane	**<0.088**	mg/kg	0.75	0.088	1	07/05/19 08:44	07/05/19 14:03	74-83-9	
Carbon tetrachloride	**<0.036**	mg/kg	0.075	0.036	1	07/05/19 08:44	07/05/19 14:03	56-23-5	
Chlorobenzene	**<0.0043**	mg/kg	0.075	0.0043	1	07/05/19 08:44	07/05/19 14:03	108-90-7	
Chloroethane	**<0.039**	mg/kg	0.75	0.039	1	07/05/19 08:44	07/05/19 14:03	75-00-3	
Chloroform	**<0.038**	mg/kg	0.075	0.038	1	07/05/19 08:44	07/05/19 14:03	67-66-3	
Chloromethane	**<0.018**	mg/kg	0.30	0.018	1	07/05/19 08:44	07/05/19 14:03	74-87-3	
Dibromochloromethane	**<0.0087**	mg/kg	0.30	0.0087	1	07/05/19 08:44	07/05/19 14:03	124-48-1	
Dichlorodifluoromethane	**<0.024**	mg/kg	0.30	0.024	1	07/05/19 08:44	07/05/19 14:03	75-71-8	
Ethylbenzene	**<0.0041**	mg/kg	0.075	0.0041	1	07/05/19 08:44	07/05/19 14:03	100-41-4	
Hexachloro-1,3-butadiene	**<0.018**	mg/kg	0.38	0.018	1	07/05/19 08:44	07/05/19 14:03	87-68-3	
Methyl-tert-butyl ether	**<0.0090**	mg/kg	0.075	0.0090	1	07/05/19 08:44	07/05/19 14:03	1634-04-4	
Methylene Chloride	**<0.14**	mg/kg	0.30	0.14	1	07/05/19 08:44	07/05/19 14:03	75-09-2	
Naphthalene	**<0.071**	mg/kg	0.30	0.071	1	07/05/19 08:44	07/05/19 14:03	91-20-3	
Styrene	**<0.0034**	mg/kg	0.075	0.0034	1	07/05/19 08:44	07/05/19 14:03	100-42-5	
Tetrachloroethene	**<0.027**	mg/kg	0.075	0.027	1	07/05/19 08:44	07/05/19 14:03	127-18-4	
Tetrahydrofuran	**<0.11**	mg/kg	3.0	0.11	1	07/05/19 08:44	07/05/19 14:03	109-99-9	
Toluene	**<0.018**	mg/kg	0.075	0.018	1	07/05/19 08:44	07/05/19 14:03	108-88-3	
Trichloroethene	**<0.012**	mg/kg	0.075	0.012	1	07/05/19 08:44	07/05/19 14:03	79-01-6	
Trichlorofluoromethane	**<0.13**	mg/kg	0.30	0.13	1	07/05/19 08:44	07/05/19 14:03	75-69-4	
Vinyl acetate	**<0.0087**	mg/kg	0.75	0.0087	1	07/05/19 08:44	07/05/19 14:03	108-05-4	
Vinyl chloride	**<0.015**	mg/kg	0.030	0.015	1	07/05/19 08:44	07/05/19 14:03	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: FD4 **Lab ID: 10480680020** Collected: 06/21/19 08:00 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
cis-1,2-Dichloroethene	**<0.012**	mg/kg	0.075	0.012	1	07/05/19 08:44	07/05/19 14:03	156-59-2	
cis-1,3-Dichloropropene	**<0.011**	mg/kg	0.075	0.011	1	07/05/19 08:44	07/05/19 14:03	10061-01-5	
m&p-Xylene	**<0.0093**	mg/kg	0.15	0.0093	1	07/05/19 08:44	07/05/19 14:03	179601-23-1	
o-Xylene	**<0.017**	mg/kg	0.075	0.017	1	07/05/19 08:44	07/05/19 14:03	95-47-6	
trans-1,2-Dichloroethene	**<0.035**	mg/kg	0.075	0.035	1	07/05/19 08:44	07/05/19 14:03	156-60-5	
trans-1,3-Dichloropropene	**<0.010**	mg/kg	0.075	0.010	1	07/05/19 08:44	07/05/19 14:03	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-125		1	07/05/19 08:44	07/05/19 14:03	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1	07/05/19 08:44	07/05/19 14:03	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1	07/05/19 08:44	07/05/19 14:03	460-00-4	

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: TB1 **Lab ID: 10480680021** Collected: 06/21/19 07:00 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.023**	mg/kg	0.050	0.023	1	07/05/19 08:44	07/05/19 11:39	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.0088**	mg/kg	0.050	0.0088	1	07/05/19 08:44	07/05/19 11:39	79-34-5	
1,1,2-Trichloroethane	**<0.0060**	mg/kg	0.050	0.0060	1	07/05/19 08:44	07/05/19 11:39	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.058**	mg/kg	0.20	0.058	1	07/05/19 08:44	07/05/19 11:39	76-13-1	
1,1-Dichloroethane	**<0.0056**	mg/kg	0.050	0.0056	1	07/05/19 08:44	07/05/19 11:39	75-34-3	
1,1-Dichloroethene	**<0.015**	mg/kg	0.050	0.015	1	07/05/19 08:44	07/05/19 11:39	75-35-4	
1,2,4-Trichlorobenzene	**<0.011**	mg/kg	0.050	0.011	1	07/05/19 08:44	07/05/19 11:39	120-82-1	
1,2,4-Trimethylbenzene	**<0.010**	mg/kg	0.050	0.010	1	07/05/19 08:44	07/05/19 11:39	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0053**	mg/kg	0.050	0.0053	1	07/05/19 08:44	07/05/19 11:39	106-93-4	
1,2-Dichlorobenzene	**<0.0020**	mg/kg	0.050	0.0020	1	07/05/19 08:44	07/05/19 11:39	95-50-1	
1,2-Dichloroethane	**<0.0055**	mg/kg	0.050	0.0055	1	07/05/19 08:44	07/05/19 11:39	107-06-2	
1,3,5-Trimethylbenzene	**<0.0080**	mg/kg	0.050	0.0080	1	07/05/19 08:44	07/05/19 11:39	108-67-8	
1,3-Dichlorobenzene	**<0.0018**	mg/kg	0.050	0.0018	1	07/05/19 08:44	07/05/19 11:39	541-73-1	
1,4-Dichlorobenzene	**<0.0031**	mg/kg	0.050	0.0031	1	07/05/19 08:44	07/05/19 11:39	106-46-7	
2-Butanone (MEK)	**<0.027**	mg/kg	0.25	0.027	1	07/05/19 08:44	07/05/19 11:39	78-93-3	
2-Hexanone	**<0.012**	mg/kg	0.25	0.012	1	07/05/19 08:44	07/05/19 11:39	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.010**	mg/kg	0.25	0.010	1	07/05/19 08:44	07/05/19 11:39	108-10-1	
Acetone	**<0.31**	mg/kg	1.0	0.31	1	07/05/19 08:44	07/05/19 11:39	67-64-1	
Benzene	**<0.0028**	mg/kg	0.020	0.0028	1	07/05/19 08:44	07/05/19 11:39	71-43-2	
Bromodichloromethane	**<0.017**	mg/kg	0.050	0.017	1	07/05/19 08:44	07/05/19 11:39	75-27-4	
Bromoform	**<0.076**	mg/kg	0.20	0.076	1	07/05/19 08:44	07/05/19 11:39	75-25-2	
Bromomethane	**<0.058**	mg/kg	0.50	0.058	1	07/05/19 08:44	07/05/19 11:39	74-83-9	
Carbon tetrachloride	**<0.024**	mg/kg	0.050	0.024	1	07/05/19 08:44	07/05/19 11:39	56-23-5	
Chlorobenzene	**<0.0028**	mg/kg	0.050	0.0028	1	07/05/19 08:44	07/05/19 11:39	108-90-7	
Chloroethane	**<0.026**	mg/kg	0.50	0.026	1	07/05/19 08:44	07/05/19 11:39	75-00-3	
Chloroform	**<0.025**	mg/kg	0.050	0.025	1	07/05/19 08:44	07/05/19 11:39	67-66-3	
Chloromethane	**<0.012**	mg/kg	0.20	0.012	1	07/05/19 08:44	07/05/19 11:39	74-87-3	
Dibromochloromethane	**<0.0058**	mg/kg	0.20	0.0058	1	07/05/19 08:44	07/05/19 11:39	124-48-1	
Dichlorodifluoromethane	**<0.016**	mg/kg	0.20	0.016	1	07/05/19 08:44	07/05/19 11:39	75-71-8	
Ethylbenzene	**<0.0027**	mg/kg	0.050	0.0027	1	07/05/19 08:44	07/05/19 11:39	100-41-4	
Hexachloro-1,3-butadiene	**<0.012**	mg/kg	0.25	0.012	1	07/05/19 08:44	07/05/19 11:39	87-68-3	
Methyl-tert-butyl ether	**<0.0060**	mg/kg	0.050	0.0060	1	07/05/19 08:44	07/05/19 11:39	1634-04-4	
Methylene Chloride	**<0.094**	mg/kg	0.20	0.094	1	07/05/19 08:44	07/05/19 11:39	75-09-2	
Naphthalene	**<0.047**	mg/kg	0.20	0.047	1	07/05/19 08:44	07/05/19 11:39	91-20-3	
Styrene	**<0.0023**	mg/kg	0.050	0.0023	1	07/05/19 08:44	07/05/19 11:39	100-42-5	
Tetrachloroethene	**<0.018**	mg/kg	0.050	0.018	1	07/05/19 08:44	07/05/19 11:39	127-18-4	
Tetrahydrofuran	**<0.073**	mg/kg	2.0	0.073	1	07/05/19 08:44	07/05/19 11:39	109-99-9	
Toluene	**<0.012**	mg/kg	0.050	0.012	1	07/05/19 08:44	07/05/19 11:39	108-88-3	
Trichloroethene	**<0.0077**	mg/kg	0.050	0.0077	1	07/05/19 08:44	07/05/19 11:39	79-01-6	
Trichlorofluoromethane	**<0.087**	mg/kg	0.20	0.087	1	07/05/19 08:44	07/05/19 11:39	75-69-4	
Vinyl acetate	**<0.0058**	mg/kg	0.50	0.0058	1	07/05/19 08:44	07/05/19 11:39	108-05-4	
Vinyl chloride	**<0.0098**	mg/kg	0.020	0.0098	1	07/05/19 08:44	07/05/19 11:39	75-01-4	
cis-1,2-Dichloroethene	**<0.0083**	mg/kg	0.050	0.0083	1	07/05/19 08:44	07/05/19 11:39	156-59-2	
cis-1,3-Dichloropropene	**<0.0072**	mg/kg	0.050	0.0072	1	07/05/19 08:44	07/05/19 11:39	10061-01-5	
m&p-Xylene	**<0.0062**	mg/kg	0.10	0.0062	1	07/05/19 08:44	07/05/19 11:39	179601-23-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: TB1 **Lab ID: 10480680021** Collected: 06/21/19 07:00 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
o-Xylene	**<0.012**	mg/kg	0.050	0.012	1	07/05/19 08:44	07/05/19 11:39	95-47-6	
trans-1,2-Dichloroethene	**<0.023**	mg/kg	0.050	0.023	1	07/05/19 08:44	07/05/19 11:39	156-60-5	
trans-1,3-Dichloropropene	**<0.0070**	mg/kg	0.050	0.0070	1	07/05/19 08:44	07/05/19 11:39	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%.	75-125		1	07/05/19 08:44	07/05/19 11:39	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1	07/05/19 08:44	07/05/19 11:39	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1	07/05/19 08:44	07/05/19 11:39	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: TB2 **Lab ID: 10480680022** Collected: 06/21/19 07:05 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
1,1,1-Trichloroethane	**<0.023**	mg/kg	0.050	0.023	1	07/05/19 08:44	07/05/19 11:57	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.0088**	mg/kg	0.050	0.0088	1	07/05/19 08:44	07/05/19 11:57	79-34-5	
1,1,2-Trichloroethane	**<0.0060**	mg/kg	0.050	0.0060	1	07/05/19 08:44	07/05/19 11:57	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.058**	mg/kg	0.20	0.058	1	07/05/19 08:44	07/05/19 11:57	76-13-1	
1,1-Dichloroethane	**<0.0056**	mg/kg	0.050	0.0056	1	07/05/19 08:44	07/05/19 11:57	75-34-3	
1,1-Dichloroethene	**<0.015**	mg/kg	0.050	0.015	1	07/05/19 08:44	07/05/19 11:57	75-35-4	
1,2,4-Trichlorobenzene	**<0.011**	mg/kg	0.050	0.011	1	07/05/19 08:44	07/05/19 11:57	120-82-1	
1,2,4-Trimethylbenzene	**<0.010**	mg/kg	0.050	0.010	1	07/05/19 08:44	07/05/19 11:57	95-63-6	
1,2-Dibromoethane (EDB)	**<0.0053**	mg/kg	0.050	0.0053	1	07/05/19 08:44	07/05/19 11:57	106-93-4	
1,2-Dichlorobenzene	**<0.0020**	mg/kg	0.050	0.0020	1	07/05/19 08:44	07/05/19 11:57	95-50-1	
1,2-Dichloroethane	**<0.0055**	mg/kg	0.050	0.0055	1	07/05/19 08:44	07/05/19 11:57	107-06-2	
1,3,5-Trimethylbenzene	**<0.0080**	mg/kg	0.050	0.0080	1	07/05/19 08:44	07/05/19 11:57	108-67-8	
1,3-Dichlorobenzene	**<0.0018**	mg/kg	0.050	0.0018	1	07/05/19 08:44	07/05/19 11:57	541-73-1	
1,4-Dichlorobenzene	**<0.0031**	mg/kg	0.050	0.0031	1	07/05/19 08:44	07/05/19 11:57	106-46-7	
2-Butanone (MEK)	**<0.027**	mg/kg	0.25	0.027	1	07/05/19 08:44	07/05/19 11:57	78-93-3	
2-Hexanone	**<0.012**	mg/kg	0.25	0.012	1	07/05/19 08:44	07/05/19 11:57	591-78-6	
4-Methyl-2-pentanone (MIBK)	**<0.010**	mg/kg	0.25	0.010	1	07/05/19 08:44	07/05/19 11:57	108-10-1	
Acetone	**<0.31**	mg/kg	1.0	0.31	1	07/05/19 08:44	07/05/19 11:57	67-64-1	
Benzene	**<0.0028**	mg/kg	0.020	0.0028	1	07/05/19 08:44	07/05/19 11:57	71-43-2	
Bromodichloromethane	**<0.017**	mg/kg	0.050	0.017	1	07/05/19 08:44	07/05/19 11:57	75-27-4	
Bromoform	**<0.076**	mg/kg	0.20	0.076	1	07/05/19 08:44	07/05/19 11:57	75-25-2	
Bromomethane	**<0.058**	mg/kg	0.50	0.058	1	07/05/19 08:44	07/05/19 11:57	74-83-9	
Carbon tetrachloride	**<0.024**	mg/kg	0.050	0.024	1	07/05/19 08:44	07/05/19 11:57	56-23-5	
Chlorobenzene	**<0.0028**	mg/kg	0.050	0.0028	1	07/05/19 08:44	07/05/19 11:57	108-90-7	
Chloroethane	**<0.026**	mg/kg	0.50	0.026	1	07/05/19 08:44	07/05/19 11:57	75-00-3	
Chloroform	**<0.025**	mg/kg	0.050	0.025	1	07/05/19 08:44	07/05/19 11:57	67-66-3	
Chloromethane	**<0.012**	mg/kg	0.20	0.012	1	07/05/19 08:44	07/05/19 11:57	74-87-3	
Dibromochloromethane	**<0.0058**	mg/kg	0.20	0.0058	1	07/05/19 08:44	07/05/19 11:57	124-48-1	
Dichlorodifluoromethane	**<0.016**	mg/kg	0.20	0.016	1	07/05/19 08:44	07/05/19 11:57	75-71-8	
Ethylbenzene	**<0.0027**	mg/kg	0.050	0.0027	1	07/05/19 08:44	07/05/19 11:57	100-41-4	
Hexachloro-1,3-butadiene	**<0.012**	mg/kg	0.25	0.012	1	07/05/19 08:44	07/05/19 11:57	87-68-3	
Methyl-tert-butyl ether	**<0.0060**	mg/kg	0.050	0.0060	1	07/05/19 08:44	07/05/19 11:57	1634-04-4	
Methylene Chloride	**<0.094**	mg/kg	0.20	0.094	1	07/05/19 08:44	07/05/19 11:57	75-09-2	
Naphthalene	**<0.047**	mg/kg	0.20	0.047	1	07/05/19 08:44	07/05/19 11:57	91-20-3	
Styrene	**<0.0023**	mg/kg	0.050	0.0023	1	07/05/19 08:44	07/05/19 11:57	100-42-5	
Tetrachloroethene	**<0.018**	mg/kg	0.050	0.018	1	07/05/19 08:44	07/05/19 11:57	127-18-4	
Tetrahydrofuran	**<0.073**	mg/kg	2.0	0.073	1	07/05/19 08:44	07/05/19 11:57	109-99-9	
Toluene	**<0.012**	mg/kg	0.050	0.012	1	07/05/19 08:44	07/05/19 11:57	108-88-3	
Trichloroethene	**<0.0077**	mg/kg	0.050	0.0077	1	07/05/19 08:44	07/05/19 11:57	79-01-6	
Trichlorofluoromethane	**<0.087**	mg/kg	0.20	0.087	1	07/05/19 08:44	07/05/19 11:57	75-69-4	
Vinyl acetate	**<0.0058**	mg/kg	0.50	0.0058	1	07/05/19 08:44	07/05/19 11:57	108-05-4	
Vinyl chloride	**<0.0098**	mg/kg	0.020	0.0098	1	07/05/19 08:44	07/05/19 11:57	75-01-4	
cis-1,2-Dichloroethene	**<0.0083**	mg/kg	0.050	0.0083	1	07/05/19 08:44	07/05/19 11:57	156-59-2	
cis-1,3-Dichloropropene	**<0.0072**	mg/kg	0.050	0.0072	1	07/05/19 08:44	07/05/19 11:57	10061-01-5	
m&p-Xylene	**<0.0062**	mg/kg	0.10	0.0062	1	07/05/19 08:44	07/05/19 11:57	179601-23-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Sample: TB2 **Lab ID: 10480680022** Collected: 06/21/19 07:05 Received: 06/25/19 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5030 Med Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B								
o-Xylene	**<0.012**	mg/kg	0.050	0.012	1	07/05/19 08:44	07/05/19 11:57	95-47-6	
trans-1,2-Dichloroethene	**<0.023**	mg/kg	0.050	0.023	1	07/05/19 08:44	07/05/19 11:57	156-60-5	
trans-1,3-Dichloropropene	**<0.0070**	mg/kg	0.050	0.0070	1	07/05/19 08:44	07/05/19 11:57	10061-02-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	91	%.	75-125		1	07/05/19 08:44	07/05/19 11:57	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1	07/05/19 08:44	07/05/19 11:57	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1	07/05/19 08:44	07/05/19 11:57	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

QC Batch: 618157 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
Associated Lab Samples: 10480680001, 10480680002, 10480680003, 10480680004, 10480680005, 10480680006, 10480680007, 10480680008, 10480680009, 10480680010, 10480680011, 10480680012, 10480680013, 10480680014, 10480680015, 10480680020

SAMPLE DUPLICATE: 3338251

Parameter	Units	10480680010 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	31.2	31.5	1	30	

SAMPLE DUPLICATE: 3338382

Parameter	Units	10480701001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.3	19.6	8	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

QC Batch: 617325 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
Associated Lab Samples: 10480680001, 10480680002, 10480680003, 10480680004, 10480680005, 10480680006, 10480680007, 10480680008, 10480680010

METHOD BLANK: 3334732 Matrix: Solid
Associated Lab Samples: 10480680001, 10480680002, 10480680003, 10480680004, 10480680005, 10480680006, 10480680007, 10480680008, 10480680010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/kg	<0.023	0.050	0.023	07/04/19 10:22	
1,1,2,2-Tetrachloroethane	mg/kg	<0.0088	0.050	0.0088	07/04/19 10:22	
1,1,2-Trichloroethane	mg/kg	<0.0060	0.050	0.0060	07/04/19 10:22	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.058	0.20	0.058	07/04/19 10:22	
1,1-Dichloroethane	mg/kg	<0.0056	0.050	0.0056	07/04/19 10:22	
1,1-Dichloroethene	mg/kg	<0.015	0.050	0.015	07/04/19 10:22	
1,2,4-Trichlorobenzene	mg/kg	<0.011	0.050	0.011	07/04/19 10:22	
1,2,4-Trimethylbenzene	mg/kg	<0.010	0.050	0.010	07/04/19 10:22	
1,2-Dibromoethane (EDB)	mg/kg	<0.0053	0.050	0.0053	07/04/19 10:22	
1,2-Dichlorobenzene	mg/kg	<0.0020	0.050	0.0020	07/04/19 10:22	
1,2-Dichloroethane	mg/kg	<0.0055	0.050	0.0055	07/04/19 10:22	
1,3,5-Trimethylbenzene	mg/kg	<0.0080	0.050	0.0080	07/04/19 10:22	
1,3-Dichlorobenzene	mg/kg	<0.0018	0.050	0.0018	07/04/19 10:22	
1,4-Dichlorobenzene	mg/kg	<0.0031	0.050	0.0031	07/04/19 10:22	
2-Butanone (MEK)	mg/kg	<0.027	0.25	0.027	07/04/19 10:22	
2-Hexanone	mg/kg	<0.012	0.25	0.012	07/04/19 10:22	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.010	0.25	0.010	07/04/19 10:22	
Acetone	mg/kg	<0.31	1.0	0.31	07/04/19 10:22	
Benzene	mg/kg	0.0082J	0.020	0.0028	07/04/19 10:22	
Bromodichloromethane	mg/kg	<0.017	0.050	0.017	07/04/19 10:22	
Bromoform	mg/kg	<0.076	0.20	0.076	07/04/19 10:22	
Bromomethane	mg/kg	<0.058	0.50	0.058	07/04/19 10:22	
Carbon tetrachloride	mg/kg	<0.024	0.050	0.024	07/04/19 10:22	
Chlorobenzene	mg/kg	<0.0028	0.050	0.0028	07/04/19 10:22	
Chloroethane	mg/kg	<0.026	0.50	0.026	07/04/19 10:22	
Chloroform	mg/kg	<0.025	0.050	0.025	07/04/19 10:22	
Chloromethane	mg/kg	<0.012	0.20	0.012	07/04/19 10:22	
cis-1,2-Dichloroethene	mg/kg	<0.0083	0.050	0.0083	07/04/19 10:22	
cis-1,3-Dichloropropene	mg/kg	<0.0072	0.050	0.0072	07/04/19 10:22	
Dibromochloromethane	mg/kg	<0.0058	0.20	0.0058	07/04/19 10:22	
Dichlorodifluoromethane	mg/kg	<0.016	0.20	0.016	07/04/19 10:22	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	07/04/19 10:22	
Hexachloro-1,3-butadiene	mg/kg	<0.012	0.25	0.012	07/04/19 10:22	
m&p-Xylene	mg/kg	<0.0062	0.10	0.0062	07/04/19 10:22	
Methyl-tert-butyl ether	mg/kg	<0.0060	0.050	0.0060	07/04/19 10:22	
Methylene Chloride	mg/kg	<0.094	0.20	0.094	07/04/19 10:22	
Naphthalene	mg/kg	<0.047	0.20	0.047	07/04/19 10:22	
o-Xylene	mg/kg	<0.012	0.050	0.012	07/04/19 10:22	
Styrene	mg/kg	<0.0023	0.050	0.0023	07/04/19 10:22	
Tetrachloroethene	mg/kg	<0.018	0.050	0.018	07/04/19 10:22	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

METHOD BLANK: 3334732 Matrix: Solid

Associated Lab Samples: 10480680001, 10480680002, 10480680003, 10480680004, 10480680005, 10480680006, 10480680007, 10480680008, 10480680010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Tetrahydrofuran	mg/kg	<0.073	2.0	0.073	07/04/19 10:22	
Toluene	mg/kg	<0.012	0.050	0.012	07/04/19 10:22	
trans-1,2-Dichloroethene	mg/kg	<0.023	0.050	0.023	07/04/19 10:22	
trans-1,3-Dichloropropene	mg/kg	<0.0070	0.050	0.0070	07/04/19 10:22	
Trichloroethene	mg/kg	<0.0077	0.050	0.0077	07/04/19 10:22	
Trichlorofluoromethane	mg/kg	<0.087	0.20	0.087	07/04/19 10:22	
Vinyl acetate	mg/kg	<0.0058	0.50	0.0058	07/04/19 10:22	
Vinyl chloride	mg/kg	<0.0098	0.020	0.0098	07/04/19 10:22	
1,2-Dichloroethane-d4 (S)	%.	98	75-125		07/04/19 10:22	
4-Bromofluorobenzene (S)	%.	99	75-125		07/04/19 10:22	
Toluene-d8 (S)	%.	99	75-125		07/04/19 10:22	

LABORATORY CONTROL SAMPLE: 3334733

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	1	0.92	92	53-146	
1,1,2,2-Tetrachloroethane	mg/kg	1	0.75	75	51-125	
1,1,2-Trichloroethane	mg/kg	1	0.77	77	55-125	
1,1,2-Trichlorotrifluoroethane	mg/kg	1	0.84	84	49-150	
1,1-Dichloroethane	mg/kg	1	0.85	85	56-125	
1,1-Dichloroethene	mg/kg	1	0.85	85	48-148	
1,2,4-Trichlorobenzene	mg/kg	1	0.91	91	48-125	
1,2,4-Trimethylbenzene	mg/kg	1	0.91	91	51-126	
1,2-Dibromoethane (EDB)	mg/kg	1	0.83	83	52-125	
1,2-Dichlorobenzene	mg/kg	1	0.84	84	50-125	
1,2-Dichloroethane	mg/kg	1	0.73	73	51-125	
1,3,5-Trimethylbenzene	mg/kg	1	0.93	93	52-127	
1,3-Dichlorobenzene	mg/kg	1	0.88	88	50-128	
1,4-Dichlorobenzene	mg/kg	1	0.81	81	51-125	
2-Butanone (MEK)	mg/kg	5	2.6	52	43-125	
2-Hexanone	mg/kg	5	3.2	63	44-137	
4-Methyl-2-pentanone (MIBK)	mg/kg	5	3.4	69	39-125	
Acetone	mg/kg	5	4.0	81	46-136	
Benzene	mg/kg	1	0.78	78	48-125	
Bromodichloromethane	mg/kg	1	0.85	85	51-131	
Bromoform	mg/kg	1	0.83	83	52-125	
Bromomethane	mg/kg	1	0.79	79	30-150	
Carbon tetrachloride	mg/kg	1	0.91	91	59-129	
Chlorobenzene	mg/kg	1	0.81	81	54-125	
Chloroethane	mg/kg	1	0.75	75	61-132	
Chloroform	mg/kg	1	0.80	80	52-125	
Chloromethane	mg/kg	1	0.76	76	46-125	
cis-1,2-Dichloroethene	mg/kg	1	0.74	74	54-127	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

LABORATORY CONTROL SAMPLE: 3334733

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,3-Dichloropropene	mg/kg	1	0.79	79	50-134	
Dibromochloromethane	mg/kg	1	0.86	86	54-125	
Dichlorodifluoromethane	mg/kg	1	0.86	86	42-125	
Ethylbenzene	mg/kg	1	0.87	87	51-125	
Hexachloro-1,3-butadiene	mg/kg	1	1.1	106	41-133	
m&p-Xylene	mg/kg	2	1.8	88	51-128	
Methyl-tert-butyl ether	mg/kg	1	0.72	72	53-125	
Methylene Chloride	mg/kg	1	0.79	79	48-125	
Naphthalene	mg/kg	1	0.74	74	51-125	
o-Xylene	mg/kg	1	0.87	87	53-125	
Styrene	mg/kg	1	0.87	87	53-128	
Tetrachloroethene	mg/kg	1	0.90	90	54-131	
Tetrahydrofuran	mg/kg	10	9.0	90	42-145	
Toluene	mg/kg	1	0.80	80	51-125	
trans-1,2-Dichloroethene	mg/kg	1	0.82	82	50-130	
trans-1,3-Dichloropropene	mg/kg	1	0.82	82	52-125	
Trichloroethene	mg/kg	1	0.92	92	55-131	
Trichlorofluoromethane	mg/kg	1	0.99	99	30-150	
Vinyl acetate	mg/kg	1	0.71	71	46-125	
Vinyl chloride	mg/kg	1	0.92	92	58-125	
1,2-Dichloroethane-d4 (S)	%.			89	75-125	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			99	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334734 3334735

Parameter	Units	10480680010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	mg/kg	<0.033	1.5	1.6	1.7	1.9	119	126	63-150	11	30	
1,1,2,2-Tetrachloroethane	mg/kg	<0.012	1.5	1.6	1.6	1.7	108	110	60-146	6	30	
1,1,2-Trichloroethane	mg/kg	<0.0085	1.5	1.6	1.6	1.7	111	110	63-143	4	30	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.082	1.5	1.6	1.4	1.5	96	97	30-150	5	30	
1,1-Dichloroethane	mg/kg	<0.0080	1.5	1.6	1.6	1.7	108	112	63-144	8	30	
1,1-Dichloroethene	mg/kg	<0.021	1.5	1.6	1.5	1.6	101	106	30-150	9	30	
1,2,4-Trichlorobenzene	mg/kg	<0.016	1.5	1.6	1.7	1.8	114	114	66-142	4	30	
1,2,4-Trimethylbenzene	mg/kg	<0.014	1.5	1.6	1.8	2.0	125	131	65-145	9	30	
1,2-Dibromoethane (EDB)	mg/kg	<0.0075	1.5	1.6	1.8	1.8	122	118	67-135	2	30	
1,2-Dichlorobenzene	mg/kg	<0.0029	1.5	1.6	1.7	1.8	118	120	68-141	6	30	
1,2-Dichloroethane	mg/kg	<0.0078	1.5	1.6	1.6	1.6	106	105	56-132	3	30	
1,3,5-Trimethylbenzene	mg/kg	<0.011	1.5	1.6	1.9	1.9	127	123	66-148	1	30	
1,3-Dichlorobenzene	mg/kg	<0.0026	1.5	1.6	1.8	1.9	121	121	63-148	4	30	
1,4-Dichlorobenzene	mg/kg	<0.0044	1.5	1.6	1.7	1.7	116	113	68-140	2	30	
2-Butanone (MEK)	mg/kg	<0.038	7.4	7.7	6.3	7.0	86	91	53-138	9	30	
2-Hexanone	mg/kg	<0.016	7.4	7.7	7.6	7.7	104	100	57-150	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334734 3334735

Parameter	Units	10480680010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.015	7.4	7.7	7.9	7.8	108	101	47-150	2	30	
Acetone	mg/kg	<0.44	7.4	7.7	8.0	8.3	108	109	64-150	5	30	
Benzene	mg/kg	0.0041J	1.5	1.6	1.5	1.6	102	104	63-136	6	30	
Bromodichloromethane	mg/kg	<0.024	1.5	1.6	1.7	1.8	119	119	63-150	5	30	
Bromoform	mg/kg	<0.11	1.5	1.6	1.9	1.8	126	119	64-140	1	30	
Bromomethane	mg/kg	<0.083	1.5	1.6	1.6	1.6	105	100	56-148	0	30	
Carbon tetrachloride	mg/kg	<0.034	1.5	1.6	1.8	1.9	121	123	75-148	6	30	
Chlorobenzene	mg/kg	<0.0040	1.5	1.6	1.7	1.8	116	115	62-147	4	30	
Chloroethane	mg/kg	<0.037	1.5	1.6	1.6	1.7	106	108	37-150	6	30	
Chloroform	mg/kg	<0.035	1.5	1.6	1.6	1.7	107	109	66-130	7	30	
Chloromethane	mg/kg	<0.017	1.5	1.6	1.4	1.5	93	95	35-131	6	30	
cis-1,2-Dichloroethene	mg/kg	<0.012	1.5	1.6	1.5	1.5	101	100	63-143	3	30	
cis-1,3-Dichloropropene	mg/kg	<0.010	1.5	1.6	1.6	1.8	109	114	60-150	9	30	
Dibromochloromethane	mg/kg	<0.0082	1.5	1.6	1.9	2.0	129	128	64-144	3	30	
Dichlorodifluoromethane	mg/kg	<0.023	1.5	1.6	1.4	1.3	96	84	30-125	9	30	
Ethylbenzene	mg/kg	<0.0039	1.5	1.6	1.8	1.9	125	121	64-142	1	30	
Hexachloro-1,3-butadiene	mg/kg	<0.017	1.5	1.6	1.9	2.1	132	137	58-150	8	30	
m&p-Xylene	mg/kg	<0.0088	2.9	3.1	3.6	3.7	124	120	67-145	1	30	
Methyl-tert-butyl ether	mg/kg	<0.0084	1.5	1.6	1.5	1.6	104	107	69-134	7	30	
Methylene Chloride	mg/kg	<0.13	1.5	1.6	1.5	1.6	98	103	56-134	9	30	
Naphthalene	mg/kg	<0.066	1.5	1.6	1.6	1.7	112	113	63-148	5	30	
o-Xylene	mg/kg	<0.016	1.5	1.6	1.8	1.8	124	119	63-148	0	30	
Styrene	mg/kg	<0.0032	1.5	1.6	1.8	1.9	125	124	63-150	3	30	
Tetrachloroethene	mg/kg	<0.025	1.5	1.6	1.8	1.8	121	120	62-150	4	30	
Tetrahydrofuran	mg/kg	<0.10	14.7	15.4	19.5	19.4	133	126	53-150	1	30	
Toluene	mg/kg	<0.017	1.5	1.6	1.7	1.7	112	113	61-141	5	30	
trans-1,2-Dichloroethene	mg/kg	<0.033	1.5	1.6	1.6	1.7	108	110	52-148	6	30	
trans-1,3-Dichloropropene	mg/kg	<0.0099	1.5	1.6	1.8	1.8	120	114	62-142	1	30	
Trichloroethene	mg/kg	<0.011	1.5	1.6	1.7	1.8	118	118	59-150	4	30	
Trichlorofluoromethane	mg/kg	<0.12	1.5	1.6	1.8	1.9	125	123	30-150	2	30	
Vinyl acetate	mg/kg	<0.0082	1.5	1.6	1.5	1.6	104	103	30-150	3	30	
Vinyl chloride	mg/kg	<0.014	1.5	1.6	1.5	1.5	105	101	44-144	0	30	
1,2-Dichloroethane-d4 (S)	%.						91	91	75-125			
4-Bromofluorobenzene (S)	%.						100	101	75-125			
Toluene-d8 (S)	%.						99	99	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

QC Batch: 617511 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV 5030 Med Level
Associated Lab Samples: 10480680009, 10480680011, 10480680012, 10480680013, 10480680014, 10480680015, 10480680020, 10480680021, 10480680022

METHOD BLANK: 3335541 Matrix: Solid
Associated Lab Samples: 10480680009, 10480680011, 10480680012, 10480680013, 10480680014, 10480680015, 10480680020, 10480680021, 10480680022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/kg	<0.023	0.050	0.023	07/05/19 11:21	
1,1,2,2-Tetrachloroethane	mg/kg	<0.0088	0.050	0.0088	07/05/19 11:21	
1,1,2-Trichloroethane	mg/kg	<0.0060	0.050	0.0060	07/05/19 11:21	
1,1,2-Trichlorotrifluoroethane	mg/kg	<0.058	0.20	0.058	07/05/19 11:21	
1,1-Dichloroethane	mg/kg	<0.0056	0.050	0.0056	07/05/19 11:21	
1,1-Dichloroethene	mg/kg	<0.015	0.050	0.015	07/05/19 11:21	
1,2,4-Trichlorobenzene	mg/kg	<0.011	0.050	0.011	07/05/19 11:21	
1,2,4-Trimethylbenzene	mg/kg	<0.010	0.050	0.010	07/05/19 11:21	
1,2-Dibromoethane (EDB)	mg/kg	<0.0053	0.050	0.0053	07/05/19 11:21	
1,2-Dichlorobenzene	mg/kg	<0.0020	0.050	0.0020	07/05/19 11:21	
1,2-Dichloroethane	mg/kg	<0.0055	0.050	0.0055	07/05/19 11:21	
1,3,5-Trimethylbenzene	mg/kg	<0.0080	0.050	0.0080	07/05/19 11:21	
1,3-Dichlorobenzene	mg/kg	<0.0018	0.050	0.0018	07/05/19 11:21	
1,4-Dichlorobenzene	mg/kg	<0.0031	0.050	0.0031	07/05/19 11:21	
2-Butanone (MEK)	mg/kg	<0.027	0.25	0.027	07/05/19 11:21	
2-Hexanone	mg/kg	<0.012	0.25	0.012	07/05/19 11:21	
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.010	0.25	0.010	07/05/19 11:21	
Acetone	mg/kg	<0.31	1.0	0.31	07/05/19 11:21	
Benzene	mg/kg	<0.0028	0.020	0.0028	07/05/19 11:21	
Bromodichloromethane	mg/kg	<0.017	0.050	0.017	07/05/19 11:21	
Bromoform	mg/kg	<0.076	0.20	0.076	07/05/19 11:21	
Bromomethane	mg/kg	<0.058	0.50	0.058	07/05/19 11:21	
Carbon tetrachloride	mg/kg	<0.024	0.050	0.024	07/05/19 11:21	
Chlorobenzene	mg/kg	<0.0028	0.050	0.0028	07/05/19 11:21	
Chloroethane	mg/kg	<0.026	0.50	0.026	07/05/19 11:21	
Chloroform	mg/kg	<0.025	0.050	0.025	07/05/19 11:21	
Chloromethane	mg/kg	<0.012	0.20	0.012	07/05/19 11:21	
cis-1,2-Dichloroethene	mg/kg	<0.0083	0.050	0.0083	07/05/19 11:21	
cis-1,3-Dichloropropene	mg/kg	<0.0072	0.050	0.0072	07/05/19 11:21	
Dibromochloromethane	mg/kg	<0.0058	0.20	0.0058	07/05/19 11:21	
Dichlorodifluoromethane	mg/kg	<0.016	0.20	0.016	07/05/19 11:21	
Ethylbenzene	mg/kg	<0.0027	0.050	0.0027	07/05/19 11:21	
Hexachloro-1,3-butadiene	mg/kg	<0.012	0.25	0.012	07/05/19 11:21	
m&p-Xylene	mg/kg	<0.0062	0.10	0.0062	07/05/19 11:21	
Methyl-tert-butyl ether	mg/kg	<0.0060	0.050	0.0060	07/05/19 11:21	
Methylene Chloride	mg/kg	<0.094	0.20	0.094	07/05/19 11:21	
Naphthalene	mg/kg	<0.047	0.20	0.047	07/05/19 11:21	
o-Xylene	mg/kg	<0.012	0.050	0.012	07/05/19 11:21	
Styrene	mg/kg	<0.0023	0.050	0.0023	07/05/19 11:21	
Tetrachloroethene	mg/kg	<0.018	0.050	0.018	07/05/19 11:21	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

METHOD BLANK: 3335541 Matrix: Solid
Associated Lab Samples: 10480680009, 10480680011, 10480680012, 10480680013, 10480680014, 10480680015, 10480680020, 10480680021, 10480680022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Tetrahydrofuran	mg/kg	<0.073	2.0	0.073	07/05/19 11:21	
Toluene	mg/kg	<0.012	0.050	0.012	07/05/19 11:21	
trans-1,2-Dichloroethene	mg/kg	<0.023	0.050	0.023	07/05/19 11:21	
trans-1,3-Dichloropropene	mg/kg	<0.0070	0.050	0.0070	07/05/19 11:21	
Trichloroethene	mg/kg	<0.0077	0.050	0.0077	07/05/19 11:21	
Trichlorofluoromethane	mg/kg	<0.087	0.20	0.087	07/05/19 11:21	
Vinyl acetate	mg/kg	<0.0058	0.50	0.0058	07/05/19 11:21	
Vinyl chloride	mg/kg	<0.0098	0.020	0.0098	07/05/19 11:21	
1,2-Dichloroethane-d4 (S)	%.	89	75-125		07/05/19 11:21	
4-Bromofluorobenzene (S)	%.	98	75-125		07/05/19 11:21	
Toluene-d8 (S)	%.	99	75-125		07/05/19 11:21	

LABORATORY CONTROL SAMPLE: 3335542

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	1	0.80	80	53-146	
1,1,2,2-Tetrachloroethane	mg/kg	1	0.65	65	51-125	
1,1,2-Trichloroethane	mg/kg	1	0.68	68	55-125	
1,1,2-Trichlorotrifluoroethane	mg/kg	1	0.72	72	49-150	
1,1-Dichloroethane	mg/kg	1	0.78	78	56-125	
1,1-Dichloroethene	mg/kg	1	0.72	72	48-148	
1,2,4-Trichlorobenzene	mg/kg	1	0.66	66	48-125	
1,2,4-Trimethylbenzene	mg/kg	1	0.77	77	51-126	
1,2-Dibromoethane (EDB)	mg/kg	1	0.75	75	52-125	
1,2-Dichlorobenzene	mg/kg	1	0.73	73	50-125	
1,2-Dichloroethane	mg/kg	1	0.69	69	51-125	
1,3,5-Trimethylbenzene	mg/kg	1	0.75	75	52-127	
1,3-Dichlorobenzene	mg/kg	1	0.74	74	50-128	
1,4-Dichlorobenzene	mg/kg	1	0.71	71	51-125	
2-Butanone (MEK)	mg/kg	5	2.7	53	43-125	
2-Hexanone	mg/kg	5	3.0	60	44-137	
4-Methyl-2-pentanone (MIBK)	mg/kg	5	3.2	63	39-125	
Acetone	mg/kg	5	3.0	61	46-136	
Benzene	mg/kg	1	0.68	68	48-125	
Bromodichloromethane	mg/kg	1	0.76	76	51-131	
Bromoform	mg/kg	1	0.70	70	52-125	
Bromomethane	mg/kg	1	0.70	70	30-150	
Carbon tetrachloride	mg/kg	1	0.82	82	59-129	
Chlorobenzene	mg/kg	1	0.74	74	54-125	
Chloroethane	mg/kg	1	0.78	78	61-132	
Chloroform	mg/kg	1	0.71	71	52-125	
Chloromethane	mg/kg	1	0.65	65	46-125	
cis-1,2-Dichloroethene	mg/kg	1	0.66	66	54-127	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

LABORATORY CONTROL SAMPLE: 3335542

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,3-Dichloropropene	mg/kg	1	0.73	73	50-134	
Dibromochloromethane	mg/kg	1	0.77	77	54-125	
Dichlorodifluoromethane	mg/kg	1	0.77	77	42-125	
Ethylbenzene	mg/kg	1	0.77	77	51-125	
Hexachloro-1,3-butadiene	mg/kg	1	0.74	74	41-133	
m&p-Xylene	mg/kg	2	1.5	75	51-128	
Methyl-tert-butyl ether	mg/kg	1	0.69	69	53-125	
Methylene Chloride	mg/kg	1	0.75	75	48-125	
Naphthalene	mg/kg	1	0.64	64	51-125	
o-Xylene	mg/kg	1	0.75	75	53-125	
Styrene	mg/kg	1	0.78	78	53-128	
Tetrachloroethene	mg/kg	1	0.75	75	54-131	
Tetrahydrofuran	mg/kg	10	7.8	78	42-145	
Toluene	mg/kg	1	0.70	70	51-125	
trans-1,2-Dichloroethene	mg/kg	1	0.74	74	50-130	
trans-1,3-Dichloropropene	mg/kg	1	0.70	70	52-125	
Trichloroethene	mg/kg	1	0.75	75	55-131	
Trichlorofluoromethane	mg/kg	1	0.99	99	30-150	
Vinyl acetate	mg/kg	1	0.64	64	46-125	
Vinyl chloride	mg/kg	1	0.81	81	58-125	
1,2-Dichloroethane-d4 (S)	%.			93	75-125	
4-Bromofluorobenzene (S)	%.			98	75-125	
Toluene-d8 (S)	%.			98	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3335543 3335544

Parameter	Units	10481376001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	mg/kg	ND	1.1	1.2	1.2	1.2	110	103	63-150	3	30	
1,1,2,2-Tetrachloroethane	mg/kg	ND	1.1	1.2	1.0	0.95	93	84	60-146	6	30	
1,1,2-Trichloroethane	mg/kg	ND	1.1	1.2	1.1	1.1	97	94	63-143	2	30	
1,1,2-Trichlorotrifluoroethane	mg/kg	ND	1.1	1.2	0.95	1.0	87	89	30-150	6	30	
1,1-Dichloroethane	mg/kg	ND	1.1	1.2	1.1	1.1	103	93	63-144	6	30	
1,1-Dichloroethene	mg/kg	ND	1.1	1.2	1.1	1.0	101	89	30-150	8	30	
1,2,4-Trichlorobenzene	mg/kg	ND	1.1	1.2	1.1	1.0	101	89	66-142	8	30	
1,2,4-Trimethylbenzene	mg/kg	ND	1.1	1.2	1.2	1.2	113	103	65-145	4	30	
1,2-Dibromoethane (EDB)	mg/kg	ND	1.1	1.2	1.2	1.1	111	98	67-135	7	30	
1,2-Dichlorobenzene	mg/kg	ND	1.1	1.2	1.1	1.1	101	95	68-141	1	30	
1,2-Dichloroethane	mg/kg	ND	1.1	1.2	0.99	0.97	91	85	56-132	2	30	
1,3,5-Trimethylbenzene	mg/kg	ND	1.1	1.2	1.2	1.2	106	104	66-148	2	30	
1,3-Dichlorobenzene	mg/kg	ND	1.1	1.2	1.2	1.1	106	98	63-148	4	30	
1,4-Dichlorobenzene	mg/kg	ND	1.1	1.2	1.1	1.1	101	93	68-140	4	30	
2-Butanone (MEK)	mg/kg	ND	5.4	5.7	4.7	5.8	87	103	53-138	21	30	
2-Hexanone	mg/kg	ND	5.4	5.7	5.0	5.6	92	99	57-150	12	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3335543 3335544

Parameter	Units	10481376001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	5.4	5.7	5.1	5.1	94	89	47-150	0	30	
Acetone	mg/kg	ND	5.4	5.7	5.3	6.1	97	107	64-150	15	30	
Benzene	mg/kg	ND	1.1	1.2	1.0	1.0	94	88	63-136	2	30	
Bromodichloromethane	mg/kg	ND	1.1	1.2	1.2	1.1	106	100	63-150	2	30	
Bromoform	mg/kg	ND	1.1	1.2	1.2	1.1	108	97	64-140	6	30	
Bromomethane	mg/kg	ND	1.1	1.2	0.87	0.89	81	78	56-148	2	30	
Carbon tetrachloride	mg/kg	ND	1.1	1.2	1.1	1.2	106	102	75-148	0	30	
Chlorobenzene	mg/kg	ND	1.1	1.2	1.1	1.1	105	94	62-147	6	30	
Chloroethane	mg/kg	ND	1.1	1.2	1.0	0.99	93	87	37-150	2	30	
Chloroform	mg/kg	ND	1.1	1.2	1.0	1.0	97	91	66-130	2	30	
Chloromethane	mg/kg	ND	1.1	1.2	0.78	0.78	72	69	35-131	1	30	
cis-1,2-Dichloroethene	mg/kg	ND	1.1	1.2	1.0	0.99	92	87	63-143	1	30	
cis-1,3-Dichloropropene	mg/kg	ND	1.1	1.2	1.1	1.1	102	94	60-150	4	30	
Dibromochloromethane	mg/kg	ND	1.1	1.2	1.2	1.2	111	102	64-144	4	30	
Dichlorodifluoromethane	mg/kg	ND	1.1	1.2	0.71	0.74	65	65	30-125	5	30	
Ethylbenzene	mg/kg	ND	1.1	1.2	1.2	1.1	112	99	64-142	8	30	
Hexachloro-1,3-butadiene	mg/kg	ND	1.1	1.2	1.2	1.1	111	96	58-150	10	30	
m&p-Xylene	mg/kg	ND	2.2	2.3	2.4	2.2	112	98	67-145	8	30	
Methyl-tert-butyl ether	mg/kg	ND	1.1	1.2	1.0	1.0	95	90	69-134	1	30	
Methylene Chloride	mg/kg	ND	1.1	1.2	1.1	1.1	98	94	56-134	0	30	
Naphthalene	mg/kg	ND	1.1	1.2	1.1	1.1	100	93	63-148	3	30	
o-Xylene	mg/kg	ND	1.1	1.2	1.2	1.1	111	98	63-148	8	30	
Styrene	mg/kg	ND	1.1	1.2	1.2	1.2	112	102	63-150	5	30	
Tetrachloroethene	mg/kg	ND	1.1	1.2	1.2	1.1	107	93	62-150	9	30	
Tetrahydrofuran	mg/kg	ND	10.9	11.4	12.6	12.3	116	108	53-150	2	30	
Toluene	mg/kg	ND	1.1	1.2	1.1	1.0	100	89	61-141	7	30	
trans-1,2-Dichloroethene	mg/kg	ND	1.1	1.2	1.1	1.1	97	93	52-148	1	30	
trans-1,3-Dichloropropene	mg/kg	ND	1.1	1.2	1.1	1.1	102	96	62-142	2	30	
Trichloroethene	mg/kg	ND	1.1	1.2	1.1	1.2	103	105	59-150	6	30	
Trichlorofluoromethane	mg/kg	ND	1.1	1.2	1.1	1.1	104	100	30-150	0	30	
Vinyl acetate	mg/kg	ND	1.1	1.2	0.96	0.43J	89	38	30-150		30	
Vinyl chloride	mg/kg	ND	1.1	1.2	0.96	1.0	88	89	44-144	6	30	
1,2-Dichloroethane-d4 (S)	%.						91	92	75-125			
4-Bromofluorobenzene (S)	%.						99	98	75-125			
Toluene-d8 (S)	%.						101	97	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV 5030 Med Level	Solid	SW-846 8260B	SW-846 5030B

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 WA-Cenex Harvest Lease Si
Pace Project No.: 10480680

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10480680001	SB207-5'	ASTM D2974	618157		
10480680002	SB207-10'	ASTM D2974	618157		
10480680003	SB207-15'	ASTM D2974	618157		
10480680004	SB207-20'	ASTM D2974	618157		
10480680005	SB207-25'	ASTM D2974	618157		
10480680006	SB207-30'	ASTM D2974	618157		
10480680007	SB207-35'	ASTM D2974	618157		
10480680008	SB207-40'	ASTM D2974	618157		
10480680009	SB207-45'	ASTM D2974	618157		
10480680010	SB207-50'	ASTM D2974	618157		
10480680011	SB207-55'	ASTM D2974	618157		
10480680012	SB207-60'	ASTM D2974	618157		
10480680013	SB207-65'	ASTM D2974	618157		
10480680014	SB207-70'	ASTM D2974	618157		
10480680015	SB207-75'	ASTM D2974	618157		
10480680020	FD4	ASTM D2974	618157		
10480680001	SB207-5'	EPA 5035/5030B	617325	EPA 8260B	617517
10480680002	SB207-10'	EPA 5035/5030B	617325	EPA 8260B	617517
10480680003	SB207-15'	EPA 5035/5030B	617325	EPA 8260B	617517
10480680004	SB207-20'	EPA 5035/5030B	617325	EPA 8260B	617517
10480680005	SB207-25'	EPA 5035/5030B	617325	EPA 8260B	617517
10480680006	SB207-30'	EPA 5035/5030B	617325	EPA 8260B	617517
10480680007	SB207-35'	EPA 5035/5030B	617325	EPA 8260B	617517
10480680008	SB207-40'	EPA 5035/5030B	617325	EPA 8260B	617517
10480680009	SB207-45'	EPA 5035/5030B	617511	EPA 8260B	617653
10480680010	SB207-50'	EPA 5035/5030B	617325	EPA 8260B	617517
10480680011	SB207-55'	EPA 5035/5030B	617511	EPA 8260B	617653
10480680012	SB207-60'	EPA 5035/5030B	617511	EPA 8260B	617653
10480680013	SB207-65'	EPA 5035/5030B	617511	EPA 8260B	617653
10480680014	SB207-70'	EPA 5035/5030B	617511	EPA 8260B	617653
10480680015	SB207-75'	EPA 5035/5030B	617511	EPA 8260B	617653
10480680020	FD4	EPA 5035/5030B	617511	EPA 8260B	617653
10480680021	TB1	EPA 5035/5030B	617511	EPA 8260B	617653
10480680022	TB2	EPA 5035/5030B	617511	EPA 8260B	617653

REPORT OF LABORATORY ANALYSIS

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jon Espinoza	Company: UPRR
Email:	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Phone: Fax:	Purchase Order # PEDD# 1497-45-Rev(0)	Pace Quote: Contract# 758938
Requested Due Date: *10 Day Standard*	Project Name: Freeman WA-Cenex Harvest Lease Site	Pace Project Manager: Jennifer Gross
	Project #: 1497	Pace Profile #: *36447 / 10*

Regulatory Agency

State / Location: WA / Freeman

WO#: 10480680

10480680

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test: VOCs by 8260	Dry Weight	D422 Grain Size w/Hydrometer - SUB	TOC 9060 - SUB	MS/MSD Requested	
1	SB207-5'	SL	G	6/21	910	—	4	X					X	X	X		X		W1
2	SB207-10'				920														W2
3	SB207-15'				925														W3
4	SB207-20'				930														W4
5	SB207-25'				935														W5
6	SB207-30'				955														W6
7	SB207-35'				1000														W7
8	SB207-40'				1020														W8
9	SB207-45'				1030														W9
10	SB207-50'				1045		12											X	MS/MSD W10
11	SB207-55'				1055	—	4												W11
12	SB207-60'				1135														W12

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Jon Li / Jacobs	6/24/19		Pace	6/25/19	0950	3.1 2.8	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Espinoza

SIGNATURE of SAMPLER: Jon Li

DATE Signed: 6/21/19

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jon Espinoza	Company: UPRR
	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Email:	Purchase Order # PEDD# 1497-45-Rev(0)	Pace Quote: Contract# 758938
Phone: Fax:	Project Name: Freeman WA-Cenex Harvest Lease Site	Pace Project Manager: Jennifer Gross
Requested Due Date: *10 Day Standard*	Project #: 1497	Pace Profile #: *36447 / 10*

Regulatory Agency

State / Location: WA / Freeman

Requested Analysis Filtered (Y/N)

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	VOCs by 8260	Dry Weight	D422 Grain Size w/Hydrometer - SUB	TOC 9060 - SUB	MS/MSD Requested	
1	SB207-65'	SL	G	6/21 2019	1145	-	4	X					X		X	X		X		013
2	SB207-70'				1200										X	X		X		014
3	SB207-75'				1210										X	X		X		015
4	SB207-62'				1211		1	X									X			016
5	SB207-67'				1212		1	X									X			017
6	SB207-71'				1213		1	X									X			018
7	SB207-76'				1215		1	X									X			019
8	FD4				800		4	X					X		X	X		X		020
9	TB1				700		1						X		X					021
10	TB2				705		1						X		X					022
11				-														-		
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Jon Ci / Jacobs	6/24/19		Pace	6/25/19	0950	3.2 2.8	y	N	y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Espinoza

SIGNATURE of SAMPLER: Jon Ci DATE Signed: 6/21/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 09May2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.28	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt **Client Name:** Jacobs **Project #:** WO#: 10480680

PM: JMG Due Date: 07/10/19

CLIENT: UPRR_Jacobs

Courier: ☒Fed Ex ☐UPS ☐USPS ☐Client ☐Pace ☐SpeeDee ☐Commercial See Exception ☐

Tracking Number: 7475 9397 8559 / 8560

Custody Seal on Cooler/Box Present? ☐Yes ☒No **Seals Intact?** ☐Yes ☒No **Biological Tissue Frozen?** ☐Yes ☐No ☒N/A

Packing Material: ☒Bubble Wrap ☒Bubble Bags ☐None ☒Other: DB **Temp Blank?** ☒Yes ☐No

Thermometer: ☐T1(0461) ☐T2(1336) ☒T3(0459) ☐T4(0254) ☐T5(0489) **Type of Ice:** ☒Wet ☐Blue ☐None ☐Dry ☐Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 3.2, 2.8 °C **Average Corrected Temp (no temp blank only):** °C See Exceptions ☐

Correction Factor: True **Cooler Temp Corrected w/temp blank:** 3.2, 2.8 °C

USDA Regulated Soil: (☐ N/A, water sample/Other:) **Date/Initials of Person Examining Contents:** CEG 6/25/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐Yes ☐No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐Yes ☐No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒Yes	☐No		1.
Chain of Custody Relinquished?	☒Yes	☐No		2.
Sampler Name and/or Signature on COC?	☒Yes	☐No	☐N/A	3.
Samples Arrived within Hold Time?	☒Yes	☐No		4.
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No		5. ☐Fecal Coliform ☐HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☐Nitrate ☐Nitrite ☐Orthophos ☐Other
Rush Turn Around Time Requested?	☐Yes	☒No		6.
Sufficient Volume?	☒Yes	☐No		7.
Correct Containers Used?	☒Yes	☐No		8.
-Pace Containers Used?	☐Yes	☒No		
Containers Intact?	☒Yes	☐No		9.
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	10. Is sediment visible in the dissolved container? ☐Yes ☐No
Is sufficient information available to reconcile the samples to the COC?	☒Yes	☐No		11. If no, write ID/ Date/Time on Container Below: See Exception ☐
Matrix: ☐Water ☒Soil ☐Oil ☐Other				
All containers needing acid/base preservation have been checked?	☐Yes	☐No	☒N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐Yes	☐No	☒N/A	☐NaOH ☐HNO_3 ☐H_2SO_4 ☐Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐Yes	☐No	☒N/A	Positive for Res. Chlorine? ☐Yes ☐No pH Paper Lot# See Exception ☐
				Res. Chlorine / 0-6 Roll / 0-6 Strip / 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐Yes	☐No	☒N/A	13. See Exception ☐
Trip Blank Present?	☒Yes	☐No	☐N/A	14.
Trip Blank Custody Seals Present?	☒Yes	☐No	☐N/A	Pace Trip Blank Lot # (if purchased): 050619-3

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Date: 06/25/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: EG

Intra-Regional Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 10480680 **Workorder Name:** 1497 WA-Cenex Harvest Lease Si **Owner Received Date:** 6/25/2019 **Due Date:** 7/12/2019

Received at:	Send To Lab:
Pace Analytical Minnesota 1700 Elm Street Suite 200 Minneapolis, MN 55414 Phone (206)957-2426	Pace Analytical Billings MT 150 N Ninth Street Billings, MT 59101 Phone (406)254-7226

Report To:
Jennifer Gross

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved ZPLU					Requested Analysis: ASTMD422											LAB USE ONLY
1	SB207-62'	PS	6/21/2019 12:11	10480680016	Solid	1					X											
2	SB207-67'	PS	6/21/2019 12:12	10480680017	Solid	1					X											
3	SB207-71'	PS	6/21/2019 12:13	10480680018	Solid	1					X											
4	SB207-76'	PS	6/21/2019 12:51	10480680019	Solid	1					X											
5																						

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace	7/8/19 1430		
2	Fed Ex		MWalter - Pace	7/9/19 0930
3				
4				

Comments

Cooler Temperature on Receipt 12.2 °C | Custody Seal (Y) or N | Received on Ice Y or (N) | Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Oct2018 Page 1 of 1
	Document No.: **F-MT-C-184-Rev.15**	Issuing Authority: Pace Montana Quality Office

Sample Condition Upon Receipt

Client Name: Pace-MN

Project #: 10480680

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 4638 0198 3439

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Optional:** Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☒ Yes ☐ No

Thermometer Used: ☒ 160285052 ☐ OS418-LS **Type of Ice:** ☐ Wet ☐ Blue ☒ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read: 17.3 **Date and Initials of Person Examining Contents:** MW 7/9/19

Cooler Temp Corrected: 17.2 **Biological Tissue Frozen?** ☐ Yes ☒ No

USDA Regulated Soil ☐ Yes ☒ No

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA? Check maps & Circle State

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☐ Yes	☒ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests? Note if sediment is visible in the dissolved container.	☐ Yes	☐ No	☒ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: Soil	☒ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl ☐ NaOH+ZnAce
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☒ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐ Yes	☒ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased): NA				

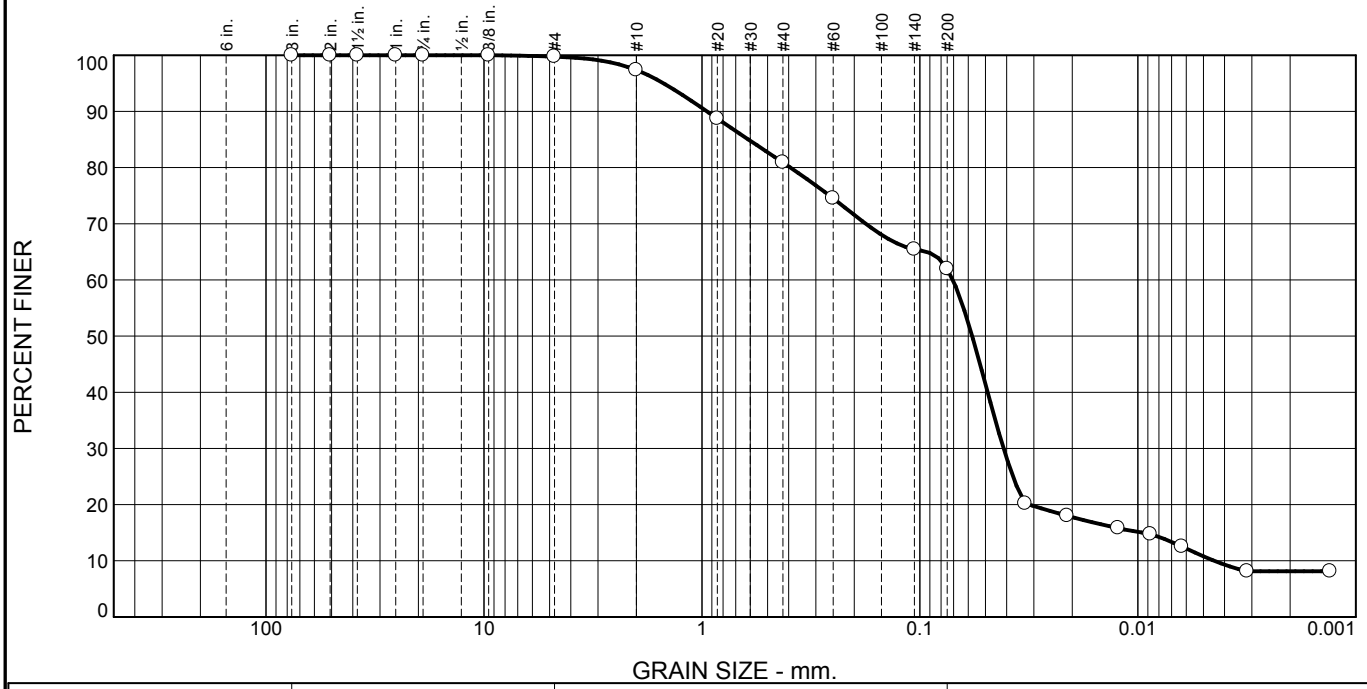
CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Jenni Gross **Date:** 07/09/19

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	3	16	19	51	11

TEST RESULTS (ASTM D422)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100		
2	100		
1.5	100		
1	100		
.75	100		
.375	100		
#4	100		
#10	97		
#20	89		
#40	81		
#60	75		
#140	65		
#200	62		
0.0329 mm.	20		
0.0211 mm.	18		
0.0123 mm.	16		
0.0088 mm.	15		
0.0063 mm.	13		
0.0032 mm.	8.1		
0.0013 mm.	8.1		

* (no specification provided)

Material Description

sandy silt

Atterberg Limits (ASTM D 4318)

PL= NP **LL=** NV **PI=**

Classification

USCS (D 2487)= ML **AASHTO (M 145)=** A-4(0)

Coefficients

D_{90}= 0.9491 D_{85}= 0.6122 D_{60}= 0.0706
D_{50}= 0.0576 D_{30}= 0.0413 D_{15}= 0.0095
D_{10}= 0.0045 C_u= 15.81 C_c= 5.41

Remarks

Date Received: 6/25/19 **Date Tested:** 7/11/19

Tested By: Will Thomas

Checked By: Rhonda Johnson

Title: Lab Manager

Location: SB207-62'
Sample Number: 10480680-16

Date Sampled: 6/21/19

Pace Analytical Services, Inc.

Billings, MT

Client: UPRR_Jacobs
Project: 1497 WA-Cenex Harvest Lease Si

Project No: **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

7/12/2019

Client: UPRR_Jacobs
Project: 1497 WA-Cenex Harvest Lease Si
Location: SB207-62'
Sample Number: 10480680-16
Material Description: sandy silt
Sample Date: 6/21/19
Date Received: 6/25/19 **PL:** NP **LL:** NV
USCS Classification: ML **AASHTO Classification:** A-4(0)
Grain Size Test Method: ASTM D422
Tested By: Will Thomas **Test Date:** 7/11/19
Checked By: Rhonda Johnson **Title:** Lab Manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
1215.70	645.36	3	0.00	0.00	100
		2	0.00	0.00	100
		1.5	0.00	0.00	100
		1	0.00	0.00	100
		.75	0.00	0.00	100
		.375	0.00	0.00	100
		#4	1.44	0.00	100
		#10	13.59	0.00	97
56.45	0.00	#20	5.01	0.00	89
		#40	4.54	0.00	81
		#60	3.69	0.00	75
		#140	5.27	0.00	65
		#200	2.01	0.00	62

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 62
Weight of hydrometer sample =56.45
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 **-** 0.164 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	22.0	25.0	18.4	0.0133	25.0	12.2	0.0329	20.2
5.00	22.0	23.0	16.4	0.0133	23.0	12.5	0.0211	18.0
15.00	22.0	21.0	14.4	0.0133	21.0	12.9	0.0123	15.8
30.00	22.0	20.0	13.4	0.0133	20.0	13.0	0.0088	14.7
60.00	22.0	18.0	11.4	0.0133	18.0	13.3	0.0063	12.5
250.00	22.0	14.0	7.4	0.0133	14.0	14.0	0.0032	8.1
1440.00	22.0	14.0	7.4	0.0133	14.0	14.0	0.0013	8.1

Pace Analytical Services, Inc.

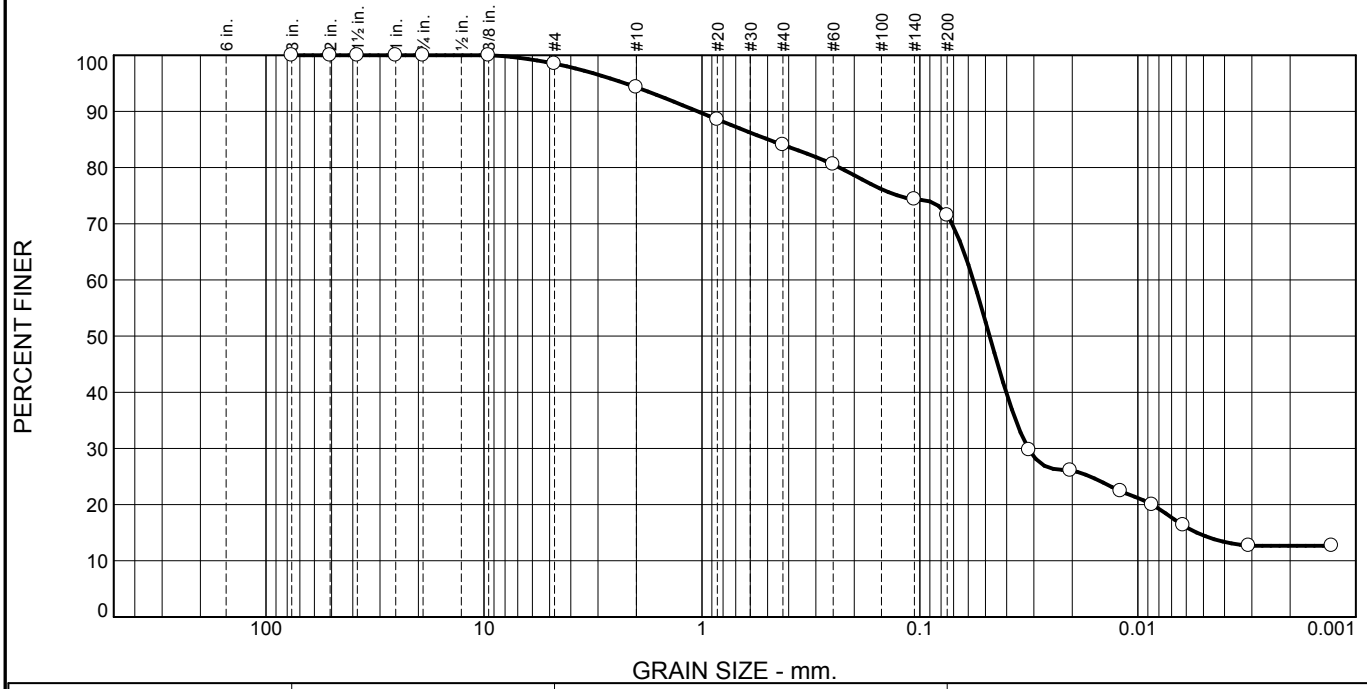
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	0	0	3	16	19	38	51	11	62

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0045	0.0095	0.0316	0.0413	0.0489	0.0576	0.0706	0.3930	0.6122	0.9491	1.5011

Fineness Modulus	C_u	C_c
0.80	15.81	5.41

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	1	5	10	12	57	15

TEST RESULTS (ASTM D422)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100		
2	100		
1.5	100		
1	100		
.75	100		
.375	100		
#4	99		
#10	94		
#20	89		
#40	84		
#60	81		
#140	74		
#200	72		
0.0315 mm.	30		
0.0204 mm.	26		
0.0120 mm.	22		
0.0086 mm.	20		
0.0062 mm.	16		
0.0031 mm.	13		
0.0013 mm.	13		

* (no specification provided)

Material Description

silt with sand

Atterberg Limits (ASTM D 4318)

PL= NP **LL=** NV **PI=**

Classification

USCS (D 2487)= ML **AASHTO (M 145)=** A-4(0)

Coefficients

D_{90}= 1.0449 D_{85}= 0.4968 D_{60}= 0.0569
D_{50}= 0.0479 D_{30}= 0.0318 D_{15}= 0.0054
D_{10}= C_u= C_c=

Remarks

Date Received: 6/25/19 **Date Tested:** 7/11/19

Tested By: Will Thomas

Checked By: Rhonda Johnson

Title: Lab Manager

Location: SB207-67'
Sample Number: 10480680-17

Date Sampled: 6/21/19

Pace Analytical Services, Inc.

Billings, MT

Client: UPRR_Jacobs
Project: 1497 WA-Cenex Harvest Lease Si

Project No: **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

7/12/2019

Client: UPRR_Jacobs
Project: 1497 WA-Cenex Harvest Lease Si
Location: SB207-67'
Sample Number: 10480680-17
Material Description: silt with sand
Sample Date: 6/21/19
Date Received: 6/25/19 **PL:** NP **LL:** NV
USCS Classification: ML **AASHTO Classification:** A-4(0)
Grain Size Test Method: ASTM D422
Tested By: Will Thomas **Test Date:** 7/11/19
Checked By: Rhonda Johnson **Title:** Lab Manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
1230.75	561.45	3	0.00	0.00	100
		2	0.00	0.00	100
		1.5	0.00	0.00	100
		1	0.00	0.00	100
		.75	0.00	0.00	100
		.375	0.00	0.00	100
		#4	10.01	0.00	99
		#10	28.20	0.00	94
58.72	0.00	#20	3.56	0.00	89
		#40	2.83	0.00	84
		#60	2.16	0.00	81
		#140	3.86	0.00	74
		#200	1.78	0.00	72

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 72
Weight of hydrometer sample =58.72
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 **-** 0.164 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	22.0	31.0	24.4	0.0133	31.0	11.2	0.0315	29.7
5.00	22.0	28.0	21.4	0.0133	28.0	11.7	0.0204	26.1
15.00	22.0	25.0	18.4	0.0133	25.0	12.2	0.0120	22.4
30.00	22.0	23.0	16.4	0.0133	23.0	12.5	0.0086	20.0
60.00	22.0	20.0	13.4	0.0133	20.0	13.0	0.0062	16.3
250.00	22.0	17.0	10.4	0.0133	17.0	13.5	0.0031	12.7

Pace Analytical Services, Inc.

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
1440.00	22.0	17.0	10.4	0.0133	17.0	13.5	0.0013	12.7

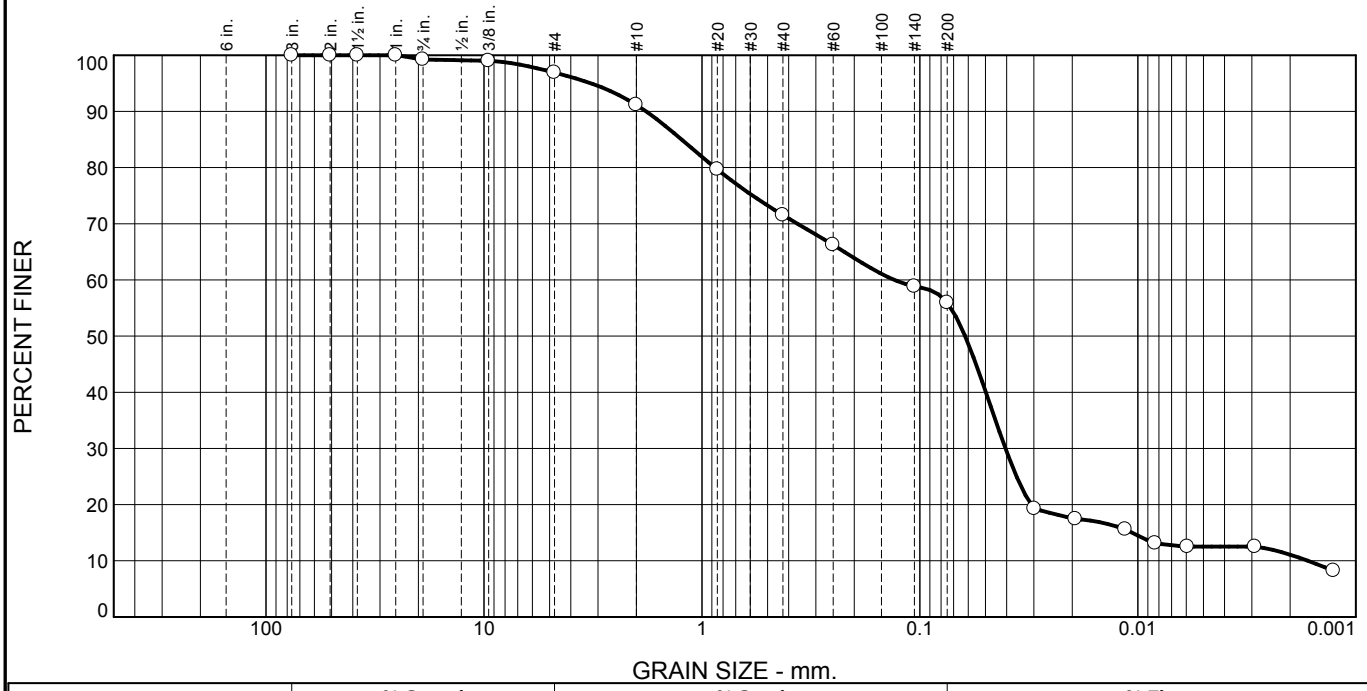
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	0	1	1	5	10	12	27	57	15	72

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0054	0.0086	0.0318	0.0402	0.0479	0.0569	0.2335	0.4968	1.0449	2.2538

Fineness Modulus
0.71

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	1	2	6	19	16	43	13

TEST RESULTS (ASTM D422)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100		
2	100		
1.5	100		
1	100		
.75	99		
.375	99		
#4	97		
#10	91		
#20	80		
#40	72		
#60	66		
#140	59		
#200	56		
0.0299 mm.	19		
0.0193 mm.	17		
0.0114 mm.	16		
0.0083 mm.	13		
0.0059 mm.	13		
0.0029 mm.	13		
0.0013 mm.	8.2		

* (no specification provided)

Material Description

sandy silt

Atterberg Limits (ASTM D 4318)

PL= NP **LL=** NV **PI=**

Classification

USCS (D 2487)= ML **AASHTO (M 145)=** A-4(0)

Coefficients

D_{90}= 1.8041 D_{85}= 1.2393 D_{60}= 0.1309
D_{50}= 0.0620 D_{30}= 0.0405 D_{15}= 0.0106
D_{10}= 0.0017 C_u= 78.86 C_c= 7.54

Remarks

Date Received: 6/25/19 **Date Tested:** 7/11/19

Tested By: Will Thomas

Checked By: Rhonda Johnson

Title: Lab Manager

Location: SB207-71'
Sample Number: 10480680-18

Date Sampled: 6/21/19

Pace Analytical Services, Inc.

Billings, MT

Client: UPRR_Jacobs
Project: 1497 WA-Cenex Harvest Lease Si

Project No: **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

7/12/2019

Client: UPRR_Jacobs
Project: 1497 WA-Cenex Harvest Lease Si
Location: SB207-71'
Sample Number: 10480680-18
Material Description: sandy silt
Sample Date: 6/21/19
Date Received: 6/25/19 **PL:** NP **LL:** NV
USCS Classification: ML **AASHTO Classification:** A-4(0)
Grain Size Test Method: ASTM D422
Tested By: Will Thomas **Test Date:** 7/11/19
Checked By: Rhonda Johnson **Title:** Lab Manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
1421.57	615.09	3	0.00	0.00	100
		2	0.00	0.00	100
		1.5	0.00	0.00	100
		1	0.00	0.00	100
		.75	6.12	0.00	99
		.375	1.84	0.00	99
		#4	16.94	0.00	97
		#10	46.40	0.00	91
91.16	0.00	#20	11.50	0.00	80
		#40	8.12	0.00	72
		#60	5.30	0.00	66
		#140	7.39	0.00	59
		#200	2.91	0.00	56

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 56
Weight of hydrometer sample =91.19
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 **-** 0.164 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	22.0	38.0	31.4	0.0133	38.0	10.1	0.0299	19.3
5.00	22.0	35.0	28.4	0.0133	35.0	10.6	0.0193	17.4
15.00	22.0	32.0	25.4	0.0133	32.0	11.0	0.0114	15.6
30.00	22.0	28.0	21.4	0.0133	28.0	11.7	0.0083	13.1
60.00	22.0	27.0	20.4	0.0133	27.0	11.9	0.0059	12.5
250.00	22.0	27.0	20.4	0.0133	27.0	11.9	0.0029	12.5
1440.00	22.0	20.0	13.4	0.0133	20.0	13.0	0.0013	8.2

Pace Analytical Services, Inc.

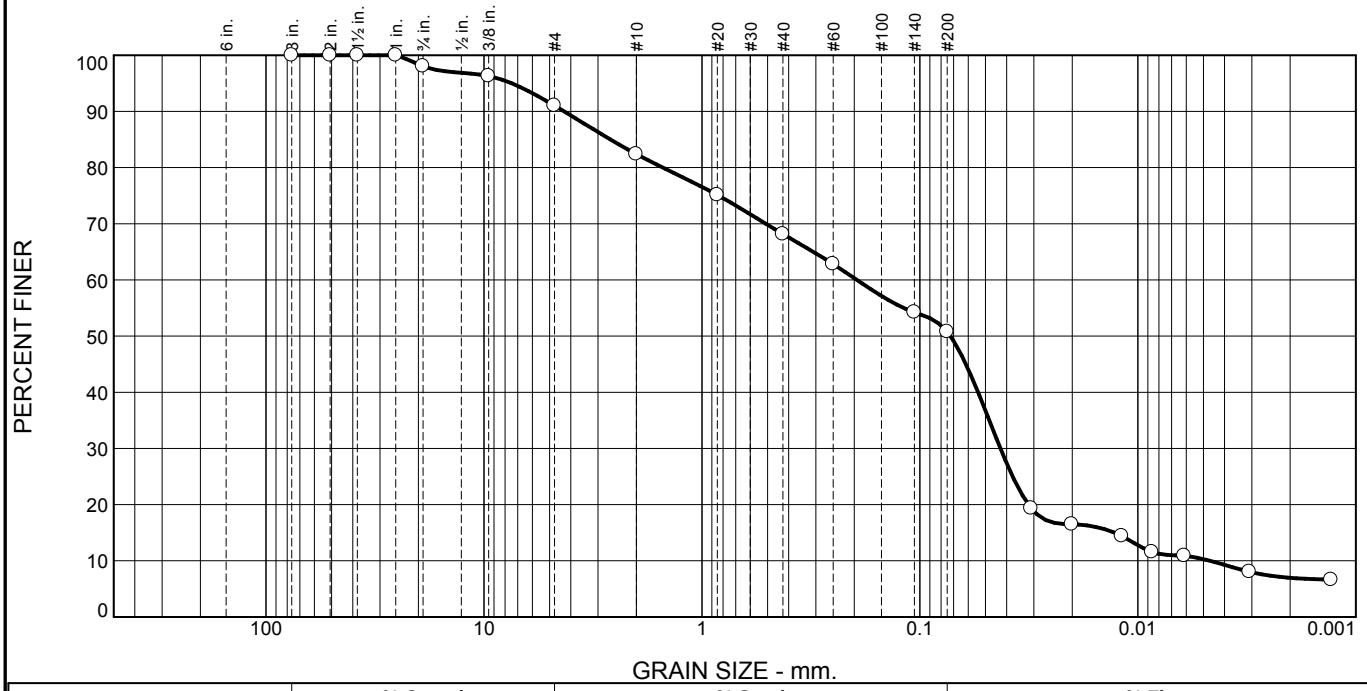
Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	1	2	3	6	19	16	41	43	13	56

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0017	0.0106	0.0309	0.0405	0.0498	0.0620	0.1309	0.8716	1.2393	1.8041	3.2313

Fineness Modulus	C_u	C_c
1.23	78.86	7.54

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	2	7	9	14	17	41	10

TEST RESULTS (ASTM D422)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100		
2	100		
1.5	100		
1	100		
.75	98		
.375	96		
#4	91		
#10	82		
#20	75		
#40	68		
#60	63		
#140	54		
#200	51		
0.0308 mm.	19		
0.0201 mm.	17		
0.0118 mm.	14		
0.0086 mm.	12		
0.0061 mm.	11		
0.0031 mm.	8.0		
0.0013 mm.	6.6		

* (no specification provided)

Material Description

sandy silt

Atterberg Limits (ASTM D 4318)

PL= NP **LL=** NV **PI=**

Classification

USCS (D 2487)= ML **AASHTO (M 145)=** A-4(0)

Coefficients

D_{90}= 4.2881 D_{85}= 2.6265 D_{60}= 0.1945
D_{50}= 0.0725 D_{30}= 0.0427 D_{15}= 0.0128
D_{10}= 0.0047 C_u= 41.70 C_c= 2.01

Remarks

Date Received: 6/25/19 **Date Tested:** 7/11/19

Tested By: Will Thomas

Checked By: Rhonda Johnson

Title: Lab Manager

Location: SB207-76'
Sample Number: 10480680-19

Date Sampled: 6/21/19

Pace Analytical Services, Inc.

Billings, MT

Client: UPRR_Jacobs
Project: 1497 WA-Cenex Harvest Lease Si

Project No: **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

7/12/2019

Client: UPRR_Jacobs
Project: 1497 WA-Cenex Harvest Lease Si
Location: SB207-76'
Sample Number: 10480680-19
Material Description: sandy silt
Sample Date: 6/21/19
Date Received: 6/25/19 **PL:** NP **LL:** NV
USCS Classification: ML **AASHTO Classification:** A-4(0)
Grain Size Test Method: ASTM D422
Tested By: Will Thomas **Test Date:** 7/11/19
Checked By: Rhonda Johnson **Title:** Lab Manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
1638.91	646.25	3	0.00	0.00	100
		2	0.00	0.00	100
		1.5	0.00	0.00	100
		1	0.00	0.00	100
		.75	19.26	0.00	98
		.375	17.48	0.00	96
		#4	52.30	0.00	91
		#10	85.69	0.00	82
71.98	0.00	#20	6.36	0.00	75
		#40	6.08	0.00	68
		#60	4.66	0.00	63
		#140	7.52	0.00	54
		#200	3.01	0.00	51

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 51
Weight of hydrometer sample =71.98
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 **-** 0.164 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	22.0	34.0	27.4	0.0133	34.0	10.7	0.0308	19.3
5.00	22.0	30.0	23.4	0.0133	30.0	11.4	0.0201	16.5
15.00	22.0	27.0	20.4	0.0133	27.0	11.9	0.0118	14.4
30.00	22.0	23.0	16.4	0.0133	23.0	12.5	0.0086	11.6
60.00	22.0	22.0	15.4	0.0133	22.0	12.7	0.0061	10.9
250.00	22.0	18.0	11.4	0.0133	18.0	13.3	0.0031	8.0
1440.00	22.0	16.0	9.4	0.0133	16.0	13.7	0.0013	6.6

Pace Analytical Services, Inc.

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0	2	7	9	9	14	17	40	41	10	51

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0047	0.0128	0.0318	0.0427	0.0541	0.0725	0.1945	1.5132	2.6265	4.2881	7.4623

Fineness Modulus	C_u	C_c
1.59	41.70	2.01

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-87307-1
Client Project/Site: TOC

For:
Pace Analytical Services, LLC
1700 Elm Street
Suite 200
Minneapolis, Minnesota 55414

Attn: Jenni Gross

Authorized for release by:
7/15/2019 3:29:19 PM

Ashley Worthy, Project Manager I
(253)922-2310
ashley.worthy@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Job ID: 580-87307-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-87307-1

Comments
No additional comments.

Receipt
The samples were received on 6/29/2019 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8º C.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-5'
Date Collected: 06/21/19 09:10
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-1
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	2100		2000	44	mg/Kg			07/12/19 14:22	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.4		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	16.6		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-10'

Date Collected: 06/21/19 09:20
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-2

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	1500	J	2000	44	mg/Kg			07/12/19 14:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.5		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	16.5		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-15'

Date Collected: 06/21/19 09:25
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-3

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	710	J	2000	44	mg/Kg			07/12/19 14:32	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.8		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	17.2		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-20'
Date Collected: 06/21/19 09:30
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-4
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	430	J	2000	44	mg/Kg			07/12/19 14:42	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.1		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	16.9		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-25'
Date Collected: 06/21/19 09:35
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-5
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	750	J	2000	44	mg/Kg			07/12/19 14:47	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.5		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	21.5		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-30'

Date Collected: 06/21/19 09:55
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-6

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	2200		2000	44	mg/Kg			07/12/19 14:52	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.5		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	18.5		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-35'
Date Collected: 06/21/19 10:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-7
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	240	J	2000	44	mg/Kg			07/12/19 14:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.4		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	22.6		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-40'
Date Collected: 06/21/19 10:20
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-8
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	840	J	2000	44	mg/Kg			07/12/19 15:01	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	74.9		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	25.1		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-45'
Date Collected: 06/21/19 10:30
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-9
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	210	J	2000	44	mg/Kg			07/12/19 15:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	65.0		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	35.0		0.1	0.1	%			07/06/19 13:30	1

Client Sample Results

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-50'
Date Collected: 06/21/19 10:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-10
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/12/19 14:07	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**65.5**		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	**34.5**		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-55'
Date Collected: 06/21/19 10:55
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-11
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	100	J	2000	44	mg/Kg			07/12/19 15:10	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	57.4		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	42.6		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-60'
Date Collected: 06/21/19 11:35
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-12
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	130	J	2000	44	mg/Kg			07/12/19 15:14	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	64.1		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	35.9		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-65'
Date Collected: 06/21/19 11:45
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-13
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	75	J	2000	44	mg/Kg			07/12/19 15:19	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	65.5		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	34.5		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-70'
Date Collected: 06/21/19 12:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-14
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/12/19 15:23	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**65.4**		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	**34.6**		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-75'
Date Collected: 06/21/19 12:10
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-15
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/12/19 15:38	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**66.6**		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	**33.4**		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: FD4
Date Collected: 06/21/19 08:00
Date Received: 06/29/19 10:15

Lab Sample ID: 580-87307-16
Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/12/19 15:43	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	**66.5**		0.1	0.1	%			07/06/19 13:30	1
Percent Moisture	**33.5**		0.1	0.1	%			07/06/19 13:30	1

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-305576/5
Matrix: Solid
Analysis Batch: 305576

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	44	mg/Kg			07/12/19 13:58	1

Lab Sample ID: LCS 580-305576/6
Matrix: Solid
Analysis Batch: 305576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Average Dup			4270	3190		mg/Kg		75	40 - 180		

Lab Sample ID: LCSD 580-305576/7
Matrix: Solid
Analysis Batch: 305576

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup			4270	3620		mg/Kg		85	40 - 180	13	32

Lab Sample ID: 580-87307-10 MS
Matrix: Solid
Analysis Batch: 305576

Client Sample ID: SB207-50'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Average Dup	ND		120000	122000		mg/Kg		101	68 - 149		

Lab Sample ID: 580-87307-10 MSD
Matrix: Solid
Analysis Batch: 305576

Client Sample ID: SB207-50'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	ND		120000	123000		mg/Kg		103	68 - 149	1	32

Lab Sample ID: 580-87307-10 DU
Matrix: Solid
Analysis Batch: 305576

Client Sample ID: SB207-50'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon - Average Dup	ND			117	J	mg/Kg				NC	50

Lab Chronicle

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-5'
Lab Sample ID: 580-87307-1
Date Collected: 06/21/19 09:10
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 14:22	JKM	TAL SEA

Client Sample ID: SB207-10'
Lab Sample ID: 580-87307-2
Date Collected: 06/21/19 09:20
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 14:27	JKM	TAL SEA

Client Sample ID: SB207-15'
Lab Sample ID: 580-87307-3
Date Collected: 06/21/19 09:25
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 14:32	JKM	TAL SEA

Client Sample ID: SB207-20'
Lab Sample ID: 580-87307-4
Date Collected: 06/21/19 09:30
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 14:42	JKM	TAL SEA

Client Sample ID: SB207-25'
Lab Sample ID: 580-87307-5
Date Collected: 06/21/19 09:35
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 14:47	JKM	TAL SEA

Client Sample ID: SB207-30'
Lab Sample ID: 580-87307-6
Date Collected: 06/21/19 09:55
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 14:52	JKM	TAL SEA

Client Sample ID: SB207-35'
Lab Sample ID: 580-87307-7
Date Collected: 06/21/19 10:00
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 14:57	JKM	TAL SEA

Client Sample ID: SB207-40'
Lab Sample ID: 580-87307-8
Date Collected: 06/21/19 10:20
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 15:01	JKM	TAL SEA

Client Sample ID: SB207-45'
Lab Sample ID: 580-87307-9
Date Collected: 06/21/19 10:30
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 15:06	JKM	TAL SEA

Client Sample ID: SB207-50'
Lab Sample ID: 580-87307-10
Date Collected: 06/21/19 10:45
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 14:07	JKM	TAL SEA

Client Sample ID: SB207-55'
Lab Sample ID: 580-87307-11
Date Collected: 06/21/19 10:55
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 15:10	JKM	TAL SEA

Client Sample ID: SB207-60'
Lab Sample ID: 580-87307-12
Date Collected: 06/21/19 11:35
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 15:14	JKM	TAL SEA

Lab Chronicle

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Client Sample ID: SB207-65'
Lab Sample ID: 580-87307-13
Date Collected: 06/21/19 11:45
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 15:19	JKM	TAL SEA

Client Sample ID: SB207-70'
Lab Sample ID: 580-87307-14
Date Collected: 06/21/19 12:00
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 15:23	JKM	TAL SEA

Client Sample ID: SB207-75'
Lab Sample ID: 580-87307-15
Date Collected: 06/21/19 12:10
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 15:38	JKM	TAL SEA

Client Sample ID: FD4
Lab Sample ID: 580-87307-16
Date Collected: 06/21/19 08:00
Matrix: Solid
Date Received: 06/29/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	304894	07/06/19 13:30	JCM	TAL SEA
Total/NA	Analysis	9060A		1	305576	07/12/19 15:43	JKM	TAL SEA

Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Pace Analytical Services, LLC
Job ID: 580-87307-1
Project/Site: TOC

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-20
ANAB	Dept. of Defense ELAP		L2236	01-19-22
ANAB	DoD		L2236	01-19-22
ANAB	ISO/IEC 17025		L2236	01-19-22
ANAB	ISO/IEC 17025		L2236	01-19-22
California	State Program	9	2901	11-05-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-19
Oregon	NELAP		WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-20

Sample Summary

Client: Pace Analytical Services, LLC
Project/Site: TOC

Job ID: 580-87307-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-87307-1	SB207-5'	Solid	06/21/19 09:10	06/29/19 10:15	
580-87307-2	SB207-10'	Solid	06/21/19 09:20	06/29/19 10:15	
580-87307-3	SB207-15'	Solid	06/21/19 09:25	06/29/19 10:15	
580-87307-4	SB207-20'	Solid	06/21/19 09:30	06/29/19 10:15	
580-87307-5	SB207-25'	Solid	06/21/19 09:35	06/29/19 10:15	
580-87307-6	SB207-30'	Solid	06/21/19 09:55	06/29/19 10:15	
580-87307-7	SB207-35'	Solid	06/21/19 10:00	06/29/19 10:15	
580-87307-8	SB207-40'	Solid	06/21/19 10:20	06/29/19 10:15	
580-87307-9	SB207-45'	Solid	06/21/19 10:30	06/29/19 10:15	
580-87307-10	SB207-50'	Solid	06/21/19 10:45	06/29/19 10:15	
580-87307-11	SB207-55'	Solid	06/21/19 10:55	06/29/19 10:15	
580-87307-12	SB207-60'	Solid	06/21/19 11:35	06/29/19 10:15	
580-87307-13	SB207-65'	Solid	06/21/19 11:45	06/29/19 10:15	
580-87307-14	SB207-70'	Solid	06/21/19 12:00	06/29/19 10:15	
580-87307-15	SB207-75'	Solid	06/21/19 12:10	06/29/19 10:15	
580-87307-16	FD4	Solid	06/21/19 08:00	06/29/19 10:15	

Chain of Custody

PASI Minnesota Laboratory

Pace Analytical®
www.pacelabs.com

87307

Workorder: 10480680 Workorder Name: 1497 WA-Cenex Harvest Lease Si Results Requested By: 7/10/2019

Report / Invoice To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426 Email: jennifer.gross@pacelabs.com	Test America 5755 8th Street E. Tacoma, WA 98424 Ashley Worthy 253-248-4965 P.O. 10480680

State of Sample Origin: WA

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: MeOH	Preserved Containers: Ungreserved 1GFU					Requested Analysis: 5632354 / 9060 TOC	Requested Analysis: dry weight										LAB USE ONLY
1	SB207-5'	6/21/2019 09:10	10480680001	Solid		1					X	X										
2	SB207-10'	6/21/2019 09:20	10480680002	Solid							X											
3	SB207-15'	6/21/2019 09:25	10480680003	Solid							X											
4	SB207-20'	6/21/2019 09:30	10480680004	Solid							X											
5	SB207-25'	6/21/2019 09:35	10480680005	Solid							X											
6	SB207-30'	6/21/2019 09:55	10480680006	Solid							X											
7	SB207-35'	6/21/2019 10:00	10480680007	Solid							X											
8	SB207-40'	6/21/2019 10:20	10480680008	Solid							X											
9	SB207-45'	6/21/2019 10:30	10480680009	Solid							X											
10	SB207-50'	6/21/2019 10:45	10480680010	Solid							X											MS/MSD
11	SB207-55'	6/21/2019 10:55	10480680011	Solid							X											
12	SB207-60'	6/21/2019 11:35	10480680012	Solid							X											
13	SB207-65'	6/21/2019 11:45	10480680013	Solid							X											
14	SB207-70'	6/21/2019 12:00	10480680014	Solid							X											
15	SB207-75'	6/21/2019 12:10	10480680015	Solid							X											
16	FD4	6/21/2019 08:00	10480680020	Solid		1					X	X										
17																						
18																						
19																						
20																						

Therm. ID: A2 Cor: 0.8 ° Unc: 1.1 °
Cooler Dsc: Lg Blue
Packing: Gub
Cust. Seal: Yes X No
Blue Ice (Wet), Dry, None
FedEx: Fo
UPS:
Lab Cour:
Other:

87307

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	[illegible]	6.28.19 1600	[illegible]	6/29/19 1005	Report to MDL GHD EQuIS EDD
2					
3					

Cooler Temperature on Receipt _____ °C	Custody Seal Y or N	Received on Ice Y or N	Samples Intact Y or N

Login Sample Receipt Checklist

Client: Pace Analytical Services, LLC

Job Number: 580-87307-1

Login Number: 87307
List Number: 1
Creator: Blankinship, Tom X

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 12, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on June 26, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10480825001	**MW17D-GW-062519**	Water	06/25/19 08:25	06/26/19 08:40
10480825002	**MW5D-GW-062519**	Water	06/25/19 09:35	06/26/19 08:40
10480825003	**MW20D-GW-062519**	Water	06/25/19 10:40	06/26/19 08:40
10480825004	**Trip Blank 1**	Water	06/25/19 07:00	06/26/19 08:40
10480825005	**MW21D-GW-062519**	Water	06/25/19 12:15	06/26/19 08:40
10480825006	**MW16D-GW-062519**	Water	06/25/19 13:15	06/26/19 08:40
10480825007	**MW18D-GW-062519**	Water	06/25/19 14:10	06/26/19 08:40
10480825008	**MW15D-GW-062519**	Water	06/25/19 15:10	06/26/19 08:40

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10480825001	**MW17D-GW-062519**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10480825002	**MW5D-GW-062519**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10480825003	**MW20D-GW-062519**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10480825004	**Trip Blank 1**	EPA 8260B	DS2	83	PASI-M
10480825005	**MW21D-GW-062519**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10480825006	**MW16D-GW-062519**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10480825007	**MW18D-GW-062519**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10480825008	**MW15D-GW-062519**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10480825001	**MW17D-GW-062519**					
RSK 175	Ethene	6.1J	ug/L	10.0	06/29/19 19:20	
EPA 6010D	Barium, Dissolved	69.6	ug/L	10.0	06/28/19 13:06	
EPA 6010D	Cobalt, Dissolved	1.3J	ug/L	10.0	06/28/19 13:06	
EPA 6010D	Molybdenum, Dissolved	6.3J	ug/L	15.0	06/28/19 13:06	
EPA 6010D	Vanadium, Dissolved	1.5J	ug/L	15.0	06/28/19 13:06	
SM 2320B	Alkalinity, Total as CaCO3	172	mg/L	5.0	07/08/19 12:53	
SM 2540C	Total Dissolved Solids	343	mg/L	10.0	07/01/19 10:40	
SM 4500-S-2 D	Sulfide, Total	0.023	mg/L	0.020	06/28/19 16:59	
EPA 300.0	Chloride	26.4	mg/L	1.2	06/26/19 20:40	
EPA 300.0	Sulfate	65.3	mg/L	1.2	06/26/19 20:40	
EPA 410.4	Chemical Oxygen Demand	23.6J	mg/L	50.0	07/03/19 13:20	
SM 5310C	Total Organic Carbon	6.2	mg/L	1.0	07/02/19 23:36	
10480825002	**MW5D-GW-062519**					
EPA 6010D	Barium, Dissolved	92.1	ug/L	10.0	06/28/19 13:08	
EPA 6010D	Cobalt, Dissolved	0.91J	ug/L	10.0	06/28/19 13:08	
EPA 6010D	Vanadium, Dissolved	7.5J	ug/L	15.0	06/28/19 13:08	
EPA 6010D	Zinc, Dissolved	9.9J	ug/L	20.0	06/28/19 13:08	B
SM 2320B	Alkalinity, Total as CaCO3	217	mg/L	5.0	07/09/19 07:10	
SM 2540C	Total Dissolved Solids	268	mg/L	10.0	07/01/19 10:40	
EPA 300.0	Chloride	1.1J	mg/L	1.2	06/26/19 20:55	
EPA 300.0	Nitrate as N	0.19	mg/L	0.10	06/26/19 20:55	
EPA 300.0	Sulfate	2.1	mg/L	1.2	06/26/19 20:55	B
EPA 353.2	Nitrogen, NO2 plus NO3	0.20	mg/L	0.10	06/27/19 12:22	
SM 5310C	Total Organic Carbon	0.67J	mg/L	1.0	07/02/19 23:50	
10480825003	**MW20D-GW-062519**					
EPA 6010D	Barium, Dissolved	19.0	ug/L	10.0	06/28/19 13:10	
EPA 6010D	Beryllium, Dissolved	0.13J	ug/L	5.0	06/28/19 13:10	
EPA 6010D	Cobalt, Dissolved	1.8J	ug/L	10.0	06/28/19 13:10	
EPA 6010D	Vanadium, Dissolved	5.1J	ug/L	15.0	06/28/19 13:10	
EPA 6010D	Zinc, Dissolved	8.7J	ug/L	20.0	06/28/19 13:10	B
EPA 8260B	Carbon disulfide	0.50J	ug/L	1.0	07/03/19 12:59	
EPA 8260B	Carbon tetrachloride	23.9	ug/L	0.50	07/03/19 12:59	
EPA 8260B	Chloroform	0.92J	ug/L	1.0	07/03/19 12:59	
SM 2320B	Alkalinity, Total as CaCO3	275	mg/L	5.0	07/09/19 07:14	M1
SM 2540C	Total Dissolved Solids	335	mg/L	10.0	07/01/19 10:40	
EPA 300.0	Chloride	6.0	mg/L	1.2	06/26/19 22:41	
EPA 300.0	Nitrate as N	1.2	mg/L	0.10	06/26/19 22:41	M1
EPA 300.0	Sulfate	9.8	mg/L	1.2	06/26/19 22:41	
EPA 353.2	Nitrogen, NO2 plus NO3	1.3	mg/L	0.10	06/27/19 12:24	
SM 5310C	Total Organic Carbon	1.0	mg/L	1.0	07/03/19 00:05	
10480825005	**MW21D-GW-062519**					
EPA 6010D	Barium, Dissolved	70.2	ug/L	10.0	06/28/19 13:21	
EPA 6010D	Beryllium, Dissolved	0.60J	ug/L	5.0	06/28/19 13:21	
EPA 6010D	Cadmium, Dissolved	0.43J	ug/L	3.0	06/28/19 13:21	
EPA 6010D	Cobalt, Dissolved	0.96J	ug/L	10.0	06/28/19 13:21	
EPA 6010D	Vanadium, Dissolved	0.78J	ug/L	15.0	06/28/19 13:21	

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10480825005	**MW21D-GW-062519**					
EPA 6010D	Zinc, Dissolved	6.8J	ug/L	20.0	06/28/19 13:21	B
SM 2320B	Alkalinity, Total as CaCO3	189	mg/L	5.0	07/09/19 07:28	
SM 2540C	Total Dissolved Solids	182	mg/L	10.0	07/01/19 10:40	
EPA 300.0	Chloride	2.9	mg/L	1.2	06/26/19 22:56	
EPA 300.0	Sulfate	8.9	mg/L	1.2	06/26/19 22:56	
SM 5310C	Total Organic Carbon	0.85J	mg/L	1.0	07/03/19 01:16	
10480825006	**MW16D-GW-062519**					
EPA 6010D	Barium, Dissolved	61.6	ug/L	10.0	06/28/19 13:23	
EPA 6010D	Beryllium, Dissolved	0.40J	ug/L	5.0	06/28/19 13:23	
EPA 6010D	Cadmium, Dissolved	0.30J	ug/L	3.0	06/28/19 13:23	
EPA 6010D	Chromium, Dissolved	0.96J	ug/L	10.0	06/28/19 13:23	
EPA 6010D	Cobalt, Dissolved	1.3J	ug/L	10.0	06/28/19 13:23	
EPA 6010D	Vanadium, Dissolved	9.8J	ug/L	15.0	06/28/19 13:23	
SM 2320B	Alkalinity, Total as CaCO3	228	mg/L	5.0	07/09/19 07:32	
SM 2540C	Total Dissolved Solids	374	mg/L	10.0	07/01/19 10:40	
EPA 300.0	Chloride	8.8	mg/L	1.2	06/26/19 23:11	
EPA 300.0	Nitrate as N	6.8	mg/L	0.10	06/26/19 23:11	
EPA 300.0	Sulfate	41.6	mg/L	1.2	06/26/19 23:11	
EPA 353.2	Nitrogen, NO2 plus NO3	7.2	mg/L	1.0	06/27/19 12:58	
SM 5310C	Total Organic Carbon	1.0	mg/L	1.0	07/03/19 01:30	
10480825007	**MW18D-GW-062519**					
EPA 6010D	Barium, Dissolved	50.4	ug/L	10.0	06/28/19 13:25	
EPA 6010D	Beryllium, Dissolved	0.45J	ug/L	5.0	06/28/19 13:25	
EPA 6010D	Cadmium, Dissolved	0.28J	ug/L	3.0	06/28/19 13:25	
EPA 6010D	Cobalt, Dissolved	0.83J	ug/L	10.0	06/28/19 13:25	
SM 2320B	Alkalinity, Total as CaCO3	155	mg/L	5.0	07/09/19 07:36	
SM 2540C	Total Dissolved Solids	193	mg/L	10.0	07/01/19 10:40	
EPA 300.0	Chloride	2.3	mg/L	1.2	06/26/19 23:26	
EPA 300.0	Sulfate	7.8	mg/L	1.2	06/26/19 23:26	
SM 5310C	Total Organic Carbon	0.65J	mg/L	1.0	07/03/19 01:44	
10480825008	**MW15D-GW-062519**					
EPA 6010D	Barium, Dissolved	10.8	ug/L	10.0	06/28/19 13:42	
EPA 6010D	Beryllium, Dissolved	0.30J	ug/L	5.0	06/28/19 13:42	
EPA 6010D	Cobalt, Dissolved	1.6J	ug/L	10.0	06/28/19 13:42	
EPA 6010D	Copper, Dissolved	1.8J	ug/L	10.0	06/28/19 13:42	B
EPA 6010D	Nickel, Dissolved	1.1J	ug/L	20.0	06/28/19 13:42	
EPA 6010D	Vanadium, Dissolved	10.3J	ug/L	15.0	06/28/19 13:42	
EPA 6010D	Zinc, Dissolved	7.6J	ug/L	20.0	06/28/19 13:42	B
EPA 8260B	Carbon tetrachloride	7.9	ug/L	0.50	07/03/19 15:22	
SM 2320B	Alkalinity, Total as CaCO3	180	mg/L	5.0	07/09/19 08:10	
SM 2540C	Total Dissolved Solids	254	mg/L	10.0	07/01/19 10:40	
EPA 300.0	Chloride	3.2	mg/L	1.2	06/26/19 23:42	
EPA 300.0	Nitrate as N	2.2	mg/L	0.10	06/26/19 23:42	
EPA 300.0	Sulfate	7.0	mg/L	1.2	06/26/19 23:42	
EPA 353.2	Nitrogen, NO2 plus NO3	2.1	mg/L	0.50	07/06/19 12:24	
SM 5310C	Total Organic Carbon	0.70J	mg/L	1.0	07/03/19 02:27	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 616585

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481531001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 3330980)
  - Ethane
  - Ethene
  - Methane

R1: RPD value was outside control limits.

- MSD (Lab ID: 3330980)
  - Ethane
  - Ethene
  - Methane

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 615876

B: Analyte was detected in the associated method blank.
- BLANK for HBN 615876 [MPRP/941 (Lab ID: 3327178)
  - Copper, Dissolved
  - Zinc, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
8 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- MW15D-GW-062519 (Lab ID: 10480825008)
- MW16D-GW-062519 (Lab ID: 10480825006)
- MW17D-GW-062519 (Lab ID: 10480825001)
- MW18D-GW-062519 (Lab ID: 10480825007)
- MW20D-GW-062519 (Lab ID: 10480825003)
- MW21D-GW-062519 (Lab ID: 10480825005)
- MW5D-GW-062519 (Lab ID: 10480825002)
- Trip Blank 1 (Lab ID: 10480825004)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 617335

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- BLANK (Lab ID: 3334749)
  - Acrolein
- LCS (Lab ID: 3334750)
  - Acrolein
- MS (Lab ID: 3334751)
  - Acrolein
- MS (Lab ID: 3334753)
  - Acrolein
- MSD (Lab ID: 3334752)
  - Acrolein
- MSD (Lab ID: 3334754)
  - Acrolein
- MW15D-GW-062519 (Lab ID: 10480825008)
  - Acrolein
- MW16D-GW-062519 (Lab ID: 10480825006)
  - Acrolein
- MW17D-GW-062519 (Lab ID: 10480825001)
  - Acrolein
- MW18D-GW-062519 (Lab ID: 10480825007)
  - Acrolein

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

QC Batch: 617335

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- MW20D-GW-062519 (Lab ID: 10480825003)
  - Acrolein
- MW21D-GW-062519 (Lab ID: 10480825005)
  - Acrolein
- MW5D-GW-062519 (Lab ID: 10480825002)
  - Acrolein
- Trip Blank 1 (Lab ID: 10480825004)
  - Acrolein

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 617335

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480825003,10480825007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3334753)
  - Bromodichloromethane
- MSD (Lab ID: 3334752)
  - Acetone

Additional Comments:

Analyte Comments:

QC Batch: 617335

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3334749)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

Analyte Comments:

QC Batch: 617335

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- LCS (Lab ID: 3334750)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3334751)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3334753)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3334752)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3334754)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW15D-GW-062519 (Lab ID: 10480825008)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW16D-GW-062519 (Lab ID: 10480825006)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW17D-GW-062519 (Lab ID: 10480825001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW18D-GW-062519 (Lab ID: 10480825007)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW20D-GW-062519 (Lab ID: 10480825003)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW21D-GW-062519 (Lab ID: 10480825005)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

Analyte Comments:

QC Batch: 617335

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- MW21D-GW-062519 (Lab ID: 10480825005)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW5D-GW-062519 (Lab ID: 10480825002)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- Trip Blank 1 (Lab ID: 10480825004)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 618175

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480825003,10480825007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 3338290)
  - Alkalinity, Total as CaCO3

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 147701

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480825003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 652390)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 615838

B: Analyte was detected in the associated method blank.
- BLANK for HBN 615838 [WETA/399 (Lab ID: 3326845)
  - Sulfate

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 615838

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480825003,10480825007,10480886008

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3326847)
  - Chloride
- MS (Lab ID: 3326849)
  - Nitrate as N
- MSD (Lab ID: 3326848)
  - Chloride
- MSD (Lab ID: 3326850)
  - Nitrate as N

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
- MS (Lab ID: 3326847)
  - Sulfate
- MSD (Lab ID: 3326848)
  - Sulfate

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 615995

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480825003,10480825007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3327566)
  - Nitrogen, NO2 plus NO3

QC Batch: 617807

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480939001,10480939002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3336982)
  - Nitrogen, NO2 plus NO3
- MSD (Lab ID: 3336983)
  - Nitrogen, NO2 plus NO3

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
7 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW17D-GW-062519 **Lab ID: 10480825001** Collected: 06/25/19 08:25 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		06/29/19 19:20	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		06/29/19 19:20	74-84-0	
Ethene	**6.1J**	ug/L	10.0	2.9	1		06/29/19 19:20	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:06	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:06	7440-38-2	
Barium, Dissolved	**69.6**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:06	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:06	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:06	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:06	7440-47-3	
Cobalt, Dissolved	**1.3J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:06	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:06	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:06	7439-92-1	
Molybdenum, Dissolved	**6.3J**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:06	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:06	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:06	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:06	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:06	7440-28-0	
Vanadium, Dissolved	**1.5J**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:06	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:06	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:29	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 13:46	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 13:46	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:46	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 13:46	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 13:46	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:46	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:46	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 13:46	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 13:46	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 13:46	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 13:46	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 13:46	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 13:46	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 13:46	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 13:46	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 13:46	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 13:46	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 13:46	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 13:46	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:46	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW17D-GW-062519 **Lab ID: 10480825001** Collected: 06/25/19 08:25 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 13:46	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:46	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 13:46	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 13:46	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 13:46	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 13:46	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:46	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 13:46	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 13:46	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 13:46	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 13:46	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 13:46	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 13:46	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 13:46	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 13:46	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 13:46	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 13:46	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 13:46	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 13:46	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/03/19 13:46	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/03/19 13:46	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:46	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 13:46	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/03/19 13:46	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 13:46	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 13:46	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 13:46	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 13:46	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 13:46	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 13:46	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 13:46	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 13:46	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 13:46	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 13:46	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:46	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 13:46	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 13:46	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 13:46	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:46	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 13:46	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 13:46	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 13:46	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 13:46	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 13:46	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 13:46	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 13:46	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW17D-GW-062519 **Lab ID: 10480825001** Collected: 06/25/19 08:25 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 13:46	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 13:46	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 13:46	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 13:46	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 13:46	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:46	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 13:46	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 13:46	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 13:46	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 13:46	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 13:46	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 13:46	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 13:46	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 13:46	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-136		1		07/03/19 13:46	17060-07-0	
Toluene-d8 (S)	106	%.	75-125		1		07/03/19 13:46	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		07/03/19 13:46	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**172**	mg/L	5.0	2.0	1		07/08/19 12:53		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**343**	mg/L	10.0	5.0	1		07/01/19 10:40		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.023**	mg/L	0.020	0.0054	1		06/28/19 16:59	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**26.4**	mg/L	1.2	0.12	1		06/26/19 20:40	16887-00-6	
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		06/26/19 20:40	14797-55-8	
Sulfate	**65.3**	mg/L	1.2	0.28	1		06/26/19 20:40	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		06/27/19 12:21		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**23.6J**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:20		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**6.2**	mg/L	1.0	0.39	1		07/02/19 23:36	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW5D-GW-062519 **Lab ID: 10480825002** Collected: 06/25/19 09:35 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		06/29/19 19:27	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		06/29/19 19:27	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		06/29/19 19:27	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:08	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:08	7440-38-2	
Barium, Dissolved	**92.1**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:08	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:08	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:08	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:08	7440-47-3	
Cobalt, Dissolved	**0.91J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:08	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:08	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:08	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:08	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:08	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:08	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:08	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:08	7440-28-0	
Vanadium, Dissolved	**7.5J**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:08	7440-62-2	
Zinc, Dissolved	**9.9J**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:08	7440-66-6	B
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:36	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 14:10	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 14:10	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:10	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:10	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 14:10	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:10	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:10	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 14:10	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 14:10	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 14:10	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 14:10	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 14:10	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 14:10	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 14:10	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 14:10	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 14:10	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 14:10	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 14:10	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 14:10	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:10	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW5D-GW-062519 **Lab ID: 10480825002** Collected: 06/25/19 09:35 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 14:10	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:10	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 14:10	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 14:10	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 14:10	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 14:10	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:10	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 14:10	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 14:10	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 14:10	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 14:10	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 14:10	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 14:10	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 14:10	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 14:10	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 14:10	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 14:10	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 14:10	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 14:10	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/03/19 14:10	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/03/19 14:10	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:10	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 14:10	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/03/19 14:10	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 14:10	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 14:10	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 14:10	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 14:10	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 14:10	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 14:10	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:10	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 14:10	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 14:10	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:10	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:10	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 14:10	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 14:10	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 14:10	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:10	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 14:10	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 14:10	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 14:10	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 14:10	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 14:10	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 14:10	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 14:10	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW5D-GW-062519 **Lab ID: 10480825002** Collected: 06/25/19 09:35 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 14:10	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 14:10	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 14:10	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 14:10	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 14:10	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:10	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 14:10	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 14:10	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 14:10	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 14:10	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 14:10	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 14:10	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:10	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 14:10	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		07/03/19 14:10	17060-07-0	
Toluene-d8 (S)	108	%.	75-125		1		07/03/19 14:10	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1		07/03/19 14:10	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**217**	mg/L	5.0	2.0	1		07/09/19 07:10		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**268**	mg/L	10.0	5.0	1		07/01/19 10:40		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/28/19 16:59	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.1J**	mg/L	1.2	0.12	1		06/26/19 20:55	16887-00-6	
Nitrate as N	**0.19**	mg/L	0.10	0.012	1		06/26/19 20:55	14797-55-8	
Sulfate	**2.1**	mg/L	1.2	0.28	1		06/26/19 20:55	14808-79-8	B
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.20**	mg/L	0.10	0.018	1		06/27/19 12:22		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:20		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.67J**	mg/L	1.0	0.39	1		07/02/19 23:50	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW20D-GW-062519 **Lab ID: 10480825003** Collected: 06/25/19 10:40 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		06/29/19 18:29	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		06/29/19 18:29	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		06/29/19 18:29	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:10	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:10	7440-38-2	
Barium, Dissolved	**19.0**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:10	7440-39-3	
Beryllium, Dissolved	**0.13J**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:10	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:10	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:10	7440-47-3	
Cobalt, Dissolved	**1.8J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:10	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:10	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:10	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:10	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:10	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:10	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:10	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:10	7440-28-0	
Vanadium, Dissolved	**5.1J**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:10	7440-62-2	
Zinc, Dissolved	**8.7J**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:10	7440-66-6	B
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:38	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 12:59	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 12:59	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 12:59	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 12:59	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 12:59	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 12:59	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 12:59	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 12:59	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 12:59	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 12:59	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 12:59	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 12:59	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 12:59	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 12:59	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 12:59	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 12:59	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 12:59	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 12:59	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 12:59	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 12:59	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW20D-GW-062519 **Lab ID: 10480825003** Collected: 06/25/19 10:40 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 12:59	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 12:59	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 12:59	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 12:59	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 12:59	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 12:59	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 12:59	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 12:59	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 12:59	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 12:59	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 12:59	67-64-1	M1
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 12:59	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 12:59	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 12:59	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 12:59	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 12:59	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 12:59	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 12:59	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 12:59	74-83-9	
Carbon disulfide	**0.50J**	ug/L	1.0	0.078	1		07/03/19 12:59	75-15-0	
Carbon tetrachloride	**23.9**	ug/L	0.50	0.19	1		07/03/19 12:59	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 12:59	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 12:59	75-00-3	
Chloroform	**0.92J**	ug/L	1.0	0.45	1		07/03/19 12:59	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 12:59	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 12:59	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 12:59	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 12:59	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 12:59	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 12:59	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 12:59	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 12:59	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 12:59	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 12:59	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 12:59	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 12:59	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 12:59	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 12:59	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 12:59	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 12:59	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 12:59	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 12:59	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 12:59	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 12:59	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 12:59	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 12:59	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW20D-GW-062519 **Lab ID: 10480825003** Collected: 06/25/19 10:40 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 12:59	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 12:59	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 12:59	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 12:59	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 12:59	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 12:59	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 12:59	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 12:59	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 12:59	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 12:59	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 12:59	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 12:59	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 12:59	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 12:59	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-136		1		07/03/19 12:59	17060-07-0	
Toluene-d8 (S)	108	%.	75-125		1		07/03/19 12:59	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		07/03/19 12:59	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**275**	mg/L	5.0	2.0	1		07/09/19 07:14		M1
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**335**	mg/L	10.0	5.0	1		07/01/19 10:40		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/28/19 17:00	18496-25-8	M1
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**6.0**	mg/L	1.2	0.12	1		06/26/19 22:41	16887-00-6	
Nitrate as N	**1.2**	mg/L	0.10	0.012	1		06/26/19 22:41	14797-55-8	M1
Sulfate	**9.8**	mg/L	1.2	0.28	1		06/26/19 22:41	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.3**	mg/L	0.10	0.018	1		06/27/19 12:24		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:20		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.0**	mg/L	1.0	0.39	1		07/03/19 00:05	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: Trip Blank 1 **Lab ID: 10480825004** Collected: 06/25/19 07:00 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 11:25	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 11:25	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:25	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 11:25	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 11:25	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:25	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:25	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 11:25	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 11:25	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 11:25	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 11:25	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 11:25	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 11:25	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 11:25	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 11:25	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 11:25	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 11:25	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 11:25	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 11:25	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:25	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 11:25	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:25	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 11:25	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 11:25	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 11:25	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 11:25	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:25	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 11:25	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 11:25	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 11:25	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 11:25	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 11:25	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 11:25	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 11:25	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 11:25	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 11:25	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 11:25	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 11:25	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 11:25	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/03/19 11:25	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/03/19 11:25	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:25	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 11:25	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/03/19 11:25	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 11:25	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 11:25	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: Trip Blank 1 **Lab ID: 10480825004** Collected: 06/25/19 07:00 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 11:25	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 11:25	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 11:25	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 11:25	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 11:25	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 11:25	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 11:25	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 11:25	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:25	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 11:25	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 11:25	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 11:25	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:25	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 11:25	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 11:25	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 11:25	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 11:25	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 11:25	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 11:25	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 11:25	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 11:25	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 11:25	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 11:25	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 11:25	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 11:25	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:25	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 11:25	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 11:25	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 11:25	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 11:25	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 11:25	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 11:25	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 11:25	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 11:25	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-136		1		07/03/19 11:25	17060-07-0	
Toluene-d8 (S)	108	%.	75-125		1		07/03/19 11:25	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		07/03/19 11:25	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW21D-GW-062519 **Lab ID: 10480825005** Collected: 06/25/19 12:15 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		06/29/19 21:02	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		06/29/19 21:02	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		06/29/19 21:02	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:21	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:21	7440-38-2	
Barium, Dissolved	**70.2**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:21	7440-39-3	
Beryllium, Dissolved	**0.60J**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:21	7440-41-7	
Cadmium, Dissolved	**0.43J**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:21	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:21	7440-47-3	
Cobalt, Dissolved	**0.96J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:21	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:21	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:21	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:21	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:21	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:21	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:21	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:21	7440-28-0	
Vanadium, Dissolved	**0.78J**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:21	7440-62-2	
Zinc, Dissolved	**6.8J**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:21	7440-66-6	B
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:45	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 14:34	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 14:34	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:34	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:34	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 14:34	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:34	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:34	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 14:34	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 14:34	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 14:34	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 14:34	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 14:34	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 14:34	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 14:34	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 14:34	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 14:34	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 14:34	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 14:34	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 14:34	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:34	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW21D-GW-062519 **Lab ID: 10480825005** Collected: 06/25/19 12:15 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 14:34	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:34	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 14:34	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 14:34	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 14:34	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 14:34	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:34	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 14:34	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 14:34	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 14:34	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 14:34	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 14:34	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 14:34	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 14:34	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 14:34	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 14:34	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 14:34	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 14:34	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 14:34	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/03/19 14:34	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/03/19 14:34	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:34	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 14:34	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/03/19 14:34	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 14:34	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 14:34	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 14:34	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 14:34	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 14:34	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 14:34	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:34	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 14:34	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 14:34	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:34	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:34	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 14:34	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 14:34	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 14:34	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:34	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 14:34	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 14:34	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 14:34	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 14:34	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 14:34	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 14:34	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 14:34	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW21D-GW-062519 **Lab ID: 10480825005** Collected: 06/25/19 12:15 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 14:34	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 14:34	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 14:34	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 14:34	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 14:34	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:34	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 14:34	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 14:34	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 14:34	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 14:34	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 14:34	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 14:34	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:34	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 14:34	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		07/03/19 14:34	17060-07-0	
Toluene-d8 (S)	107	%.	75-125		1		07/03/19 14:34	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		07/03/19 14:34	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**189**	mg/L	5.0	2.0	1		07/09/19 07:28		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**182**	mg/L	10.0	5.0	1		07/01/19 10:40		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:07	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.9**	mg/L	1.2	0.12	1		06/26/19 22:56	16887-00-6	
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		06/26/19 22:56	14797-55-8	
Sulfate	**8.9**	mg/L	1.2	0.28	1		06/26/19 22:56	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		06/27/19 12:27		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:21		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.85J**	mg/L	1.0	0.39	1		07/03/19 01:16	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW16D-GW-062519 **Lab ID: 10480825006** Collected: 06/25/19 13:15 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		06/29/19 21:10	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		06/29/19 21:10	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		06/29/19 21:10	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:23	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:23	7440-38-2	
Barium, Dissolved	**61.6**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:23	7440-39-3	
Beryllium, Dissolved	**0.40J**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:23	7440-41-7	
Cadmium, Dissolved	**0.30J**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:23	7440-43-9	
Chromium, Dissolved	**0.96J**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:23	7440-47-3	
Cobalt, Dissolved	**1.3J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:23	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:23	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:23	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:23	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:23	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:23	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:23	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:23	7440-28-0	
Vanadium, Dissolved	**9.8J**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:23	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:23	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:48	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 14:58	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 14:58	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:58	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:58	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 14:58	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:58	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:58	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 14:58	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 14:58	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 14:58	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 14:58	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 14:58	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 14:58	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 14:58	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 14:58	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 14:58	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 14:58	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 14:58	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 14:58	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:58	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW16D-GW-062519 **Lab ID: 10480825006** Collected: 06/25/19 13:15 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 14:58	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:58	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 14:58	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 14:58	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 14:58	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 14:58	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:58	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 14:58	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 14:58	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 14:58	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 14:58	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 14:58	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 14:58	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 14:58	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 14:58	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 14:58	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 14:58	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 14:58	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 14:58	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/03/19 14:58	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/03/19 14:58	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:58	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 14:58	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/03/19 14:58	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 14:58	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 14:58	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 14:58	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 14:58	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 14:58	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 14:58	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:58	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 14:58	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 14:58	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:58	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:58	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 14:58	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 14:58	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 14:58	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 14:58	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 14:58	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 14:58	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 14:58	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 14:58	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 14:58	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 14:58	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 14:58	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW16D-GW-062519 **Lab ID: 10480825006** Collected: 06/25/19 13:15 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 14:58	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 14:58	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 14:58	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 14:58	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 14:58	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 14:58	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 14:58	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 14:58	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 14:58	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 14:58	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 14:58	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 14:58	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 14:58	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 14:58	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-136		1		07/03/19 14:58	17060-07-0	
Toluene-d8 (S)	109	%.	75-125		1		07/03/19 14:58	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		07/03/19 14:58	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**228**	mg/L	5.0	2.0	1		07/09/19 07:32		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**374**	mg/L	10.0	5.0	1		07/01/19 10:40		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:08	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**8.8**	mg/L	1.2	0.12	1		06/26/19 23:11	16887-00-6	
Nitrate as N	**6.8**	mg/L	0.10	0.012	1		06/26/19 23:11	14797-55-8	
Sulfate	**41.6**	mg/L	1.2	0.28	1		06/26/19 23:11	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**7.2**	mg/L	1.0	0.18	10		06/27/19 12:58		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:21		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.0**	mg/L	1.0	0.39	1		07/03/19 01:30	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW18D-GW-062519 **Lab ID: 10480825007** Collected: 06/25/19 14:10 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/02/19 17:12	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/02/19 17:12	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/02/19 17:12	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:25	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:25	7440-38-2	
Barium, Dissolved	**50.4**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:25	7440-39-3	
Beryllium, Dissolved	**0.45J**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:25	7440-41-7	
Cadmium, Dissolved	**0.28J**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:25	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:25	7440-47-3	
Cobalt, Dissolved	**0.83J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:25	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:25	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:25	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:25	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:25	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:25	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:25	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:25	7440-28-0	
Vanadium, Dissolved	**<0.43**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:25	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:25	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:50	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 13:23	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 13:23	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:23	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 13:23	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 13:23	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:23	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:23	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 13:23	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 13:23	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 13:23	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 13:23	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 13:23	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 13:23	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 13:23	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 13:23	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 13:23	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 13:23	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 13:23	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 13:23	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:23	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW18D-GW-062519 **Lab ID: 10480825007** Collected: 06/25/19 14:10 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 13:23	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:23	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 13:23	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 13:23	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 13:23	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 13:23	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:23	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 13:23	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 13:23	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 13:23	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 13:23	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 13:23	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 13:23	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 13:23	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 13:23	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 13:23	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 13:23	75-27-4	M1
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 13:23	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 13:23	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/03/19 13:23	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/03/19 13:23	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:23	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 13:23	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/03/19 13:23	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 13:23	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 13:23	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 13:23	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 13:23	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 13:23	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 13:23	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 13:23	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 13:23	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 13:23	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 13:23	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:23	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 13:23	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 13:23	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 13:23	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 13:23	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 13:23	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 13:23	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 13:23	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 13:23	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 13:23	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 13:23	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 13:23	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW18D-GW-062519 **Lab ID: 10480825007** Collected: 06/25/19 14:10 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 13:23	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 13:23	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 13:23	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 13:23	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 13:23	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 13:23	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 13:23	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 13:23	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 13:23	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 13:23	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 13:23	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 13:23	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 13:23	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 13:23	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		07/03/19 13:23	17060-07-0	
Toluene-d8 (S)	109	%.	75-125		1		07/03/19 13:23	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		07/03/19 13:23	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**155**	mg/L	5.0	2.0	1		07/09/19 07:36		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**193**	mg/L	10.0	5.0	1		07/01/19 10:40		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:09	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.3**	mg/L	1.2	0.12	1		06/26/19 23:26	16887-00-6	
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		06/26/19 23:26	14797-55-8	
Sulfate	**7.8**	mg/L	1.2	0.28	1		06/26/19 23:26	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		06/27/19 12:32		M1
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:21		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.65J**	mg/L	1.0	0.39	1		07/03/19 01:44	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW15D-GW-062519 **Lab ID: 10480825008** Collected: 06/25/19 15:10 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/01/19 13:20	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/01/19 13:20	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/01/19 13:20	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	06/27/19 11:19	06/28/19 13:42	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	06/27/19 11:19	06/28/19 13:42	7440-38-2	
Barium, Dissolved	**10.8**	ug/L	10.0	0.60	1	06/27/19 11:19	06/28/19 13:42	7440-39-3	
Beryllium, Dissolved	**0.30J**	ug/L	5.0	0.12	1	06/27/19 11:19	06/28/19 13:42	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	06/27/19 11:19	06/28/19 13:42	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	06/27/19 11:19	06/28/19 13:42	7440-47-3	
Cobalt, Dissolved	**1.6J**	ug/L	10.0	0.50	1	06/27/19 11:19	06/28/19 13:42	7440-48-4	
Copper, Dissolved	**1.8J**	ug/L	10.0	1.2	1	06/27/19 11:19	06/28/19 13:42	7440-50-8	B
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	06/27/19 11:19	06/28/19 13:42	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	06/27/19 11:19	06/28/19 13:42	7439-98-7	
Nickel, Dissolved	**1.1J**	ug/L	20.0	1.1	1	06/27/19 11:19	06/28/19 13:42	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	06/27/19 11:19	06/28/19 13:42	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	06/27/19 11:19	06/28/19 13:42	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	06/27/19 11:19	06/28/19 13:42	7440-28-0	
Vanadium, Dissolved	**10.3J**	ug/L	15.0	0.43	1	06/27/19 11:19	06/28/19 13:42	7440-62-2	
Zinc, Dissolved	**7.6J**	ug/L	20.0	6.3	1	06/27/19 11:19	06/28/19 13:42	7440-66-6	B
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	06/27/19 14:22	07/01/19 14:57	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 15:22	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 15:22	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:22	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 15:22	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 15:22	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:22	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:22	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 15:22	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 15:22	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 15:22	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 15:22	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 15:22	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 15:22	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 15:22	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 15:22	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 15:22	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 15:22	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 15:22	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 15:22	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:22	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW15D-GW-062519 **Lab ID: 10480825008** Collected: 06/25/19 15:10 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 15:22	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:22	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 15:22	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 15:22	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 15:22	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 15:22	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:22	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 15:22	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 15:22	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 15:22	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 15:22	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 15:22	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 15:22	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 15:22	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 15:22	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 15:22	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 15:22	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 15:22	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 15:22	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/03/19 15:22	75-15-0	
Carbon tetrachloride	**7.9**	ug/L	0.50	0.19	1		07/03/19 15:22	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:22	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 15:22	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/03/19 15:22	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 15:22	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 15:22	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 15:22	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 15:22	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 15:22	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 15:22	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 15:22	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 15:22	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 15:22	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 15:22	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:22	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 15:22	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 15:22	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 15:22	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:22	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 15:22	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 15:22	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 15:22	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 15:22	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 15:22	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 15:22	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 15:22	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Sample: MW15D-GW-062519 **Lab ID: 10480825008** Collected: 06/25/19 15:10 Received: 06/26/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 15:22	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 15:22	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 15:22	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 15:22	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 15:22	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:22	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 15:22	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 15:22	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 15:22	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 15:22	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 15:22	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 15:22	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 15:22	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 15:22	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-136		1		07/03/19 15:22	17060-07-0	
Toluene-d8 (S)	107	%.	75-125		1		07/03/19 15:22	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		07/03/19 15:22	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**180**	mg/L	5.0	2.0	1		07/09/19 08:10		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**254**	mg/L	10.0	5.0	1		07/01/19 10:40		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:11	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**3.2**	mg/L	1.2	0.12	1		06/26/19 23:42	16887-00-6	
Nitrate as N	**2.2**	mg/L	0.10	0.012	1		06/26/19 23:42	14797-55-8	
Sulfate	**7.0**	mg/L	1.2	0.28	1		06/26/19 23:42	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**2.1**	mg/L	0.50	0.088	5		07/06/19 12:24		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:22		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.70J**	mg/L	1.0	0.39	1		07/03/19 02:27	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 616410 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006

METHOD BLANK: 3329763 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	06/29/19 15:13	
Ethene	ug/L	<2.9	10.0	2.9	06/29/19 15:13	
Methane	ug/L	<4.9	10.0	4.9	06/29/19 15:13	

LABORATORY CONTROL SAMPLE & LCSD: 3329764 3329765

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	120	116	105	102	85-115	3	20	
Ethene	ug/L	106	110	107	104	101	85-115	3	20	
Methane	ug/L	60.7	61.2	59.3	101	98	85-115	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3329769 3329770

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<3.0	114	114	114	129	101	114	30-150	12	20	
Ethene	ug/L	<2.9	106	106	106	119	100	112	30-150	12	20	
Methane	ug/L	<4.9	60.7	60.7	58.2	65.7	96	108	30-150	12	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3329771 3329772

Parameter	Units	10480886008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	ND	114	114	142	146	124	128	30-150	3	20	
Ethene	ug/L	ND	106	106	130	133	122	125	30-150	3	20	
Methane	ug/L	ND	60.7	60.7	74.5	76.4	123	126	30-150	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 616585
QC Batch Method: RSK 175
Analysis Method: RSK 175
Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10480825008

METHOD BLANK: 3330975 Matrix: Water
Associated Lab Samples: 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/01/19 10:32	
Ethene	ug/L	<2.9	10.0	2.9	07/01/19 10:32	
Methane	ug/L	<4.9	10.0	4.9	07/01/19 10:32	

LABORATORY CONTROL SAMPLE & LCSD: 3330976 3330977

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	112	119	99	105	85-115	6	20	
Ethene	ug/L	106	104	110	98	104	85-115	6	20	
Methane	ug/L	60.7	58.6	61.0	97	101	85-115	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3330979 3330980

Parameter	Units	10481531001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<3.0	114	114	111	36.1	98	32	30-150	102	20	M1,R1
Ethene	ug/L	<2.9	106	106	103	33.3	97	31	30-150	102	20	M1,R1
Methane	ug/L	<4.9	60.7	60.7	57.9	15.5	95	26	30-150	115	20	M1,R1

SAMPLE DUPLICATE: 3330978

Parameter	Units	10481355001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 616968
QC Batch Method: RSK 175
Analysis Method: RSK 175
Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10480825007

METHOD BLANK: 3332719 Matrix: Water
Associated Lab Samples: 10480825007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/02/19 11:10	
Ethene	ug/L	<2.9	10.0	2.9	07/02/19 11:10	
Methane	ug/L	<4.9	10.0	4.9	07/02/19 11:10	

LABORATORY CONTROL SAMPLE & LCSD: 3332720 3332721

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	110	117	97	103	85-115	6	20	
Ethene	ug/L	106	102	108	96	102	85-115	6	20	
Methane	ug/L	60.7	57.1	60.3	94	99	85-115	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3332722 3332723

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<3.0	114	114	106	103	93	90	30-150	3	20	
Ethene	ug/L	<2.9	106	106	98.9	95.4	93	90	30-150	4	20	
Methane	ug/L	<4.9	60.7	60.7	56.2	52.4	93	86	30-150	7	20	

SAMPLE DUPLICATE: 3333665

Parameter	Units	10481000001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 615914 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

METHOD BLANK: 3327348 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/01/19 14:13	

LABORATORY CONTROL SAMPLE: 3327349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.1	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327350 3327351

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	4.9	4.8	97	96	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327352 3327353

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.0	4.9	101	99	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 615876 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

METHOD BLANK: 3327178 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	06/28/19 12:56	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	06/28/19 12:56	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	06/28/19 12:56	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	06/28/19 12:56	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	06/28/19 12:56	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	06/28/19 12:56	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	06/28/19 12:56	
Copper, Dissolved	ug/L	1.8J	10.0	1.2	06/28/19 12:56	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	06/28/19 12:56	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	06/28/19 12:56	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	06/28/19 12:56	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	06/28/19 12:56	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	06/28/19 12:56	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	06/28/19 12:56	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	06/28/19 12:56	
Zinc, Dissolved	ug/L	7.1J	20.0	6.3	06/28/19 12:56	

LABORATORY CONTROL SAMPLE: 3327179

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	979	98	80-120	
Arsenic, Dissolved	ug/L	1000	999	100	80-120	
Barium, Dissolved	ug/L	1000	1010	101	80-120	
Beryllium, Dissolved	ug/L	1000	1020	102	80-120	
Cadmium, Dissolved	ug/L	1000	1020	102	80-120	
Chromium, Dissolved	ug/L	1000	1000	100	80-120	
Cobalt, Dissolved	ug/L	1000	1010	101	80-120	
Copper, Dissolved	ug/L	1000	981	98	80-120	
Lead, Dissolved	ug/L	1000	1010	101	80-120	
Molybdenum, Dissolved	ug/L	1000	994	99	80-120	
Nickel, Dissolved	ug/L	1000	999	100	80-120	
Selenium, Dissolved	ug/L	1000	1030	103	80-120	
Silver, Dissolved	ug/L	500	501	100	80-120	
Thallium, Dissolved	ug/L	1000	990	99	80-120	
Vanadium, Dissolved	ug/L	1000	1000	100	80-120	
Zinc, Dissolved	ug/L	1000	1020	102	80-120	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327180 3327181

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	996	996	99	99	75-125	0	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	999	1010	100	101	75-125	1	20	
Barium, Dissolved	ug/L	19.0	1000	1000	1010	1020	99	100	75-125	1	20	
Beryllium, Dissolved	ug/L	0.13J	1000	1000	1020	1030	102	103	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1000	1010	100	101	75-125	1	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	989	998	99	100	75-125	1	20	
Cobalt, Dissolved	ug/L	1.8J	1000	1000	976	986	97	98	75-125	1	20	
Copper, Dissolved	ug/L	<1.2	1000	1000	982	993	98	99	75-125	1	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	992	1000	99	100	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	993	998	99	100	75-125	0	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	963	974	96	97	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1020	1030	102	103	75-125	1	20	
Silver, Dissolved	ug/L	<0.40	500	500	504	509	101	102	75-125	1	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	981	992	98	99	75-125	1	20	
Vanadium, Dissolved	ug/L	5.1J	1000	1000	1000	1010	100	101	75-125	1	20	
Zinc, Dissolved	ug/L	8.7J	1000	1000	995	1000	99	100	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327182 3327183

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	1010	992	101	99	75-125	2	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1020	1000	102	100	75-125	2	20	
Barium, Dissolved	ug/L	50.4	1000	1000	1070	1050	102	100	75-125	2	20	
Beryllium, Dissolved	ug/L	0.45J	1000	1000	1040	1020	104	102	75-125	2	20	
Cadmium, Dissolved	ug/L	0.28J	1000	1000	1030	1010	103	101	75-125	2	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1020	995	102	100	75-125	2	20	
Cobalt, Dissolved	ug/L	0.83J	1000	1000	1010	986	101	98	75-125	2	20	
Copper, Dissolved	ug/L	<1.2	1000	1000	1000	981	100	98	75-125	2	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1020	999	102	100	75-125	2	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	1030	1010	102	101	75-125	2	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	999	978	100	98	75-125	2	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1050	1030	105	103	75-125	2	20	
Silver, Dissolved	ug/L	<0.40	500	500	515	505	103	101	75-125	2	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	1010	987	101	98	75-125	2	20	
Vanadium, Dissolved	ug/L	<0.43	1000	1000	1020	996	102	100	75-125	2	20	
Zinc, Dissolved	ug/L	<6.3	1000	1000	1020	1000	102	100	75-125	2	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 617335 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825004, 10480825005, 10480825006, 10480825007, 10480825008

METHOD BLANK: 3334749 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825004, 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/03/19 11:01	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/03/19 11:01	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/03/19 11:01	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/03/19 11:01	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/03/19 11:01	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	07/03/19 11:01	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/03/19 11:01	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	07/03/19 11:01	
1,2,4-Trimethylbenzene	ug/L	<0.20	1.0	0.20	07/03/19 11:01	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/03/19 11:01	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/03/19 11:01	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/03/19 11:01	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/03/19 11:01	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/03/19 11:01	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/03/19 11:01	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/03/19 11:01	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	07/03/19 11:01	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/03/19 11:01	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/03/19 11:01	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/03/19 11:01	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/03/19 11:01	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/03/19 11:01	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/03/19 11:01	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/03/19 11:01	
Acetone	ug/L	<9.2	20.0	9.2	07/03/19 11:01	
Acrolein	ug/L	<1.2	40.0	1.2	07/03/19 11:01	CL
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/03/19 11:01	
Benzene	ug/L	<0.10	0.50	0.10	07/03/19 11:01	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/03/19 11:01	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/03/19 11:01	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/03/19 11:01	
Bromoform	ug/L	<0.80	4.0	0.80	07/03/19 11:01	
Bromomethane	ug/L	<1.8	4.0	1.8	07/03/19 11:01	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/03/19 11:01	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

METHOD BLANK: 3334749 Matrix: Water

Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825004, 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/03/19 11:01	
Chlorobenzene	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
Chloroethane	ug/L	<0.49	1.0	0.49	07/03/19 11:01	
Chloroform	ug/L	<0.45	1.0	0.45	07/03/19 11:01	
Chloromethane	ug/L	<0.16	4.0	0.16	07/03/19 11:01	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/03/19 11:01	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	0.20	07/03/19 11:01	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/03/19 11:01	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/03/19 11:01	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/03/19 11:01	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/03/19 11:01	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/03/19 11:01	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/03/19 11:01	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/03/19 11:01	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/03/19 11:01	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/03/19 11:01	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/03/19 11:01	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/03/19 11:01	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/03/19 11:01	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/03/19 11:01	
Naphthalene	ug/L	<0.48	1.0	0.48	07/03/19 11:01	
o-Xylene	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
p-Isopropyltoluene	ug/L	<0.15	1.0	0.15	07/03/19 11:01	
sec-Butylbenzene	ug/L	<0.15	1.0	0.15	07/03/19 11:01	
Styrene	ug/L	<0.19	0.50	0.19	07/03/19 11:01	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	07/03/19 11:01	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/03/19 11:01	
tert-Butylbenzene	ug/L	<0.15	1.0	0.15	07/03/19 11:01	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/03/19 11:01	
Toluene	ug/L	<0.083	0.50	0.083	07/03/19 11:01	
trans-1,2-Dichloroethene	ug/L	<0.12	1.0	0.12	07/03/19 11:01	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/03/19 11:01	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/03/19 11:01	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/03/19 11:01	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/03/19 11:01	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/03/19 11:01	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/03/19 11:01	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/03/19 11:01	
1,2-Dichloroethane-d4 (S)	%.	102	75-136		07/03/19 11:01	
4-Bromofluorobenzene (S)	%.	99	75-125		07/03/19 11:01	
Toluene-d8 (S)	%.	108	75-125		07/03/19 11:01	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

LABORATORY CONTROL SAMPLE: 3334750

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	8.8	88	68-141	
1,1,1-Trichloroethane	ug/L	10	8.5	85	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	8.6	86	73-125	
1,1,2-Trichloroethane	ug/L	10	8.4	84	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	8.5	85	69-132	
1,1-Dichloroethane	ug/L	10	9.0	90	73-125	
1,1-Dichloroethene	ug/L	10	8.3	83	71-126	
1,1-Dichloropropene	ug/L	10	7.3	73	73-126	
1,2,3-Trichlorobenzene	ug/L	10	9.3	93	72-126	
1,2,3-Trichloropropane	ug/L	10	8.5	85	75-126	
1,2,4-Trichlorobenzene	ug/L	10	9.7	97	71-134	
1,2,4-Trimethylbenzene	ug/L	10	9.0	90	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	21.8	87	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	8.9	89	75-129	
1,2-Dichlorobenzene	ug/L	10	9.3	93	75-129	
1,2-Dichloroethane	ug/L	10	7.1	71	75-125	L2
1,2-Dichloroethene (Total)	ug/L	20	17.7	88	74-125	N2
1,2-Dichloropropane	ug/L	10	8.7	87	75-125	
1,3,5-Trimethylbenzene	ug/L	10	10.1	101	75-127	
1,3-Dichlorobenzene	ug/L	10	9.1	91	75-126	
1,3-Dichloropropane	ug/L	10	8.8	88	75-125	
1,4-Dichlorobenzene	ug/L	10	9.0	90	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	175J	88	72-129	
2,2,4-Trimethylpentane	ug/L	10	7.3	73	72-128	N2
2,2-Dichloropropane	ug/L	10	9.6	96	65-138	
2-Butanone (MEK)	ug/L	50	36.3	73	59-144	
2-Chlorotoluene	ug/L	10	9.0	90	75-127	
2-Hexanone	ug/L	50	43.0	86	73-134	
4-Chlorotoluene	ug/L	10	9.4	94	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	39.8	80	62-141	
Acetone	ug/L	50	42.6	85	60-137	
Acrolein	ug/L	100	55.8	56	60-141	CL,L2
Acrylonitrile	ug/L	100	85.4	85	75-129	
Benzene	ug/L	10	7.7	77	73-125	
Bromobenzene	ug/L	10	9.2	92	73-125	
Bromochloromethane	ug/L	10	9.4	94	75-135	
Bromodichloromethane	ug/L	10	8.8	88	75-125	
Bromoform	ug/L	10	8.0	80	67-136	
Bromomethane	ug/L	10	9.9	99	30-150	
Carbon disulfide	ug/L	10	7.3	73	47-137	
Carbon tetrachloride	ug/L	10	8.4	84	75-125	
Chlorobenzene	ug/L	10	9.0	90	75-125	
Chloroethane	ug/L	10	10.9	109	63-136	
Chloroform	ug/L	10	8.5	85	73-128	
Chloromethane	ug/L	10	9.1	91	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.0	90	75-125	
cis-1,3-Dichloropropene	ug/L	10	8.3	83	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

LABORATORY CONTROL SAMPLE: 3334750

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	10	100	75-125	
Dibromomethane	ug/L	10	9.2	92	75-125	
Dichlorodifluoromethane	ug/L	10	9.1	91	63-132	
Dichlorofluoromethane	ug/L	10	9.7	97	68-127	N2
Diisopropyl ether	ug/L	10	7.6	76	71-131	
Ethyl-tert-butyl ether	ug/L	10	8.4	84	75-125	
Ethylbenzene	ug/L	10	8.8	88	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.3	93	72-134	
Isopropylbenzene (Cumene)	ug/L	10	9.5	95	75-125	
m&p-Xylene	ug/L	20	17.6	88	75-126	
Methyl-tert-butyl ether	ug/L	10	8.6	86	75-125	
Methylene Chloride	ug/L	10	8.2	82	70-125	
n-Butylbenzene	ug/L	10	9.7	97	75-126	
n-Propylbenzene	ug/L	10	8.6	86	73-127	
Naphthalene	ug/L	10	9.0	90	63-128	
o-Xylene	ug/L	10	10	100	75-128	
p-Isopropyltoluene	ug/L	10	9.6	96	75-125	
sec-Butylbenzene	ug/L	10	9.0	90	75-126	
Styrene	ug/L	10	9.8	98	75-125	
tert-Amylmethyl ether	ug/L	10	7.9	79	75-125	
tert-Butyl Alcohol	ug/L	100	84.8	85	75-130	
tert-Butylbenzene	ug/L	10	9.1	91	75-131	
Tetrachloroethene	ug/L	10	8.7	87	74-125	
Tetrahydrofuran	ug/L	100	76.6	77	64-138	
Toluene	ug/L	10	8.9	89	74-125	
trans-1,2-Dichloroethene	ug/L	10	8.7	87	68-128	
trans-1,3-Dichloropropene	ug/L	10	8.9	89	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	24.9	100	60-127	
Trichloroethene	ug/L	10	8.6	86	75-127	
Trichlorofluoromethane	ug/L	10	10.1	101	72-133	
Vinyl acetate	ug/L	10	8.8J	88	61-129	
Vinyl chloride	ug/L	10	9.4	94	75-128	
Xylene (Total)	ug/L	30	27.6	92	75-125	
1,2-Dichloroethane-d4 (S)	%.			107	75-136	
4-Bromofluorobenzene (S)	%.			99	75-125	
Toluene-d8 (S)	%.			103	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334751 3334752

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	10	10	8.5	9.3	85	93	75-140	9	30	
1,1,1-Trichloroethane	ug/L	<0.14	10	10	8.2	8.5	82	85	74-136	4	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	10	10	8.1	9.2	81	92	66-134	13	30	
1,1,2-Trichloroethane	ug/L	<0.18	10	10	8.4	9.1	84	91	75-126	8	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334751 3334752

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	10	10	8.6	8.8	86	88	65-146	3	30	
1,1-Dichloroethane	ug/L	<0.17	10	10	8.5	7.8	85	78	68-132	9	30	
1,1-Dichloroethene	ug/L	<0.16	10	10	8.5	8.1	85	81	66-139	4	30	
1,1-Dichloropropene	ug/L	<0.20	10	10	7.7	8.0	77	80	67-134	4	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	10	10	9.5	10.1	95	101	67-129	6	30	
1,2,3-Trichloropropane	ug/L	<0.26	10	10	8.3	8.7	83	87	69-128	5	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	10	10	10.1	10.3	101	103	65-140	2	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	10	10	9.1	10	91	100	71-133	9	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	25	25	22.8	23.6	91	94	54-138	3	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	10	10	8.4	9.0	84	90	68-125	7	30	
1,2-Dichlorobenzene	ug/L	<0.14	10	10	8.9	10.1	89	101	74-136	12	30	
1,2-Dichloroethane	ug/L	<0.22	10	10	7.7	7.8	77	78	68-125	2	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	20	20	16.7	16.3	83	81	71-126	2	30	N2
1,2-Dichloropropane	ug/L	<0.16	10	10	8.3	8.9	83	89	67-125	7	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	10	10	10.4	11.2	104	112	68-137	8	30	
1,3-Dichlorobenzene	ug/L	<0.16	10	10	9.5	10.0	95	100	75-131	5	30	
1,3-Dichloropropane	ug/L	<0.070	10	10	8.6	9.1	86	91	71-125	6	30	
1,4-Dichlorobenzene	ug/L	<0.17	10	10	9.0	10	90	100	74-126	10	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	200	169J	175J	84	87	68-125		30	
2,2,4-Trimethylpentane	ug/L	<0.19	10	10	7.9	7.9	79	79	54-129	0	30	N2
2,2-Dichloropropane	ug/L	<0.17	10	10	8.9	8.6	89	86	69-139	3	30	
2-Butanone (MEK)	ug/L	<0.99	50	50	28.8	32.7	58	65	54-144	13	30	
2-Chlorotoluene	ug/L	<0.16	10	10	9.2	9.8	92	98	75-134	6	30	
2-Hexanone	ug/L	<0.88	50	50	37.0	39.8	74	80	58-137	7	30	
4-Chlorotoluene	ug/L	<0.13	10	10	9.1	9.9	91	99	72-133	9	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	50	50	41.0	43.5	82	87	60-129	6	30	
Acetone	ug/L	<9.2	50	50	31.3	30.5	63	61	62-132	3	30	M1
Acrolein	ug/L	<1.2	100	100	101	108	101	108	30-150	7	30	CL
Acrylonitrile	ug/L	<0.91	100	100	77.1	76.2	77	76	68-125	1	30	
Benzene	ug/L	<0.10	10	10	7.3	7.9	73	79	68-125	7	30	
Bromobenzene	ug/L	<0.21	10	10	8.8	9.5	88	95	73-126	8	30	
Bromochloromethane	ug/L	<0.27	10	10	7.9	8.3	79	83	66-143	6	30	
Bromodichloromethane	ug/L	<0.22	10	10	8.0	8.5	80	85	74-125	6	30	
Bromoform	ug/L	<0.80	10	10	8.0	8.9	80	89	64-134	10	30	
Bromomethane	ug/L	<1.8	10	10	9.9	10.4	99	104	30-150	5	30	
Carbon disulfide	ug/L	0.50J	10	10	7.5	6.8	70	63	43-147	11	30	
Carbon tetrachloride	ug/L	23.9	10	10	32.2	33.3	83	94	71-143	3	30	
Chlorobenzene	ug/L	<0.17	10	10	8.8	9.2	88	92	75-125	5	30	
Chloroethane	ug/L	<0.49	10	10	10.8	11.0	108	110	75-129	2	30	
Chloroform	ug/L	0.92J	10	10	8.4	9.1	75	81	66-132	7	30	
Chloromethane	ug/L	<0.16	10	10	8.8	7.8	88	78	53-137	13	30	
cis-1,2-Dichloroethene	ug/L	<0.15	10	10	8.5	8.5	85	85	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	<0.20	10	10	7.5	8.0	75	80	66-125	6	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334751 3334752

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	10	10	9.5	9.9	95	99	62-132	5	30	
Dibromomethane	ug/L	<0.16	10	10	9.1	9.7	91	97	67-125	6	30	
Dichlorodifluoromethane	ug/L	<0.23	10	10	8.6	8.5	86	85	71-142	1	30	
Dichlorofluoromethane	ug/L	<0.14	10	10	9.1	8.8	91	88	70-131	3	30	N2
Diisopropyl ether	ug/L	<0.13	10	10	7.6	6.9	76	69	63-131	9	30	
Ethyl-tert-butyl ether	ug/L	<0.18	10	10	7.9	8.3	79	83	66-128	4	30	
Ethylbenzene	ug/L	<0.14	10	10	8.6	9.5	86	95	74-126	10	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	10	10	11.2	9.7	112	97	68-143	14	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	10	10	9.8	10.6	98	106	74-130	8	30	
m&p-Xylene	ug/L	<0.31	20	20	17.8	18.2	89	91	69-132	2	30	
Methyl-tert-butyl ether	ug/L	<0.16	10	10	8.0	8.4	80	84	65-131	4	30	
Methylene Chloride	ug/L	<0.98	10	10	7.7	7.7	77	77	57-125	0	30	
n-Butylbenzene	ug/L	<0.24	10	10	10.3	10.3	103	103	71-131	0	30	
n-Propylbenzene	ug/L	<0.10	10	10	9.2	9.8	92	98	67-138	5	30	
Naphthalene	ug/L	<0.48	10	10	8.9	10.2	89	102	60-130	14	30	
o-Xylene	ug/L	<0.16	10	10	9.9	10.1	99	101	69-131	2	30	
p-Isopropyltoluene	ug/L	<0.15	10	10	9.9	10.2	99	102	72-133	3	30	
sec-Butylbenzene	ug/L	<0.15	10	10	9.6	9.7	96	97	73-134	1	30	
Styrene	ug/L	<0.19	10	10	9.6	10	96	100	72-125	4	30	
tert-Amylmethyl ether	ug/L	<0.11	10	10	8.3	8.6	83	86	67-125	3	30	
tert-Butyl Alcohol	ug/L	<1.2	100	100	81.5	89.8	82	90	64-137	10	30	
tert-Butylbenzene	ug/L	<0.15	10	10	9.8	9.9	98	99	70-143	1	30	
Tetrachloroethene	ug/L	<0.17	10	10	9.1	9.1	91	91	72-129	0	30	
Tetrahydrofuran	ug/L	<2.2	100	100	74.0	87.3	74	87	66-128	16	30	
Toluene	ug/L	<0.083	10	10	8.5	8.8	85	88	73-125	3	30	
trans-1,2-Dichloroethene	ug/L	<0.12	10	10	8.1	7.8	81	78	62-137	4	30	
trans-1,3-Dichloropropene	ug/L	<0.18	10	10	9.0	9.1	90	91	61-136	1	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	25	25	23.6	24.8	94	99	45-128	5	30	
Trichloroethene	ug/L	<0.15	10	10	9.2	8.7	92	87	74-132	6	30	
Trichlorofluoromethane	ug/L	<0.23	10	10	9.9	8.9	99	89	75-139	10	30	
Vinyl acetate	ug/L	<1.1	10	10	8.5J	8.9J	85	89	51-135		30	
Vinyl chloride	ug/L	<0.092	10	10	9.0	8.7	90	87	68-146	3	30	
Xylene (Total)	ug/L	<0.31	30	30	27.6	28.3	92	94	67-137	2	30	
1,2-Dichloroethane-d4 (S)	%.						106	108	75-136			
4-Bromofluorobenzene (S)	%.						99	99	75-125			
Toluene-d8 (S)	%.						103	104	75-125			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334753 3334754

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	10	10	9.4	9.2	94	92	75-140	3	30	
1,1,1-Trichloroethane	ug/L	<0.14	10	10	8.7	8.8	87	88	74-136	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334753 3334754

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2,2-Tetrachloroethane	ug/L	<0.17	10	10	8.7	9.2	87	92	66-134	6	30	
1,1,2-Trichloroethane	ug/L	<0.18	10	10	8.8	9.2	88	92	75-126	5	30	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	10	10	9.3	9.8	93	98	65-146	4	30	
1,1-Dichloroethane	ug/L	<0.17	10	10	8.4	8.4	84	84	68-132	1	30	
1,1-Dichloroethene	ug/L	<0.16	10	10	8.9	8.8	89	88	66-139	1	30	
1,1-Dichloropropene	ug/L	<0.20	10	10	8.0	8.7	80	87	67-134	8	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	10	10	10.3	10.7	103	107	67-129	4	30	
1,2,3-Trichloropropane	ug/L	<0.26	10	10	9.1	9.2	91	92	69-128	1	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	10	10	10.5	11.0	105	110	65-140	5	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	10	10	9.4	10.7	94	107	71-133	13	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	25	25	23.9	24.2	96	97	54-138	1	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	10	10	9.1	9.2	91	92	68-125	1	30	
1,2-Dichlorobenzene	ug/L	<0.14	10	10	9.5	10.9	95	109	74-136	13	30	
1,2-Dichloroethane	ug/L	<0.22	10	10	8.0	8.1	80	81	68-125	1	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	20	20	17.5	16.5	88	82	71-126	6	30	N2
1,2-Dichloropropane	ug/L	<0.16	10	10	7.3	7.9	73	79	67-125	8	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	10	10	10.8	12.0	108	120	68-137	10	30	
1,3-Dichlorobenzene	ug/L	<0.16	10	10	9.7	10.5	97	105	75-131	7	30	
1,3-Dichloropropane	ug/L	<0.070	10	10	9.2	9.3	92	93	71-125	1	30	
1,4-Dichlorobenzene	ug/L	<0.17	10	10	9.5	10	95	100	74-126	5	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	200	174J	190J	87	95	68-125		30	
2,2,4-Trimethylpentane	ug/L	<0.19	10	10	8.5	8.8	85	88	54-129	3	30	N2
2,2-Dichloropropane	ug/L	<0.17	10	10	9.3	8.9	93	89	69-139	5	30	
2-Butanone (MEK)	ug/L	<0.99	50	50	30.7	32.4	61	65	54-144	6	30	
2-Chlorotoluene	ug/L	<0.16	10	10	9.3	10.8	93	108	75-134	15	30	
2-Hexanone	ug/L	<0.88	50	50	39.4	39.8	79	80	58-137	1	30	
4-Chlorotoluene	ug/L	<0.13	10	10	9.2	10.4	92	104	72-133	13	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	50	50	43.1	44.0	86	88	60-129	2	30	
Acetone	ug/L	<9.2	50	50	33.0	33.2	66	66	62-132	1	30	
Acrolein	ug/L	<1.2	100	100	107	103	107	103	30-150	3	30	CL
Acrylonitrile	ug/L	<0.91	100	100	80.3	80.1	80	80	68-125	0	30	
Benzene	ug/L	<0.10	10	10	8.1	8.5	81	85	68-125	5	30	
Bromobenzene	ug/L	<0.21	10	10	9.3	10.1	93	101	73-126	9	30	
Bromochloromethane	ug/L	<0.27	10	10	8.6	8.4	86	84	66-143	2	30	
Bromodichloromethane	ug/L	<0.22	10	10	7.1	7.5	71	75	74-125	6	30	M1
Bromoform	ug/L	<0.80	10	10	8.8	8.9	88	89	64-134	2	30	
Bromomethane	ug/L	<1.8	10	10	11.2	11.4	112	114	30-150	2	30	
Carbon disulfide	ug/L	<0.078	10	10	7.4	7.1	74	71	43-147	5	30	
Carbon tetrachloride	ug/L	<0.19	10	10	8.9	9.2	89	92	71-143	3	30	
Chlorobenzene	ug/L	<0.17	10	10	9.0	9.6	90	96	75-125	6	30	
Chloroethane	ug/L	<0.49	10	10	11.2	10.9	112	109	75-129	3	30	
Chloroform	ug/L	<0.45	10	10	7.8	8.2	78	82	66-132	5	30	
Chloromethane	ug/L	<0.16	10	10	8.9	8.5	89	85	53-137	5	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334753 3334754

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
cis-1,2-Dichloroethene	ug/L	<0.15	10	10	8.7	8.0	87	80	67-133	9	30	
cis-1,3-Dichloropropene	ug/L	<0.20	10	10	6.7	7.0	67	70	66-125	5	30	
Dibromochloromethane	ug/L	<0.12	10	10	9.6	9.9	96	99	62-132	2	30	
Dibromomethane	ug/L	<0.16	10	10	8.9	7.8	89	78	67-125	13	30	
Dichlorodifluoromethane	ug/L	<0.23	10	10	8.2	9.0	82	90	71-142	9	30	
Dichlorofluoromethane	ug/L	<0.14	10	10	9.3	9.2	93	92	70-131	2	30	N2
Diisopropyl ether	ug/L	<0.13	10	10	7.6	8.0	76	80	63-131	4	30	
Ethyl-tert-butyl ether	ug/L	<0.18	10	10	8.5	8.0	85	80	66-128	7	30	
Ethylbenzene	ug/L	<0.14	10	10	9.2	9.9	92	99	74-126	8	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	10	10	11.2	10.2	112	102	68-143	9	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	10	10	10.5	11.7	105	117	74-130	11	30	
m&p-Xylene	ug/L	<0.31	20	20	17.7	20.3	88	102	69-132	14	30	
Methyl-tert-butyl ether	ug/L	<0.16	10	10	8.3	8.4	83	84	65-131	1	30	
Methylene Chloride	ug/L	<0.98	10	10	7.7	8.1	77	81	57-125	5	30	
n-Butylbenzene	ug/L	<0.24	10	10	10.7	10.9	107	109	71-131	2	30	
n-Propylbenzene	ug/L	<0.10	10	10	9.4	10.4	94	104	67-138	10	30	
Naphthalene	ug/L	<0.48	10	10	9.0	10.4	90	104	60-130	14	30	
o-Xylene	ug/L	<0.16	10	10	9.9	11.2	99	112	69-131	13	30	
p-Isopropyltoluene	ug/L	<0.15	10	10	10.3	10.8	103	108	72-133	4	30	
sec-Butylbenzene	ug/L	<0.15	10	10	10.0	10.5	100	105	73-134	4	30	
Styrene	ug/L	<0.19	10	10	10.0	11.3	100	113	72-125	12	30	
tert-Amylmethyl ether	ug/L	<0.11	10	10	8.8	8.8	88	88	67-125	1	30	
tert-Butyl Alcohol	ug/L	<1.2	100	100	80.9	84.3	81	84	64-137	4	30	
tert-Butylbenzene	ug/L	<0.15	10	10	10.1	11.0	101	110	70-143	9	30	
Tetrachloroethene	ug/L	<0.17	10	10	9.2	10.1	92	101	72-129	9	30	
Tetrahydrofuran	ug/L	<2.2	100	100	78.7	85.2	79	85	66-128	8	30	
Toluene	ug/L	<0.083	10	10	9.2	9.5	92	95	73-125	4	30	
trans-1,2-Dichloroethene	ug/L	<0.12	10	10	8.8	8.5	88	85	62-137	4	30	
trans-1,3-Dichloropropene	ug/L	<0.18	10	10	9.1	9.3	91	93	61-136	3	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	25	25	24.7	25.9	99	103	45-128	4	30	
Trichloroethene	ug/L	<0.15	10	10	8.8	9.7	88	97	74-132	10	30	
Trichlorofluoromethane	ug/L	<0.23	10	10	10.1	10.0	101	100	75-139	0	30	
Vinyl acetate	ug/L	<1.1	10	10	9.2J	8.0J	92	80	51-135		30	
Vinyl chloride	ug/L	<0.092	10	10	9.3	9.1	93	91	68-146	2	30	
Xylene (Total)	ug/L	<0.31	30	30	27.5	31.5	92	105	67-137	14	30	
1,2-Dichloroethane-d4 (S)	%.						102	102	75-136			
4-Bromofluorobenzene (S)	%.						97	99	75-125			
Toluene-d8 (S)	%.						103	104	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 617905 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10480825001

METHOD BLANK: 3337502 Matrix: Water
Associated Lab Samples: 10480825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/08/19 10:41	

LABORATORY CONTROL SAMPLE & LCSD: 3337503 3337504

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	41.6	41.8	104	105	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337505 3337506

Parameter	Units	10481052004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	26.3	40	40	67.6	67.0	103	102	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337507 3337508

Parameter	Units	10481203011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	211	40	40	252	253	103	104	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 618175 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

METHOD BLANK: 3338286 Matrix: Water
Associated Lab Samples: 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/09/19 06:56	

LABORATORY CONTROL SAMPLE & LCSD: 3338287 3338288

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	41.9	42.0	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3338289 3338290

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	275	40	40	311	305	89	76	80-120	2	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3338291 3338292

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	155	40	40	196	199	102	110	80-120	2	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 616493 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

METHOD BLANK: 3330166 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	6.0J	10.0	5.0	07/01/19 10:40	

LABORATORY CONTROL SAMPLE: 3330167

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	998	100	80-120	

SAMPLE DUPLICATE: 3330168

Parameter	Units	10480825003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	335	329	2	5	

SAMPLE DUPLICATE: 3330169

Parameter	Units	10480825007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	193	202	5	5	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 147701 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10480825001, 10480825002, 10480825003

METHOD BLANK: 652387 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	06/28/19 16:09	

LABORATORY CONTROL SAMPLE: 652388

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.21	106	90-110	

MATRIX SPIKE SAMPLE: 652390

Parameter	Units	10480825003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.022	11	75-125	M1

SAMPLE DUPLICATE: 652389

Parameter	Units	10480825003 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 147742 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10480825005, 10480825006, 10480825007, 10480825008

METHOD BLANK: 652665 Matrix: Water
Associated Lab Samples: 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	06/29/19 15:12	

LABORATORY CONTROL SAMPLE: 652666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.19	97	90-110	

MATRIX SPIKE SAMPLE: 652668

Parameter	Units	10480825007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.095	46	75-125	

SAMPLE DUPLICATE: 652667

Parameter	Units	10480825007 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 615838 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

METHOD BLANK: 3326845 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	06/26/19 18:39	
Nitrate as N	mg/L	<0.012	0.10	0.012	06/26/19 18:39	
Sulfate	mg/L	0.52J	1.2	0.28	06/26/19 18:39	

LABORATORY CONTROL SAMPLE: 3326846

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.2	98	90-110	
Nitrate as N	mg/L	1	0.99	99	90-110	
Sulfate	mg/L	12.5	13.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3326847 3326848

Parameter	Units	10480886008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	64.2	12.5	12.5	67.5	67.2	26	24	90-110	0	20	M1
Nitrate as N	mg/L	10.1	20	20	30.2	30.1	100	100	90-110	0	20	
Sulfate	mg/L	1010	250	250	1190	1180	74	72	90-110	1	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3326849 3326850

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.0	12.5	12.5	17.8	17.9	94	95	90-110	1	20	
Nitrate as N	mg/L	1.2	1	1	2.1	2.1	86	88	90-110	1	20	M1
Sulfate	mg/L	9.8	12.5	12.5	21.5	21.6	93	94	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3326851 3326852

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.3	12.5	12.5	14.5	14.5	97	97	90-110	0	20	
Nitrate as N	mg/L	<0.012	1	1	0.97	0.97	97	97	90-110	0	20	
Sulfate	mg/L	7.8	12.5	12.5	19.8	19.7	96	96	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 615995 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007

METHOD BLANK: 3327562 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	06/27/19 12:36	

LABORATORY CONTROL SAMPLE: 3327563

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327564 3327565

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	1.3	1	1	2.3	2.3	106	101	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3327566 3327567

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	1.1	1.0	111	105	90-110	6	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 617807 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10480825008

METHOD BLANK: 3336978 Matrix: Water
Associated Lab Samples: 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	07/06/19 12:43	FS

LABORATORY CONTROL SAMPLE: 3336979

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	102	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3336980 3336981

Parameter	Units	10480939001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.33	1	1	1.4	1.4	103	103	90-110	0	20	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3336982 3336983

Parameter	Units	10480939002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	0.89	0.88	88	87	90-110	2	20	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 617289 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

METHOD BLANK: 3334639 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/03/19 13:18	

LABORATORY CONTROL SAMPLE: 3334640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	304	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334641 3334642

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	251	246	97	95	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334643 3334644

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	254	246	100	97	90-110	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

QC Batch: 169508 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

METHOD BLANK: 669720 Matrix: Water
Associated Lab Samples: 10480825001, 10480825002, 10480825003, 10480825005, 10480825006, 10480825007, 10480825008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	07/02/19 23:08	

LABORATORY CONTROL SAMPLE: 669721

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 669722 669723

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.0	25	25	26.6	26.6	103	102	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 669724 669725

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.65J	25	25	26.1	25.7	102	100	80-120	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
FS	The sample was filtered in the laboratory prior to analysis.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10480825001	MW17D-GW-062519	RSK 175	616410		
10480825002	MW5D-GW-062519	RSK 175	616410		
10480825003	MW20D-GW-062519	RSK 175	616410		
10480825005	MW21D-GW-062519	RSK 175	616410		
10480825006	MW16D-GW-062519	RSK 175	616410		
10480825007	MW18D-GW-062519	RSK 175	616968		
10480825008	MW15D-GW-062519	RSK 175	616585		
10480825001	MW17D-GW-062519	EPA 3010	615876	EPA 6010D	616271
10480825002	MW5D-GW-062519	EPA 3010	615876	EPA 6010D	616271
10480825003	MW20D-GW-062519	EPA 3010	615876	EPA 6010D	616271
10480825005	MW21D-GW-062519	EPA 3010	615876	EPA 6010D	616271
10480825006	MW16D-GW-062519	EPA 3010	615876	EPA 6010D	616271
10480825007	MW18D-GW-062519	EPA 3010	615876	EPA 6010D	616271
10480825008	MW15D-GW-062519	EPA 3010	615876	EPA 6010D	616271
10480825001	MW17D-GW-062519	EPA 7470A	615914	EPA 7470A	616313
10480825002	MW5D-GW-062519	EPA 7470A	615914	EPA 7470A	616313
10480825003	MW20D-GW-062519	EPA 7470A	615914	EPA 7470A	616313
10480825005	MW21D-GW-062519	EPA 7470A	615914	EPA 7470A	616313
10480825006	MW16D-GW-062519	EPA 7470A	615914	EPA 7470A	616313
10480825007	MW18D-GW-062519	EPA 7470A	615914	EPA 7470A	616313
10480825008	MW15D-GW-062519	EPA 7470A	615914	EPA 7470A	616313
10480825001	MW17D-GW-062519	EPA 8260B	617335		
10480825002	MW5D-GW-062519	EPA 8260B	617335		
10480825003	MW20D-GW-062519	EPA 8260B	617335		
10480825004	Trip Blank 1	EPA 8260B	617335		
10480825005	MW21D-GW-062519	EPA 8260B	617335		
10480825006	MW16D-GW-062519	EPA 8260B	617335		
10480825007	MW18D-GW-062519	EPA 8260B	617335		
10480825008	MW15D-GW-062519	EPA 8260B	617335		
10480825001	MW17D-GW-062519	SM 2320B	617905		
10480825002	MW5D-GW-062519	SM 2320B	618175		
10480825003	MW20D-GW-062519	SM 2320B	618175		
10480825005	MW21D-GW-062519	SM 2320B	618175		
10480825006	MW16D-GW-062519	SM 2320B	618175		
10480825007	MW18D-GW-062519	SM 2320B	618175		
10480825008	MW15D-GW-062519	SM 2320B	618175		
10480825001	MW17D-GW-062519	SM 2540C	616493		
10480825002	MW5D-GW-062519	SM 2540C	616493		
10480825003	MW20D-GW-062519	SM 2540C	616493		
10480825005	MW21D-GW-062519	SM 2540C	616493		
10480825006	MW16D-GW-062519	SM 2540C	616493		
10480825007	MW18D-GW-062519	SM 2540C	616493		
10480825008	MW15D-GW-062519	SM 2540C	616493		
10480825001	MW17D-GW-062519	SM 4500-S-2 D	147701		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10480825

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10480825002	**MW5D-GW-062519**	SM 4500-S-2 D	147701		
10480825003	**MW20D-GW-062519**	SM 4500-S-2 D	147701		
10480825005	**MW21D-GW-062519**	SM 4500-S-2 D	147742		
10480825006	**MW16D-GW-062519**	SM 4500-S-2 D	147742		
10480825007	**MW18D-GW-062519**	SM 4500-S-2 D	147742		
10480825008	**MW15D-GW-062519**	SM 4500-S-2 D	147742		
10480825001	**MW17D-GW-062519**	EPA 300.0	615838		
10480825002	**MW5D-GW-062519**	EPA 300.0	615838		
10480825003	**MW20D-GW-062519**	EPA 300.0	615838		
10480825005	**MW21D-GW-062519**	EPA 300.0	615838		
10480825006	**MW16D-GW-062519**	EPA 300.0	615838		
10480825007	**MW18D-GW-062519**	EPA 300.0	615838		
10480825008	**MW15D-GW-062519**	EPA 300.0	615838		
10480825001	**MW17D-GW-062519**	EPA 353.2	615995		
10480825002	**MW5D-GW-062519**	EPA 353.2	615995		
10480825003	**MW20D-GW-062519**	EPA 353.2	615995		
10480825005	**MW21D-GW-062519**	EPA 353.2	615995		
10480825006	**MW16D-GW-062519**	EPA 353.2	615995		
10480825007	**MW18D-GW-062519**	EPA 353.2	615995		
10480825008	**MW15D-GW-062519**	EPA 353.2	617807		
10480825001	**MW17D-GW-062519**	EPA 410.4	617289	EPA 410.4	617343
10480825002	**MW5D-GW-062519**	EPA 410.4	617289	EPA 410.4	617343
10480825003	**MW20D-GW-062519**	EPA 410.4	617289	EPA 410.4	617343
10480825005	**MW21D-GW-062519**	EPA 410.4	617289	EPA 410.4	617343
10480825006	**MW16D-GW-062519**	EPA 410.4	617289	EPA 410.4	617343
10480825007	**MW18D-GW-062519**	EPA 410.4	617289	EPA 410.4	617343
10480825008	**MW15D-GW-062519**	EPA 410.4	617289	EPA 410.4	617343
10480825001	**MW17D-GW-062519**	SM 5310C	169508		
10480825002	**MW5D-GW-062519**	SM 5310C	169508		
10480825003	**MW20D-GW-062519**	SM 5310C	169508		
10480825005	**MW21D-GW-062519**	SM 5310C	169508		
10480825006	**MW16D-GW-062519**	SM 5310C	169508		
10480825007	**MW18D-GW-062519**	SM 5310C	169508		
10480825008	**MW15D-GW-062519**	SM 5310C	169508		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: CH2M Hill	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh	
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR	Regulatory Agency
	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	
Email:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 758938	
Phone: Fax:	Project Name: Freeman WA-Grain Handling Facility	Pace Project Manager: Jennifer Gross	State / Location
Requested Due Date: *10 Day Standard*	Project #: 1497	Pace Profile #: *36447 / 4*	WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Y/N	Analyses Test: Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 6310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	Requested Analysis Filtered (Y/N)
														Y		Y												
1	MW17D-GW-062519	GW	G	06/25/19	0825		13								X	X	X	X	X	X	X	X	X					001
2	MW5D-GW-062519			06/25/19	0935		13								X	X	X	X	X	X	X	X	X					002
3	MW20D-GW-062519			06/25/19	1040		39								X	X	X	X	X	X	X	X	X				X	003
4	TRIP BLANK 1			06/25/19	0700		3								X													004
5	MW21D-GW-062519			06/25/19	1215		13								X	X	X	X	X	X	X	X	X					005
6	MW16D-GW-062519			06/25/19	1315		13								X	X	X	X	X	X	X	X	X					006
7	MW18D-GW-062519			06/25/19	1410		39								X	X	X	X	X	X	X	X	X				X	007
8	MW15D-GW-062519			06/25/19	1520		13								X	X	X	X	X	X	X	X	X					008
9																												
10																												
11																												
12																												

WO# : 10480825

10480825

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILI			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Short hold analyses are in bold	Natalie Dowdy / JACOBS	06/25/19	1700	PACE	6/26/19	9:40	3.2	Y	Y	Y
*Field filtered by client										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Natalie Dowdy

SIGNATURE of SAMPLER: Natalie Dowdy

DATE Signed: 06/25/19

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 09May2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.28	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CH2M HILL

Project #: WO#: 10480825

PM: JMG Due Date: 07/11/19

CLIENT: UPRR_Jacobs

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Pace [ ] SpeeDee [ ] Commercial See Exception [X]

Tracking Number:

Custody Seal on Cooler/Box Present? [X] Yes [ ] No **Seals Intact?** [X] Yes [ ] No **Biological Tissue Frozen?** [ ] Yes [ ] No [X] N/A

Packing Material: [ ] Bubble Wrap [X] Bubble Bags [ ] None [X] Other: BAGS **Temp Blank?** [X] Yes [ ] No

Thermometer: [ ] T1(0461) [X] T2(1336) [ ] T3(0459) [ ] T4(0254) [ ] T5(0489) **Type of Ice:** [X] Wet [ ] Blue [ ] None [ ] Dry [ ] Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.3, 0.5, 0.5 °C

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 0.4, 0.6, 0.6 °C

Average Corrected Temp (no temp blank only): °C See Exceptions [ ]

USDA Regulated Soil: ([X] N/A, water sample/Other:) Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? [ ] Yes [ ] No

Date/Initials of Person Examining Contents: 6.26.19 CMY

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? [ ] Yes [ ] No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present and Filled Out?	[X] Yes [ ] No	1.
Chain of Custody Relinquished?	[X] Yes [ ] No	2.
Sampler Name and/or Signature on COC?	[X] Yes [ ] No [ ] N/A	3.
Samples Arrived within Hold Time?	[X] Yes [ ] No	4.
Short Hold Time Analysis (<72 hr)?	[X] Yes [ ] No	5. [ ] Fecal Coliform [ ] HPC [ ] Total Coliform/E coli [ ] BOD/cBOD [ ] Hex Chrome [ ] Turbidity [X] Nitrate [ ] Nitrite [ ] Orthophos [ ] Other
Rush Turn Around Time Requested?	[ ] Yes [X] No	6.
Sufficient Volume?	[X] Yes [ ] No	7.
Correct Containers Used? -Pace Containers Used?	[X] Yes [ ] No [X] Yes [ ] No	8.
Containers Intact?	[X] Yes [ ] No	9.
Field Filtered Volume Received for Dissolved Tests?	[X] Yes [ ] No [X] N/A	10. Is sediment visible in the dissolved container? [ ] Yes [ ] No
Is sufficient information available to reconcile the samples to the COC? JMG 062719	[X] Yes [ ] No	11. **If no, write ID/ Date/Time on Container Below:** See Exception [ ]
Matrix: [X] Water [ ] Soil [ ] Oil [ ] Other		
All containers needing acid/base preservation have been checked?	[X] Yes [ ] No [ ] N/A	12. Sample # 1-13 : 1/1 1-39 : 1/1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	[X] Yes [ ] No [ ] N/A	[ ] NaOH [X] HNO_3 [X] H_2SO_4 [X] Zinc Acetate
Exceptions (VOA) Coliform (TOC) DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	[X] Yes [ ] No [ ] N/A	Positive for Res. Chlorine? [ ] Yes [ ] No pH Paper Lot# See Exception [ ]
		Res. Chlorine: 0-6 Roll 203619; 0-6 Strip; 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	[ ] Yes [X] No [ ] N/A	13. See Exception [ ]
Trip Blank Present?	[X] Yes [ ] No [ ] N/A	14.
Trip Blank Custody Seals Present?	[X] Yes [ ] No [ ] N/A	Pace Trip Blank Lot # (if purchased): 213047

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Mark Ochsner Date/Time: 06/27/18 **Field Data Required?** [ ] Yes [ ] No

Comments/Resolution: WA certs not required for RSK or sulfide.

Project Manager Review: Jenji Gross **Date:** 06/27/19

Note: Whenever there is a discrepancy affecting N hold, incorrect preservative, out of temp, incorrect containers). liance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of

Labeled by:

Pace Analytical	Document Name: SCUR Exception Form – Coolers Above 6°C	Document Revised: 08Apr2019 Page 1 of 1
	Document No.: F-MN-C-298-Rev.02	Issuing Authority: Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions: **Workorder #:** 10480825

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature

4934 3730 5717	0.4
4934 3730 1803	0.6
4934 3730 5706	0.6

Other Issues

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

PRE

Chain of Custody

WO#: 12131267

PM: CLJ **Due Date: 07/10/19**

CLIENT: PACE MPLS

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes ☐ No

Workorder: 10480825 **Workorder Name:** 1497 Freeman WA-Grain Handling

Owner Received Date: 6/26/2019 **Results Requested By:** 7/11/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S	5632354 / 5310 TOC	5632354 / 5310 TOC	LAB USE ONLY
1	MW17D-GW-062519	PS	6/25/2019 08:25	10480825001	Water	2		X	
2	MW5D-GW-062519	PS	6/25/2019 09:35	10480825002	Water	2		X	
3	MW20D-GW-062519	RQS	6/25/2019 10:40	10480825003	Water	6	X	X	
4	MW21D-GW-062519	PS	6/25/2019 12:15	10480825005	Water	2		X	
5	MW16D-GW-062519	PS	6/25/2019 13:15	10480825006	Water	2		X	
6	MW18D-GW-062519	RQS	6/25/2019 14:10	10480825007	Water	6	X	X	
7	MW15D-GW-062519	PS	6/25/2019 15:10	10480825008	Water	2		X	

Comments

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] 6/27/19	6/27/19 1130	[signature] 8/27/19	1920
2	[signature] 6/27/19	2350	[signature]	6/28/19 10:10
3				

Cooler Temperature on Receipt 0.4 °C **Custody Seal** (Y) or N **Received on Ice** (Y) or N **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: **WO#: 12131267**

PM: CLJ **Due Date: 07/10/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☑ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.1 Cooler Temp Corrected °C: 0.4 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 6/27/19 DC

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☒ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation properly preserved?	☒ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased): _____				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Carrie Jhon Date: 7/1/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

WO# : 20110394

20110394

Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subc

Origin: WA

Cert. Needed: ☐ Yes ☒ No

Workorder: 10480825 **Workorder Name:** 1497 Freeman WA-Grain Handling **Owner Received Date:** 6/26/2019 **Results Requested By:** 7/11/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	Requested Analysis: 5636267 / 4500 Sulfide	5636267 / 4500 Sulfide	LAB USE ONLY
1	MW17D-GW-062519	PS	6/25/2019 08:25	10480825001	Water	1		X	
2	MW5D-GW-062519	PS	6/25/2019 09:35	10480825002	Water	1		X	
3	MW20D-GW-062519	RQS	6/25/2019 10:40	10480825003	Water	3	X	X	
4	MW21D-GW-062519	PS	6/25/2019 12:15	10480825005	Water	1		X	
5	MW16D-GW-062519	PS	6/25/2019 13:15	10480825006	Water	1		X	
6	MW18D-GW-062519	RQS	6/25/2019 14:10	10480825007	Water	3	X	X	
7	MW15D-GW-062519	PS	6/25/2019 15:10	10480825008	Water	1		X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace	6/27/19 1550	Fed Ex	
2	FedEx 6/28/19 1025		[signature] Pace 6/28/19	1025
3				

Comments

Cooler Temperature on Receipt 3.3 °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Conditio

WO#: 20110394

PM: CMM **Due Date: 07/11/19**

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None Samples on ice: [see COC]

Cooler Temperature: [see COC] Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6-28-19

Temp must be measured from Temperature blank when present

				Comments:
Temperature Blank Present"?	☑Yes	☐No	☐N/A	1
Chain of Custody Present:	☑Yes	☐No	☐N/A	2
Chain of Custody Complete:	☑Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☐Yes	☑No	☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6
Sufficient Volume:	☑Yes	☐No	☐N/A	7
Correct Containers Used:	☑Yes	☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☑No	☐N/A	9
Sample Labels match COC:	☑Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14
Trip Blank Present:	☐Yes	☑No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 12, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on June 27, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10481000001	**MW1D-GW-062619**	Water	06/26/19 08:05	06/27/19 08:40
10481000002	**TRIP BLANK 1**	Water	06/26/19 07:00	06/27/19 08:40
10481000003	**MW2D-GW-062619**	Water	06/26/19 08:55	06/27/19 08:40
10481000004	**MW6D-GW-062619**	Water	06/26/19 10:05	06/27/19 08:40
10481000005	**FD2-GW-062619**	Water	06/26/19 08:00	06/27/19 08:40
10481000006	**MW6U-GW-062619**	Water	06/26/19 11:45	06/27/19 08:40
10481000007	**MW4D-GW-062619**	Water	06/26/19 13:40	06/27/19 08:40
10481000008	**MW3D-GW-062619**	Water	06/26/19 14:55	06/27/19 08:40
10481000009	**FD3-GW-062619**	Water	06/26/19 12:00	06/27/19 08:40
10481000010	**MW14D-GW-062619**	Water	06/26/19 16:00	06/27/19 08:40

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10481000001	**MW1D-GW-062619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481000002	**TRIP BLANK 1**	EPA 8260B	DS2	83	PASI-M
10481000003	**MW2D-GW-062619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481000004	**MW6D-GW-062619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481000005	**FD2-GW-062619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481000006	**MW6U-GW-062619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481000007	**MW4D-GW-062619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481000008	**MW3D-GW-062619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481000009	**FD3-GW-062619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481000010	**MW14D-GW-062619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481000001	**MW1D-GW-062619**					
EPA 6010D	Arsenic, Dissolved	9.4J	ug/L	20.0	07/11/19 13:38	
EPA 6010D	Barium, Dissolved	69.4	ug/L	10.0	07/11/19 13:38	
EPA 6010D	Molybdenum, Dissolved	10.5J	ug/L	15.0	07/11/19 13:38	
EPA 6010D	Nickel, Dissolved	2.9J	ug/L	20.0	07/11/19 13:38	
EPA 6010D	Vanadium, Dissolved	1.1J	ug/L	15.0	07/11/19 13:38	
EPA 6010D	Zinc, Dissolved	11.8J	ug/L	20.0	07/11/19 13:38	
EPA 7470A	Mercury, Dissolved	0.28	ug/L	0.20	07/10/19 17:55	
SM 2320B	Alkalinity, Total as CaCO3	193	mg/L	5.0	07/10/19 07:06	M1
SM 2540C	Total Dissolved Solids	236	mg/L	10.0	07/02/19 10:34	
EPA 300.0	Chloride	1.9	mg/L	1.2	06/27/19 19:40	
EPA 300.0	Nitrate as N	0.13	mg/L	0.10	06/27/19 19:40	
EPA 300.0	Sulfate	4.0	mg/L	1.2	06/27/19 19:40	B
EPA 353.2	Nitrogen, NO2 plus NO3	0.11	mg/L	0.10	07/06/19 12:53	
SM 5310C	Total Organic Carbon	1.4	mg/L	1.0	07/03/19 03:10	
10481000003	**MW2D-GW-062619**					
RSK 175	Methane	17.2	ug/L	10.0	07/02/19 19:05	
EPA 6010D	Barium, Dissolved	68.6	ug/L	10.0	07/11/19 14:02	
EPA 6010D	Cobalt, Dissolved	0.87J	ug/L	10.0	07/11/19 14:02	
EPA 6010D	Molybdenum, Dissolved	11.9J	ug/L	15.0	07/11/19 14:02	
EPA 6010D	Nickel, Dissolved	2.4J	ug/L	20.0	07/11/19 14:02	
EPA 6010D	Vanadium, Dissolved	1.3J	ug/L	15.0	07/11/19 14:02	
EPA 6010D	Zinc, Dissolved	9.5J	ug/L	20.0	07/11/19 14:02	
SM 2320B	Alkalinity, Total as CaCO3	141	mg/L	5.0	07/10/19 07:23	
SM 2540C	Total Dissolved Solids	203	mg/L	10.0	07/02/19 10:34	
EPA 300.0	Chloride	1.6	mg/L	1.2	06/27/19 20:11	
EPA 300.0	Nitrate as N	0.040J	mg/L	0.10	06/27/19 20:11	
EPA 300.0	Sulfate	6.2	mg/L	1.2	06/27/19 20:11	
SM 5310C	Total Organic Carbon	4.2	mg/L	1.0	07/03/19 03:52	
10481000004	**MW6D-GW-062619**					
EPA 6010D	Barium, Dissolved	6.4J	ug/L	10.0	07/11/19 14:05	
EPA 6010D	Vanadium, Dissolved	5.1J	ug/L	15.0	07/11/19 14:05	
SM 2320B	Alkalinity, Total as CaCO3	181	mg/L	5.0	07/10/19 07:39	
SM 2540C	Total Dissolved Solids	231	mg/L	10.0	07/02/19 10:34	
EPA 300.0	Chloride	2.1	mg/L	1.2	06/27/19 20:26	
EPA 300.0	Nitrate as N	0.068J	mg/L	0.10	06/27/19 20:26	
EPA 300.0	Sulfate	6.4	mg/L	1.2	06/27/19 20:26	
EPA 353.2	Nitrogen, NO2 plus NO3	0.041J	mg/L	0.10	07/06/19 12:55	
SM 5310C	Total Organic Carbon	0.51J	mg/L	1.0	07/03/19 04:07	
10481000005	**FD2-GW-062619**					
EPA 6010D	Barium, Dissolved	6.5J	ug/L	10.0	07/11/19 14:08	
EPA 6010D	Vanadium, Dissolved	5.2J	ug/L	15.0	07/11/19 14:08	
SM 2320B	Alkalinity, Total as CaCO3	181	mg/L	5.0	07/10/19 08:12	
SM 2540C	Total Dissolved Solids	231	mg/L	10.0	07/02/19 10:34	
EPA 300.0	Chloride	2.1	mg/L	1.2	06/27/19 20:41	
EPA 300.0	Nitrate as N	0.067J	mg/L	0.10	06/27/19 20:41	
EPA 300.0	Sulfate	6.2	mg/L	1.2	06/27/19 20:41	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481000005	**FD2-GW-062619**					
EPA 353.2	Nitrogen, NO2 plus NO3	0.041J	mg/L	0.10	07/06/19 12:56	
SM 5310C	Total Organic Carbon	0.91J	mg/L	1.0	07/03/19 04:21	
10481000006	**MW6U-GW-062619**					
EPA 6010D	Arsenic, Dissolved	6.4J	ug/L	20.0	07/11/19 14:11	
EPA 6010D	Barium, Dissolved	73.7	ug/L	10.0	07/11/19 14:11	
EPA 6010D	Beryllium, Dissolved	0.33J	ug/L	5.0	07/11/19 14:11	
EPA 6010D	Chromium, Dissolved	3.3J	ug/L	10.0	07/11/19 14:11	
EPA 6010D	Cobalt, Dissolved	2.2J	ug/L	10.0	07/11/19 14:11	
EPA 6010D	Copper, Dissolved	3.7J	ug/L	10.0	07/11/19 14:11	
EPA 6010D	Lead, Dissolved	4.5J	ug/L	10.0	07/11/19 14:11	
EPA 6010D	Nickel, Dissolved	2.9J	ug/L	20.0	07/11/19 14:11	
EPA 6010D	Vanadium, Dissolved	16.2	ug/L	15.0	07/11/19 14:11	
EPA 6010D	Zinc, Dissolved	18.6J	ug/L	20.0	07/11/19 14:11	
EPA 7470A	Mercury, Dissolved	0.85	ug/L	0.20	07/10/19 18:12	
EPA 8260B	Carbon disulfide	0.65J	ug/L	1.0	07/04/19 02:00	
EPA 8260B	Carbon tetrachloride	46.1	ug/L	0.50	07/04/19 02:00	
EPA 8260B	Chloroform	2.2	ug/L	1.0	07/04/19 02:00	
SM 2320B	Alkalinity, Total as CaCO3	218	mg/L	5.0	07/10/19 09:21	
SM 2540C	Total Dissolved Solids	415	mg/L	25.0	07/02/19 10:34	
EPA 300.0	Chloride	9.5	mg/L	1.2	06/27/19 20:56	
EPA 300.0	Nitrate as N	1.1	mg/L	0.10	06/27/19 20:56	
EPA 300.0	Sulfate	6.0	mg/L	1.2	06/27/19 20:56	
EPA 353.2	Nitrogen, NO2 plus NO3	1.0	mg/L	0.10	07/06/19 12:58	FS
EPA 410.4	Chemical Oxygen Demand	75.3	mg/L	50.0	07/03/19 13:23	
SM 5310C	Total Organic Carbon	2.7	mg/L	1.0	07/03/19 04:35	
10481000007	**MW4D-GW-062619**					
EPA 6010D	Arsenic, Dissolved	4.9J	ug/L	20.0	07/11/19 14:14	
EPA 6010D	Barium, Dissolved	84.5	ug/L	10.0	07/11/19 14:14	
EPA 6010D	Beryllium, Dissolved	0.13J	ug/L	5.0	07/11/19 14:14	
EPA 6010D	Chromium, Dissolved	1.7J	ug/L	10.0	07/11/19 14:14	
EPA 6010D	Cobalt, Dissolved	5.9J	ug/L	10.0	07/11/19 14:14	
EPA 6010D	Copper, Dissolved	3.7J	ug/L	10.0	07/11/19 14:14	
EPA 6010D	Nickel, Dissolved	6.2J	ug/L	20.0	07/11/19 14:14	
EPA 6010D	Vanadium, Dissolved	6.2J	ug/L	15.0	07/11/19 14:14	
EPA 6010D	Zinc, Dissolved	10.8J	ug/L	20.0	07/11/19 14:14	
EPA 8260B	Carbon tetrachloride	3.2	ug/L	0.50	07/04/19 02:24	
EPA 8260B	Chloroform	0.84J	ug/L	1.0	07/04/19 02:24	
EPA 8260B	Toluene	0.12J	ug/L	0.50	07/04/19 02:24	
SM 2320B	Alkalinity, Total as CaCO3	118	mg/L	5.0	07/10/19 09:27	
SM 2540C	Total Dissolved Solids	325	mg/L	10.0	07/02/19 10:34	
EPA 300.0	Chloride	7.8	mg/L	1.2	06/27/19 21:11	
EPA 300.0	Nitrate as N	0.68	mg/L	0.10	06/27/19 21:11	
EPA 300.0	Sulfate	4.7	mg/L	1.2	06/27/19 21:11	B
EPA 353.2	Nitrogen, NO2 plus NO3	0.67	mg/L	0.10	07/06/19 12:59	FS
EPA 410.4	Chemical Oxygen Demand	62.5	mg/L	50.0	07/03/19 13:23	
SM 5310C	Total Organic Carbon	9.4	mg/L	1.0	07/03/19 04:50	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481000008	**MW3D-GW-062619**					
EPA 6010D	Barium, Dissolved	45.5	ug/L	10.0	07/11/19 14:17	
EPA 6010D	Beryllium, Dissolved	0.19J	ug/L	5.0	07/11/19 14:17	
EPA 6010D	Chromium, Dissolved	4.8J	ug/L	10.0	07/11/19 14:17	
EPA 6010D	Nickel, Dissolved	2.2J	ug/L	20.0	07/11/19 14:17	
EPA 6010D	Vanadium, Dissolved	2.6J	ug/L	15.0	07/11/19 14:17	
SM 2320B	Alkalinity, Total as CaCO3	139	mg/L	5.0	07/10/19 09:32	
SM 2540C	Total Dissolved Solids	207	mg/L	10.0	07/02/19 10:34	
EPA 300.0	Chloride	1.6	mg/L	1.2	06/27/19 21:26	
EPA 300.0	Nitrate as N	0.14	mg/L	0.10	06/27/19 21:26	
EPA 300.0	Sulfate	3.5	mg/L	1.2	06/27/19 21:26	B
EPA 353.2	Nitrogen, NO2 plus NO3	0.14	mg/L	0.10	07/06/19 13:00	
SM 5310C	Total Organic Carbon	1.2	mg/L	1.0	07/03/19 05:04	
10481000009	**FD3-GW-062619**					
EPA 6010D	Barium, Dissolved	48.9	ug/L	10.0	07/11/19 14:20	
EPA 6010D	Beryllium, Dissolved	0.28J	ug/L	5.0	07/11/19 14:20	
EPA 6010D	Chromium, Dissolved	6.9J	ug/L	10.0	07/11/19 14:20	
EPA 6010D	Copper, Dissolved	1.5J	ug/L	10.0	07/11/19 14:20	
EPA 6010D	Nickel, Dissolved	3.8J	ug/L	20.0	07/11/19 14:20	
EPA 6010D	Vanadium, Dissolved	3.1J	ug/L	15.0	07/11/19 14:20	
EPA 6010D	Zinc, Dissolved	10.7J	ug/L	20.0	07/11/19 14:20	
SM 2320B	Alkalinity, Total as CaCO3	139	mg/L	5.0	07/10/19 09:37	
SM 2540C	Total Dissolved Solids	205	mg/L	10.0	07/02/19 10:34	
EPA 300.0	Chloride	2.0	mg/L	1.2	06/27/19 21:41	
EPA 300.0	Nitrate as N	0.14	mg/L	0.10	06/27/19 21:41	
EPA 300.0	Sulfate	4.3	mg/L	1.2	06/27/19 21:41	B
EPA 353.2	Nitrogen, NO2 plus NO3	0.14	mg/L	0.10	07/06/19 13:03	
SM 5310C	Total Organic Carbon	0.72J	mg/L	1.0	07/03/19 05:19	
10481000010	**MW14D-GW-062619**					
EPA 6010D	Barium, Dissolved	25.6	ug/L	10.0	07/11/19 14:23	
EPA 6010D	Nickel, Dissolved	1.2J	ug/L	20.0	07/11/19 14:23	
EPA 6010D	Vanadium, Dissolved	4.7J	ug/L	15.0	07/11/19 14:23	
SM 2320B	Alkalinity, Total as CaCO3	150	mg/L	5.0	07/10/19 09:42	
SM 2540C	Total Dissolved Solids	216	mg/L	10.0	07/02/19 10:34	
EPA 300.0	Chloride	1.4	mg/L	1.2	06/27/19 22:27	
EPA 300.0	Nitrate as N	0.053J	mg/L	0.10	06/27/19 22:27	
EPA 300.0	Sulfate	1.9	mg/L	1.2	06/27/19 22:27	B
EPA 353.2	Nitrogen, NO2 plus NO3	0.027J	mg/L	0.10	07/06/19 13:04	FS
SM 5310C	Total Organic Carbon	2.1	mg/L	1.0	07/03/19 05:33	

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
10 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- FD2-GW-062619 (Lab ID: 10481000005)
- FD3-GW-062619 (Lab ID: 10481000009)
- MW14D-GW-062619 (Lab ID: 10481000010)
- MW3D-GW-062619 (Lab ID: 10481000008)
- MW4D-GW-062619 (Lab ID: 10481000007)
- MW6U-GW-062619 (Lab ID: 10481000006)
- TRIP BLANK 1 (Lab ID: 10481000002)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 616965

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- LCS (Lab ID: 3332688)
  - Carbon disulfide
- MS (Lab ID: 3332689)
  - Carbon disulfide
- MSD (Lab ID: 3332690)
  - Carbon disulfide

QC Batch: 617335

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
- BLANK (Lab ID: 3334749)
  - Acrolein
- FD2-GW-062619 (Lab ID: 10481000005)
  - Acrolein
- LCS (Lab ID: 3334750)
  - Acrolein
- MS (Lab ID: 3334751)
  - Acrolein
- MS (Lab ID: 3334753)
  - Acrolein
- MSD (Lab ID: 3334752)
  - Acrolein

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

QC Batch: 617335

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- MSD (Lab ID: 3334754)
  - Acrolein
- TRIP BLANK 1 (Lab ID: 10481000002)
  - Acrolein

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 616965

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3332687)
  - Hexachloro-1,3-butadiene
  - n-Butylbenzene

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 616965

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.

- LCS (Lab ID: 3332688)
  - Carbon disulfide

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 616965

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481283006

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 3332689)
  - Carbon disulfide
- MSD (Lab ID: 3332690)
  - Carbon disulfide

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3332689)
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

QC Batch: 617335

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480825003,10480825007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3334753)
  - Bromodichloromethane
- MSD (Lab ID: 3334752)
  - Acetone

Additional Comments:

Analyte Comments:

QC Batch: 616965

1M: Post-analysis pH measurement indicates insufficient VOA sample preservation. Therefore, analysis was conducted outside the recognized method holding time.

- MS (Lab ID: 3332689)
  - 1,2-Dichloroethane-d4 (S)
- MSD (Lab ID: 3332690)
  - 1,2-Dichloroethane-d4 (S)

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3332687)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3332688)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3332689)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3332690)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW1D-GW-062619 (Lab ID: 10481000001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW2D-GW-062619 (Lab ID: 10481000003)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW6D-GW-062619 (Lab ID: 10481000004)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

Analyte Comments:

QC Batch: 616965

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- MW6D-GW-062619 (Lab ID: 10481000004)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3332687)
  - Hexachloro-1,3-butadiene
  - n-Butylbenzene

QC Batch: 617335

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3334749)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- FD2-GW-062619 (Lab ID: 10481000005)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3334750)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3334751)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3334753)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3334752)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3334754)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- TRIP BLANK 1 (Lab ID: 10481000002)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

Analyte Comments:

QC Batch: 617335

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- TRIP BLANK 1 (Lab ID: 10481000002)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

QC Batch: 617460

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3335306)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- FD3-GW-062619 (Lab ID: 10481000009)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3335307)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3337914)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3337915)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW14D-GW-062619 (Lab ID: 10481000010)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW3D-GW-062619 (Lab ID: 10481000008)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW4D-GW-062619 (Lab ID: 10481000007)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW6U-GW-062619 (Lab ID: 10481000006)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 12, 2019

Analyte Comments:

QC Batch: 617460

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- MW6U-GW-062619 (Lab ID: 10481000006)
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 618406

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481000001,10481000003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 3339762)
  - Alkalinity, Total as CaCO3

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 616221

B: Analyte was detected in the associated method blank.

- BLANK for HBN 616221 [WETA/399 (Lab ID: 3328620)
  - Sulfate

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: July 12, 2019

General Information:
9 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW1D-GW-062619 **Lab ID: 10481000001** Collected: 06/26/19 08:05 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/02/19 18:58	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/02/19 18:58	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/02/19 18:58	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/10/19 09:10	07/11/19 13:38	7440-36-0	
Arsenic, Dissolved	**9.4J**	ug/L	20.0	3.8	1	07/10/19 09:10	07/11/19 13:38	7440-38-2	
Barium, Dissolved	**69.4**	ug/L	10.0	0.60	1	07/10/19 09:10	07/11/19 13:38	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/10/19 09:10	07/11/19 13:38	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/10/19 09:10	07/11/19 13:38	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/10/19 09:10	07/11/19 13:38	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	07/10/19 09:10	07/11/19 13:38	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/10/19 09:10	07/11/19 13:38	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/10/19 09:10	07/11/19 13:38	7439-92-1	
Molybdenum, Dissolved	**10.5J**	ug/L	15.0	3.8	1	07/10/19 09:10	07/11/19 13:38	7439-98-7	
Nickel, Dissolved	**2.9J**	ug/L	20.0	1.1	1	07/10/19 09:10	07/11/19 13:38	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/10/19 09:10	07/11/19 13:38	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/10/19 09:10	07/11/19 13:38	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/10/19 09:10	07/11/19 13:38	7440-28-0	
Vanadium, Dissolved	**1.1J**	ug/L	15.0	0.43	1	07/10/19 09:10	07/11/19 13:38	7440-62-2	
Zinc, Dissolved	**11.8J**	ug/L	20.0	6.3	1	07/10/19 09:10	07/11/19 13:38	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**0.28**	ug/L	0.20	0.093	1	07/10/19 12:17	07/10/19 17:55	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/02/19 00:40	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/02/19 00:40	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:40	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/02/19 00:40	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/02/19 00:40	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:40	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:40	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/02/19 00:40	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/02/19 00:40	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/02/19 00:40	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/02/19 00:40	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/02/19 00:40	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		07/02/19 00:40	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/02/19 00:40	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/02/19 00:40	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/02/19 00:40	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/02/19 00:40	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/02/19 00:40	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/02/19 00:40	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:40	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW1D-GW-062619 **Lab ID: 10481000001** Collected: 06/26/19 08:05 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/02/19 00:40	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:40	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/02/19 00:40	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/02/19 00:40	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/02/19 00:40	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/02/19 00:40	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:40	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/02/19 00:40	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/02/19 00:40	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/02/19 00:40	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/02/19 00:40	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/02/19 00:40	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/02/19 00:40	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/02/19 00:40	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/02/19 00:40	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/02/19 00:40	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	1.0	0.22	1		07/02/19 00:40	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/02/19 00:40	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/02/19 00:40	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/02/19 00:40	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/02/19 00:40	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:40	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/02/19 00:40	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/02/19 00:40	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/02/19 00:40	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		07/02/19 00:40	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/02/19 00:40	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/02/19 00:40	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/02/19 00:40	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/02/19 00:40	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/02/19 00:40	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/02/19 00:40	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/02/19 00:40	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/02/19 00:40	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:40	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/02/19 00:40	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/02/19 00:40	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/02/19 00:40	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:40	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/02/19 00:40	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/02/19 00:40	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/02/19 00:40	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/02/19 00:40	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/02/19 00:40	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/02/19 00:40	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/02/19 00:40	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW1D-GW-062619 **Lab ID: 10481000001** Collected: 06/26/19 08:05 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 00:40	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/02/19 00:40	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/02/19 00:40	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/02/19 00:40	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/02/19 00:40	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:40	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 00:40	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 00:40	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/02/19 00:40	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/02/19 00:40	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 00:40	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/02/19 00:40	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		07/02/19 00:40	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/02/19 00:40	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-136		1		07/02/19 00:40	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1		07/02/19 00:40	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/02/19 00:40	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**193**	mg/L	5.0	2.0	1		07/10/19 07:06		M1
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**236**	mg/L	10.0	5.0	1		07/02/19 10:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:13	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.9**	mg/L	1.2	0.12	1		06/27/19 19:40	16887-00-6	
Nitrate as N	**0.13**	mg/L	0.10	0.012	1		06/27/19 19:40	14797-55-8	
Sulfate	**4.0**	mg/L	1.2	0.28	1		06/27/19 19:40	14808-79-8	B
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.11**	mg/L	0.10	0.018	1		07/06/19 12:53		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:22		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.4**	mg/L	1.0	0.39	1		07/03/19 03:10	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: TRIP BLANK 1 **Lab ID: 10481000002** Collected: 06/26/19 07:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 11:48	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 11:48	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:48	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 11:48	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 11:48	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:48	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:48	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 11:48	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 11:48	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 11:48	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 11:48	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 11:48	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 11:48	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 11:48	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 11:48	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 11:48	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 11:48	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 11:48	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 11:48	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:48	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 11:48	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:48	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 11:48	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 11:48	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 11:48	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 11:48	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:48	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 11:48	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 11:48	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 11:48	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 11:48	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 11:48	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 11:48	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 11:48	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 11:48	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 11:48	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 11:48	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 11:48	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 11:48	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/03/19 11:48	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/03/19 11:48	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:48	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 11:48	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/03/19 11:48	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 11:48	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 11:48	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: TRIP BLANK 1 **Lab ID: 10481000002** Collected: 06/26/19 07:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 11:48	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 11:48	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 11:48	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 11:48	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 11:48	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 11:48	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 11:48	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 11:48	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:48	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 11:48	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 11:48	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 11:48	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 11:48	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 11:48	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 11:48	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 11:48	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 11:48	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 11:48	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 11:48	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 11:48	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 11:48	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 11:48	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 11:48	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 11:48	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 11:48	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 11:48	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 11:48	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 11:48	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 11:48	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 11:48	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 11:48	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 11:48	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 11:48	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 11:48	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		07/03/19 11:48	17060-07-0	
Toluene-d8 (S)	109	%.	75-125		1		07/03/19 11:48	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		07/03/19 11:48	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW2D-GW-062619 **Lab ID: 10481000003** Collected: 06/26/19 08:55 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**17.2**	ug/L	10.0	4.9	1		07/02/19 19:05	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/02/19 19:05	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/02/19 19:05	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/10/19 09:10	07/11/19 14:02	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/10/19 09:10	07/11/19 14:02	7440-38-2	
Barium, Dissolved	**68.6**	ug/L	10.0	0.60	1	07/10/19 09:10	07/11/19 14:02	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/10/19 09:10	07/11/19 14:02	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/10/19 09:10	07/11/19 14:02	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/10/19 09:10	07/11/19 14:02	7440-47-3	
Cobalt, Dissolved	**0.87J**	ug/L	10.0	0.50	1	07/10/19 09:10	07/11/19 14:02	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/10/19 09:10	07/11/19 14:02	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/10/19 09:10	07/11/19 14:02	7439-92-1	
Molybdenum, Dissolved	**11.9J**	ug/L	15.0	3.8	1	07/10/19 09:10	07/11/19 14:02	7439-98-7	
Nickel, Dissolved	**2.4J**	ug/L	20.0	1.1	1	07/10/19 09:10	07/11/19 14:02	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/10/19 09:10	07/11/19 14:02	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/10/19 09:10	07/11/19 14:02	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/10/19 09:10	07/11/19 14:02	7440-28-0	
Vanadium, Dissolved	**1.3J**	ug/L	15.0	0.43	1	07/10/19 09:10	07/11/19 14:02	7440-62-2	
Zinc, Dissolved	**9.5J**	ug/L	20.0	6.3	1	07/10/19 09:10	07/11/19 14:02	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/10/19 12:17	07/10/19 17:58	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/02/19 00:57	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/02/19 00:57	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:57	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/02/19 00:57	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/02/19 00:57	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:57	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:57	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/02/19 00:57	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/02/19 00:57	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/02/19 00:57	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/02/19 00:57	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/02/19 00:57	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		07/02/19 00:57	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/02/19 00:57	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/02/19 00:57	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/02/19 00:57	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/02/19 00:57	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/02/19 00:57	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/02/19 00:57	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:57	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW2D-GW-062619 **Lab ID: 10481000003** Collected: 06/26/19 08:55 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/02/19 00:57	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:57	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/02/19 00:57	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/02/19 00:57	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/02/19 00:57	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/02/19 00:57	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:57	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/02/19 00:57	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/02/19 00:57	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/02/19 00:57	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/02/19 00:57	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/02/19 00:57	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/02/19 00:57	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/02/19 00:57	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/02/19 00:57	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/02/19 00:57	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	1.0	0.22	1		07/02/19 00:57	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/02/19 00:57	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/02/19 00:57	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/02/19 00:57	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/02/19 00:57	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:57	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/02/19 00:57	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/02/19 00:57	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/02/19 00:57	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		07/02/19 00:57	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/02/19 00:57	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/02/19 00:57	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/02/19 00:57	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/02/19 00:57	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/02/19 00:57	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/02/19 00:57	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/02/19 00:57	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/02/19 00:57	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:57	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/02/19 00:57	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/02/19 00:57	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/02/19 00:57	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/02/19 00:57	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/02/19 00:57	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/02/19 00:57	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/02/19 00:57	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/02/19 00:57	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/02/19 00:57	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/02/19 00:57	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/02/19 00:57	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW2D-GW-062619 **Lab ID: 10481000003** Collected: 06/26/19 08:55 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 00:57	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/02/19 00:57	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/02/19 00:57	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/02/19 00:57	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/02/19 00:57	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 00:57	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 00:57	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 00:57	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/02/19 00:57	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/02/19 00:57	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 00:57	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/02/19 00:57	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		07/02/19 00:57	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/02/19 00:57	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		07/02/19 00:57	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/02/19 00:57	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		07/02/19 00:57	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**141**	mg/L	5.0	2.0	1		07/10/19 07:23		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**203**	mg/L	10.0	5.0	1		07/02/19 10:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:55	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.6**	mg/L	1.2	0.12	1		06/27/19 20:11	16887-00-6	
Nitrate as N	**0.040J**	mg/L	0.10	0.012	1		06/27/19 20:11	14797-55-8	
Sulfate	**6.2**	mg/L	1.2	0.28	1		06/27/19 20:11	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		07/06/19 12:54		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:22		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**4.2**	mg/L	1.0	0.39	1		07/03/19 03:52	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW6D-GW-062619 **Lab ID: 10481000004** Collected: 06/26/19 10:05 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/02/19 19:12	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/02/19 19:12	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/02/19 19:12	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/10/19 09:10	07/11/19 14:05	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/10/19 09:10	07/11/19 14:05	7440-38-2	
Barium, Dissolved	**6.4J**	ug/L	10.0	0.60	1	07/10/19 09:10	07/11/19 14:05	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/10/19 09:10	07/11/19 14:05	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/10/19 09:10	07/11/19 14:05	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/10/19 09:10	07/11/19 14:05	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	07/10/19 09:10	07/11/19 14:05	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/10/19 09:10	07/11/19 14:05	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/10/19 09:10	07/11/19 14:05	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/10/19 09:10	07/11/19 14:05	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/10/19 09:10	07/11/19 14:05	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/10/19 09:10	07/11/19 14:05	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/10/19 09:10	07/11/19 14:05	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/10/19 09:10	07/11/19 14:05	7440-28-0	
Vanadium, Dissolved	**5.1J**	ug/L	15.0	0.43	1	07/10/19 09:10	07/11/19 14:05	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	07/10/19 09:10	07/11/19 14:05	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/10/19 12:17	07/10/19 18:00	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/02/19 01:14	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/02/19 01:14	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/02/19 01:14	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/02/19 01:14	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/02/19 01:14	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/02/19 01:14	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 01:14	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/02/19 01:14	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/02/19 01:14	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/02/19 01:14	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/02/19 01:14	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/02/19 01:14	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		07/02/19 01:14	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/02/19 01:14	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/02/19 01:14	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/02/19 01:14	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/02/19 01:14	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/02/19 01:14	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/02/19 01:14	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 01:14	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW6D-GW-062619 **Lab ID: 10481000004** Collected: 06/26/19 10:05 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/02/19 01:14	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/02/19 01:14	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/02/19 01:14	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/02/19 01:14	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/02/19 01:14	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/02/19 01:14	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 01:14	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/02/19 01:14	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/02/19 01:14	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/02/19 01:14	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/02/19 01:14	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/02/19 01:14	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/02/19 01:14	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/02/19 01:14	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/02/19 01:14	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/02/19 01:14	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	1.0	0.22	1		07/02/19 01:14	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/02/19 01:14	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/02/19 01:14	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/02/19 01:14	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/02/19 01:14	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/02/19 01:14	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/02/19 01:14	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/02/19 01:14	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/02/19 01:14	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		07/02/19 01:14	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/02/19 01:14	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/02/19 01:14	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/02/19 01:14	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/02/19 01:14	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/02/19 01:14	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/02/19 01:14	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/02/19 01:14	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/02/19 01:14	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/02/19 01:14	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/02/19 01:14	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/02/19 01:14	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/02/19 01:14	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/02/19 01:14	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/02/19 01:14	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/02/19 01:14	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/02/19 01:14	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/02/19 01:14	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/02/19 01:14	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/02/19 01:14	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/02/19 01:14	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW6D-GW-062619 **Lab ID: 10481000004** Collected: 06/26/19 10:05 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 01:14	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/02/19 01:14	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/02/19 01:14	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/02/19 01:14	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/02/19 01:14	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/02/19 01:14	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 01:14	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 01:14	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/02/19 01:14	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/02/19 01:14	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/02/19 01:14	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/02/19 01:14	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		07/02/19 01:14	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/02/19 01:14	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-136		1		07/02/19 01:14	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		07/02/19 01:14	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		07/02/19 01:14	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**181**	mg/L	5.0	2.0	1		07/10/19 07:39		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**231**	mg/L	10.0	5.0	1		07/02/19 10:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:55	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.1**	mg/L	1.2	0.12	1		06/27/19 20:26	16887-00-6	
Nitrate as N	**0.068J**	mg/L	0.10	0.012	1		06/27/19 20:26	14797-55-8	
Sulfate	**6.4**	mg/L	1.2	0.28	1		06/27/19 20:26	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.041J**	mg/L	0.10	0.018	1		07/06/19 12:55		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:23		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.51J**	mg/L	1.0	0.39	1		07/03/19 04:07	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: FD2-GW-062619 **Lab ID: 10481000005** Collected: 06/26/19 08:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/02/19 18:44	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/02/19 18:44	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/02/19 18:44	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/10/19 09:10	07/11/19 14:08	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/10/19 09:10	07/11/19 14:08	7440-38-2	
Barium, Dissolved	**6.5J**	ug/L	10.0	0.60	1	07/10/19 09:10	07/11/19 14:08	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/10/19 09:10	07/11/19 14:08	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/10/19 09:10	07/11/19 14:08	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/10/19 09:10	07/11/19 14:08	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	07/10/19 09:10	07/11/19 14:08	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/10/19 09:10	07/11/19 14:08	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/10/19 09:10	07/11/19 14:08	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/10/19 09:10	07/11/19 14:08	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/10/19 09:10	07/11/19 14:08	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/10/19 09:10	07/11/19 14:08	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/10/19 09:10	07/11/19 14:08	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/10/19 09:10	07/11/19 14:08	7440-28-0	
Vanadium, Dissolved	**5.2J**	ug/L	15.0	0.43	1	07/10/19 09:10	07/11/19 14:08	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	07/10/19 09:10	07/11/19 14:08	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/10/19 12:17	07/10/19 18:06	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/03/19 15:45	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/03/19 15:45	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:45	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/03/19 15:45	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/03/19 15:45	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:45	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:45	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/03/19 15:45	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 15:45	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/03/19 15:45	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 15:45	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 15:45	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/03/19 15:45	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/03/19 15:45	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 15:45	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 15:45	107-06-2	L2
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/03/19 15:45	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 15:45	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/03/19 15:45	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:45	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: FD2-GW-062619 **Lab ID: 10481000005** Collected: 06/26/19 08:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/03/19 15:45	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:45	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/03/19 15:45	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/03/19 15:45	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/03/19 15:45	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/03/19 15:45	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:45	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/03/19 15:45	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/03/19 15:45	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/03/19 15:45	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/03/19 15:45	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/03/19 15:45	107-02-8	CL,L2
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/03/19 15:45	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 15:45	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/03/19 15:45	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/03/19 15:45	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/03/19 15:45	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/03/19 15:45	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/03/19 15:45	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/03/19 15:45	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/03/19 15:45	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:45	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/03/19 15:45	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/03/19 15:45	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/03/19 15:45	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/03/19 15:45	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/03/19 15:45	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/03/19 15:45	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/03/19 15:45	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/03/19 15:45	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/03/19 15:45	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/03/19 15:45	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 15:45	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/03/19 15:45	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:45	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/03/19 15:45	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/03/19 15:45	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/03/19 15:45	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/03/19 15:45	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/03/19 15:45	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/03/19 15:45	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/03/19 15:45	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/03/19 15:45	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/03/19 15:45	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/03/19 15:45	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/03/19 15:45	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: FD2-GW-062619 **Lab ID: 10481000005** Collected: 06/26/19 08:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/03/19 15:45	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/03/19 15:45	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/03/19 15:45	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/03/19 15:45	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/03/19 15:45	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/03/19 15:45	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 15:45	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 15:45	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/03/19 15:45	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/03/19 15:45	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/03/19 15:45	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/03/19 15:45	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/03/19 15:45	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/03/19 15:45	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-136		1		07/03/19 15:45	17060-07-0	
Toluene-d8 (S)	107	%.	75-125		1		07/03/19 15:45	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		07/03/19 15:45	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**181**	mg/L	5.0	2.0	1		07/10/19 08:12		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**231**	mg/L	10.0	5.0	1		07/02/19 10:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:56	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.1**	mg/L	1.2	0.12	1		06/27/19 20:41	16887-00-6	
Nitrate as N	**0.067J**	mg/L	0.10	0.012	1		06/27/19 20:41	14797-55-8	
Sulfate	**6.2**	mg/L	1.2	0.28	1		06/27/19 20:41	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.041J**	mg/L	0.10	0.018	1		07/06/19 12:56		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:23		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.91J**	mg/L	1.0	0.39	1		07/03/19 04:21	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW6U-GW-062619 **Lab ID: 10481000006** Collected: 06/26/19 11:45 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 11:18	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 11:18	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 11:18	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/10/19 09:10	07/11/19 14:11	7440-36-0	
Arsenic, Dissolved	**6.4J**	ug/L	20.0	3.8	1	07/10/19 09:10	07/11/19 14:11	7440-38-2	
Barium, Dissolved	**73.7**	ug/L	10.0	0.60	1	07/10/19 09:10	07/11/19 14:11	7440-39-3	
Beryllium, Dissolved	**0.33J**	ug/L	5.0	0.12	1	07/10/19 09:10	07/11/19 14:11	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/10/19 09:10	07/11/19 14:11	7440-43-9	
Chromium, Dissolved	**3.3J**	ug/L	10.0	0.66	1	07/10/19 09:10	07/11/19 14:11	7440-47-3	
Cobalt, Dissolved	**2.2J**	ug/L	10.0	0.50	1	07/10/19 09:10	07/11/19 14:11	7440-48-4	
Copper, Dissolved	**3.7J**	ug/L	10.0	1.2	1	07/10/19 09:10	07/11/19 14:11	7440-50-8	
Lead, Dissolved	**4.5J**	ug/L	10.0	2.0	1	07/10/19 09:10	07/11/19 14:11	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/10/19 09:10	07/11/19 14:11	7439-98-7	
Nickel, Dissolved	**2.9J**	ug/L	20.0	1.1	1	07/10/19 09:10	07/11/19 14:11	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/10/19 09:10	07/11/19 14:11	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/10/19 09:10	07/11/19 14:11	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/10/19 09:10	07/11/19 14:11	7440-28-0	
Vanadium, Dissolved	**16.2**	ug/L	15.0	0.43	1	07/10/19 09:10	07/11/19 14:11	7440-62-2	
Zinc, Dissolved	**18.6J**	ug/L	20.0	6.3	1	07/10/19 09:10	07/11/19 14:11	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**0.85**	ug/L	0.20	0.093	1	07/10/19 12:17	07/10/19 18:12	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/04/19 02:00	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/04/19 02:00	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:00	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:00	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/04/19 02:00	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:00	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:00	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/04/19 02:00	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 02:00	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/04/19 02:00	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 02:00	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 02:00	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/04/19 02:00	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/04/19 02:00	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 02:00	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 02:00	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/04/19 02:00	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 02:00	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/04/19 02:00	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:00	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW6U-GW-062619 **Lab ID: 10481000006** Collected: 06/26/19 11:45 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/04/19 02:00	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:00	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/04/19 02:00	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/04/19 02:00	540-84-1	L2,N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/04/19 02:00	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/04/19 02:00	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:00	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/04/19 02:00	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/04/19 02:00	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/04/19 02:00	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/04/19 02:00	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/04/19 02:00	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/04/19 02:00	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 02:00	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 02:00	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/04/19 02:00	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 02:00	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/04/19 02:00	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/04/19 02:00	74-83-9	
Carbon disulfide	**0.65J**	ug/L	1.0	0.078	1		07/04/19 02:00	75-15-0	
Carbon tetrachloride	**46.1**	ug/L	0.50	0.19	1		07/04/19 02:00	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:00	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/04/19 02:00	75-00-3	
Chloroform	**2.2**	ug/L	1.0	0.45	1		07/04/19 02:00	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 02:00	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/04/19 02:00	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/04/19 02:00	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/04/19 02:00	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/04/19 02:00	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/04/19 02:00	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:00	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 02:00	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 02:00	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:00	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:00	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/04/19 02:00	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/04/19 02:00	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/04/19 02:00	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:00	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/04/19 02:00	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/04/19 02:00	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/04/19 02:00	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/04/19 02:00	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/04/19 02:00	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/04/19 02:00	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/04/19 02:00	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW6U-GW-062619 **Lab ID: 10481000006** Collected: 06/26/19 11:45 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/04/19 02:00	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 02:00	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 02:00	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/04/19 02:00	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 02:00	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:00	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 02:00	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 02:00	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/04/19 02:00	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/04/19 02:00	75-65-0	L2
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 02:00	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/04/19 02:00	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:00	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/04/19 02:00	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		07/04/19 02:00	17060-07-0	
Toluene-d8 (S)	107	%.	75-125		1		07/04/19 02:00	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		07/04/19 02:00	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**218**	mg/L	5.0	2.0	1		07/10/19 09:21		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**415**	mg/L	25.0	12.5	1		07/02/19 10:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 15:07	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**9.5**	mg/L	1.2	0.12	1		06/27/19 20:56	16887-00-6	
Nitrate as N	**1.1**	mg/L	0.10	0.012	1		06/27/19 20:56	14797-55-8	
Sulfate	**6.0**	mg/L	1.2	0.28	1		06/27/19 20:56	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.0**	mg/L	0.10	0.018	1		07/06/19 12:58		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**75.3**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:23		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.7**	mg/L	1.0	0.39	1		07/03/19 04:35	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW4D-GW-062619 **Lab ID: 10481000007** Collected: 06/26/19 13:40 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 11:25	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 11:25	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 11:25	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/10/19 09:10	07/11/19 14:14	7440-36-0	
Arsenic, Dissolved	**4.9J**	ug/L	20.0	3.8	1	07/10/19 09:10	07/11/19 14:14	7440-38-2	
Barium, Dissolved	**84.5**	ug/L	10.0	0.60	1	07/10/19 09:10	07/11/19 14:14	7440-39-3	
Beryllium, Dissolved	**0.13J**	ug/L	5.0	0.12	1	07/10/19 09:10	07/11/19 14:14	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/10/19 09:10	07/11/19 14:14	7440-43-9	
Chromium, Dissolved	**1.7J**	ug/L	10.0	0.66	1	07/10/19 09:10	07/11/19 14:14	7440-47-3	
Cobalt, Dissolved	**5.9J**	ug/L	10.0	0.50	1	07/10/19 09:10	07/11/19 14:14	7440-48-4	
Copper, Dissolved	**3.7J**	ug/L	10.0	1.2	1	07/10/19 09:10	07/11/19 14:14	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/10/19 09:10	07/11/19 14:14	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/10/19 09:10	07/11/19 14:14	7439-98-7	
Nickel, Dissolved	**6.2J**	ug/L	20.0	1.1	1	07/10/19 09:10	07/11/19 14:14	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/10/19 09:10	07/11/19 14:14	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/10/19 09:10	07/11/19 14:14	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/10/19 09:10	07/11/19 14:14	7440-28-0	
Vanadium, Dissolved	**6.2J**	ug/L	15.0	0.43	1	07/10/19 09:10	07/11/19 14:14	7440-62-2	
Zinc, Dissolved	**10.8J**	ug/L	20.0	6.3	1	07/10/19 09:10	07/11/19 14:14	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/10/19 12:17	07/10/19 18:14	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/04/19 02:24	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/04/19 02:24	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:24	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:24	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/04/19 02:24	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:24	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:24	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/04/19 02:24	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 02:24	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/04/19 02:24	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 02:24	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 02:24	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/04/19 02:24	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/04/19 02:24	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 02:24	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 02:24	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/04/19 02:24	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 02:24	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/04/19 02:24	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:24	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW4D-GW-062619 **Lab ID: 10481000007** Collected: 06/26/19 13:40 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/04/19 02:24	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:24	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/04/19 02:24	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/04/19 02:24	540-84-1	L2,N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/04/19 02:24	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/04/19 02:24	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:24	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/04/19 02:24	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/04/19 02:24	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/04/19 02:24	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/04/19 02:24	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/04/19 02:24	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/04/19 02:24	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 02:24	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 02:24	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/04/19 02:24	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 02:24	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/04/19 02:24	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/04/19 02:24	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/04/19 02:24	75-15-0	
Carbon tetrachloride	**3.2**	ug/L	0.50	0.19	1		07/04/19 02:24	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:24	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/04/19 02:24	75-00-3	
Chloroform	**0.84J**	ug/L	1.0	0.45	1		07/04/19 02:24	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 02:24	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/04/19 02:24	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/04/19 02:24	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/04/19 02:24	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/04/19 02:24	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/04/19 02:24	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:24	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 02:24	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 02:24	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:24	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:24	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/04/19 02:24	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/04/19 02:24	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/04/19 02:24	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:24	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/04/19 02:24	109-99-9	
Toluene	**0.12J**	ug/L	0.50	0.083	1		07/04/19 02:24	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/04/19 02:24	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/04/19 02:24	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/04/19 02:24	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/04/19 02:24	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/04/19 02:24	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW4D-GW-062619 **Lab ID: 10481000007** Collected: 06/26/19 13:40 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/04/19 02:24	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 02:24	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 02:24	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/04/19 02:24	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 02:24	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:24	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 02:24	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 02:24	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/04/19 02:24	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/04/19 02:24	75-65-0	L2
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 02:24	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/04/19 02:24	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:24	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/04/19 02:24	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		07/04/19 02:24	17060-07-0	
Toluene-d8 (S)	109	%.	75-125		1		07/04/19 02:24	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1		07/04/19 02:24	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**118**	mg/L	5.0	2.0	1		07/10/19 09:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**325**	mg/L	10.0	5.0	1		07/02/19 10:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:56	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**7.8**	mg/L	1.2	0.12	1		06/27/19 21:11	16887-00-6	
Nitrate as N	**0.68**	mg/L	0.10	0.012	1		06/27/19 21:11	14797-55-8	
Sulfate	**4.7**	mg/L	1.2	0.28	1		06/27/19 21:11	14808-79-8	B
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.67**	mg/L	0.10	0.018	1		07/06/19 12:59		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**62.5**	mg/L	50.0	17.0	1	07/03/19 08:33	07/03/19 13:23		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**9.4**	mg/L	1.0	0.39	1		07/03/19 04:50	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW3D-GW-062619 **Lab ID: 10481000008** Collected: 06/26/19 14:55 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 11:03	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 11:03	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 11:03	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/10/19 09:10	07/11/19 14:17	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/10/19 09:10	07/11/19 14:17	7440-38-2	
Barium, Dissolved	**45.5**	ug/L	10.0	0.60	1	07/10/19 09:10	07/11/19 14:17	7440-39-3	
Beryllium, Dissolved	**0.19J**	ug/L	5.0	0.12	1	07/10/19 09:10	07/11/19 14:17	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/10/19 09:10	07/11/19 14:17	7440-43-9	
Chromium, Dissolved	**4.8J**	ug/L	10.0	0.66	1	07/10/19 09:10	07/11/19 14:17	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	07/10/19 09:10	07/11/19 14:17	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/10/19 09:10	07/11/19 14:17	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/10/19 09:10	07/11/19 14:17	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/10/19 09:10	07/11/19 14:17	7439-98-7	
Nickel, Dissolved	**2.2J**	ug/L	20.0	1.1	1	07/10/19 09:10	07/11/19 14:17	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/10/19 09:10	07/11/19 14:17	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/10/19 09:10	07/11/19 14:17	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/10/19 09:10	07/11/19 14:17	7440-28-0	
Vanadium, Dissolved	**2.6J**	ug/L	15.0	0.43	1	07/10/19 09:10	07/11/19 14:17	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	07/10/19 09:10	07/11/19 14:17	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/10/19 12:17	07/10/19 18:16	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/04/19 02:48	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/04/19 02:48	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:48	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:48	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/04/19 02:48	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:48	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:48	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/04/19 02:48	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 02:48	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/04/19 02:48	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 02:48	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 02:48	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/04/19 02:48	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/04/19 02:48	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 02:48	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 02:48	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/04/19 02:48	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 02:48	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/04/19 02:48	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:48	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW3D-GW-062619 **Lab ID: 10481000008** Collected: 06/26/19 14:55 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/04/19 02:48	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:48	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/04/19 02:48	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/04/19 02:48	540-84-1	L2,N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/04/19 02:48	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/04/19 02:48	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:48	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/04/19 02:48	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/04/19 02:48	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/04/19 02:48	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/04/19 02:48	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/04/19 02:48	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/04/19 02:48	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 02:48	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 02:48	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/04/19 02:48	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 02:48	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/04/19 02:48	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/04/19 02:48	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/04/19 02:48	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/04/19 02:48	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:48	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/04/19 02:48	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/04/19 02:48	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 02:48	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/04/19 02:48	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/04/19 02:48	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/04/19 02:48	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/04/19 02:48	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/04/19 02:48	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:48	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 02:48	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 02:48	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:48	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:48	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/04/19 02:48	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/04/19 02:48	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/04/19 02:48	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 02:48	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/04/19 02:48	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/04/19 02:48	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/04/19 02:48	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/04/19 02:48	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/04/19 02:48	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/04/19 02:48	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/04/19 02:48	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW3D-GW-062619 **Lab ID: 10481000008** Collected: 06/26/19 14:55 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/04/19 02:48	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 02:48	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 02:48	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/04/19 02:48	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 02:48	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 02:48	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 02:48	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 02:48	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/04/19 02:48	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/04/19 02:48	75-65-0	L2
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 02:48	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/04/19 02:48	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/04/19 02:48	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/04/19 02:48	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		07/04/19 02:48	17060-07-0	
Toluene-d8 (S)	109	%.	75-125		1		07/04/19 02:48	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		07/04/19 02:48	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**139**	mg/L	5.0	2.0	1		07/10/19 09:32		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**207**	mg/L	10.0	5.0	1		07/02/19 10:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:57	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.6**	mg/L	1.2	0.12	1		06/27/19 21:26	16887-00-6	
Nitrate as N	**0.14**	mg/L	0.10	0.012	1		06/27/19 21:26	14797-55-8	
Sulfate	**3.5**	mg/L	1.2	0.28	1		06/27/19 21:26	14808-79-8	B
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.14**	mg/L	0.10	0.018	1		07/06/19 13:00		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:26		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.2**	mg/L	1.0	0.39	1		07/03/19 05:04	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: FD3-GW-062619 **Lab ID: 10481000009** Collected: 06/26/19 12:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 11:32	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 11:32	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 11:32	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/10/19 09:10	07/11/19 14:20	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/10/19 09:10	07/11/19 14:20	7440-38-2	
Barium, Dissolved	**48.9**	ug/L	10.0	0.60	1	07/10/19 09:10	07/11/19 14:20	7440-39-3	
Beryllium, Dissolved	**0.28J**	ug/L	5.0	0.12	1	07/10/19 09:10	07/11/19 14:20	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/10/19 09:10	07/11/19 14:20	7440-43-9	
Chromium, Dissolved	**6.9J**	ug/L	10.0	0.66	1	07/10/19 09:10	07/11/19 14:20	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	07/10/19 09:10	07/11/19 14:20	7440-48-4	
Copper, Dissolved	**1.5J**	ug/L	10.0	1.2	1	07/10/19 09:10	07/11/19 14:20	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/10/19 09:10	07/11/19 14:20	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/10/19 09:10	07/11/19 14:20	7439-98-7	
Nickel, Dissolved	**3.8J**	ug/L	20.0	1.1	1	07/10/19 09:10	07/11/19 14:20	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/10/19 09:10	07/11/19 14:20	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/10/19 09:10	07/11/19 14:20	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/10/19 09:10	07/11/19 14:20	7440-28-0	
Vanadium, Dissolved	**3.1J**	ug/L	15.0	0.43	1	07/10/19 09:10	07/11/19 14:20	7440-62-2	
Zinc, Dissolved	**10.7J**	ug/L	20.0	6.3	1	07/10/19 09:10	07/11/19 14:20	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/10/19 12:17	07/10/19 18:18	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/04/19 03:12	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/04/19 03:12	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:12	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:12	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/04/19 03:12	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:12	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:12	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/04/19 03:12	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 03:12	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/04/19 03:12	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 03:12	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 03:12	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/04/19 03:12	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/04/19 03:12	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 03:12	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 03:12	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/04/19 03:12	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 03:12	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/04/19 03:12	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:12	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: FD3-GW-062619 **Lab ID: 10481000009** Collected: 06/26/19 12:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/04/19 03:12	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:12	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/04/19 03:12	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/04/19 03:12	540-84-1	L2,N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/04/19 03:12	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/04/19 03:12	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:12	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/04/19 03:12	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/04/19 03:12	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/04/19 03:12	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/04/19 03:12	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/04/19 03:12	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/04/19 03:12	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 03:12	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 03:12	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/04/19 03:12	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 03:12	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/04/19 03:12	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/04/19 03:12	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/04/19 03:12	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/04/19 03:12	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:12	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/04/19 03:12	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/04/19 03:12	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 03:12	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/04/19 03:12	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/04/19 03:12	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/04/19 03:12	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/04/19 03:12	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/04/19 03:12	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:12	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 03:12	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 03:12	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:12	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:12	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/04/19 03:12	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/04/19 03:12	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/04/19 03:12	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:12	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/04/19 03:12	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/04/19 03:12	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/04/19 03:12	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/04/19 03:12	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/04/19 03:12	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/04/19 03:12	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/04/19 03:12	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: FD3-GW-062619 **Lab ID: 10481000009** Collected: 06/26/19 12:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/04/19 03:12	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 03:12	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 03:12	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/04/19 03:12	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 03:12	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:12	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 03:12	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 03:12	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/04/19 03:12	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/04/19 03:12	75-65-0	L2
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 03:12	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/04/19 03:12	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:12	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/04/19 03:12	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-136		1		07/04/19 03:12	17060-07-0	
Toluene-d8 (S)	108	%.	75-125		1		07/04/19 03:12	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		07/04/19 03:12	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**139**	mg/L	5.0	2.0	1		07/10/19 09:37		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**205**	mg/L	10.0	5.0	1		07/02/19 10:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 14:58	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.0**	mg/L	1.2	0.12	1		06/27/19 21:41	16887-00-6	
Nitrate as N	**0.14**	mg/L	0.10	0.012	1		06/27/19 21:41	14797-55-8	
Sulfate	**4.3**	mg/L	1.2	0.28	1		06/27/19 21:41	14808-79-8	B
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.14**	mg/L	0.10	0.018	1		07/06/19 13:03		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:26		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.72J**	mg/L	1.0	0.39	1		07/03/19 05:19	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW14D-GW-062619 **Lab ID: 10481000010** Collected: 06/26/19 16:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 11:39	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 11:39	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 11:39	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/10/19 09:10	07/11/19 14:23	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/10/19 09:10	07/11/19 14:23	7440-38-2	
Barium, Dissolved	**25.6**	ug/L	10.0	0.60	1	07/10/19 09:10	07/11/19 14:23	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/10/19 09:10	07/11/19 14:23	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/10/19 09:10	07/11/19 14:23	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/10/19 09:10	07/11/19 14:23	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	07/10/19 09:10	07/11/19 14:23	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/10/19 09:10	07/11/19 14:23	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/10/19 09:10	07/11/19 14:23	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/10/19 09:10	07/11/19 14:23	7439-98-7	
Nickel, Dissolved	**1.2J**	ug/L	20.0	1.1	1	07/10/19 09:10	07/11/19 14:23	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/10/19 09:10	07/11/19 14:23	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/10/19 09:10	07/11/19 14:23	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/10/19 09:10	07/11/19 14:23	7440-28-0	
Vanadium, Dissolved	**4.7J**	ug/L	15.0	0.43	1	07/10/19 09:10	07/11/19 14:23	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	07/10/19 09:10	07/11/19 14:23	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/10/19 12:17	07/10/19 18:20	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/04/19 03:35	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/04/19 03:35	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:35	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:35	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/04/19 03:35	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:35	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:35	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/04/19 03:35	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 03:35	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/04/19 03:35	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 03:35	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 03:35	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/04/19 03:35	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/04/19 03:35	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 03:35	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 03:35	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/04/19 03:35	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 03:35	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/04/19 03:35	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:35	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW14D-GW-062619 **Lab ID: 10481000010** Collected: 06/26/19 16:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/04/19 03:35	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:35	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/04/19 03:35	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/04/19 03:35	540-84-1	L2,N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/04/19 03:35	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/04/19 03:35	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:35	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/04/19 03:35	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/04/19 03:35	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/04/19 03:35	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/04/19 03:35	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/04/19 03:35	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/04/19 03:35	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 03:35	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 03:35	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/04/19 03:35	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 03:35	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/04/19 03:35	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/04/19 03:35	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/04/19 03:35	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/04/19 03:35	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:35	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/04/19 03:35	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/04/19 03:35	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 03:35	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/04/19 03:35	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/04/19 03:35	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/04/19 03:35	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/04/19 03:35	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/04/19 03:35	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:35	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 03:35	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 03:35	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:35	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:35	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/04/19 03:35	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/04/19 03:35	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/04/19 03:35	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:35	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/04/19 03:35	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/04/19 03:35	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/04/19 03:35	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/04/19 03:35	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/04/19 03:35	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/04/19 03:35	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/04/19 03:35	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Sample: MW14D-GW-062619 **Lab ID: 10481000010** Collected: 06/26/19 16:00 Received: 06/27/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/04/19 03:35	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 03:35	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 03:35	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/04/19 03:35	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 03:35	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:35	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 03:35	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 03:35	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/04/19 03:35	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/04/19 03:35	75-65-0	L2
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 03:35	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/04/19 03:35	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:35	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/04/19 03:35	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		07/04/19 03:35	17060-07-0	
Toluene-d8 (S)	109	%.	75-125		1		07/04/19 03:35	2037-26-5	
4-Bromofluorobenzene (S)	95	%.	75-125		1		07/04/19 03:35	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**150**	mg/L	5.0	2.0	1		07/10/19 09:42		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**216**	mg/L	10.0	5.0	1		07/02/19 10:34		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		06/29/19 15:08	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.4**	mg/L	1.2	0.12	1		06/27/19 22:27	16887-00-6	
Nitrate as N	**0.053J**	mg/L	0.10	0.012	1		06/27/19 22:27	14797-55-8	
Sulfate	**1.9**	mg/L	1.2	0.28	1		06/27/19 22:27	14808-79-8	B
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.027J**	mg/L	0.10	0.018	1		07/06/19 13:04		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:27		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.1**	mg/L	1.0	0.39	1		07/03/19 05:33	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 616968 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005

METHOD BLANK: 3332719 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/02/19 11:10	
Ethene	ug/L	<2.9	10.0	2.9	07/02/19 11:10	
Methane	ug/L	<4.9	10.0	4.9	07/02/19 11:10	

LABORATORY CONTROL SAMPLE & LCSD: 3332720 3332721

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	110	117	97	103	85-115	6	20	
Ethene	ug/L	106	102	108	96	102	85-115	6	20	
Methane	ug/L	60.7	57.1	60.3	94	99	85-115	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3332722 3332723

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<3.0	114	114	106	103	93	90	30-150	3	20	
Ethene	ug/L	<2.9	106	106	98.9	95.4	93	90	30-150	4	20	
Methane	ug/L	<4.9	60.7	60.7	56.2	52.4	93	86	30-150	7	20	

SAMPLE DUPLICATE: 3333665

Parameter	Units	10481000001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 617222 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 3334152 Matrix: Water
Associated Lab Samples: 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/03/19 10:27	
Ethene	ug/L	<2.9	10.0	2.9	07/03/19 10:27	
Methane	ug/L	<4.9	10.0	4.9	07/03/19 10:27	

LABORATORY CONTROL SAMPLE & LCSD: 3334153 3334154

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	117	107	103	94	85-115	9	20	
Ethene	ug/L	106	108	99.5	102	94	85-115	8	20	
Methane	ug/L	60.7	59.9	55.3	99	91	85-115	8	20	

SAMPLE DUPLICATE: 3334155

Parameter	Units	10481000008 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

SAMPLE DUPLICATE: 3334156

Parameter	Units	10481249002 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 616699 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 3331433 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/10/19 17:51	

LABORATORY CONTROL SAMPLE: 3331434

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.3	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331435 3331436

Parameter	Units	10481000004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.3	5.2	106	104	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 616659 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 3331244 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	07/11/19 13:21	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	07/11/19 13:21	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	07/11/19 13:21	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	07/11/19 13:21	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	07/11/19 13:21	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	07/11/19 13:21	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	07/11/19 13:21	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	07/11/19 13:21	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	07/11/19 13:21	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	07/11/19 13:21	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	07/11/19 13:21	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	07/11/19 13:21	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	07/11/19 13:21	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	07/11/19 13:21	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	07/11/19 13:21	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	07/11/19 13:21	

LABORATORY CONTROL SAMPLE: 3331245

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	994	99	80-120	
Arsenic, Dissolved	ug/L	1000	994	99	80-120	
Barium, Dissolved	ug/L	1000	992	99	80-120	
Beryllium, Dissolved	ug/L	1000	971	97	80-120	
Cadmium, Dissolved	ug/L	1000	1000	100	80-120	
Chromium, Dissolved	ug/L	1000	977	98	80-120	
Cobalt, Dissolved	ug/L	1000	977	98	80-120	
Copper, Dissolved	ug/L	1000	951	95	80-120	
Lead, Dissolved	ug/L	1000	999	100	80-120	
Molybdenum, Dissolved	ug/L	1000	976	98	80-120	
Nickel, Dissolved	ug/L	1000	986	99	80-120	
Selenium, Dissolved	ug/L	1000	990	99	80-120	
Silver, Dissolved	ug/L	500	481	96	80-120	
Thallium, Dissolved	ug/L	1000	1010	101	80-120	
Vanadium, Dissolved	ug/L	1000	950	95	80-120	
Zinc, Dissolved	ug/L	1000	997	100	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331246 3331247

Parameter	Units	10481000001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	1010	1010	100	101	75-125	1	20	
Arsenic, Dissolved	ug/L	9.4J	1000	1000	1000	1010	99	100	75-125	1	20	
Barium, Dissolved	ug/L	69.4	1000	1000	1060	1050	99	98	75-125	1	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	976	979	98	98	75-125	0	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	989	993	99	99	75-125	0	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	972	977	97	98	75-125	1	20	
Cobalt, Dissolved	ug/L	<0.50	1000	1000	965	968	97	97	75-125	0	20	
Copper, Dissolved	ug/L	<1.2	1000	1000	954	944	95	94	75-125	1	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	979	984	98	98	75-125	1	20	
Molybdenum, Dissolved	ug/L	10.5J	1000	1000	987	995	98	98	75-125	1	20	
Nickel, Dissolved	ug/L	2.9J	1000	1000	973	976	97	97	75-125	0	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	983	985	98	99	75-125	0	20	
Silver, Dissolved	ug/L	<0.40	500	500	484	480	97	96	75-125	1	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	983	986	98	99	75-125	0	20	
Vanadium, Dissolved	ug/L	1.1J	1000	1000	952	944	95	94	75-125	1	20	
Zinc, Dissolved	ug/L	11.8J	1000	1000	990	996	98	98	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 616965 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004

METHOD BLANK: 3332687 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/01/19 19:38	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/01/19 19:38	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/01/19 19:38	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/01/19 19:38	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/01/19 19:38	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/01/19 19:38	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/01/19 19:38	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/01/19 19:38	
1,2,3-Trichlorobenzene	ug/L	0.91J	1.0	0.21	07/01/19 19:38	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/01/19 19:38	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	07/01/19 19:38	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/01/19 19:38	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	10.0	1.7	07/01/19 19:38	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/01/19 19:38	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/01/19 19:38	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/01/19 19:38	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/01/19 19:38	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/01/19 19:38	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/01/19 19:38	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/01/19 19:38	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	07/01/19 19:38	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/01/19 19:38	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/01/19 19:38	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/01/19 19:38	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/01/19 19:38	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/01/19 19:38	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/01/19 19:38	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/01/19 19:38	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/01/19 19:38	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/01/19 19:38	
Acetone	ug/L	<9.2	20.0	9.2	07/01/19 19:38	
Acrolein	ug/L	<1.2	10.0	1.2	07/01/19 19:38	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/01/19 19:38	
Benzene	ug/L	<0.10	0.50	0.10	07/01/19 19:38	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/01/19 19:38	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/01/19 19:38	
Bromodichloromethane	ug/L	<0.22	1.0	0.22	07/01/19 19:38	
Bromoform	ug/L	<0.80	4.0	0.80	07/01/19 19:38	
Bromomethane	ug/L	<1.8	4.0	1.8	07/01/19 19:38	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/01/19 19:38	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/01/19 19:38	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

METHOD BLANK: 3332687 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	07/01/19 19:38	
Chloroethane	ug/L	<0.49	1.0	0.49	07/01/19 19:38	
Chloroform	ug/L	<0.45	1.0	0.45	07/01/19 19:38	
Chloromethane	ug/L	<0.16	4.0	0.16	07/01/19 19:38	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/01/19 19:38	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/01/19 19:38	
Dibromochloromethane	ug/L	<0.12	1.0	0.12	07/01/19 19:38	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/01/19 19:38	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/01/19 19:38	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/01/19 19:38	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/01/19 19:38	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/01/19 19:38	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/01/19 19:38	
Hexachloro-1,3-butadiene	ug/L	1.5	1.0	0.31	07/01/19 19:38	P8
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/01/19 19:38	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/01/19 19:38	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/01/19 19:38	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/01/19 19:38	
n-Butylbenzene	ug/L	0.54	0.50	0.24	07/01/19 19:38	P8
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/01/19 19:38	
Naphthalene	ug/L	<0.48	1.0	0.48	07/01/19 19:38	
o-Xylene	ug/L	<0.16	0.50	0.16	07/01/19 19:38	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/01/19 19:38	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/01/19 19:38	
Styrene	ug/L	<0.19	0.50	0.19	07/01/19 19:38	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	07/01/19 19:38	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/01/19 19:38	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/01/19 19:38	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/01/19 19:38	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/01/19 19:38	
Toluene	ug/L	<0.083	0.50	0.083	07/01/19 19:38	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/01/19 19:38	
trans-1,3-Dichloropropene	ug/L	<0.18	1.0	0.18	07/01/19 19:38	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/01/19 19:38	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/01/19 19:38	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/01/19 19:38	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/01/19 19:38	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/01/19 19:38	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/01/19 19:38	
1,2-Dichloroethane-d4 (S)	%.	101	75-136		07/01/19 19:38	
4-Bromofluorobenzene (S)	%.	100	75-125		07/01/19 19:38	
Toluene-d8 (S)	%.	98	75-125		07/01/19 19:38	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

LABORATORY CONTROL SAMPLE: 3332688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.5	98	68-141	
1,1,1-Trichloroethane	ug/L	20	21.0	105	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	20.7	104	73-125	
1,1,2-Trichloroethane	ug/L	20	19.5	98	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.4	97	69-132	
1,1-Dichloroethane	ug/L	20	20.8	104	73-125	
1,1-Dichloroethene	ug/L	20	22.3	111	71-126	
1,1-Dichloropropene	ug/L	20	21.0	105	73-126	
1,2,3-Trichlorobenzene	ug/L	20	22.8	114	72-126	
1,2,3-Trichloropropane	ug/L	20	20.0	100	75-126	
1,2,4-Trichlorobenzene	ug/L	20	19.5	97	71-134	
1,2,4-Trimethylbenzene	ug/L	20	21.0	105	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	49.4	99	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	20.4	102	75-129	
1,2-Dichlorobenzene	ug/L	20	20.5	102	75-129	
1,2-Dichloroethane	ug/L	20	19.8	99	75-125	
1,2-Dichloroethene (Total)	ug/L	40	40.4	101	74-125	N2
1,2-Dichloropropane	ug/L	20	19.8	99	75-125	
1,3,5-Trimethylbenzene	ug/L	20	21.2	106	75-127	
1,3-Dichlorobenzene	ug/L	20	20.6	103	75-126	
1,3-Dichloropropane	ug/L	20	20.8	104	75-125	
1,4-Dichlorobenzene	ug/L	20	19.7	99	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	424	106	72-129	
2,2,4-Trimethylpentane	ug/L	20	21.5	108	72-128	N2
2,2-Dichloropropane	ug/L	20	19.6	98	65-138	
2-Butanone (MEK)	ug/L	100	100	100	59-144	
2-Chlorotoluene	ug/L	20	20.6	103	75-127	
2-Hexanone	ug/L	100	105	105	73-134	
4-Chlorotoluene	ug/L	20	20.6	103	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	62-141	
Acetone	ug/L	100	104	104	60-137	
Acrolein	ug/L	200	204	102	60-141	
Acrylonitrile	ug/L	200	210	105	75-129	
Benzene	ug/L	20	21.3	106	73-125	
Bromobenzene	ug/L	20	20.9	105	73-125	
Bromochloromethane	ug/L	20	22.0	110	75-135	
Bromodichloromethane	ug/L	20	18.6	93	75-125	
Bromoform	ug/L	20	19.6	98	67-136	
Bromomethane	ug/L	20	17.4	87	30-150	
Carbon disulfide	ug/L	20	29.5	148	47-137	CH,L3
Carbon tetrachloride	ug/L	20	21.2	106	75-125	
Chlorobenzene	ug/L	20	21.2	106	75-125	
Chloroethane	ug/L	20	20.2	101	63-136	
Chloroform	ug/L	20	18.8	94	73-128	
Chloromethane	ug/L	20	21.2	106	55-130	
cis-1,2-Dichloroethene	ug/L	20	18.9	95	75-125	
cis-1,3-Dichloropropene	ug/L	20	20.3	102	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

LABORATORY CONTROL SAMPLE: 3332688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.3	102	75-125	
Dibromomethane	ug/L	20	21.0	105	75-125	
Dichlorodifluoromethane	ug/L	20	18.1	90	63-132	
Dichlorofluoromethane	ug/L	20	20.9	104	68-127	N2
Diisopropyl ether	ug/L	20	19.6	98	71-131	
Ethyl-tert-butyl ether	ug/L	20	20.6	103	75-125	
Ethylbenzene	ug/L	20	20.2	101	75-125	
Hexachloro-1,3-butadiene	ug/L	20	20.1	100	72-134	
Isopropylbenzene (Cumene)	ug/L	20	22.9	115	75-125	
m&p-Xylene	ug/L	40	41.9	105	75-126	
Methyl-tert-butyl ether	ug/L	20	20.9	105	75-125	
Methylene Chloride	ug/L	20	20.5	103	70-125	
n-Butylbenzene	ug/L	20	20.3	102	75-126	
n-Propylbenzene	ug/L	20	20.0	100	73-127	
Naphthalene	ug/L	20	20.4	102	63-128	
o-Xylene	ug/L	20	19.7	98	75-128	
p-Isopropyltoluene	ug/L	20	20.6	103	75-125	
sec-Butylbenzene	ug/L	20	20.7	103	75-126	
Styrene	ug/L	20	20.1	101	75-125	
tert-Amylmethyl ether	ug/L	20	20.1	100	75-125	
tert-Butyl Alcohol	ug/L	200	191	95	75-130	
tert-Butylbenzene	ug/L	20	20.6	103	75-131	
Tetrachloroethene	ug/L	20	22.1	110	74-125	
Tetrahydrofuran	ug/L	200	198	99	64-138	
Toluene	ug/L	20	21.7	108	74-125	
trans-1,2-Dichloroethene	ug/L	20	21.5	107	68-128	
trans-1,3-Dichloropropene	ug/L	20	19.8	99	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	44.0	88	60-127	
Trichloroethene	ug/L	20	21.3	107	75-127	
Trichlorofluoromethane	ug/L	20	18.8	94	72-133	
Vinyl acetate	ug/L	20	20.3	101	61-129	
Vinyl chloride	ug/L	20	19.2	96	75-128	
Xylene (Total)	ug/L	60	61.6	103	75-125	
1,2-Dichloroethane-d4 (S)	%.			106	75-136	
4-Bromofluorobenzene (S)	%.			99	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3332689 3332690

Parameter	Units	10481283006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	19.8	20.1	99	100	75-140	2	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	23.7	22.8	119	114	74-136	4	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	20.8	20.5	104	102	66-134	2	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	19.2	19.5	96	97	75-126	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3332689 3332690

Parameter	Units	10481283006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	24.4	23.1	122	116	65-146	5	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	22.7	22.0	113	110	68-132	3	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	26.5	25.0	132	125	66-139	6	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	24.0	22.9	120	114	67-134	5	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	22.0	25.3	110	126	67-129	14	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	20.1	19.7	100	98	69-128	2	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	22.5	22.6	112	113	65-140	1	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	22.8	23.0	114	115	71-133	1	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	44.7	46.7	89	93	54-138	4	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	19.9	19.7	100	99	68-125	1	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	21.2	21.2	106	106	74-136	0	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	20.2	19.1	101	96	68-125	5	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	44.9	43.2	112	108	71-126	4	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	20.7	19.4	104	97	67-125	6	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	22.9	24.0	114	120	68-137	5	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	21.4	21.6	107	108	75-131	1	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	21.5	21.2	107	106	71-125	1	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	20.2	20.9	101	104	74-126	3	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	409	354	102	89	68-125	14	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	27.4	24.9	137	124	54-129	10	30	M1,N2
2,2-Dichloropropane	ug/L	<0.17	20	20	22.9	23.6	114	118	69-139	3	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	91.1	82.1	91	82	54-144	10	30	
2-Chlorotoluene	ug/L	<0.16	20	20	21.8	22.5	109	112	75-134	3	30	
2-Hexanone	ug/L	<0.88	100	100	108	96.2	108	96	58-137	11	30	
4-Chlorotoluene	ug/L	<0.13	20	20	21.4	21.9	107	110	72-133	3	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	99.9	102	100	102	60-129	2	30	
Acetone	ug/L	<9.2	100	100	119	88.0	119	88	62-132	30	30	
Acrolein	ug/L	<1.2	200	200	193	196	96	98	30-150	2	30	
Acrylonitrile	ug/L	<0.91	200	200	200	200	100	100	68-125	0	30	
Benzene	ug/L	<0.10	20	20	22.7	22.3	114	111	68-125	2	30	
Bromobenzene	ug/L	<0.21	20	20	22.3	21.5	111	107	73-126	4	30	
Bromochloromethane	ug/L	<0.27	20	20	21.9	21.8	110	109	66-143	1	30	
Bromodichloromethane	ug/L	<0.22	20	20	19.3	18.3	97	92	74-125	5	30	
Bromoform	ug/L	<0.80	20	20	19.3	20.3	96	101	64-134	5	30	
Bromomethane	ug/L	<1.8	20	20	18.8	17.3	94	87	30-150	8	30	
Carbon disulfide	ug/L	<0.078	20	20	35.1	32.6	176	163	43-147	7	30	CH,M0
Carbon tetrachloride	ug/L	<0.19	20	20	24.5	23.8	123	119	71-143	3	30	
Chlorobenzene	ug/L	<0.17	20	20	21.4	21.1	107	106	75-125	1	30	
Chloroethane	ug/L	<0.49	20	20	22.0	24.2	110	121	75-129	10	30	
Chloroform	ug/L	<0.45	20	20	19.9	19.1	99	95	66-132	4	30	
Chloromethane	ug/L	<0.16	20	20	23.0	25.4	115	127	53-137	10	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	21.2	19.9	106	99	67-133	6	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	20.9	19.5	105	98	66-125	7	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3332689 3332690

Parameter	Units	10481283006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	20.2	19.8	101	99	62-132	2	30	
Dibromomethane	ug/L	<0.16	20	20	21.5	20.2	108	101	67-125	6	30	
Dichlorodifluoromethane	ug/L	<0.23	20	20	22.5	25.7	113	129	71-142	13	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	22.0	24.3	110	122	70-131	10	30	N2
Diisopropyl ether	ug/L	<0.13	20	20	19.0	20.0	95	100	63-131	5	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	19.9	20.6	100	103	66-128	3	30	
Ethylbenzene	ug/L	<0.14	20	20	21.9	22.2	109	111	74-126	1	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	28.1	25.3	141	126	68-143	11	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	24.3	26.1	121	130	74-130	7	30	
m&p-Xylene	ug/L	<0.31	40	40	44.8	44.1	112	110	69-132	2	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	20.0	20.4	100	102	65-131	2	30	
Methylene Chloride	ug/L	<0.98	20	20	21.6	21.0	108	105	57-125	3	30	
n-Butylbenzene	ug/L	<0.24	20	20	23.9	24.6	119	123	71-131	3	30	
n-Propylbenzene	ug/L	<0.10	20	20	22.6	23.2	113	116	67-138	3	30	
Naphthalene	ug/L	<0.48	20	20	19.6	21.7	98	109	60-130	10	30	
o-Xylene	ug/L	<0.16	20	20	20.5	21.1	102	105	69-131	3	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	23.7	23.8	118	119	72-133	1	30	
sec-Butylbenzene	ug/L	<0.15	20	20	24.4	25.0	122	125	73-134	2	30	
Styrene	ug/L	<0.19	20	20	20.4	20.4	102	102	72-125	0	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	19.4	20.8	97	104	67-125	7	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	186	194	93	97	64-137	4	30	
tert-Butylbenzene	ug/L	<0.15	20	20	23.1	23.8	115	119	70-143	3	30	
Tetrachloroethene	ug/L	<0.17	20	20	24.5	25.9	122	129	72-129	6	30	
Tetrahydrofuran	ug/L	<2.2	200	200	199	201	99	100	66-128	1	30	
Toluene	ug/L	<0.083	20	20	23.0	22.1	115	110	73-125	4	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	23.7	23.3	119	116	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	20.0	19.3	100	96	61-136	4	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	41.7	42.2	83	84	45-128	1	30	
Trichloroethene	ug/L	<0.15	20	20	24.1	22.2	120	111	74-132	8	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	22.2	25.9	111	129	75-139	15	30	
Vinyl acetate	ug/L	<1.1	20	20	20.2	19.8	101	99	51-135	2	30	
Vinyl chloride	ug/L	<0.092	20	20	22.2	24.8	111	124	68-146	11	30	
Xylene (Total)	ug/L	<0.31	60	60	65.3	65.2	109	109	67-137	0	30	
1,2-Dichloroethane-d4 (S)	%.						105	105	75-136			1M
4-Bromofluorobenzene (S)	%.						100	99	75-125			
Toluene-d8 (S)	%.						104	105	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 617335 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481000002, 10481000005

METHOD BLANK: 3334749 Matrix: Water
Associated Lab Samples: 10481000002, 10481000005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/03/19 11:01	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/03/19 11:01	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/03/19 11:01	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/03/19 11:01	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/03/19 11:01	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	07/03/19 11:01	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/03/19 11:01	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	07/03/19 11:01	
1,2,4-Trimethylbenzene	ug/L	<0.20	1.0	0.20	07/03/19 11:01	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/03/19 11:01	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/03/19 11:01	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/03/19 11:01	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/03/19 11:01	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/03/19 11:01	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/03/19 11:01	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/03/19 11:01	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	07/03/19 11:01	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/03/19 11:01	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/03/19 11:01	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/03/19 11:01	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/03/19 11:01	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/03/19 11:01	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/03/19 11:01	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/03/19 11:01	
Acetone	ug/L	<9.2	20.0	9.2	07/03/19 11:01	
Acrolein	ug/L	<1.2	40.0	1.2	07/03/19 11:01	CL
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/03/19 11:01	
Benzene	ug/L	<0.10	0.50	0.10	07/03/19 11:01	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/03/19 11:01	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/03/19 11:01	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/03/19 11:01	
Bromoform	ug/L	<0.80	4.0	0.80	07/03/19 11:01	
Bromomethane	ug/L	<1.8	4.0	1.8	07/03/19 11:01	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/03/19 11:01	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/03/19 11:01	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

METHOD BLANK: 3334749 Matrix: Water
Associated Lab Samples: 10481000002, 10481000005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
Chloroethane	ug/L	<0.49	1.0	0.49	07/03/19 11:01	
Chloroform	ug/L	<0.45	1.0	0.45	07/03/19 11:01	
Chloromethane	ug/L	<0.16	4.0	0.16	07/03/19 11:01	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/03/19 11:01	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	0.20	07/03/19 11:01	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/03/19 11:01	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/03/19 11:01	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/03/19 11:01	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/03/19 11:01	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/03/19 11:01	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/03/19 11:01	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/03/19 11:01	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/03/19 11:01	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/03/19 11:01	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/03/19 11:01	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/03/19 11:01	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/03/19 11:01	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/03/19 11:01	
Naphthalene	ug/L	<0.48	1.0	0.48	07/03/19 11:01	
o-Xylene	ug/L	<0.16	0.50	0.16	07/03/19 11:01	
p-Isopropyltoluene	ug/L	<0.15	1.0	0.15	07/03/19 11:01	
sec-Butylbenzene	ug/L	<0.15	1.0	0.15	07/03/19 11:01	
Styrene	ug/L	<0.19	0.50	0.19	07/03/19 11:01	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	07/03/19 11:01	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/03/19 11:01	
tert-Butylbenzene	ug/L	<0.15	1.0	0.15	07/03/19 11:01	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/03/19 11:01	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/03/19 11:01	
Toluene	ug/L	<0.083	0.50	0.083	07/03/19 11:01	
trans-1,2-Dichloroethene	ug/L	<0.12	1.0	0.12	07/03/19 11:01	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/03/19 11:01	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/03/19 11:01	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/03/19 11:01	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/03/19 11:01	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/03/19 11:01	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/03/19 11:01	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/03/19 11:01	
1,2-Dichloroethane-d4 (S)	%.	102	75-136		07/03/19 11:01	
4-Bromofluorobenzene (S)	%.	99	75-125		07/03/19 11:01	
Toluene-d8 (S)	%.	108	75-125		07/03/19 11:01	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

LABORATORY CONTROL SAMPLE: 3334750

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	8.8	88	68-141	
1,1,1-Trichloroethane	ug/L	10	8.5	85	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	8.6	86	73-125	
1,1,2-Trichloroethane	ug/L	10	8.4	84	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	8.5	85	69-132	
1,1-Dichloroethane	ug/L	10	9.0	90	73-125	
1,1-Dichloroethene	ug/L	10	8.3	83	71-126	
1,1-Dichloropropene	ug/L	10	7.3	73	73-126	
1,2,3-Trichlorobenzene	ug/L	10	9.3	93	72-126	
1,2,3-Trichloropropane	ug/L	10	8.5	85	75-126	
1,2,4-Trichlorobenzene	ug/L	10	9.7	97	71-134	
1,2,4-Trimethylbenzene	ug/L	10	9.0	90	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	21.8	87	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	8.9	89	75-129	
1,2-Dichlorobenzene	ug/L	10	9.3	93	75-129	
1,2-Dichloroethane	ug/L	10	7.1	71	75-125	L2
1,2-Dichloroethene (Total)	ug/L	20	17.7	88	74-125	N2
1,2-Dichloropropane	ug/L	10	8.7	87	75-125	
1,3,5-Trimethylbenzene	ug/L	10	10.1	101	75-127	
1,3-Dichlorobenzene	ug/L	10	9.1	91	75-126	
1,3-Dichloropropane	ug/L	10	8.8	88	75-125	
1,4-Dichlorobenzene	ug/L	10	9.0	90	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	175J	88	72-129	
2,2,4-Trimethylpentane	ug/L	10	7.3	73	72-128	N2
2,2-Dichloropropane	ug/L	10	9.6	96	65-138	
2-Butanone (MEK)	ug/L	50	36.3	73	59-144	
2-Chlorotoluene	ug/L	10	9.0	90	75-127	
2-Hexanone	ug/L	50	43.0	86	73-134	
4-Chlorotoluene	ug/L	10	9.4	94	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	39.8	80	62-141	
Acetone	ug/L	50	42.6	85	60-137	
Acrolein	ug/L	100	55.8	56	60-141	CL,L2
Acrylonitrile	ug/L	100	85.4	85	75-129	
Benzene	ug/L	10	7.7	77	73-125	
Bromobenzene	ug/L	10	9.2	92	73-125	
Bromochloromethane	ug/L	10	9.4	94	75-135	
Bromodichloromethane	ug/L	10	8.8	88	75-125	
Bromoform	ug/L	10	8.0	80	67-136	
Bromomethane	ug/L	10	9.9	99	30-150	
Carbon disulfide	ug/L	10	7.3	73	47-137	
Carbon tetrachloride	ug/L	10	8.4	84	75-125	
Chlorobenzene	ug/L	10	9.0	90	75-125	
Chloroethane	ug/L	10	10.9	109	63-136	
Chloroform	ug/L	10	8.5	85	73-128	
Chloromethane	ug/L	10	9.1	91	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.0	90	75-125	
cis-1,3-Dichloropropene	ug/L	10	8.3	83	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

LABORATORY CONTROL SAMPLE: 3334750

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	10	100	75-125	
Dibromomethane	ug/L	10	9.2	92	75-125	
Dichlorodifluoromethane	ug/L	10	9.1	91	63-132	
Dichlorofluoromethane	ug/L	10	9.7	97	68-127	N2
Diisopropyl ether	ug/L	10	7.6	76	71-131	
Ethyl-tert-butyl ether	ug/L	10	8.4	84	75-125	
Ethylbenzene	ug/L	10	8.8	88	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.3	93	72-134	
Isopropylbenzene (Cumene)	ug/L	10	9.5	95	75-125	
m&p-Xylene	ug/L	20	17.6	88	75-126	
Methyl-tert-butyl ether	ug/L	10	8.6	86	75-125	
Methylene Chloride	ug/L	10	8.2	82	70-125	
n-Butylbenzene	ug/L	10	9.7	97	75-126	
n-Propylbenzene	ug/L	10	8.6	86	73-127	
Naphthalene	ug/L	10	9.0	90	63-128	
o-Xylene	ug/L	10	10	100	75-128	
p-Isopropyltoluene	ug/L	10	9.6	96	75-125	
sec-Butylbenzene	ug/L	10	9.0	90	75-126	
Styrene	ug/L	10	9.8	98	75-125	
tert-Amylmethyl ether	ug/L	10	7.9	79	75-125	
tert-Butyl Alcohol	ug/L	100	84.8	85	75-130	
tert-Butylbenzene	ug/L	10	9.1	91	75-131	
Tetrachloroethene	ug/L	10	8.7	87	74-125	
Tetrahydrofuran	ug/L	100	76.6	77	64-138	
Toluene	ug/L	10	8.9	89	74-125	
trans-1,2-Dichloroethene	ug/L	10	8.7	87	68-128	
trans-1,3-Dichloropropene	ug/L	10	8.9	89	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	24.9	100	60-127	
Trichloroethene	ug/L	10	8.6	86	75-127	
Trichlorofluoromethane	ug/L	10	10.1	101	72-133	
Vinyl acetate	ug/L	10	8.8J	88	61-129	
Vinyl chloride	ug/L	10	9.4	94	75-128	
Xylene (Total)	ug/L	30	27.6	92	75-125	
1,2-Dichloroethane-d4 (S)	%.			107	75-136	
4-Bromofluorobenzene (S)	%.			99	75-125	
Toluene-d8 (S)	%.			103	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334751 3334752

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	10	10	8.5	9.3	85	93	75-140	9	30	
1,1,1-Trichloroethane	ug/L	<0.14	10	10	8.2	8.5	82	85	74-136	4	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	10	10	8.1	9.2	81	92	66-134	13	30	
1,1,2-Trichloroethane	ug/L	<0.18	10	10	8.4	9.1	84	91	75-126	8	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334751 3334752

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	10	10	8.6	8.8	86	88	65-146	3	30	
1,1-Dichloroethane	ug/L	<0.17	10	10	8.5	7.8	85	78	68-132	9	30	
1,1-Dichloroethene	ug/L	<0.16	10	10	8.5	8.1	85	81	66-139	4	30	
1,1-Dichloropropene	ug/L	<0.20	10	10	7.7	8.0	77	80	67-134	4	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	10	10	9.5	10.1	95	101	67-129	6	30	
1,2,3-Trichloropropane	ug/L	<0.26	10	10	8.3	8.7	83	87	69-128	5	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	10	10	10.1	10.3	101	103	65-140	2	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	10	10	9.1	10	91	100	71-133	9	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	25	25	22.8	23.6	91	94	54-138	3	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	10	10	8.4	9.0	84	90	68-125	7	30	
1,2-Dichlorobenzene	ug/L	<0.14	10	10	8.9	10.1	89	101	74-136	12	30	
1,2-Dichloroethane	ug/L	<0.22	10	10	7.7	7.8	77	78	68-125	2	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	20	20	16.7	16.3	83	81	71-126	2	30	N2
1,2-Dichloropropane	ug/L	<0.16	10	10	8.3	8.9	83	89	67-125	7	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	10	10	10.4	11.2	104	112	68-137	8	30	
1,3-Dichlorobenzene	ug/L	<0.16	10	10	9.5	10.0	95	100	75-131	5	30	
1,3-Dichloropropane	ug/L	<0.070	10	10	8.6	9.1	86	91	71-125	6	30	
1,4-Dichlorobenzene	ug/L	<0.17	10	10	9.0	10	90	100	74-126	10	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	200	169J	175J	84	87	68-125		30	
2,2,4-Trimethylpentane	ug/L	<0.19	10	10	7.9	7.9	79	79	54-129	0	30	N2
2,2-Dichloropropane	ug/L	<0.17	10	10	8.9	8.6	89	86	69-139	3	30	
2-Butanone (MEK)	ug/L	<0.99	50	50	28.8	32.7	58	65	54-144	13	30	
2-Chlorotoluene	ug/L	<0.16	10	10	9.2	9.8	92	98	75-134	6	30	
2-Hexanone	ug/L	<0.88	50	50	37.0	39.8	74	80	58-137	7	30	
4-Chlorotoluene	ug/L	<0.13	10	10	9.1	9.9	91	99	72-133	9	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	50	50	41.0	43.5	82	87	60-129	6	30	
Acetone	ug/L	<9.2	50	50	31.3	30.5	63	61	62-132	3	30	M1
Acrolein	ug/L	<1.2	100	100	101	108	101	108	30-150	7	30	CL
Acrylonitrile	ug/L	<0.91	100	100	77.1	76.2	77	76	68-125	1	30	
Benzene	ug/L	<0.10	10	10	7.3	7.9	73	79	68-125	7	30	
Bromobenzene	ug/L	<0.21	10	10	8.8	9.5	88	95	73-126	8	30	
Bromochloromethane	ug/L	<0.27	10	10	7.9	8.3	79	83	66-143	6	30	
Bromodichloromethane	ug/L	<0.22	10	10	8.0	8.5	80	85	74-125	6	30	
Bromoform	ug/L	<0.80	10	10	8.0	8.9	80	89	64-134	10	30	
Bromomethane	ug/L	<1.8	10	10	9.9	10.4	99	104	30-150	5	30	
Carbon disulfide	ug/L	0.50J	10	10	7.5	6.8	70	63	43-147	11	30	
Carbon tetrachloride	ug/L	23.9	10	10	32.2	33.3	83	94	71-143	3	30	
Chlorobenzene	ug/L	<0.17	10	10	8.8	9.2	88	92	75-125	5	30	
Chloroethane	ug/L	<0.49	10	10	10.8	11.0	108	110	75-129	2	30	
Chloroform	ug/L	0.92J	10	10	8.4	9.1	75	81	66-132	7	30	
Chloromethane	ug/L	<0.16	10	10	8.8	7.8	88	78	53-137	13	30	
cis-1,2-Dichloroethene	ug/L	<0.15	10	10	8.5	8.5	85	85	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	<0.20	10	10	7.5	8.0	75	80	66-125	6	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334751 3334752

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	10	10	9.5	9.9	95	99	62-132	5	30	
Dibromomethane	ug/L	<0.16	10	10	9.1	9.7	91	97	67-125	6	30	
Dichlorodifluoromethane	ug/L	<0.23	10	10	8.6	8.5	86	85	71-142	1	30	
Dichlorofluoromethane	ug/L	<0.14	10	10	9.1	8.8	91	88	70-131	3	30	N2
Diisopropyl ether	ug/L	<0.13	10	10	7.6	6.9	76	69	63-131	9	30	
Ethyl-tert-butyl ether	ug/L	<0.18	10	10	7.9	8.3	79	83	66-128	4	30	
Ethylbenzene	ug/L	<0.14	10	10	8.6	9.5	86	95	74-126	10	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	10	10	11.2	9.7	112	97	68-143	14	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	10	10	9.8	10.6	98	106	74-130	8	30	
m&p-Xylene	ug/L	<0.31	20	20	17.8	18.2	89	91	69-132	2	30	
Methyl-tert-butyl ether	ug/L	<0.16	10	10	8.0	8.4	80	84	65-131	4	30	
Methylene Chloride	ug/L	<0.98	10	10	7.7	7.7	77	77	57-125	0	30	
n-Butylbenzene	ug/L	<0.24	10	10	10.3	10.3	103	103	71-131	0	30	
n-Propylbenzene	ug/L	<0.10	10	10	9.2	9.8	92	98	67-138	5	30	
Naphthalene	ug/L	<0.48	10	10	8.9	10.2	89	102	60-130	14	30	
o-Xylene	ug/L	<0.16	10	10	9.9	10.1	99	101	69-131	2	30	
p-Isopropyltoluene	ug/L	<0.15	10	10	9.9	10.2	99	102	72-133	3	30	
sec-Butylbenzene	ug/L	<0.15	10	10	9.6	9.7	96	97	73-134	1	30	
Styrene	ug/L	<0.19	10	10	9.6	10	96	100	72-125	4	30	
tert-Amylmethyl ether	ug/L	<0.11	10	10	8.3	8.6	83	86	67-125	3	30	
tert-Butyl Alcohol	ug/L	<1.2	100	100	81.5	89.8	82	90	64-137	10	30	
tert-Butylbenzene	ug/L	<0.15	10	10	9.8	9.9	98	99	70-143	1	30	
Tetrachloroethene	ug/L	<0.17	10	10	9.1	9.1	91	91	72-129	0	30	
Tetrahydrofuran	ug/L	<2.2	100	100	74.0	87.3	74	87	66-128	16	30	
Toluene	ug/L	<0.083	10	10	8.5	8.8	85	88	73-125	3	30	
trans-1,2-Dichloroethene	ug/L	<0.12	10	10	8.1	7.8	81	78	62-137	4	30	
trans-1,3-Dichloropropene	ug/L	<0.18	10	10	9.0	9.1	90	91	61-136	1	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	25	25	23.6	24.8	94	99	45-128	5	30	
Trichloroethene	ug/L	<0.15	10	10	9.2	8.7	92	87	74-132	6	30	
Trichlorofluoromethane	ug/L	<0.23	10	10	9.9	8.9	99	89	75-139	10	30	
Vinyl acetate	ug/L	<1.1	10	10	8.5J	8.9J	85	89	51-135		30	
Vinyl chloride	ug/L	<0.092	10	10	9.0	8.7	90	87	68-146	3	30	
Xylene (Total)	ug/L	<0.31	30	30	27.6	28.3	92	94	67-137	2	30	
1,2-Dichloroethane-d4 (S)	%.						106	108	75-136			
4-Bromofluorobenzene (S)	%.						99	99	75-125			
Toluene-d8 (S)	%.						103	104	75-125			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334753 3334754

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	10	10	9.4	9.2	94	92	75-140	3	30	
1,1,1-Trichloroethane	ug/L	<0.14	10	10	8.7	8.8	87	88	74-136	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334753 3334754

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2,2-Tetrachloroethane	ug/L	<0.17	10	10	8.7	9.2	87	92	66-134	6	30	
1,1,2-Trichloroethane	ug/L	<0.18	10	10	8.8	9.2	88	92	75-126	5	30	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	10	10	9.3	9.8	93	98	65-146	4	30	
1,1-Dichloroethane	ug/L	<0.17	10	10	8.4	8.4	84	84	68-132	1	30	
1,1-Dichloroethene	ug/L	<0.16	10	10	8.9	8.8	89	88	66-139	1	30	
1,1-Dichloropropene	ug/L	<0.20	10	10	8.0	8.7	80	87	67-134	8	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	10	10	10.3	10.7	103	107	67-129	4	30	
1,2,3-Trichloropropane	ug/L	<0.26	10	10	9.1	9.2	91	92	69-128	1	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	10	10	10.5	11.0	105	110	65-140	5	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	10	10	9.4	10.7	94	107	71-133	13	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	25	25	23.9	24.2	96	97	54-138	1	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	10	10	9.1	9.2	91	92	68-125	1	30	
1,2-Dichlorobenzene	ug/L	<0.14	10	10	9.5	10.9	95	109	74-136	13	30	
1,2-Dichloroethane	ug/L	<0.22	10	10	8.0	8.1	80	81	68-125	1	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	20	20	17.5	16.5	88	82	71-126	6	30	N2
1,2-Dichloropropane	ug/L	<0.16	10	10	7.3	7.9	73	79	67-125	8	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	10	10	10.8	12.0	108	120	68-137	10	30	
1,3-Dichlorobenzene	ug/L	<0.16	10	10	9.7	10.5	97	105	75-131	7	30	
1,3-Dichloropropane	ug/L	<0.070	10	10	9.2	9.3	92	93	71-125	1	30	
1,4-Dichlorobenzene	ug/L	<0.17	10	10	9.5	10	95	100	74-126	5	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	200	174J	190J	87	95	68-125		30	
2,2,4-Trimethylpentane	ug/L	<0.19	10	10	8.5	8.8	85	88	54-129	3	30	N2
2,2-Dichloropropane	ug/L	<0.17	10	10	9.3	8.9	93	89	69-139	5	30	
2-Butanone (MEK)	ug/L	<0.99	50	50	30.7	32.4	61	65	54-144	6	30	
2-Chlorotoluene	ug/L	<0.16	10	10	9.3	10.8	93	108	75-134	15	30	
2-Hexanone	ug/L	<0.88	50	50	39.4	39.8	79	80	58-137	1	30	
4-Chlorotoluene	ug/L	<0.13	10	10	9.2	10.4	92	104	72-133	13	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	50	50	43.1	44.0	86	88	60-129	2	30	
Acetone	ug/L	<9.2	50	50	33.0	33.2	66	66	62-132	1	30	
Acrolein	ug/L	<1.2	100	100	107	103	107	103	30-150	3	30	CL
Acrylonitrile	ug/L	<0.91	100	100	80.3	80.1	80	80	68-125	0	30	
Benzene	ug/L	<0.10	10	10	8.1	8.5	81	85	68-125	5	30	
Bromobenzene	ug/L	<0.21	10	10	9.3	10.1	93	101	73-126	9	30	
Bromochloromethane	ug/L	<0.27	10	10	8.6	8.4	86	84	66-143	2	30	
Bromodichloromethane	ug/L	<0.22	10	10	7.1	7.5	71	75	74-125	6	30	M1
Bromoform	ug/L	<0.80	10	10	8.8	8.9	88	89	64-134	2	30	
Bromomethane	ug/L	<1.8	10	10	11.2	11.4	112	114	30-150	2	30	
Carbon disulfide	ug/L	<0.078	10	10	7.4	7.1	74	71	43-147	5	30	
Carbon tetrachloride	ug/L	<0.19	10	10	8.9	9.2	89	92	71-143	3	30	
Chlorobenzene	ug/L	<0.17	10	10	9.0	9.6	90	96	75-125	6	30	
Chloroethane	ug/L	<0.49	10	10	11.2	10.9	112	109	75-129	3	30	
Chloroform	ug/L	<0.45	10	10	7.8	8.2	78	82	66-132	5	30	
Chloromethane	ug/L	<0.16	10	10	8.9	8.5	89	85	53-137	5	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334753 3334754

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
cis-1,2-Dichloroethene	ug/L	<0.15	10	10	8.7	8.0	87	80	67-133	9	30	
cis-1,3-Dichloropropene	ug/L	<0.20	10	10	6.7	7.0	67	70	66-125	5	30	
Dibromochloromethane	ug/L	<0.12	10	10	9.6	9.9	96	99	62-132	2	30	
Dibromomethane	ug/L	<0.16	10	10	8.9	7.8	89	78	67-125	13	30	
Dichlorodifluoromethane	ug/L	<0.23	10	10	8.2	9.0	82	90	71-142	9	30	
Dichlorofluoromethane	ug/L	<0.14	10	10	9.3	9.2	93	92	70-131	2	30	N2
Diisopropyl ether	ug/L	<0.13	10	10	7.6	8.0	76	80	63-131	4	30	
Ethyl-tert-butyl ether	ug/L	<0.18	10	10	8.5	8.0	85	80	66-128	7	30	
Ethylbenzene	ug/L	<0.14	10	10	9.2	9.9	92	99	74-126	8	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	10	10	11.2	10.2	112	102	68-143	9	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	10	10	10.5	11.7	105	117	74-130	11	30	
m&p-Xylene	ug/L	<0.31	20	20	17.7	20.3	88	102	69-132	14	30	
Methyl-tert-butyl ether	ug/L	<0.16	10	10	8.3	8.4	83	84	65-131	1	30	
Methylene Chloride	ug/L	<0.98	10	10	7.7	8.1	77	81	57-125	5	30	
n-Butylbenzene	ug/L	<0.24	10	10	10.7	10.9	107	109	71-131	2	30	
n-Propylbenzene	ug/L	<0.10	10	10	9.4	10.4	94	104	67-138	10	30	
Naphthalene	ug/L	<0.48	10	10	9.0	10.4	90	104	60-130	14	30	
o-Xylene	ug/L	<0.16	10	10	9.9	11.2	99	112	69-131	13	30	
p-Isopropyltoluene	ug/L	<0.15	10	10	10.3	10.8	103	108	72-133	4	30	
sec-Butylbenzene	ug/L	<0.15	10	10	10.0	10.5	100	105	73-134	4	30	
Styrene	ug/L	<0.19	10	10	10.0	11.3	100	113	72-125	12	30	
tert-Amylmethyl ether	ug/L	<0.11	10	10	8.8	8.8	88	88	67-125	1	30	
tert-Butyl Alcohol	ug/L	<1.2	100	100	80.9	84.3	81	84	64-137	4	30	
tert-Butylbenzene	ug/L	<0.15	10	10	10.1	11.0	101	110	70-143	9	30	
Tetrachloroethene	ug/L	<0.17	10	10	9.2	10.1	92	101	72-129	9	30	
Tetrahydrofuran	ug/L	<2.2	100	100	78.7	85.2	79	85	66-128	8	30	
Toluene	ug/L	<0.083	10	10	9.2	9.5	92	95	73-125	4	30	
trans-1,2-Dichloroethene	ug/L	<0.12	10	10	8.8	8.5	88	85	62-137	4	30	
trans-1,3-Dichloropropene	ug/L	<0.18	10	10	9.1	9.3	91	93	61-136	3	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	25	25	24.7	25.9	99	103	45-128	4	30	
Trichloroethene	ug/L	<0.15	10	10	8.8	9.7	88	97	74-132	10	30	
Trichlorofluoromethane	ug/L	<0.23	10	10	10.1	10.0	101	100	75-139	0	30	
Vinyl acetate	ug/L	<1.1	10	10	9.2J	8.0J	92	80	51-135		30	
Vinyl chloride	ug/L	<0.092	10	10	9.3	9.1	93	91	68-146	2	30	
Xylene (Total)	ug/L	<0.31	30	30	27.5	31.5	92	105	67-137	14	30	
1,2-Dichloroethane-d4 (S)	%.						102	102	75-136			
4-Bromofluorobenzene (S)	%.						97	99	75-125			
Toluene-d8 (S)	%.						103	104	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 617460 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 3335306 Matrix: Water
Associated Lab Samples: 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/03/19 21:16	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/03/19 21:16	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/03/19 21:16	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/03/19 21:16	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/03/19 21:16	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	07/03/19 21:16	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/03/19 21:16	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	07/03/19 21:16	
1,2,4-Trimethylbenzene	ug/L	<0.20	1.0	0.20	07/03/19 21:16	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/03/19 21:16	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/03/19 21:16	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/03/19 21:16	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/03/19 21:16	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/03/19 21:16	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/03/19 21:16	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/03/19 21:16	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	07/03/19 21:16	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/03/19 21:16	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/03/19 21:16	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/03/19 21:16	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/03/19 21:16	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/03/19 21:16	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/03/19 21:16	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/03/19 21:16	
Acetone	ug/L	<9.2	20.0	9.2	07/03/19 21:16	
Acrolein	ug/L	<1.2	40.0	1.2	07/03/19 21:16	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/03/19 21:16	
Benzene	ug/L	<0.10	0.50	0.10	07/03/19 21:16	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/03/19 21:16	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/03/19 21:16	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/03/19 21:16	
Bromoform	ug/L	<0.80	4.0	0.80	07/03/19 21:16	
Bromomethane	ug/L	<1.8	4.0	1.8	07/03/19 21:16	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/03/19 21:16	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/03/19 21:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

METHOD BLANK: 3335306 Matrix: Water
Associated Lab Samples: 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
Chloroethane	ug/L	<0.49	1.0	0.49	07/03/19 21:16	
Chloroform	ug/L	<0.45	1.0	0.45	07/03/19 21:16	
Chloromethane	ug/L	<0.16	4.0	0.16	07/03/19 21:16	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/03/19 21:16	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	0.20	07/03/19 21:16	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/03/19 21:16	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/03/19 21:16	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/03/19 21:16	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/03/19 21:16	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/03/19 21:16	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/03/19 21:16	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/03/19 21:16	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/03/19 21:16	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/03/19 21:16	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/03/19 21:16	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/03/19 21:16	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/03/19 21:16	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/03/19 21:16	
Naphthalene	ug/L	<0.48	1.0	0.48	07/03/19 21:16	
o-Xylene	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
p-Isopropyltoluene	ug/L	<0.15	1.0	0.15	07/03/19 21:16	
sec-Butylbenzene	ug/L	<0.15	1.0	0.15	07/03/19 21:16	
Styrene	ug/L	<0.19	0.50	0.19	07/03/19 21:16	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	07/03/19 21:16	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/03/19 21:16	
tert-Butylbenzene	ug/L	<0.15	1.0	0.15	07/03/19 21:16	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/03/19 21:16	
Toluene	ug/L	<0.083	0.50	0.083	07/03/19 21:16	
trans-1,2-Dichloroethene	ug/L	<0.12	1.0	0.12	07/03/19 21:16	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/03/19 21:16	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/03/19 21:16	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/03/19 21:16	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/03/19 21:16	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/03/19 21:16	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/03/19 21:16	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/03/19 21:16	
1,2-Dichloroethane-d4 (S)	%.	100	75-136		07/03/19 21:16	
4-Bromofluorobenzene (S)	%.	96	75-125		07/03/19 21:16	
Toluene-d8 (S)	%.	108	75-125		07/03/19 21:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

LABORATORY CONTROL SAMPLE: 3335307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	9.3	93	68-141	
1,1,1-Trichloroethane	ug/L	10	9.0	90	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	9.1	91	73-125	
1,1,2-Trichloroethane	ug/L	10	9.6	96	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	8.7	87	69-132	
1,1-Dichloroethane	ug/L	10	8.7	87	73-125	
1,1-Dichloroethene	ug/L	10	8.7	87	71-126	
1,1-Dichloropropene	ug/L	10	7.9	79	73-126	
1,2,3-Trichlorobenzene	ug/L	10	9.8	98	72-126	
1,2,3-Trichloropropane	ug/L	10	9.7	97	75-126	
1,2,4-Trichlorobenzene	ug/L	10	10.2	102	71-134	
1,2,4-Trimethylbenzene	ug/L	10	9.4	94	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	25.3	101	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	9.6	96	75-129	
1,2-Dichlorobenzene	ug/L	10	9.7	97	75-129	
1,2-Dichloroethane	ug/L	10	7.9	79	75-125	
1,2-Dichloroethene (Total)	ug/L	20	17.3	86	74-125	N2
1,2-Dichloropropane	ug/L	10	9.0	90	75-125	
1,3,5-Trimethylbenzene	ug/L	10	10.5	105	75-127	
1,3-Dichlorobenzene	ug/L	10	10.2	102	75-126	
1,3-Dichloropropane	ug/L	10	9.2	92	75-125	
1,4-Dichlorobenzene	ug/L	10	9.7	97	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	191J	95	72-129	
2,2,4-Trimethylpentane	ug/L	10	6.9	69	72-128	L2,N2
2,2-Dichloropropane	ug/L	10	8.4	84	65-138	
2-Butanone (MEK)	ug/L	50	32.6	65	59-144	
2-Chlorotoluene	ug/L	10	9.6	96	75-127	
2-Hexanone	ug/L	50	38.9	78	73-134	
4-Chlorotoluene	ug/L	10	9.4	94	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	42.2	84	62-141	
Acetone	ug/L	50	35.3	71	60-137	
Acrolein	ug/L	100	92.4	92	60-141	
Acrylonitrile	ug/L	100	83.6	84	75-129	
Benzene	ug/L	10	7.8	78	73-125	
Bromobenzene	ug/L	10	9.9	99	73-125	
Bromochloromethane	ug/L	10	9.7	97	75-135	
Bromodichloromethane	ug/L	10	8.5	85	75-125	
Bromoform	ug/L	10	9.3	93	67-136	
Bromomethane	ug/L	10	10.6	106	30-150	
Carbon disulfide	ug/L	10	7.2	72	47-137	
Carbon tetrachloride	ug/L	10	9.2	92	75-125	
Chlorobenzene	ug/L	10	9.5	95	75-125	
Chloroethane	ug/L	10	9.8	98	63-136	
Chloroform	ug/L	10	9.0	90	73-128	
Chloromethane	ug/L	10	8.7	87	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.0	90	75-125	
cis-1,3-Dichloropropene	ug/L	10	8.2	82	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

LABORATORY CONTROL SAMPLE: 3335307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	10.2	102	75-125	
Dibromomethane	ug/L	10	9.4	94	75-125	
Dichlorodifluoromethane	ug/L	10	9.2	92	63-132	
Dichlorofluoromethane	ug/L	10	10.1	101	68-127	N2
Diisopropyl ether	ug/L	10	7.9	79	71-131	
Ethyl-tert-butyl ether	ug/L	10	8.7	87	75-125	
Ethylbenzene	ug/L	10	9.2	92	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.3	93	72-134	
Isopropylbenzene (Cumene)	ug/L	10	10.4	104	75-125	
m&p-Xylene	ug/L	20	18.2	91	75-126	
Methyl-tert-butyl ether	ug/L	10	8.4	84	75-125	
Methylene Chloride	ug/L	10	8.1	81	70-125	
n-Butylbenzene	ug/L	10	9.5	95	75-126	
n-Propylbenzene	ug/L	10	9.0	90	73-127	
Naphthalene	ug/L	10	9.2	92	63-128	
o-Xylene	ug/L	10	10.2	102	75-128	
p-Isopropyltoluene	ug/L	10	9.7	97	75-125	
sec-Butylbenzene	ug/L	10	9.2	92	75-126	
Styrene	ug/L	10	11.0	110	75-125	
tert-Amylmethyl ether	ug/L	10	8.4	84	75-125	
tert-Butyl Alcohol	ug/L	100	72.1	72	75-130	L2
tert-Butylbenzene	ug/L	10	9.7	97	75-131	
Tetrachloroethene	ug/L	10	9.1	91	74-125	
Tetrahydrofuran	ug/L	100	94.5	95	64-138	
Toluene	ug/L	10	9.0	90	74-125	
trans-1,2-Dichloroethene	ug/L	10	8.3	83	68-128	
trans-1,3-Dichloropropene	ug/L	10	8.8	88	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	24.3	97	60-127	
Trichloroethene	ug/L	10	8.9	89	75-127	
Trichlorofluoromethane	ug/L	10	10.4	104	72-133	
Vinyl acetate	ug/L	10	8.7J	87	61-129	
Vinyl chloride	ug/L	10	9.3	93	75-128	
Xylene (Total)	ug/L	30	28.4	95	75-125	
1,2-Dichloroethane-d4 (S)	%.			102	75-136	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			102	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337914 3337915

Parameter	Units	10481437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	10	10	9.4	9.9	94	99	75-140	5	30	
1,1,1-Trichloroethane	ug/L	ND	10	10	9.6	9.3	96	93	74-136	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	10	10	9.6	9.5	96	95	66-134	1	30	
1,1,2-Trichloroethane	ug/L	ND	10	10	9.5	9.5	95	95	75-126	0	30	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337914 3337915

Parameter	Units	10481437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	10	10	9.6	9.5	96	95	65-146	1	30	
1,1-Dichloroethane	ug/L	ND	10	10	8.9	9.0	89	90	68-132	1	30	
1,1-Dichloroethene	ug/L	ND	10	10	9.4	8.7	94	87	66-139	8	30	
1,1-Dichloropropene	ug/L	ND	10	10	9.1	8.9	91	89	67-134	3	30	
1,2,3-Trichlorobenzene	ug/L	ND	10	10	10.5	10.7	105	107	67-129	1	30	
1,2,3-Trichloropropane	ug/L	ND	10	10	9.4	9.8	94	98	69-128	4	30	
1,2,4-Trichlorobenzene	ug/L	ND	10	10	11.1	11.2	111	112	65-140	1	30	
1,2,4-Trimethylbenzene	ug/L	ND	10	10	10.2	10.8	102	108	71-133	6	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	25	25	24.9	24.4	100	97	54-138	2	30	
1,2-Dibromoethane (EDB)	ug/L	ND	10	10	9.3	9.3	93	93	68-125	0	30	
1,2-Dichlorobenzene	ug/L	ND	10	10	10.3	10.9	103	109	74-136	5	30	
1,2-Dichloroethane	ug/L	ND	10	10	8.1	8.3	81	83	68-125	2	30	
1,2-Dichloroethene (Total)	ug/L	ND	20	20	17.2	18.4	86	92	71-126	7	30	N2
1,2-Dichloropropane	ug/L	ND	10	10	9.3	9.0	93	90	67-125	3	30	
1,3,5-Trimethylbenzene	ug/L	ND	10	10	11.6	12.4	116	124	68-137	6	30	
1,3-Dichlorobenzene	ug/L	ND	10	10	10.3	11.1	103	111	75-131	7	30	
1,3-Dichloropropane	ug/L	ND	10	10	9.7	9.9	97	99	71-125	2	30	
1,4-Dichlorobenzene	ug/L	ND	10	10	10	10.6	100	106	74-126	5	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	200	200	189J	206	95	103	68-125		30	
2,2,4-Trimethylpentane	ug/L	ND	10	10	9.4	8.4	94	84	54-129	12	30	N2
2,2-Dichloropropane	ug/L	ND	10	10	8.4	8.4	84	84	69-139	0	30	
2-Butanone (MEK)	ug/L	ND	50	50	34.3	35.8	69	72	54-144	4	30	
2-Chlorotoluene	ug/L	ND	10	10	10.2	10.8	102	108	75-134	6	30	
2-Hexanone	ug/L	ND	50	50	37.8	40.3	76	81	58-137	6	30	
4-Chlorotoluene	ug/L	ND	10	10	10.1	10.8	101	108	72-133	7	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	42.4	44.1	85	88	60-129	4	30	
Acetone	ug/L	ND	50	50	37.8	37.1	76	74	62-132	2	30	
Acrolein	ug/L	ND	100	100	105	108	105	108	30-150	3	30	
Acrylonitrile	ug/L	ND	100	100	85.9	87.5	86	87	68-125	2	30	
Benzene	ug/L	ND	10	10	9.1	8.8	91	88	68-125	4	30	
Bromobenzene	ug/L	ND	10	10	10.3	10.3	103	103	73-126	1	30	
Bromochloromethane	ug/L	ND	10	10	8.4	9.5	84	95	66-143	12	30	
Bromodichloromethane	ug/L	ND	10	10	8.8	8.7	88	87	74-125	0	30	
Bromoform	ug/L	ND	10	10	9.1	9.5	91	95	64-134	4	30	
Bromomethane	ug/L	ND	10	10	10.8	11.4	108	114	30-150	5	30	
Carbon disulfide	ug/L	ND	10	10	7.7	7.1	77	71	43-147	8	30	
Carbon tetrachloride	ug/L	ND	10	10	9.7	9.9	97	99	71-143	2	30	
Chlorobenzene	ug/L	ND	10	10	9.6	9.9	96	99	75-125	3	30	
Chloroethane	ug/L	ND	10	10	11.5	11.2	115	112	75-129	2	30	
Chloroform	ug/L	ND	10	10	8.6	8.4	86	84	66-132	2	30	
Chloromethane	ug/L	ND	10	10	8.4	8.2	84	82	53-137	2	30	
cis-1,2-Dichloroethene	ug/L	ND	10	10	8.5	9.5	85	95	67-133	12	30	
cis-1,3-Dichloropropene	ug/L	ND	10	10	8.3	8.0	83	80	66-125	4	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337914 3337915

Parameter	Units	10481437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	10	10	10.4	10.3	104	103	62-132	1	30	
Dibromomethane	ug/L	ND	10	10	9.8	9.8	98	98	67-125	1	30	
Dichlorodifluoromethane	ug/L	ND	10	10	8.5	8.7	85	87	71-142	2	30	
Dichlorofluoromethane	ug/L	ND	10	10	9.5	9.3	95	93	70-131	2	30	N2
Diisopropyl ether	ug/L	ND	10	10	7.6	8.2	76	82	63-131	7	30	
Ethyl-tert-butyl ether	ug/L	ND	10	10	7.9	8.3	79	83	66-128	5	30	
Ethylbenzene	ug/L	ND	10	10	9.7	10.3	97	103	74-126	5	30	
Hexachloro-1,3-butadiene	ug/L	ND	10	10	11.2	10	112	100	68-143	11	30	
Isopropylbenzene (Cumene)	ug/L	ND	10	10	10.7	12.0	107	120	74-130	12	30	
m&p-Xylene	ug/L	ND	20	20	19.3	20.8	96	104	69-132	8	30	
Methyl-tert-butyl ether	ug/L	ND	10	10	8.5	8.8	85	88	65-131	4	30	
Methylene Chloride	ug/L	ND	10	10	8.7	8.7	87	87	57-125	1	30	
n-Butylbenzene	ug/L	ND	10	10	10.9	10.7	109	107	71-131	2	30	
n-Propylbenzene	ug/L	ND	10	10	10.0	10.8	100	108	67-138	7	30	
Naphthalene	ug/L	ND	10	10	9.9	10.6	99	106	60-130	6	30	
o-Xylene	ug/L	ND	10	10	10.4	11.1	104	111	69-131	7	30	
p-Isopropyltoluene	ug/L	ND	10	10	10.6	11.2	106	112	72-133	5	30	
sec-Butylbenzene	ug/L	ND	10	10	10.5	10.7	105	107	73-134	2	30	
Styrene	ug/L	ND	10	10	10.8	11.6	108	116	72-125	7	30	
tert-Amylmethyl ether	ug/L	ND	10	10	8.7	8.7	87	87	67-125	1	30	
tert-Butyl Alcohol	ug/L	ND	100	100	75.9	88.6	76	89	64-137	15	30	
tert-Butylbenzene	ug/L	ND	10	10	11.0	11.4	110	114	70-143	3	30	
Tetrachloroethene	ug/L	9.5	10	10	18.8	20.5	92	109	72-129	9	30	
Tetrahydrofuran	ug/L	ND	100	100	97.0	92.2	97	92	66-128	5	30	
Toluene	ug/L	ND	10	10	9.6	9.4	96	94	73-125	2	30	
trans-1,2-Dichloroethene	ug/L	ND	10	10	8.7	8.9	87	89	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	ND	10	10	9.6	9.6	96	96	61-136	0	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	25	25	26.3	25.8	105	103	45-128	2	30	
Trichloroethene	ug/L	ND	10	10	9.7	9.7	97	97	74-132	0	30	
Trichlorofluoromethane	ug/L	ND	10	10	9.6	9.6	96	96	75-139	0	30	
Vinyl acetate	ug/L	ND	10	10	7.2J	7.5J	72	75	51-135		30	
Vinyl chloride	ug/L	ND	10	10	8.7	8.6	87	86	68-146	2	30	
Xylene (Total)	ug/L	ND	30	30	29.6	31.9	99	106	67-137	8	30	
1,2-Dichloroethane-d4 (S)	%.						103	105	75-136			
4-Bromofluorobenzene (S)	%.						99	97	75-125			
Toluene-d8 (S)	%.						102	101	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 618406 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 3339758 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/10/19 06:53	

LABORATORY CONTROL SAMPLE & LCSD: 3339759 3339760

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.1	42.0	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339761 3339762

Parameter	Units	10481000001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	193	40	40	238	244	110	128	80-120	3	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339763 3339764

Parameter	Units	10481000003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	141	40	40	179	180	94	97	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 616939 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 3332495 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0J	10.0	5.0	07/02/19 10:34	

LABORATORY CONTROL SAMPLE: 3332496

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	998	100	80-120	

SAMPLE DUPLICATE: 3332497

Parameter	Units	10481268003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	219	213	3	5	

SAMPLE DUPLICATE: 3332498

Parameter	Units	10481099002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	170	168	1	5	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 147742 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 652665 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	06/29/19 15:12	

LABORATORY CONTROL SAMPLE: 652666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.19	97	90-110	

MATRIX SPIKE SAMPLE: 652668

Parameter	Units	10480825007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.095	46	75-125	

SAMPLE DUPLICATE: 652667

Parameter	Units	10480825007 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 616221 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 3328620 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	06/27/19 19:25	
Nitrate as N	mg/L	<0.012	0.10	0.012	06/27/19 19:25	
Sulfate	mg/L	0.50J	1.2	0.28	06/27/19 19:25	

LABORATORY CONTROL SAMPLE: 3328621

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.2	97	90-110	
Nitrate as N	mg/L	1	0.98	98	90-110	
Sulfate	mg/L	12.5	12.9	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3328622 3328623

Parameter	Units	10481000001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.9	12.5	12.5	14.2	14.1	98	97	90-110	1	20	
Nitrate as N	mg/L	0.13	1	1	1.1	1.1	97	96	90-110	0	20	
Sulfate	mg/L	4.0	12.5	12.5	16.5	16.3	100	99	90-110	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 617808 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 3336984 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	07/06/19 13:19	FS

LABORATORY CONTROL SAMPLE: 3336985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	102	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3336986 3336987

Parameter	Units	10481154001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.031J	1	1	1.1	1.1	104	103	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3336988 3336989

Parameter	Units	10481154002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.39	1	1	1.5	1.4	107	104	90-110	2	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 617289 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007

METHOD BLANK: 3334639 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/03/19 13:18	

LABORATORY CONTROL SAMPLE: 3334640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	304	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334641 3334642

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	251	246	97	95	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3334643 3334644

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	254	246	100	97	90-110	3	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 618373 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10481000008, 10481000009, 10481000010

METHOD BLANK: 3339410 Matrix: Water
Associated Lab Samples: 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/10/19 15:26	

LABORATORY CONTROL SAMPLE: 3339411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	295	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339412 3339413

Parameter	Units	10481000008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	247	238	95	92	90-110	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339414 3339415

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	237	241	92	94	90-110	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

QC Batch: 169508 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

METHOD BLANK: 669720 Matrix: Water
Associated Lab Samples: 10481000001, 10481000003, 10481000004, 10481000005, 10481000006, 10481000007, 10481000008, 10481000009, 10481000010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	07/02/19 23:08	

LABORATORY CONTROL SAMPLE: 669721

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 669722 669723

Parameter	Units	10480825003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.0	25	25	26.6	26.6	103	102	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 669724 669725

Parameter	Units	10480825007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.65J	25	25	26.1	25.7	102	100	80-120	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

1M	Post-analysis pH measurement indicates insufficient VOA sample preservation. Therefore, analysis was conducted outside the recognized method holding time.
B	Analyte was detected in the associated method blank.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
FS	The sample was filtered in the laboratory prior to analysis.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
P8	Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

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METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481000001	**MW1D-GW-062619**	RSK 175	616968		
10481000003	**MW2D-GW-062619**	RSK 175	616968		
10481000004	**MW6D-GW-062619**	RSK 175	616968		
10481000005	**FD2-GW-062619**	RSK 175	616968		
10481000006	**MW6U-GW-062619**	RSK 175	617222		
10481000007	**MW4D-GW-062619**	RSK 175	617222		
10481000008	**MW3D-GW-062619**	RSK 175	617222		
10481000009	**FD3-GW-062619**	RSK 175	617222		
10481000010	**MW14D-GW-062619**	RSK 175	617222		
10481000001	**MW1D-GW-062619**	EPA 3010	616659	EPA 6010D	618725
10481000003	**MW2D-GW-062619**	EPA 3010	616659	EPA 6010D	618725
10481000004	**MW6D-GW-062619**	EPA 3010	616659	EPA 6010D	618725
10481000005	**FD2-GW-062619**	EPA 3010	616659	EPA 6010D	618725
10481000006	**MW6U-GW-062619**	EPA 3010	616659	EPA 6010D	618725
10481000007	**MW4D-GW-062619**	EPA 3010	616659	EPA 6010D	618725
10481000008	**MW3D-GW-062619**	EPA 3010	616659	EPA 6010D	618725
10481000009	**FD3-GW-062619**	EPA 3010	616659	EPA 6010D	618725
10481000010	**MW14D-GW-062619**	EPA 3010	616659	EPA 6010D	618725
10481000001	**MW1D-GW-062619**	EPA 7470A	616699	EPA 7470A	618624
10481000003	**MW2D-GW-062619**	EPA 7470A	616699	EPA 7470A	618624
10481000004	**MW6D-GW-062619**	EPA 7470A	616699	EPA 7470A	618624
10481000005	**FD2-GW-062619**	EPA 7470A	616699	EPA 7470A	618624
10481000006	**MW6U-GW-062619**	EPA 7470A	616699	EPA 7470A	618624
10481000007	**MW4D-GW-062619**	EPA 7470A	616699	EPA 7470A	618624
10481000008	**MW3D-GW-062619**	EPA 7470A	616699	EPA 7470A	618624
10481000009	**FD3-GW-062619**	EPA 7470A	616699	EPA 7470A	618624
10481000010	**MW14D-GW-062619**	EPA 7470A	616699	EPA 7470A	618624
10481000001	**MW1D-GW-062619**	EPA 8260B	616965		
10481000002	**TRIP BLANK 1**	EPA 8260B	617335		
10481000003	**MW2D-GW-062619**	EPA 8260B	616965		
10481000004	**MW6D-GW-062619**	EPA 8260B	616965		
10481000005	**FD2-GW-062619**	EPA 8260B	617335		
10481000006	**MW6U-GW-062619**	EPA 8260B	617460		
10481000007	**MW4D-GW-062619**	EPA 8260B	617460		
10481000008	**MW3D-GW-062619**	EPA 8260B	617460		
10481000009	**FD3-GW-062619**	EPA 8260B	617460		
10481000010	**MW14D-GW-062619**	EPA 8260B	617460		
10481000001	**MW1D-GW-062619**	SM 2320B	618406		
10481000003	**MW2D-GW-062619**	SM 2320B	618406		
10481000004	**MW6D-GW-062619**	SM 2320B	618406		
10481000005	**FD2-GW-062619**	SM 2320B	618406		
10481000006	**MW6U-GW-062619**	SM 2320B	618406		
10481000007	**MW4D-GW-062619**	SM 2320B	618406		
10481000008	**MW3D-GW-062619**	SM 2320B	618406		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481000009	**FD3-GW-062619**	SM 2320B	618406		
10481000010	**MW14D-GW-062619**	SM 2320B	618406		
10481000001	**MW1D-GW-062619**	SM 2540C	616939		
10481000003	**MW2D-GW-062619**	SM 2540C	616939		
10481000004	**MW6D-GW-062619**	SM 2540C	616939		
10481000005	**FD2-GW-062619**	SM 2540C	616939		
10481000006	**MW6U-GW-062619**	SM 2540C	616939		
10481000007	**MW4D-GW-062619**	SM 2540C	616939		
10481000008	**MW3D-GW-062619**	SM 2540C	616939		
10481000009	**FD3-GW-062619**	SM 2540C	616939		
10481000010	**MW14D-GW-062619**	SM 2540C	616939		
10481000001	**MW1D-GW-062619**	SM 4500-S-2 D	147742		
10481000003	**MW2D-GW-062619**	SM 4500-S-2 D	147742		
10481000004	**MW6D-GW-062619**	SM 4500-S-2 D	147742		
10481000005	**FD2-GW-062619**	SM 4500-S-2 D	147742		
10481000006	**MW6U-GW-062619**	SM 4500-S-2 D	147742		
10481000007	**MW4D-GW-062619**	SM 4500-S-2 D	147742		
10481000008	**MW3D-GW-062619**	SM 4500-S-2 D	147742		
10481000009	**FD3-GW-062619**	SM 4500-S-2 D	147742		
10481000010	**MW14D-GW-062619**	SM 4500-S-2 D	147742		
10481000001	**MW1D-GW-062619**	EPA 300.0	616221		
10481000003	**MW2D-GW-062619**	EPA 300.0	616221		
10481000004	**MW6D-GW-062619**	EPA 300.0	616221		
10481000005	**FD2-GW-062619**	EPA 300.0	616221		
10481000006	**MW6U-GW-062619**	EPA 300.0	616221		
10481000007	**MW4D-GW-062619**	EPA 300.0	616221		
10481000008	**MW3D-GW-062619**	EPA 300.0	616221		
10481000009	**FD3-GW-062619**	EPA 300.0	616221		
10481000010	**MW14D-GW-062619**	EPA 300.0	616221		
10481000001	**MW1D-GW-062619**	EPA 353.2	617808		
10481000003	**MW2D-GW-062619**	EPA 353.2	617808		
10481000004	**MW6D-GW-062619**	EPA 353.2	617808		
10481000005	**FD2-GW-062619**	EPA 353.2	617808		
10481000006	**MW6U-GW-062619**	EPA 353.2	617808		
10481000007	**MW4D-GW-062619**	EPA 353.2	617808		
10481000008	**MW3D-GW-062619**	EPA 353.2	617808		
10481000009	**FD3-GW-062619**	EPA 353.2	617808		
10481000010	**MW14D-GW-062619**	EPA 353.2	617808		
10481000001	**MW1D-GW-062619**	EPA 410.4	617289	EPA 410.4	617343
10481000003	**MW2D-GW-062619**	EPA 410.4	617289	EPA 410.4	617343
10481000004	**MW6D-GW-062619**	EPA 410.4	617289	EPA 410.4	617343
10481000005	**FD2-GW-062619**	EPA 410.4	617289	EPA 410.4	617343
10481000006	**MW6U-GW-062619**	EPA 410.4	617289	EPA 410.4	617343
10481000007	**MW4D-GW-062619**	EPA 410.4	617289	EPA 410.4	617343
10481000008	**MW3D-GW-062619**	EPA 410.4	618373	EPA 410.4	618458
10481000009	**FD3-GW-062619**	EPA 410.4	618373	EPA 410.4	618458

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481000

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481000010	**MW14D-GW-062619**	EPA 410.4	618373	EPA 410.4	618458
10481000001	**MW1D-GW-062619**	SM 5310C	169508		
10481000003	**MW2D-GW-062619**	SM 5310C	169508		
10481000004	**MW6D-GW-062619**	SM 5310C	169508		
10481000005	**FD2-GW-062619**	SM 5310C	169508		
10481000006	**MW6U-GW-062619**	SM 5310C	169508		
10481000007	**MW4D-GW-062619**	SM 5310C	169508		
10481000008	**MW3D-GW-062619**	SM 5310C	169508		
10481000009	**FD3-GW-062619**	SM 5310C	169508		
10481000010	**MW14D-GW-062619**	SM 5310C	169508		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: CH2M Hill	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR
Email:	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Phone: Fax:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 758938
Requested Due Date: *10 Day Standard*	Project Name: Freeman,WA-Grain Handling Facility	Pace Project Manager: Jennifer Gross
	Project #: 1497	Pace Profile #: *36447 / 4*

Regulatory Agency

State / Location: WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Requested Analysis Filtered (Y/N)	Analyses Test: Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate/Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	
														Y/N	Y												
1	MW1D-GW-062619	WT	G	06/26/19	0805		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			001
2	TRIP BLANK 1			06/26/19	0700		3				X				X												002
3	MW2D-GW-062619			06/26/19	0855		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			003
4	MW6D-GW-062619			06/26/19	1005		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			004
5	FD2-GW-062619			06/26/19	0800		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			005
6	MW6U-GW-062619			06/26/19	1145		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			006
7	MW4D-GW-062619			06/26/19	1340		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			007
8	MW3D-GW-062619			06/26/19	1455		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			008
9	FD3-GW-062619			06/26/19	1200		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			009
10	MW14D-GW-062619			06/26/19	1600		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			010
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Short hold analyses are in bold	Natalie Dowdy	06/26/19	1700	PACE	6/27/19	0940	-7,2 Y Y Y
*Field filtered by client							

WO# : 10481000

10481000

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Natalie Dowdy

SIGNATURE of SAMPLER: Natalie Dowdy

DATE Signed: 06/26/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
-7,2	Y	Y	Y

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 09May2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.28	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CH2M Hill

Project #: **WO#: 10481000**

PM: JMG **Due Date: 07/02/19**

CLIENT: UPRR_Jacobs

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial ☐ See Exception

Tracking Number: 4434 3730 7890

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No **Seals Intact?** ☐ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☐ N/A

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other: PB **Temp Blank?** ☐ Yes ☐ No

Thermometer: ☐ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☐ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 1.9, 3.0 °C

Correction Factor: -0.2 **Cooler Temp Corrected w/temp blank:** 1.7, 2.8 °C

Average Corrected Temp (no temp blank only): °C **See Exceptions** ☐

USDA Regulated Soil: (☐ N/A, water sample/Other:)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: SSL 6/27/19

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes ☐ No	1.
Chain of Custody Relinquished?	☑ Yes ☐ No	2.
Sampler Name and/or Signature on COC?	☑ Yes ☐ No ☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes ☐ No	4.
Short Hold Time Analysis (<72 hr)?	☑ Yes ☐ No	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☑ Nitrate ☑ Nitrite ☐ Orthophos ☑ Other Total phos
Rush Turn Around Time Requested?	☐ Yes ☑ No	6. JMG 06/27/19
Sufficient Volume?	☑ Yes ☐ No	7.
Correct Containers Used? -Pace Containers Used?	☑ Yes ☐ No ☑ Yes ☐ No	8.
Containers Intact?	☑ Yes ☐ No	9.
Field Filtered Volume Received for Dissolved Tests?	☒ Yes ☐ No ☐ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? JMG 062719	☑ Yes ☐ No	11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other		
All containers needing acid/base preservation have been checked?	☑ Yes ☐ No ☐ N/A	12. Sample # 1-10: Y1 Y1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes ☐ No ☐ N/A	☐ NaOH ☑ HNO_3 ☑ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC, DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS JMG 062719 5/6/27/19	☒ Yes ☐ No ☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# 220416A **See Exception** ☐
		Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐ Yes ☑ No ☐ N/A	13. **See Exception** ☐
Trip Blank Present?	☑ Yes ☐ No ☐ N/A	14.
Trip Blank Custody Seals Present?	☑ Yes ☐ No ☐ N/A	Pace Trip Blank Lot # (if purchased): 213047

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Mark Ochsner Date/Time: 06/27/18

Comments/Resolution: WA certs not required for RSK or sulfide.

Field Data Required? ☐ Yes ☐ No

Project Manager Review: Jenni Gross Date: 06/27/19

Note: Whenever there is a discrepancy affecting No- hold, incorrect preservative, out of temp, incorrect co... samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of

Labeled by:

Pace Analytical	Document Name: SCUR Exception Form – Coolers Above 6°C	Document Revised: 08Apr2019 Page 1 of 1
	Document No.: F-MN-C-298-Rev.02	Issuing Authority: Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions: **Workorder #:** 10481000

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature	
4434 3730 7890	1.7
117889	2.8

Other Issues

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

PRE

Chain of Custody

WO#: 12131277

PM: CLJ Due Date: 07/11/19

CLIENT: PACE MPLS

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes [ ] No

Workorder: 10481000 **Workorder Name:** 1497 Freeman WA-Grain Handling

Owner Received Date: 6/27/2019 Results Requested By: 7/12/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 VG9S	5632354 / 5310 TOC	LAB USE ONLY
1	MW1D-GW-062619	PS	6/26/2019 08:05	10481000001	Water	2	X	
2	MW2D-GW-062619	PS	6/26/2019 08:55	10481000003	Water	2	X	
3	MW6D-GW-062619	PS	6/26/2019 10:05	10481000004	Water	2	X	
4	FD2-GW-062619	PS	6/26/2019 08:00	10481000005	Water	2	X	
5	MW6U-GW-062619	PS	6/26/2019 11:45	10481000006	Water	2	X	
6	MW4D-GW-062619	PS	6/26/2019 13:40	10481000007	Water	2	X	
7	MW3D-GW-062619	PS	6/26/2019 14:55	10481000008	Water	2	X	
8	FD3-GW-062619	PS	6/26/2019 12:00	10481000009	Water	2	X	
9	MW14D-GW-062619	PS	6/26/2019 16:00	10481000010	Water	2	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	6/27/19 1819	[signature] 6/27/19	1920
2	[signature] 6/27/19	2350	Nicole Jave 6/28/19	1130
3				

Comments

Cooler Temperature on Receipt 0.4 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace MN

Project #: **WO#: 12131277**

PM: CLJ **Due Date: 07/11/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.1 Cooler Temp Corrected °C: 0.4 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 6/27/19 DC VMG 6/28/19

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☒ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☒ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation properly preserved?	☐ Yes	☐ No	☒ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased): _____				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Carrie Jhon Date: 7/1/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

Chain of Custody

WO#: 20110398

20110398

Pace Analytical
www.pacelabs.com

☐ Samples were sent directly to the

e Of Origin: WA

. Needed: ☐ Yes ☒ No

Workorder: 10481000 **Workorder Name:** 1497 Freeman WA-Grain Handling **Owner Received Date:** 6/27/2019 **Results Requested By:** 7/12/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: BP2Z (500mL)	5636267 / 4500 Sulfide	LAB USE ONLY
1	MW1D-GW-062619	PS	6/26/2019 08:05	10481000001	Water	1	X	
2	MW2D-GW-062619	PS	6/26/2019 08:55	10481000003	Water	1	X	
3	MW6D-GW-062619	PS	6/26/2019 10:05	10481000004	Water	1	X	
4	FD2-GW-062619	PS	6/26/2019 08:00	10481000005	Water	1	X	
5	MW6U-GW-062619	PS	6/26/2019 11:45	10481000006	Water	1	X	
6	MW4D-GW-062619	PS	6/26/2019 13:40	10481000007	Water	1	X	
7	MW3D-GW-062619	PS	6/26/2019 14:55	10481000008	Water	1	X	
8	FD3-GW-062619	PS	6/26/2019 12:00	10481000009	Water	1	X	
9	MW14D-GW-062619	PS	6/26/2019 16:00	10481000010	Water	1	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	6/27/19 1550	[signature]	
2	[signature] 6/28/19 1025		[signature] 6/28/19	1025
3				

Comments

Cooler Temperature on Receipt 3.3 °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upc

F

WO#: 20110398

PM: CMM **Due Date: 07/12/19**

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 6-28-19

Temp must be measured from Temperature blank when present

			Comments:
Temperature Blank Present"?	☑Yes	☐No ☐N/A	1
Chain of Custody Present:	☑Yes	☐No ☐N/A	2
Chain of Custody Complete:	☑Yes	☐No ☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No ☐N/A	4
Sampler Name & Signature on COC:	☐Yes	☑No ☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No ☐N/A	6
Sufficient Volume:	☑Yes	☐No ☐N/A	7
Correct Containers Used:	☑Yes	☐No ☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☑No ☐N/A	9
Sample Labels match COC:	☑Yes	☐No ☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No ☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No ☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No ☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☑N/A	14
Trip Blank Present:	☐Yes	☑No	15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 22, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on June 28, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This report was revised on July 22, 2019 to update the client sample IDs to -062719 on Pace samples 10481249003 through 013 and to update Pace sample 10481249013 to MW-FD3-GW-062719.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10481249001	**TRIP BLANK 1**	Water	06/27/19 07:00	06/28/19 08:40
10481249002	**MW6S-GW-062719**	Water	06/27/19 07:40	06/28/19 08:40
10481249003	**MW11S-GW-062719**	Water	06/27/19 08:20	06/28/19 08:40
10481249004	**MW12S-GW-062719**	Water	06/27/19 08:45	06/28/19 08:40
10481249005	**MW10S-GW-062719**	Water	06/27/19 09:15	06/28/19 08:40
10481249006	**MW9S-GW-062719**	Water	06/27/19 10:15	06/28/19 08:40
10481249007	**MW25S-GW-062719**	Water	06/27/19 10:45	06/28/19 08:40
10481249008	**MW24S-GW-062719**	Water	06/27/19 11:10	06/28/19 08:40
10481249009	**MW8S-GW-062719**	Water	06/27/19 11:45	06/28/19 08:40
10481249010	**MW7S-GW-062719**	Water	06/27/19 12:00	06/28/19 08:40
10481249011	**MW1S-GW-062719**	Water	06/27/19 12:30	06/28/19 08:40
10481249012	**MW19D-GW-062719**	Water	06/27/19 15:00	06/28/19 08:40
10481249013	**MW-FD3-GW-062719**	Water	06/27/19 08:00	06/28/19 08:40

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10481249001	**TRIP BLANK 1**	EPA 8260B	DS2	83	PASI-M
10481249002	**MW6S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249003	**MW11S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249004	**MW12S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249005	**MW10S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	DCL	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249006	**MW9S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ, DS2	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249007	**MW25S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ, DS2	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249008	**MW24S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ, DS2	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249009	**MW8S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ, DS2	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249010	**MW7S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249011	**MW1S-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10481249012	**MW19D-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ, DS2	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481249013	**MW-FD3-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ, DS2	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481249002	**MW6S-GW-062719**					
EPA 6010D	Barium, Dissolved	37.9	ug/L	10.0	07/11/19 15:36	
EPA 6010D	Beryllium, Dissolved	0.23J	ug/L	5.0	07/11/19 15:36	B
EPA 6010D	Copper, Dissolved	1.6J	ug/L	10.0	07/11/19 15:36	
EPA 6010D	Vanadium, Dissolved	4.6J	ug/L	15.0	07/11/19 15:36	
EPA 6010D	Zinc, Dissolved	6.6J	ug/L	20.0	07/11/19 15:36	
SM 2320B	Alkalinity, Total as CaCO3	151	mg/L	5.0	07/10/19 14:28	
SM 2540C	Total Dissolved Solids	194	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	1.4	mg/L	1.2	06/28/19 17:34	
EPA 300.0	Nitrate as N	0.22	mg/L	0.10	06/28/19 17:34	
EPA 300.0	Sulfate	1.9	mg/L	1.2	06/28/19 17:34	B
EPA 353.2	Nitrogen, NO2 plus NO3	0.25	mg/L	0.10	07/06/19 14:36	
SM 5310C	Total Organic Carbon	1.3	mg/L	1.0	07/08/19 16:50	
10481249003	**MW11S-GW-062719**					
EPA 6010D	Barium, Dissolved	45.7	ug/L	10.0	07/11/19 15:38	
EPA 6010D	Beryllium, Dissolved	0.18J	ug/L	5.0	07/11/19 15:38	B
EPA 6010D	Cobalt, Dissolved	0.91J	ug/L	10.0	07/11/19 15:38	
EPA 6010D	Vanadium, Dissolved	7.0J	ug/L	15.0	07/11/19 15:38	
EPA 6010D	Zinc, Dissolved	12.6J	ug/L	20.0	07/11/19 15:38	
SM 2320B	Alkalinity, Total as CaCO3	216	mg/L	5.0	07/10/19 14:33	
SM 2540C	Total Dissolved Solids	248	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	1.2J	mg/L	1.2	06/28/19 18:54	
EPA 300.0	Nitrate as N	0.064J	mg/L	0.10	06/28/19 18:54	
EPA 300.0	Sulfate	4.8	mg/L	1.2	06/28/19 18:54	B
EPA 353.2	Nitrogen, NO2 plus NO3	0.055J	mg/L	0.10	07/06/19 14:37	
SM 5310C	Total Organic Carbon	0.91J	mg/L	1.0	07/08/19 17:19	
10481249004	**MW12S-GW-062719**					
EPA 6010D	Barium, Dissolved	186	ug/L	10.0	07/11/19 15:39	
EPA 6010D	Beryllium, Dissolved	0.16J	ug/L	5.0	07/11/19 15:39	B
EPA 6010D	Cobalt, Dissolved	1.6J	ug/L	10.0	07/11/19 15:39	
EPA 6010D	Nickel, Dissolved	2.2J	ug/L	20.0	07/11/19 15:39	
EPA 6010D	Vanadium, Dissolved	4.2J	ug/L	15.0	07/11/19 15:39	
EPA 6010D	Zinc, Dissolved	11.6J	ug/L	20.0	07/11/19 15:39	
SM 2320B	Alkalinity, Total as CaCO3	239	mg/L	5.0	07/10/19 14:38	
SM 2540C	Total Dissolved Solids	450	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	42.5	mg/L	1.2	06/28/19 19:09	
EPA 300.0	Nitrate as N	7.2	mg/L	0.10	06/28/19 19:09	
EPA 300.0	Sulfate	42.0	mg/L	1.2	06/28/19 19:09	
EPA 353.2	Nitrogen, NO2 plus NO3	6.8	mg/L	1.0	07/06/19 15:19	
SM 5310C	Total Organic Carbon	2.5	mg/L	1.0	07/08/19 18:01	
10481249005	**MW10S-GW-062719**					
EPA 6010D	Barium, Dissolved	32.0	ug/L	10.0	07/11/19 15:41	
EPA 6010D	Beryllium, Dissolved	0.17J	ug/L	5.0	07/11/19 15:41	B
EPA 6010D	Cobalt, Dissolved	1.2J	ug/L	10.0	07/11/19 15:41	
EPA 6010D	Copper, Dissolved	6.4J	ug/L	10.0	07/11/19 15:41	
EPA 6010D	Vanadium, Dissolved	3.8J	ug/L	15.0	07/11/19 15:41	
EPA 6010D	Zinc, Dissolved	8.7J	ug/L	20.0	07/11/19 15:41	

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481249005	**MW10S-GW-062719**					
SM 2320B	Alkalinity, Total as CaCO3	300	mg/L	5.0	07/10/19 14:43	
SM 2540C	Total Dissolved Solids	323	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	1.1J	mg/L	1.2	06/28/19 19:24	
EPA 300.0	Nitrate as N	0.30	mg/L	0.10	06/28/19 19:24	
EPA 300.0	Sulfate	2.0	mg/L	1.2	06/28/19 19:24	B
EPA 353.2	Nitrogen, NO2 plus NO3	0.39	mg/L	0.10	07/06/19 14:39	FS
SM 5310C	Total Organic Carbon	2.8	mg/L	1.0	07/08/19 18:15	
10481249006	**MW9S-GW-062719**					
EPA 6010D	Barium, Dissolved	72.7	ug/L	10.0	07/11/19 15:46	
EPA 6010D	Beryllium, Dissolved	0.36J	ug/L	5.0	07/11/19 15:46	B
EPA 6010D	Cadmium, Dissolved	0.41J	ug/L	3.0	07/11/19 15:46	
EPA 6010D	Cobalt, Dissolved	1.1J	ug/L	10.0	07/11/19 15:46	
EPA 6010D	Copper, Dissolved	1.3J	ug/L	10.0	07/11/19 15:46	
EPA 6010D	Nickel, Dissolved	2.3J	ug/L	20.0	07/11/19 15:46	
EPA 6010D	Vanadium, Dissolved	1.9J	ug/L	15.0	07/11/19 15:46	
EPA 6010D	Zinc, Dissolved	12.5J	ug/L	20.0	07/11/19 15:46	
EPA 8260B	Carbon tetrachloride	286	ug/L	5.0	07/11/19 18:48	
EPA 8260B	Chloroform	48.4	ug/L	1.0	07/11/19 02:13	
SM 2320B	Alkalinity, Total as CaCO3	79.5	mg/L	5.0	07/10/19 08:04	
SM 2540C	Total Dissolved Solids	397	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	69.0	mg/L	1.2	06/28/19 19:39	
EPA 300.0	Nitrate as N	13.8	mg/L	0.50	06/28/19 22:28	
EPA 300.0	Sulfate	60.5	mg/L	1.2	06/28/19 19:39	
EPA 353.2	Nitrogen, NO2 plus NO3	15.4	mg/L	1.0	07/06/19 15:20	
SM 5310C	Total Organic Carbon	1.7	mg/L	1.0	07/08/19 18:29	
10481249007	**MW25S-GW-062719**					
EPA 6010D	Barium, Dissolved	42.1	ug/L	10.0	07/11/19 15:48	
EPA 6010D	Beryllium, Dissolved	0.24J	ug/L	5.0	07/11/19 15:48	B
EPA 6010D	Cobalt, Dissolved	1.6J	ug/L	10.0	07/11/19 15:48	
EPA 6010D	Copper, Dissolved	2.1J	ug/L	10.0	07/11/19 15:48	
EPA 6010D	Nickel, Dissolved	3.0J	ug/L	20.0	07/11/19 15:48	
EPA 6010D	Vanadium, Dissolved	1.7J	ug/L	15.0	07/11/19 15:48	
EPA 6010D	Zinc, Dissolved	11.5J	ug/L	20.0	07/11/19 15:48	
EPA 8260B	Carbon tetrachloride	119	ug/L	2.5	07/11/19 16:34	
EPA 8260B	Chloroform	44.7	ug/L	1.0	07/11/19 02:30	
SM 2320B	Alkalinity, Total as CaCO3	82.7	mg/L	5.0	07/10/19 08:18	
SM 2540C	Total Dissolved Solids	390	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	86.3	mg/L	1.2	06/28/19 19:54	
EPA 300.0	Nitrate as N	9.0	mg/L	0.50	06/28/19 22:46	
EPA 300.0	Sulfate	54.4	mg/L	1.2	06/28/19 19:54	
EPA 353.2	Nitrogen, NO2 plus NO3	10.4	mg/L	1.0	07/06/19 15:21	
EPA 410.4	Chemical Oxygen Demand	34.1J	mg/L	50.0	07/10/19 15:28	
SM 5310C	Total Organic Carbon	5.4	mg/L	1.0	07/08/19 18:44	
10481249008	**MW24S-GW-062719**					
EPA 6010D	Barium, Dissolved	95.5	ug/L	10.0	07/11/19 15:49	
EPA 6010D	Beryllium, Dissolved	0.13J	ug/L	5.0	07/11/19 15:49	B

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481249008	**MW24S-GW-062719**					
EPA 6010D	Cobalt, Dissolved	5.5J	ug/L	10.0	07/11/19 15:49	
EPA 6010D	Copper, Dissolved	4.0J	ug/L	10.0	07/11/19 15:49	
EPA 6010D	Lead, Dissolved	2.5J	ug/L	10.0	07/11/19 15:49	
EPA 6010D	Nickel, Dissolved	2.7J	ug/L	20.0	07/11/19 15:49	
EPA 6010D	Vanadium, Dissolved	3.9J	ug/L	15.0	07/11/19 15:49	
EPA 6010D	Zinc, Dissolved	19.7J	ug/L	20.0	07/11/19 15:49	
EPA 8260B	Acetone	14.8J	ug/L	20.0	07/11/19 02:47	
EPA 8260B	Carbon tetrachloride	63.4	ug/L	2.5	07/11/19 16:51	
EPA 8260B	Chloroform	37.1	ug/L	1.0	07/11/19 02:47	
SM 2320B	Alkalinity, Total as CaCO3	91.8	mg/L	5.0	07/10/19 08:22	
SM 2540C	Total Dissolved Solids	736	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	375	mg/L	6.0	06/29/19 00:54	
EPA 300.0	Nitrate as N	5.9	mg/L	0.10	06/28/19 20:40	
EPA 300.0	Sulfate	50.3	mg/L	1.2	06/28/19 20:40	
EPA 353.2	Nitrogen, NO2 plus NO3	6.5	mg/L	0.50	07/06/19 15:22	FS
EPA 410.4	Chemical Oxygen Demand	133	mg/L	50.0	07/10/19 15:28	
SM 5310C	Total Organic Carbon	17.4	mg/L	1.0	07/08/19 18:58	
10481249009	**MW8S-GW-062719**					
EPA 6010D	Barium, Dissolved	33.6	ug/L	10.0	07/11/19 15:51	
EPA 6010D	Cobalt, Dissolved	1.9J	ug/L	10.0	07/11/19 15:51	
EPA 6010D	Nickel, Dissolved	1.6J	ug/L	20.0	07/11/19 15:51	
EPA 6010D	Vanadium, Dissolved	2.0J	ug/L	15.0	07/11/19 15:51	
EPA 6010D	Zinc, Dissolved	17.0J	ug/L	20.0	07/11/19 15:51	
EPA 8260B	Carbon tetrachloride	133	ug/L	2.5	07/11/19 17:08	
EPA 8260B	Chloroform	42.6	ug/L	1.0	07/11/19 03:04	
SM 2320B	Alkalinity, Total as CaCO3	127	mg/L	5.0	07/10/19 08:26	
SM 2540C	Total Dissolved Solids	275	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	3.2	mg/L	1.2	06/28/19 20:55	
EPA 300.0	Nitrate as N	8.4	mg/L	0.50	06/29/19 01:11	
EPA 300.0	Sulfate	22.2	mg/L	1.2	06/28/19 20:55	
EPA 353.2	Nitrogen, NO2 plus NO3	10.9	mg/L	1.0	07/06/19 15:23	
SM 5310C	Total Organic Carbon	1.7	mg/L	1.0	07/08/19 19:12	
10481249010	**MW7S-GW-062719**					
RSK 175	Methane	23.4	ug/L	10.0	07/03/19 21:13	
EPA 6010D	Arsenic, Dissolved	7.4J	ug/L	20.0	07/11/19 15:52	
EPA 6010D	Barium, Dissolved	75.2	ug/L	10.0	07/11/19 15:52	
EPA 6010D	Cadmium, Dissolved	0.50J	ug/L	3.0	07/11/19 15:52	
EPA 6010D	Cobalt, Dissolved	2.8J	ug/L	10.0	07/11/19 15:52	
EPA 6010D	Copper, Dissolved	1.8J	ug/L	10.0	07/11/19 15:52	
EPA 6010D	Lead, Dissolved	4.8J	ug/L	10.0	07/11/19 15:52	
EPA 6010D	Nickel, Dissolved	3.5J	ug/L	20.0	07/11/19 15:52	
EPA 6010D	Vanadium, Dissolved	2.2J	ug/L	15.0	07/11/19 15:52	
EPA 6010D	Zinc, Dissolved	51.0	ug/L	20.0	07/11/19 15:52	
EPA 8260B	Carbon tetrachloride	1.5	ug/L	0.50	07/11/19 03:20	
EPA 8260B	Toluene	1.2	ug/L	0.50	07/11/19 03:20	
SM 2320B	Alkalinity, Total as CaCO3	107	mg/L	5.0	07/10/19 08:30	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481249010	**MW7S-GW-062719**					
SM 2540C	Total Dissolved Solids	201	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	19.4	mg/L	1.2	06/28/19 21:10	
EPA 300.0	Nitrate as N	3.4	mg/L	0.10	06/28/19 21:10	
EPA 300.0	Sulfate	22.9	mg/L	1.2	06/28/19 21:10	
EPA 353.2	Nitrogen, NO2 plus NO3	3.9	mg/L	0.50	07/06/19 15:24	FS
EPA 410.4	Chemical Oxygen Demand	107	mg/L	50.0	07/10/19 15:29	
SM 5310C	Total Organic Carbon	4.4	mg/L	1.0	07/08/19 19:26	
10481249011	**MW1S-GW-062719**					
EPA 6010D	Barium, Dissolved	195	ug/L	10.0	07/11/19 15:54	
EPA 6010D	Beryllium, Dissolved	0.14J	ug/L	5.0	07/11/19 15:54	B
EPA 6010D	Cobalt, Dissolved	1.2J	ug/L	10.0	07/11/19 15:54	
EPA 6010D	Copper, Dissolved	1.3J	ug/L	10.0	07/11/19 15:54	
EPA 6010D	Nickel, Dissolved	1.2J	ug/L	20.0	07/11/19 15:54	
EPA 6010D	Vanadium, Dissolved	9.4J	ug/L	15.0	07/11/19 15:54	
EPA 6010D	Zinc, Dissolved	11.2J	ug/L	20.0	07/11/19 15:54	
SM 2320B	Alkalinity, Total as CaCO3	433	mg/L	5.0	07/10/19 09:57	
SM 2540C	Total Dissolved Solids	460	mg/L	10.0	07/03/19 08:41	
EPA 300.0	Chloride	7.4	mg/L	1.2	06/28/19 21:25	
EPA 300.0	Nitrate as N	0.17	mg/L	0.10	06/28/19 21:25	
EPA 300.0	Sulfate	33.6	mg/L	1.2	06/28/19 21:25	
EPA 353.2	Nitrogen, NO2 plus NO3	0.19	mg/L	0.10	07/06/19 14:46	
SM 5310C	Total Organic Carbon	3.5	mg/L	1.0	07/08/19 19:40	
10481249012	**MW19D-GW-062719**					
EPA 6010D	Barium, Dissolved	10.6	ug/L	10.0	07/11/19 15:56	B
EPA 6010D	Beryllium, Dissolved	0.35J	ug/L	5.0	07/11/19 15:56	B
EPA 6010D	Cadmium, Dissolved	0.34J	ug/L	3.0	07/11/19 15:56	
EPA 6010D	Cobalt, Dissolved	2.4J	ug/L	10.0	07/11/19 15:56	
EPA 6010D	Vanadium, Dissolved	6.5J	ug/L	15.0	07/11/19 15:56	
EPA 8260B	Carbon tetrachloride	401	ug/L	5.0	07/11/19 17:24	
EPA 8260B	Chloroform	26.2	ug/L	1.0	07/11/19 03:54	
SM 2320B	Alkalinity, Total as CaCO3	175	mg/L	5.0	07/10/19 10:01	
SM 2540C	Total Dissolved Solids	298	mg/L	10.0	07/03/19 14:23	
EPA 300.0	Chloride	9.6	mg/L	1.2	06/28/19 21:40	
EPA 300.0	Nitrate as N	4.7	mg/L	0.10	06/28/19 21:40	
EPA 300.0	Sulfate	29.5	mg/L	1.2	06/28/19 21:40	
EPA 353.2	Nitrogen, NO2 plus NO3	5.2	mg/L	0.50	07/06/19 15:25	
SM 5310C	Total Organic Carbon	1.2	mg/L	1.0	07/08/19 19:55	
10481249013	**MW-FD3-GW-062719**					
EPA 6010D	Barium, Dissolved	9.7J	ug/L	10.0	07/11/19 15:57	B
EPA 6010D	Beryllium, Dissolved	0.13J	ug/L	5.0	07/11/19 15:57	B
EPA 6010D	Cobalt, Dissolved	1.1J	ug/L	10.0	07/11/19 15:57	
EPA 6010D	Nickel, Dissolved	3.1J	ug/L	20.0	07/11/19 15:57	
EPA 6010D	Vanadium, Dissolved	6.3J	ug/L	15.0	07/11/19 15:57	
EPA 8260B	Carbon tetrachloride	408	ug/L	5.0	07/11/19 18:31	
EPA 8260B	Chloroform	26.4	ug/L	1.0	07/11/19 04:11	
SM 2320B	Alkalinity, Total as CaCO3	180	mg/L	5.0	07/10/19 10:06	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481249013	**MW-FD3-GW-062719**					
SM 2540C	Total Dissolved Solids	288	mg/L	10.0	07/03/19 14:23	
EPA 300.0	Chloride	9.6	mg/L	1.2	06/28/19 21:55	
EPA 300.0	Nitrate as N	4.6	mg/L	0.10	06/28/19 21:55	
EPA 300.0	Sulfate	29.5	mg/L	1.2	06/28/19 21:55	
EPA 353.2	Nitrogen, NO2 plus NO3	5.3	mg/L	0.50	07/06/19 15:26	M1
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	07/08/19 17:05	

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 617371

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- DUP (Lab ID: 3334820)
  - Methane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 616661

B: Analyte was detected in the associated method blank.
- BLANK for HBN 616661 [MPRP/943 (Lab ID: 3331252)
  - Barium, Dissolved
  - Beryllium, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
13 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- MW11S-GW-062719 (Lab ID: 10481249003)
- MW6S-GW-062719 (Lab ID: 10481249002)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 618674

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.
- BLANK (Lab ID: 3341452)
  - 1,2,4-Trichlorobenzene
  - Hexachloro-1,3-butadiene
  - Naphthalene
  - n-Butylbenzene

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 618674

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10482647001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3341454)

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 22, 2019

QC Batch: 618674

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10482647001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Acrolein
- MSD (Lab ID: 3341455)
  - Acrolein
  - n-Butylbenzene

QC Batch: 618922

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3342327)
  - Acrolein
- MSD (Lab ID: 3342328)
  - Acrolein

Additional Comments:

Analyte Comments:

QC Batch: 616759

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3331766)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3331767)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3331768)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3331769)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- TRIP BLANK 1 (Lab ID: 10481249001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 22, 2019

Analyte Comments:

QC Batch: 617460

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3335306)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3335307)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3337914)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3337915)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW11S-GW-062719 (Lab ID: 10481249003)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW6S-GW-062719 (Lab ID: 10481249002)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

QC Batch: 618674

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3341452)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3341453)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3341454)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3341455)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 22, 2019

Analyte Comments:

QC Batch: 618674

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- MSD (Lab ID: 3341455)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW-FD3-GW-062719 (Lab ID: 10481249013)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW19D-GW-062719 (Lab ID: 10481249012)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW1S-GW-062719 (Lab ID: 10481249011)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW24S-GW-062719 (Lab ID: 10481249008)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW25S-GW-062719 (Lab ID: 10481249007)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW7S-GW-062719 (Lab ID: 10481249010)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW8S-GW-062719 (Lab ID: 10481249009)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW9S-GW-062719 (Lab ID: 10481249006)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3341452)
  - 1,2,4-Trichlorobenzene
  - Hexachloro-1,3-butadiene
  - Naphthalene
  - n-Butylbenzene

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 22, 2019

Analyte Comments:

QC Batch: 618922

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3342325)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3342326)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3342327)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3342328)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW10S-GW-062719 (Lab ID: 10481249005)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW12S-GW-062719 (Lab ID: 10481249004)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 618410

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249006,10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3339781)
  - Alkalinity, Total as CaCO3
- MSD (Lab ID: 3339782)
  - Alkalinity, Total as CaCO3

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 148126

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 655463)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 616503

B: Analyte was detected in the associated method blank.

- BLANK for HBN 616503 [WETA/399 (Lab ID: 3330230)
  - Sulfate

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 616503

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249002,10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3330234)
  - Chloride
- MSD (Lab ID: 3330235)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 617810

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249013,10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3336999)
  - Nitrogen, NO2 plus NO3

Additional Comments:

Analyte Comments:

QC Batch: 617810

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 3336999)
  - Nitrogen, NO2 plus NO3
- MSD (Lab ID: 3337000)
  - Nitrogen, NO2 plus NO3

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: July 22, 2019

General Information:
12 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: TRIP BLANK 1 **Lab ID: 10481249001** Collected: 06/27/19 07:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/01/19 11:40	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/01/19 11:40	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/01/19 11:40	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/01/19 11:40	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/01/19 11:40	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/01/19 11:40	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/01/19 11:40	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/01/19 11:40	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/01/19 11:40	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/01/19 11:40	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/01/19 11:40	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/01/19 11:40	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/01/19 11:40	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/01/19 11:40	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/01/19 11:40	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/01/19 11:40	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/01/19 11:40	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/01/19 11:40	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/01/19 11:40	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/01/19 11:40	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/01/19 11:40	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/01/19 11:40	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/01/19 11:40	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/01/19 11:40	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/01/19 11:40	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/01/19 11:40	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/01/19 11:40	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/01/19 11:40	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/01/19 11:40	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/01/19 11:40	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/01/19 11:40	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/01/19 11:40	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/01/19 11:40	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/01/19 11:40	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/01/19 11:40	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/01/19 11:40	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/01/19 11:40	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/01/19 11:40	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/01/19 11:40	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/01/19 11:40	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/01/19 11:40	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/01/19 11:40	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/01/19 11:40	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/01/19 11:40	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/01/19 11:40	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/01/19 11:40	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: TRIP BLANK 1 **Lab ID: 10481249001** Collected: 06/27/19 07:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/01/19 11:40	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/01/19 11:40	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/01/19 11:40	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/01/19 11:40	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/01/19 11:40	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/01/19 11:40	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/01/19 11:40	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/01/19 11:40	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/01/19 11:40	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/01/19 11:40	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/01/19 11:40	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/01/19 11:40	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/01/19 11:40	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/01/19 11:40	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/01/19 11:40	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/01/19 11:40	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/01/19 11:40	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/01/19 11:40	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/01/19 11:40	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/01/19 11:40	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/01/19 11:40	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/01/19 11:40	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/01/19 11:40	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/01/19 11:40	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/01/19 11:40	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/01/19 11:40	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/01/19 11:40	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/01/19 11:40	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/01/19 11:40	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/01/19 11:40	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/01/19 11:40	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/01/19 11:40	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/01/19 11:40	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/01/19 11:40	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-136		1		07/01/19 11:40	17060-07-0	
Toluene-d8 (S)	108	%.	75-125		1		07/01/19 11:40	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		07/01/19 11:40	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW6S-GW-062719 **Lab ID: 10481249002** Collected: 06/27/19 07:40 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 12:56	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 12:56	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 12:56	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:36	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:36	7440-38-2	
Barium, Dissolved	**37.9**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:36	7440-39-3	
Beryllium, Dissolved	**0.23J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:36	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:36	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:36	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:36	7440-48-4	
Copper, Dissolved	**1.6J**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:36	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:36	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:36	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:36	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:36	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:36	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:36	7440-28-0	
Vanadium, Dissolved	**4.6J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:36	7440-62-2	
Zinc, Dissolved	**6.6J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:36	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:13	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/04/19 03:59	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/04/19 03:59	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:59	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:59	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/04/19 03:59	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:59	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:59	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/04/19 03:59	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 03:59	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/04/19 03:59	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 03:59	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 03:59	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/04/19 03:59	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/04/19 03:59	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 03:59	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 03:59	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/04/19 03:59	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 03:59	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/04/19 03:59	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:59	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW6S-GW-062719 **Lab ID: 10481249002** Collected: 06/27/19 07:40 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/04/19 03:59	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:59	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/04/19 03:59	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/04/19 03:59	540-84-1	L2,N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/04/19 03:59	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/04/19 03:59	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:59	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/04/19 03:59	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/04/19 03:59	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/04/19 03:59	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/04/19 03:59	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/04/19 03:59	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/04/19 03:59	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 03:59	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 03:59	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/04/19 03:59	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 03:59	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/04/19 03:59	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/04/19 03:59	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/04/19 03:59	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/04/19 03:59	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:59	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/04/19 03:59	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/04/19 03:59	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 03:59	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/04/19 03:59	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/04/19 03:59	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/04/19 03:59	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/04/19 03:59	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/04/19 03:59	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:59	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 03:59	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 03:59	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:59	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:59	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/04/19 03:59	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/04/19 03:59	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/04/19 03:59	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 03:59	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/04/19 03:59	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/04/19 03:59	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/04/19 03:59	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/04/19 03:59	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/04/19 03:59	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/04/19 03:59	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/04/19 03:59	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW6S-GW-062719 **Lab ID: 10481249002** Collected: 06/27/19 07:40 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/04/19 03:59	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 03:59	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 03:59	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/04/19 03:59	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 03:59	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 03:59	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 03:59	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 03:59	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/04/19 03:59	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/04/19 03:59	75-65-0	L2
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 03:59	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/04/19 03:59	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/04/19 03:59	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/04/19 03:59	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-136		1		07/04/19 03:59	17060-07-0	
Toluene-d8 (S)	110	%.	75-125		1		07/04/19 03:59	2037-26-5	
4-Bromofluorobenzene (S)	95	%.	75-125		1		07/04/19 03:59	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**151**	mg/L	5.0	2.0	1		07/10/19 14:28		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**194**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:12	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.4**	mg/L	1.2	0.12	1		06/28/19 17:34	16887-00-6	
Nitrate as N	**0.22**	mg/L	0.10	0.012	1		06/28/19 17:34	14797-55-8	
Sulfate	**1.9**	mg/L	1.2	0.28	1		06/28/19 17:34	14808-79-8	B
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.25**	mg/L	0.10	0.018	1		07/06/19 14:36		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:27		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.3**	mg/L	1.0	0.39	1		07/08/19 16:50	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW11S-GW-062719 **Lab ID: 10481249003** Collected: 06/27/19 08:20 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 13:10	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 13:10	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 13:10	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:38	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:38	7440-38-2	
Barium, Dissolved	**45.7**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:38	7440-39-3	
Beryllium, Dissolved	**0.18J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:38	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:38	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:38	7440-47-3	
Cobalt, Dissolved	**0.91J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:38	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:38	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:38	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:38	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:38	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:38	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:38	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:38	7440-28-0	
Vanadium, Dissolved	**7.0J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:38	7440-62-2	
Zinc, Dissolved	**12.6J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:38	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:16	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/04/19 04:23	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/04/19 04:23	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 04:23	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/04/19 04:23	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/04/19 04:23	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/04/19 04:23	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 04:23	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/04/19 04:23	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 04:23	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/04/19 04:23	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 04:23	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 04:23	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/04/19 04:23	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/04/19 04:23	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 04:23	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 04:23	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/04/19 04:23	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 04:23	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/04/19 04:23	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 04:23	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW11S-GW-062719 **Lab ID: 10481249003** Collected: 06/27/19 08:20 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/04/19 04:23	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 04:23	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/04/19 04:23	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/04/19 04:23	540-84-1	L2,N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/04/19 04:23	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/04/19 04:23	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 04:23	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/04/19 04:23	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/04/19 04:23	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/04/19 04:23	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/04/19 04:23	67-64-1	
Acrolein	**<1.2**	ug/L	40.0	1.2	1		07/04/19 04:23	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/04/19 04:23	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 04:23	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/04/19 04:23	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/04/19 04:23	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/04/19 04:23	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/04/19 04:23	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/04/19 04:23	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/04/19 04:23	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/04/19 04:23	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 04:23	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/04/19 04:23	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/04/19 04:23	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/04/19 04:23	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/04/19 04:23	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/04/19 04:23	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/04/19 04:23	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/04/19 04:23	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/04/19 04:23	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/04/19 04:23	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/04/19 04:23	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 04:23	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/04/19 04:23	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/04/19 04:23	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/04/19 04:23	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/04/19 04:23	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/04/19 04:23	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/04/19 04:23	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/04/19 04:23	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/04/19 04:23	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/04/19 04:23	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/04/19 04:23	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/04/19 04:23	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/04/19 04:23	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/04/19 04:23	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW11S-GW-062719 **Lab ID: 10481249003** Collected: 06/27/19 08:20 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/04/19 04:23	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/04/19 04:23	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/04/19 04:23	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/04/19 04:23	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/04/19 04:23	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/04/19 04:23	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 04:23	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 04:23	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/04/19 04:23	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/04/19 04:23	75-65-0	L2
tert-Butylbenzene	**<0.15**	ug/L	1.0	0.15	1		07/04/19 04:23	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		07/04/19 04:23	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/04/19 04:23	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/04/19 04:23	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		07/04/19 04:23	17060-07-0	
Toluene-d8 (S)	109	%.	75-125		1		07/04/19 04:23	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1		07/04/19 04:23	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**216**	mg/L	5.0	2.0	1		07/10/19 14:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**248**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:14	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.2J**	mg/L	1.2	0.12	1		06/28/19 18:54	16887-00-6	
Nitrate as N	**0.064J**	mg/L	0.10	0.012	1		06/28/19 18:54	14797-55-8	
Sulfate	**4.8**	mg/L	1.2	0.28	1		06/28/19 18:54	14808-79-8	B
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.055J**	mg/L	0.10	0.018	1		07/06/19 14:37		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:27		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.91J**	mg/L	1.0	0.39	1		07/08/19 17:19	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW12S-GW-062719 **Lab ID: 10481249004** Collected: 06/27/19 08:45 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 13:17	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 13:17	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 13:17	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:39	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:39	7440-38-2	
Barium, Dissolved	**186**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:39	7440-39-3	
Beryllium, Dissolved	**0.16J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:39	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:39	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:39	7440-47-3	
Cobalt, Dissolved	**1.6J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:39	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:39	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:39	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:39	7439-98-7	
Nickel, Dissolved	**2.2J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:39	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:39	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:39	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:39	7440-28-0	
Vanadium, Dissolved	**4.2J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:39	7440-62-2	
Zinc, Dissolved	**11.6J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:39	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:18	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:00	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 16:00	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 16:00	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 16:00	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 16:00	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 16:00	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:00	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:00	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 16:00	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 16:00	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:00	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:00	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 16:00	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 16:00	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 16:00	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 16:00	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 16:00	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 16:00	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 16:00	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:00	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW12S-GW-062719 **Lab ID: 10481249004** Collected: 06/27/19 08:45 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 16:00	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 16:00	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 16:00	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 16:00	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 16:00	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 16:00	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:00	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 16:00	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 16:00	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 16:00	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 16:00	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 16:00	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 16:00	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 16:00	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 16:00	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 16:00	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 16:00	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 16:00	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 16:00	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 16:00	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/11/19 16:00	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 16:00	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 16:00	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/11/19 16:00	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 16:00	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 16:00	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 16:00	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 16:00	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 16:00	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 16:00	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 16:00	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 16:00	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 16:00	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 16:00	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:00	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 16:00	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 16:00	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 16:00	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 16:00	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 16:00	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 16:00	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 16:00	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 16:00	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 16:00	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 16:00	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 16:00	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW12S-GW-062719 **Lab ID: 10481249004** Collected: 06/27/19 08:45 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 16:00	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:00	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 16:00	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 16:00	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 16:00	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:00	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 16:00	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 16:00	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 16:00	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 16:00	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 16:00	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 16:00	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 16:00	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 16:00	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/11/19 16:00	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/11/19 16:00	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/11/19 16:00	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**239**	mg/L	5.0	2.0	1		07/10/19 14:38		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**450**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:15	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**42.5**	mg/L	1.2	0.12	1		06/28/19 19:09	16887-00-6	
Nitrate as N	**7.2**	mg/L	0.10	0.012	1		06/28/19 19:09	14797-55-8	
Sulfate	**42.0**	mg/L	1.2	0.28	1		06/28/19 19:09	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**6.8**	mg/L	1.0	0.18	10		07/06/19 15:19		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:27		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.5**	mg/L	1.0	0.39	1		07/08/19 18:01	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW10S-GW-062719 **Lab ID: 10481249005** Collected: 06/27/19 09:15 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 13:25	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 13:25	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 13:25	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:41	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:41	7440-38-2	
Barium, Dissolved	**32.0**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:41	7440-39-3	
Beryllium, Dissolved	**0.17J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:41	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:41	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:41	7440-47-3	
Cobalt, Dissolved	**1.2J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:41	7440-48-4	
Copper, Dissolved	**6.4J**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:41	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:41	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:41	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:41	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:41	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:41	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:41	7440-28-0	
Vanadium, Dissolved	**3.8J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:41	7440-62-2	
Zinc, Dissolved	**8.7J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:41	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:20	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:17	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 16:17	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 16:17	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 16:17	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 16:17	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 16:17	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:17	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:17	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 16:17	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 16:17	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:17	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:17	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 16:17	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 16:17	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 16:17	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 16:17	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 16:17	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 16:17	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 16:17	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:17	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW10S-GW-062719 **Lab ID: 10481249005** Collected: 06/27/19 09:15 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 16:17	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 16:17	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 16:17	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 16:17	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 16:17	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 16:17	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:17	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 16:17	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 16:17	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 16:17	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 16:17	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 16:17	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 16:17	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 16:17	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 16:17	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 16:17	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 16:17	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 16:17	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 16:17	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 16:17	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/11/19 16:17	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 16:17	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 16:17	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/11/19 16:17	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 16:17	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 16:17	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 16:17	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 16:17	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 16:17	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 16:17	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 16:17	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 16:17	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 16:17	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 16:17	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:17	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 16:17	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 16:17	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 16:17	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 16:17	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 16:17	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 16:17	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 16:17	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 16:17	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 16:17	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 16:17	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 16:17	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW10S-GW-062719 **Lab ID: 10481249005** Collected: 06/27/19 09:15 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 16:17	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 16:17	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 16:17	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 16:17	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 16:17	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 16:17	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 16:17	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 16:17	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 16:17	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 16:17	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 16:17	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 16:17	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 16:17	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 16:17	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		07/11/19 16:17	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		07/11/19 16:17	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		07/11/19 16:17	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**300**	mg/L	5.0	2.0	1		07/10/19 14:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**323**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:16	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.1J**	mg/L	1.2	0.12	1		06/28/19 19:24	16887-00-6	
Nitrate as N	**0.30**	mg/L	0.10	0.012	1		06/28/19 19:24	14797-55-8	
Sulfate	**2.0**	mg/L	1.2	0.28	1		06/28/19 19:24	14808-79-8	B
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.39**	mg/L	0.10	0.018	1		07/06/19 14:39		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:28		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.8**	mg/L	1.0	0.39	1		07/08/19 18:15	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW9S-GW-062719 **Lab ID: 10481249006** Collected: 06/27/19 10:15 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 17:05	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 17:05	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 17:05	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:46	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:46	7440-38-2	
Barium, Dissolved	**72.7**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:46	7440-39-3	
Beryllium, Dissolved	**0.36J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:46	7440-41-7	B
Cadmium, Dissolved	**0.41J**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:46	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:46	7440-47-3	
Cobalt, Dissolved	**1.1J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:46	7440-48-4	
Copper, Dissolved	**1.3J**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:46	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:46	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:46	7439-98-7	
Nickel, Dissolved	**2.3J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:46	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:46	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:46	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:46	7440-28-0	
Vanadium, Dissolved	**1.9J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:46	7440-62-2	
Zinc, Dissolved	**12.5J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:46	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:22	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:13	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 02:13	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:13	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:13	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 02:13	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:13	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:13	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:13	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 02:13	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 02:13	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:13	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:13	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 02:13	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 02:13	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 02:13	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 02:13	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 02:13	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 02:13	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 02:13	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:13	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW9S-GW-062719 **Lab ID: 10481249006** Collected: 06/27/19 10:15 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 02:13	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:13	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 02:13	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 02:13	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 02:13	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 02:13	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:13	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 02:13	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 02:13	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 02:13	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 02:13	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 02:13	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 02:13	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 02:13	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 02:13	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 02:13	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 02:13	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 02:13	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 02:13	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 02:13	75-15-0	
Carbon tetrachloride	**286**	ug/L	5.0	1.9	10		07/11/19 18:48	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 02:13	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 02:13	75-00-3	
Chloroform	**48.4**	ug/L	1.0	0.45	1		07/11/19 02:13	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 02:13	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 02:13	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 02:13	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 02:13	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 02:13	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 02:13	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:13	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 02:13	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 02:13	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:13	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:13	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 02:13	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 02:13	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 02:13	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:13	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 02:13	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 02:13	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 02:13	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 02:13	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 02:13	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 02:13	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 02:13	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW9S-GW-062719 **Lab ID: 10481249006** Collected: 06/27/19 10:15 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:13	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:13	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 02:13	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 02:13	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 02:13	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:13	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:13	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:13	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 02:13	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 02:13	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:13	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 02:13	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:13	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 02:13	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/11/19 02:13	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/11/19 02:13	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		07/11/19 02:13	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**79.5**	mg/L	5.0	2.0	1		07/10/19 08:04		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**397**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:16	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**69.0**	mg/L	1.2	0.12	1		06/28/19 19:39	16887-00-6	
Nitrate as N	**13.8**	mg/L	0.50	0.062	5		06/28/19 22:28	14797-55-8	
Sulfate	**60.5**	mg/L	1.2	0.28	1		06/28/19 19:39	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**15.4**	mg/L	1.0	0.18	10		07/06/19 15:20		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:28		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.7**	mg/L	1.0	0.39	1		07/08/19 18:29	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW25S-GW-062719 **Lab ID: 10481249007** Collected: 06/27/19 10:45 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 17:12	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 17:12	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 17:12	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:48	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:48	7440-38-2	
Barium, Dissolved	**42.1**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:48	7440-39-3	
Beryllium, Dissolved	**0.24J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:48	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:48	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:48	7440-47-3	
Cobalt, Dissolved	**1.6J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:48	7440-48-4	
Copper, Dissolved	**2.1J**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:48	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:48	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:48	7439-98-7	
Nickel, Dissolved	**3.0J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:48	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:48	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:48	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:48	7440-28-0	
Vanadium, Dissolved	**1.7J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:48	7440-62-2	
Zinc, Dissolved	**11.5J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:48	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:25	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:30	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 02:30	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:30	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:30	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 02:30	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:30	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:30	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:30	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 02:30	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 02:30	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:30	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:30	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 02:30	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 02:30	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 02:30	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 02:30	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 02:30	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 02:30	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 02:30	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:30	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW25S-GW-062719 **Lab ID: 10481249007** Collected: 06/27/19 10:45 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 02:30	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:30	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 02:30	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 02:30	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 02:30	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 02:30	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:30	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 02:30	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 02:30	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 02:30	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 02:30	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 02:30	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 02:30	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 02:30	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 02:30	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 02:30	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 02:30	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 02:30	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 02:30	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 02:30	75-15-0	
Carbon tetrachloride	**119**	ug/L	2.5	0.94	5		07/11/19 16:34	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 02:30	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 02:30	75-00-3	
Chloroform	**44.7**	ug/L	1.0	0.45	1		07/11/19 02:30	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 02:30	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 02:30	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 02:30	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 02:30	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 02:30	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 02:30	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:30	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 02:30	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 02:30	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:30	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:30	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 02:30	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 02:30	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 02:30	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:30	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 02:30	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 02:30	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 02:30	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 02:30	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 02:30	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 02:30	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 02:30	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW25S-GW-062719 **Lab ID: 10481249007** Collected: 06/27/19 10:45 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:30	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:30	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 02:30	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 02:30	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 02:30	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:30	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:30	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:30	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 02:30	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 02:30	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:30	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 02:30	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:30	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 02:30	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		07/11/19 02:30	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		07/11/19 02:30	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		07/11/19 02:30	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**82.7**	mg/L	5.0	2.0	1		07/10/19 08:18		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**390**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:17	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**86.3**	mg/L	1.2	0.12	1		06/28/19 19:54	16887-00-6	
Nitrate as N	**9.0**	mg/L	0.50	0.062	5		06/28/19 22:46	14797-55-8	
Sulfate	**54.4**	mg/L	1.2	0.28	1		06/28/19 19:54	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**10.4**	mg/L	1.0	0.18	10		07/06/19 15:21		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**34.1J**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:28		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**5.4**	mg/L	1.0	0.39	1		07/08/19 18:44	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW24S-GW-062719 **Lab ID: 10481249008** Collected: 06/27/19 11:10 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 20:58	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 20:58	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 20:58	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:49	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:49	7440-38-2	
Barium, Dissolved	**95.5**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:49	7440-39-3	
Beryllium, Dissolved	**0.13J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:49	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:49	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:49	7440-47-3	
Cobalt, Dissolved	**5.5J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:49	7440-48-4	
Copper, Dissolved	**4.0J**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:49	7440-50-8	
Lead, Dissolved	**2.5J**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:49	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:49	7439-98-7	
Nickel, Dissolved	**2.7J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:49	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:49	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:49	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:49	7440-28-0	
Vanadium, Dissolved	**3.9J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:49	7440-62-2	
Zinc, Dissolved	**19.7J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:49	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:27	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:47	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 02:47	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:47	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:47	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 02:47	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:47	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:47	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:47	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 02:47	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 02:47	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:47	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:47	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 02:47	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 02:47	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 02:47	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 02:47	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 02:47	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 02:47	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 02:47	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:47	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW24S-GW-062719 **Lab ID: 10481249008** Collected: 06/27/19 11:10 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 02:47	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:47	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 02:47	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 02:47	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 02:47	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 02:47	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:47	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 02:47	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 02:47	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 02:47	108-10-1	
Acetone	**14.8J**	ug/L	20.0	9.2	1		07/11/19 02:47	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 02:47	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 02:47	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 02:47	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 02:47	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 02:47	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 02:47	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 02:47	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 02:47	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 02:47	75-15-0	
Carbon tetrachloride	**63.4**	ug/L	2.5	0.94	5		07/11/19 16:51	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 02:47	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 02:47	75-00-3	
Chloroform	**37.1**	ug/L	1.0	0.45	1		07/11/19 02:47	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 02:47	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 02:47	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 02:47	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 02:47	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 02:47	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 02:47	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:47	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 02:47	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 02:47	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:47	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:47	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 02:47	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 02:47	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 02:47	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 02:47	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 02:47	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 02:47	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 02:47	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 02:47	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 02:47	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 02:47	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 02:47	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW24S-GW-062719 **Lab ID: 10481249008** Collected: 06/27/19 11:10 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:47	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 02:47	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 02:47	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 02:47	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 02:47	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 02:47	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:47	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:47	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 02:47	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 02:47	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 02:47	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 02:47	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 02:47	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 02:47	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/11/19 02:47	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/11/19 02:47	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		07/11/19 02:47	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**91.8**	mg/L	5.0	2.0	1		07/10/19 08:22		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**736**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:17	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**375**	mg/L	6.0	0.62	5		06/29/19 00:54	16887-00-6	
Nitrate as N	**5.9**	mg/L	0.10	0.012	1		06/28/19 20:40	14797-55-8	
Sulfate	**50.3**	mg/L	1.2	0.28	1		06/28/19 20:40	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**6.5**	mg/L	0.50	0.088	5		07/06/19 15:22		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**133**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:28		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**17.4**	mg/L	1.0	0.39	1		07/08/19 18:58	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW8S-GW-062719 **Lab ID: 10481249009** Collected: 06/27/19 11:45 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 21:06	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 21:06	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 21:06	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:51	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:51	7440-38-2	
Barium, Dissolved	**33.6**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:51	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:51	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:51	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:51	7440-47-3	
Cobalt, Dissolved	**1.9J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:51	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:51	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:51	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:51	7439-98-7	
Nickel, Dissolved	**1.6J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:51	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:51	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:51	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:51	7440-28-0	
Vanadium, Dissolved	**2.0J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:51	7440-62-2	
Zinc, Dissolved	**17.0J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:51	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:29	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:04	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:04	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:04	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:04	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 03:04	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:04	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:04	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:04	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 03:04	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 03:04	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:04	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:04	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 03:04	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 03:04	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:04	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 03:04	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 03:04	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 03:04	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:04	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:04	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW8S-GW-062719 **Lab ID: 10481249009** Collected: 06/27/19 11:45 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 03:04	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:04	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 03:04	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 03:04	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 03:04	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 03:04	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:04	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 03:04	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 03:04	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 03:04	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 03:04	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 03:04	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 03:04	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 03:04	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 03:04	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 03:04	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 03:04	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 03:04	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 03:04	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 03:04	75-15-0	
Carbon tetrachloride	**133**	ug/L	2.5	0.94	5		07/11/19 17:08	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 03:04	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 03:04	75-00-3	
Chloroform	**42.6**	ug/L	1.0	0.45	1		07/11/19 03:04	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 03:04	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:04	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 03:04	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 03:04	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 03:04	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 03:04	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:04	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:04	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 03:04	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:04	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:04	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 03:04	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 03:04	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 03:04	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:04	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 03:04	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 03:04	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 03:04	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 03:04	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 03:04	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 03:04	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 03:04	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW8S-GW-062719 **Lab ID: 10481249009** Collected: 06/27/19 11:45 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:04	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:04	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 03:04	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 03:04	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 03:04	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:04	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:04	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:04	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 03:04	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 03:04	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:04	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:04	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:04	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 03:04	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/11/19 03:04	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/11/19 03:04	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		07/11/19 03:04	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**127**	mg/L	5.0	2.0	1		07/10/19 08:26		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**275**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:39	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**3.2**	mg/L	1.2	0.12	1		06/28/19 20:55	16887-00-6	
Nitrate as N	**8.4**	mg/L	0.50	0.062	5		06/29/19 01:11	14797-55-8	
Sulfate	**22.2**	mg/L	1.2	0.28	1		06/28/19 20:55	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**10.9**	mg/L	1.0	0.18	10		07/06/19 15:23		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:28		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.7**	mg/L	1.0	0.39	1		07/08/19 19:12	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW7S-GW-062719 **Lab ID: 10481249010** Collected: 06/27/19 12:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**23.4**	ug/L	10.0	4.9	1		07/03/19 21:13	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 21:13	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 21:13	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:52	7440-36-0	
Arsenic, Dissolved	**7.4J**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:52	7440-38-2	
Barium, Dissolved	**75.2**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:52	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:52	7440-41-7	
Cadmium, Dissolved	**0.50J**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:52	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:52	7440-47-3	
Cobalt, Dissolved	**2.8J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:52	7440-48-4	
Copper, Dissolved	**1.8J**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:52	7440-50-8	
Lead, Dissolved	**4.8J**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:52	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:52	7439-98-7	
Nickel, Dissolved	**3.5J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:52	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:52	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:52	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:52	7440-28-0	
Vanadium, Dissolved	**2.2J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:52	7440-62-2	
Zinc, Dissolved	**51.0**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:52	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:36	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:20	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:20	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:20	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:20	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 03:20	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:20	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:20	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:20	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 03:20	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 03:20	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:20	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:20	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 03:20	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 03:20	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:20	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 03:20	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 03:20	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 03:20	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:20	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:20	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW7S-GW-062719 **Lab ID: 10481249010** Collected: 06/27/19 12:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 03:20	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:20	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 03:20	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 03:20	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 03:20	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 03:20	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:20	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 03:20	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 03:20	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 03:20	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 03:20	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 03:20	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 03:20	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 03:20	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 03:20	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 03:20	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 03:20	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 03:20	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 03:20	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 03:20	75-15-0	
Carbon tetrachloride	**1.5**	ug/L	0.50	0.19	1		07/11/19 03:20	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 03:20	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 03:20	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/11/19 03:20	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 03:20	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:20	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 03:20	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 03:20	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 03:20	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 03:20	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:20	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:20	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 03:20	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:20	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:20	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 03:20	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 03:20	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 03:20	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:20	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 03:20	109-99-9	
Toluene	**1.2**	ug/L	0.50	0.083	1		07/11/19 03:20	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 03:20	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 03:20	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 03:20	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 03:20	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 03:20	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW7S-GW-062719 **Lab ID: 10481249010** Collected: 06/27/19 12:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:20	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:20	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 03:20	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 03:20	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 03:20	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:20	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:20	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:20	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 03:20	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 03:20	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:20	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:20	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:20	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 03:20	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		07/11/19 03:20	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/11/19 03:20	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/11/19 03:20	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**107**	mg/L	5.0	2.0	1		07/10/19 08:30		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**201**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:39	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**19.4**	mg/L	1.2	0.12	1		06/28/19 21:10	16887-00-6	
Nitrate as N	**3.4**	mg/L	0.10	0.012	1		06/28/19 21:10	14797-55-8	
Sulfate	**22.9**	mg/L	1.2	0.28	1		06/28/19 21:10	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**3.9**	mg/L	0.50	0.088	5		07/06/19 15:24		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**107**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:29		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**4.4**	mg/L	1.0	0.39	1		07/08/19 19:26	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW1S-GW-062719 **Lab ID: 10481249011** Collected: 06/27/19 12:30 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 21:20	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 21:20	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 21:20	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:54	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:54	7440-38-2	
Barium, Dissolved	**195**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:54	7440-39-3	
Beryllium, Dissolved	**0.14J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:54	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:54	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:54	7440-47-3	
Cobalt, Dissolved	**1.2J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:54	7440-48-4	
Copper, Dissolved	**1.3J**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:54	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:54	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:54	7439-98-7	
Nickel, Dissolved	**1.2J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:54	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:54	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:54	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:54	7440-28-0	
Vanadium, Dissolved	**9.4J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:54	7440-62-2	
Zinc, Dissolved	**11.2J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:54	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:38	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:37	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:37	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:37	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:37	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 03:37	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:37	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:37	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:37	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 03:37	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 03:37	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:37	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:37	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 03:37	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 03:37	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:37	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 03:37	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 03:37	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 03:37	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:37	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:37	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW1S-GW-062719 **Lab ID: 10481249011** Collected: 06/27/19 12:30 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 03:37	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:37	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 03:37	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 03:37	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 03:37	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 03:37	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:37	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 03:37	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 03:37	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 03:37	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 03:37	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 03:37	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 03:37	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 03:37	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 03:37	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 03:37	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 03:37	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 03:37	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 03:37	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 03:37	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/11/19 03:37	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 03:37	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 03:37	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/11/19 03:37	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 03:37	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:37	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 03:37	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 03:37	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 03:37	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 03:37	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:37	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:37	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 03:37	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:37	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:37	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 03:37	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 03:37	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 03:37	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:37	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 03:37	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 03:37	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 03:37	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 03:37	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 03:37	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 03:37	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 03:37	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW1S-GW-062719 **Lab ID: 10481249011** Collected: 06/27/19 12:30 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:37	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:37	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 03:37	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 03:37	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 03:37	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:37	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:37	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:37	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 03:37	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 03:37	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:37	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:37	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:37	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 03:37	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-136		1		07/11/19 03:37	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		07/11/19 03:37	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/11/19 03:37	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**433**	mg/L	5.0	2.0	1		07/10/19 09:57		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**460**	mg/L	10.0	5.0	1		07/03/19 08:41		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:40	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**7.4**	mg/L	1.2	0.12	1		06/28/19 21:25	16887-00-6	
Nitrate as N	**0.17**	mg/L	0.10	0.012	1		06/28/19 21:25	14797-55-8	
Sulfate	**33.6**	mg/L	1.2	0.28	1		06/28/19 21:25	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.19**	mg/L	0.10	0.018	1		07/06/19 14:46		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:29		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.5**	mg/L	1.0	0.39	1		07/08/19 19:40	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW19D-GW-062719 **Lab ID: 10481249012** Collected: 06/27/19 15:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 21:27	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 21:27	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 21:27	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:56	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:56	7440-38-2	
Barium, Dissolved	**10.6**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:56	7440-39-3	B
Beryllium, Dissolved	**0.35J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:56	7440-41-7	B
Cadmium, Dissolved	**0.34J**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:56	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:56	7440-47-3	
Cobalt, Dissolved	**2.4J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:56	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:56	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:56	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:56	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:56	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:56	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:56	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:56	7440-28-0	
Vanadium, Dissolved	**6.5J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:56	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:56	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:41	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:54	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:54	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:54	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:54	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 03:54	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:54	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:54	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:54	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 03:54	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 03:54	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:54	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:54	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 03:54	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 03:54	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:54	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 03:54	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 03:54	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 03:54	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:54	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:54	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW19D-GW-062719 **Lab ID: 10481249012** Collected: 06/27/19 15:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 03:54	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:54	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 03:54	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 03:54	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 03:54	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 03:54	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:54	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 03:54	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 03:54	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 03:54	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 03:54	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 03:54	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 03:54	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 03:54	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 03:54	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 03:54	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 03:54	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 03:54	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 03:54	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 03:54	75-15-0	
Carbon tetrachloride	**401**	ug/L	5.0	1.9	10		07/11/19 17:24	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 03:54	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 03:54	75-00-3	
Chloroform	**26.2**	ug/L	1.0	0.45	1		07/11/19 03:54	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 03:54	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:54	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 03:54	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 03:54	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 03:54	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 03:54	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:54	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 03:54	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 03:54	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:54	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:54	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 03:54	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 03:54	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 03:54	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 03:54	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 03:54	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 03:54	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 03:54	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 03:54	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 03:54	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 03:54	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 03:54	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW19D-GW-062719 **Lab ID: 10481249012** Collected: 06/27/19 15:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:54	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 03:54	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 03:54	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 03:54	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 03:54	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 03:54	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:54	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:54	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 03:54	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 03:54	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 03:54	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 03:54	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 03:54	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 03:54	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		07/11/19 03:54	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/11/19 03:54	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		07/11/19 03:54	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**175**	mg/L	5.0	2.0	1		07/10/19 10:01		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**298**	mg/L	10.0	5.0	1		07/03/19 14:23		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:40	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**9.6**	mg/L	1.2	0.12	1		06/28/19 21:40	16887-00-6	
Nitrate as N	**4.7**	mg/L	0.10	0.012	1		06/28/19 21:40	14797-55-8	
Sulfate	**29.5**	mg/L	1.2	0.28	1		06/28/19 21:40	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**5.2**	mg/L	0.50	0.088	5		07/06/19 15:25		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:29		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.2**	mg/L	1.0	0.39	1		07/08/19 19:55	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW-FD3-GW-062719 **Lab ID: 10481249013** Collected: 06/27/19 08:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 21:34	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 21:34	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 21:34	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:57	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:57	7440-38-2	
Barium, Dissolved	**9.7J**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:57	7440-39-3	B
Beryllium, Dissolved	**0.13J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:57	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:57	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:57	7440-47-3	
Cobalt, Dissolved	**1.1J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:57	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:57	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:57	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:57	7439-98-7	
Nickel, Dissolved	**3.1J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:57	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:57	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:57	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:57	7440-28-0	
Vanadium, Dissolved	**6.3J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:57	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:57	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:43	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:11	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 04:11	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:11	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:11	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 04:11	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:11	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:11	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:11	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 04:11	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 04:11	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:11	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:11	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 04:11	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 04:11	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 04:11	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 04:11	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 04:11	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 04:11	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 04:11	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:11	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW-FD3-GW-062719 **Lab ID: 10481249013** Collected: 06/27/19 08:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 04:11	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:11	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 04:11	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 04:11	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 04:11	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 04:11	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:11	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 04:11	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 04:11	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 04:11	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 04:11	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 04:11	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 04:11	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 04:11	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 04:11	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 04:11	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 04:11	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 04:11	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 04:11	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 04:11	75-15-0	
Carbon tetrachloride	**408**	ug/L	5.0	1.9	10		07/11/19 18:31	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 04:11	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 04:11	75-00-3	
Chloroform	**26.4**	ug/L	1.0	0.45	1		07/11/19 04:11	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 04:11	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 04:11	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 04:11	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 04:11	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 04:11	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 04:11	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:11	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 04:11	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 04:11	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:11	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:11	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 04:11	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 04:11	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 04:11	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:11	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 04:11	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 04:11	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 04:11	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 04:11	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 04:11	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 04:11	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 04:11	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Sample: MW-FD3-GW-062719 **Lab ID: 10481249013** Collected: 06/27/19 08:00 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:11	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:11	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 04:11	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 04:11	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 04:11	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:11	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:11	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:11	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 04:11	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 04:11	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:11	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 04:11	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:11	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 04:11	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		07/11/19 04:11	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		07/11/19 04:11	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/11/19 04:11	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**180**	mg/L	5.0	2.0	1		07/10/19 10:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**288**	mg/L	10.0	5.0	1		07/03/19 14:23		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:13	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**9.6**	mg/L	1.2	0.12	1		06/28/19 21:55	16887-00-6	
Nitrate as N	**4.6**	mg/L	0.10	0.012	1		06/28/19 21:55	14797-55-8	
Sulfate	**29.5**	mg/L	1.2	0.28	1		06/28/19 21:55	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**5.3**	mg/L	0.50	0.088	5		07/06/19 15:26		M1
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:29		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.1**	mg/L	1.0	0.39	1		07/08/19 17:05	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 617222 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005

METHOD BLANK: 3334152 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/03/19 10:27	
Ethene	ug/L	<2.9	10.0	2.9	07/03/19 10:27	
Methane	ug/L	<4.9	10.0	4.9	07/03/19 10:27	

LABORATORY CONTROL SAMPLE & LCSD: 3334153 3334154

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	117	107	103	94	85-115	9	20	
Ethene	ug/L	106	108	99.5	102	94	85-115	8	20	
Methane	ug/L	60.7	59.9	55.3	99	91	85-115	8	20	

SAMPLE DUPLICATE: 3334155

Parameter	Units	10481000008 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

SAMPLE DUPLICATE: 3334156

Parameter	Units	10481249002 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 617371 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10481249006, 10481249007

METHOD BLANK: 3334816 Matrix: Water
Associated Lab Samples: 10481249006, 10481249007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/03/19 14:23	
Ethene	ug/L	<2.9	10.0	2.9	07/03/19 14:23	
Methane	ug/L	<4.9	10.0	4.9	07/03/19 14:23	

LABORATORY CONTROL SAMPLE & LCSD: 3334817 3334818

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	117	118	103	104	85-115	1	20	
Ethene	ug/L	106	108	109	101	103	85-115	1	20	
Methane	ug/L	60.7	60.3	60.5	99	100	85-115	0	20	

SAMPLE DUPLICATE: 3334819

Parameter	Units	60307125001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	<3.0		20	
Ethene	ug/L	ND	<2.9		20	
Methane	ug/L	ND	5.6J		20	

SAMPLE DUPLICATE: 3334820

Parameter	Units	50228954027 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	81.5	80.0	2	20	
Ethene	ug/L	28.2	27.8	2	20	
Methane	ug/L	6050	5970	1	20	E

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 617524 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 3335656 Matrix: Water
Associated Lab Samples: 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/03/19 20:30	
Ethene	ug/L	<2.9	10.0	2.9	07/03/19 20:30	
Methane	ug/L	<4.9	10.0	4.9	07/03/19 20:30	

LABORATORY CONTROL SAMPLE & LCSD: 3335657 3335658

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	116	116	102	102	85-115	0	20	
Ethene	ug/L	106	108	107	102	101	85-115	1	20	
Methane	ug/L	60.7	60.5	59.3	100	98	85-115	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3335660 3335661

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<3.0	114	114	109	109	96	96	30-150	0	20	
Ethene	ug/L	<2.9	106	106	101	101	95	95	30-150	0	20	
Methane	ug/L	<4.9	60.7	60.7	55.6	55.6	92	92	30-150	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 616705 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 3331452 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/11/19 20:09	

LABORATORY CONTROL SAMPLE: 3331453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331454 3331455

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.1	5.1	103	102	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 616661 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 3331252 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	07/11/19 15:33	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	07/11/19 15:33	
Barium, Dissolved	ug/L	1.7J	10.0	0.60	07/11/19 15:33	
Beryllium, Dissolved	ug/L	0.12J	5.0	0.12	07/11/19 15:33	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	07/11/19 15:33	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	07/11/19 15:33	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	07/11/19 15:33	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	07/11/19 15:33	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	07/11/19 15:33	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	07/11/19 15:33	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	07/11/19 15:33	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	07/11/19 15:33	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	07/11/19 15:33	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	07/11/19 15:33	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	07/11/19 15:33	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	07/11/19 15:33	

LABORATORY CONTROL SAMPLE: 3331253

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	973	97	80-120	
Arsenic, Dissolved	ug/L	1000	969	97	80-120	
Barium, Dissolved	ug/L	1000	971	97	80-120	
Beryllium, Dissolved	ug/L	1000	980	98	80-120	
Cadmium, Dissolved	ug/L	1000	989	99	80-120	
Chromium, Dissolved	ug/L	1000	962	96	80-120	
Cobalt, Dissolved	ug/L	1000	959	96	80-120	
Copper, Dissolved	ug/L	1000	929	93	80-120	
Lead, Dissolved	ug/L	1000	971	97	80-120	
Molybdenum, Dissolved	ug/L	1000	986	99	80-120	
Nickel, Dissolved	ug/L	1000	963	96	80-120	
Selenium, Dissolved	ug/L	1000	989	99	80-120	
Silver, Dissolved	ug/L	500	481	96	80-120	
Thallium, Dissolved	ug/L	1000	957	96	80-120	
Vanadium, Dissolved	ug/L	1000	961	96	80-120	
Zinc, Dissolved	ug/L	1000	978	98	80-120	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331254 3331255

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	978	989	98	99	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	970	984	97	98	75-125	1	20	
Barium, Dissolved	ug/L	20.1	1000	1000	976	987	96	97	75-125	1	20	
Beryllium, Dissolved	ug/L	0.16J	1000	1000	981	996	98	100	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	965	975	96	97	75-125	1	20	
Chromium, Dissolved	ug/L	2.7J	1000	1000	955	967	95	96	75-125	1	20	
Cobalt, Dissolved	ug/L	0.83J	1000	1000	937	949	94	95	75-125	1	20	
Copper, Dissolved	ug/L	118	1000	1000	1060	1070	94	95	75-125	1	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	951	963	95	96	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	990	1010	99	101	75-125	2	20	
Nickel, Dissolved	ug/L	17.7J	1000	1000	956	966	94	95	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	978	992	98	99	75-125	1	20	
Silver, Dissolved	ug/L	<0.40	500	500	485	490	97	98	75-125	1	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	954	959	95	96	75-125	0	20	
Vanadium, Dissolved	ug/L	0.74J	1000	1000	960	971	96	97	75-125	1	20	
Zinc, Dissolved	ug/L	1630	1000	1000	2540	2550	91	91	75-125	0	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 616759 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481249001

METHOD BLANK: 3331766 Matrix: Water
Associated Lab Samples: 10481249001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/01/19 11:16	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/01/19 11:16	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/01/19 11:16	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/01/19 11:16	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/01/19 11:16	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/01/19 11:16	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/01/19 11:16	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/01/19 11:16	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	07/01/19 11:16	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/01/19 11:16	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	07/01/19 11:16	
1,2,4-Trimethylbenzene	ug/L	<0.20	1.0	0.20	07/01/19 11:16	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/01/19 11:16	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/01/19 11:16	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/01/19 11:16	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/01/19 11:16	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/01/19 11:16	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/01/19 11:16	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/01/19 11:16	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/01/19 11:16	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	07/01/19 11:16	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/01/19 11:16	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/01/19 11:16	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/01/19 11:16	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/01/19 11:16	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/01/19 11:16	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/01/19 11:16	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/01/19 11:16	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/01/19 11:16	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/01/19 11:16	
Acetone	ug/L	<9.2	20.0	9.2	07/01/19 11:16	
Acrolein	ug/L	<1.2	40.0	1.2	07/01/19 11:16	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/01/19 11:16	
Benzene	ug/L	<0.10	0.50	0.10	07/01/19 11:16	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/01/19 11:16	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/01/19 11:16	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/01/19 11:16	
Bromoform	ug/L	<0.80	4.0	0.80	07/01/19 11:16	
Bromomethane	ug/L	<1.8	4.0	1.8	07/01/19 11:16	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/01/19 11:16	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/01/19 11:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

METHOD BLANK: 3331766 Matrix: Water
Associated Lab Samples: 10481249001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	07/01/19 11:16	
Chloroethane	ug/L	<0.49	1.0	0.49	07/01/19 11:16	
Chloroform	ug/L	<0.45	1.0	0.45	07/01/19 11:16	
Chloromethane	ug/L	<0.16	4.0	0.16	07/01/19 11:16	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/01/19 11:16	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	0.20	07/01/19 11:16	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/01/19 11:16	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/01/19 11:16	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/01/19 11:16	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/01/19 11:16	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/01/19 11:16	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/01/19 11:16	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/01/19 11:16	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/01/19 11:16	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/01/19 11:16	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/01/19 11:16	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/01/19 11:16	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/01/19 11:16	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/01/19 11:16	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/01/19 11:16	
Naphthalene	ug/L	<0.48	1.0	0.48	07/01/19 11:16	
o-Xylene	ug/L	<0.16	0.50	0.16	07/01/19 11:16	
p-Isopropyltoluene	ug/L	<0.15	1.0	0.15	07/01/19 11:16	
sec-Butylbenzene	ug/L	<0.15	1.0	0.15	07/01/19 11:16	
Styrene	ug/L	<0.19	0.50	0.19	07/01/19 11:16	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	07/01/19 11:16	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/01/19 11:16	
tert-Butylbenzene	ug/L	<0.15	1.0	0.15	07/01/19 11:16	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/01/19 11:16	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/01/19 11:16	
Toluene	ug/L	<0.083	0.50	0.083	07/01/19 11:16	
trans-1,2-Dichloroethene	ug/L	<0.12	1.0	0.12	07/01/19 11:16	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/01/19 11:16	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/01/19 11:16	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/01/19 11:16	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/01/19 11:16	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/01/19 11:16	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/01/19 11:16	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/01/19 11:16	
1,2-Dichloroethane-d4 (S)	%.	106	75-136		07/01/19 11:16	
4-Bromofluorobenzene (S)	%.	100	75-125		07/01/19 11:16	
Toluene-d8 (S)	%.	109	75-125		07/01/19 11:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

LABORATORY CONTROL SAMPLE: 3331767

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	8.8	88	68-141	
1,1,1-Trichloroethane	ug/L	10	8.4	84	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	8.9	89	73-125	
1,1,2-Trichloroethane	ug/L	10	9.5	95	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	7.9	79	69-132	
1,1-Dichloroethane	ug/L	10	8.7	87	73-125	
1,1-Dichloroethene	ug/L	10	8.4	84	71-126	
1,1-Dichloropropene	ug/L	10	8.3	83	73-126	
1,2,3-Trichlorobenzene	ug/L	10	9.4	94	72-126	
1,2,3-Trichloropropane	ug/L	10	9.0	90	75-126	
1,2,4-Trichlorobenzene	ug/L	10	9.8	98	71-134	
1,2,4-Trimethylbenzene	ug/L	10	9.4	94	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	25.4	102	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	9.5	95	75-129	
1,2-Dichlorobenzene	ug/L	10	9.3	93	75-129	
1,2-Dichloroethane	ug/L	10	8.4	84	75-125	
1,2-Dichloroethene (Total)	ug/L	20	16.8	84	74-125	N2
1,2-Dichloropropane	ug/L	10	8.5	85	75-125	
1,3,5-Trimethylbenzene	ug/L	10	10.5	105	75-127	
1,3-Dichlorobenzene	ug/L	10	9.6	96	75-126	
1,3-Dichloropropane	ug/L	10	9.8	98	75-125	
1,4-Dichlorobenzene	ug/L	10	9.1	91	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	186J	93	72-129	
2,2,4-Trimethylpentane	ug/L	10	8.2	82	72-128	N2
2,2-Dichloropropane	ug/L	10	8.9	89	65-138	
2-Butanone (MEK)	ug/L	50	48.7	97	59-144	
2-Chlorotoluene	ug/L	10	9.4	94	75-127	
2-Hexanone	ug/L	50	51.6	103	73-134	
4-Chlorotoluene	ug/L	10	9.5	95	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	47.7	95	62-141	
Acetone	ug/L	50	51.4	103	60-137	
Acrolein	ug/L	100	88.9	89	60-141	
Acrylonitrile	ug/L	100	84.3	84	75-129	
Benzene	ug/L	10	8.8	88	73-125	
Bromobenzene	ug/L	10	9.4	94	73-125	
Bromochloromethane	ug/L	10	8.5	85	75-135	
Bromodichloromethane	ug/L	10	8.6	86	75-125	
Bromoform	ug/L	10	9.1	91	67-136	
Bromomethane	ug/L	10	9.0	90	30-150	
Carbon disulfide	ug/L	10	7.7	77	47-137	
Carbon tetrachloride	ug/L	10	8.7	87	75-125	
Chlorobenzene	ug/L	10	9.2	92	75-125	
Chloroethane	ug/L	10	10.6	106	63-136	
Chloroform	ug/L	10	8.3	83	73-128	
Chloromethane	ug/L	10	8.9	89	55-130	
cis-1,2-Dichloroethene	ug/L	10	8.6	86	75-125	
cis-1,3-Dichloropropene	ug/L	10	8.4	84	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

LABORATORY CONTROL SAMPLE: 3331767

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	9.8	98	75-125	
Dibromomethane	ug/L	10	9.0	90	75-125	
Dichlorodifluoromethane	ug/L	10	8.2	82	63-132	
Dichlorofluoromethane	ug/L	10	9.4	94	68-127	N2
Diisopropyl ether	ug/L	10	8.5	85	71-131	
Ethyl-tert-butyl ether	ug/L	10	9.0	90	75-125	
Ethylbenzene	ug/L	10	9.0	90	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.6	96	72-134	
Isopropylbenzene (Cumene)	ug/L	10	10.0	100	75-125	
m&p-Xylene	ug/L	20	18.7	94	75-126	
Methyl-tert-butyl ether	ug/L	10	8.8	88	75-125	
Methylene Chloride	ug/L	10	8.2	82	70-125	
n-Butylbenzene	ug/L	10	9.8	98	75-126	
n-Propylbenzene	ug/L	10	9.0	90	73-127	
Naphthalene	ug/L	10	9.4	94	63-128	
o-Xylene	ug/L	10	9.9	99	75-128	
p-Isopropyltoluene	ug/L	10	9.6	96	75-125	
sec-Butylbenzene	ug/L	10	9.0	90	75-126	
Styrene	ug/L	10	10.2	102	75-125	
tert-Amylmethyl ether	ug/L	10	9.1	91	75-125	
tert-Butyl Alcohol	ug/L	100	90.0	90	75-130	
tert-Butylbenzene	ug/L	10	9.3	93	75-131	
Tetrachloroethene	ug/L	10	9.0	90	74-125	
Tetrahydrofuran	ug/L	100	92.9	93	64-138	
Toluene	ug/L	10	9.4	94	74-125	
trans-1,2-Dichloroethene	ug/L	10	8.2	82	68-128	
trans-1,3-Dichloropropene	ug/L	10	10	100	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	28.4	113	60-127	
Trichloroethene	ug/L	10	8.7	87	75-127	
Trichlorofluoromethane	ug/L	10	9.1	91	72-133	
Vinyl acetate	ug/L	10	9.5J	95	61-129	
Vinyl chloride	ug/L	10	8.7	87	75-128	
Xylene (Total)	ug/L	30	28.6	95	75-125	
1,2-Dichloroethane-d4 (S)	%.			105	75-136	
4-Bromofluorobenzene (S)	%.			99	75-125	
Toluene-d8 (S)	%.			109	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331768 3331769

Parameter	Units	10480663020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	10	10	9.2	10.3	92	103	75-140	11	30	
1,1,1-Trichloroethane	ug/L	ND	10	10	9.4	9.8	94	98	74-136	4	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	10	10	9.8	10.1	98	101	66-134	3	30	
1,1,2-Trichloroethane	ug/L	ND	10	10	9.1	10.4	91	104	75-126	14	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331768 3331769

Parameter	Units	10480663020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	10	10	9.1	10.4	91	104	65-146	13	30	
1,1-Dichloroethane	ug/L	ND	10	10	9.3	9.6	93	96	68-132	4	30	
1,1-Dichloroethene	ug/L	ND	10	10	9.2	9.6	92	96	66-139	4	30	
1,1-Dichloropropene	ug/L	ND	10	10	9.1	9.4	91	94	67-134	3	30	
1,2,3-Trichlorobenzene	ug/L	ND	10	10	10.9	11.3	109	113	67-129	3	30	
1,2,3-Trichloropropane	ug/L	ND	10	10	9.2	9.9	92	99	69-128	7	30	
1,2,4-Trichlorobenzene	ug/L	ND	10	10	11.3	11.7	113	117	65-140	3	30	
1,2,4-Trimethylbenzene	ug/L	ND	10	10	10.0	11.3	100	113	71-133	12	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	25	25	24.4	28.1	98	112	54-138	14	30	
1,2-Dibromoethane (EDB)	ug/L	ND	10	10	9.0	9.8	90	98	68-125	8	30	
1,2-Dichlorobenzene	ug/L	ND	10	10	9.8	10.9	98	109	74-136	10	30	
1,2-Dichloroethane	ug/L	ND	10	10	8.5	9.2	85	92	68-125	7	30	
1,2-Dichloroethene (Total)	ug/L	ND	20	20	18.8	18.7	94	94	71-126	0	30	N2
1,2-Dichloropropane	ug/L	ND	10	10	9.0	9.9	90	99	67-125	10	30	
1,3,5-Trimethylbenzene	ug/L	ND	10	10	11.3	12.7	113	127	68-137	12	30	
1,3-Dichlorobenzene	ug/L	ND	10	10	9.9	11.2	99	112	75-131	12	30	
1,3-Dichloropropane	ug/L	ND	10	10	9.2	10	92	100	71-125	8	30	
1,4-Dichlorobenzene	ug/L	ND	10	10	9.7	10.6	97	106	74-126	9	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	200	200	189J	192J	94	96	68-125		30	
2,2,4-Trimethylpentane	ug/L	ND	10	10	11.0	9.7	110	97	54-129	13	30	N2
2,2-Dichloropropane	ug/L	ND	10	10	9.7	10.3	97	103	69-139	6	30	
2-Butanone (MEK)	ug/L	ND	50	50	36.3	39.2	73	78	54-144	8	30	
2-Chlorotoluene	ug/L	ND	10	10	9.9	11.3	99	113	75-134	13	30	
2-Hexanone	ug/L	ND	50	50	44.3	48.0	89	96	58-137	8	30	
4-Chlorotoluene	ug/L	ND	10	10	9.9	11.2	99	112	72-133	12	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	46.9	52.9	94	106	60-129	12	30	
Acetone	ug/L	ND	50	50	33.8	38.6	68	77	62-132	13	30	
Acrolein	ug/L	ND	100	100	110	122	110	122	30-150	10	30	
Acrylonitrile	ug/L	ND	100	100	88.8	95.4	89	95	68-125	7	30	
Benzene	ug/L	ND	10	10	8.8	9.2	88	92	68-125	4	30	
Bromobenzene	ug/L	ND	10	10	9.6	10.5	96	105	73-126	9	30	
Bromochloromethane	ug/L	ND	10	10	9.1	9.4	91	94	66-143	4	30	
Bromodichloromethane	ug/L	ND	10	10	8.5	9.2	85	92	74-125	9	30	
Bromoform	ug/L	ND	10	10	8.8	9.6	88	96	64-134	9	30	
Bromomethane	ug/L	ND	10	10	8.3	9.0	83	90	30-150	9	30	
Carbon disulfide	ug/L	ND	10	10	9.4	9.0	94	90	43-147	5	30	
Carbon tetrachloride	ug/L	ND	10	10	9.8	10.0	98	100	71-143	2	30	
Chlorobenzene	ug/L	ND	10	10	9.2	10.2	92	102	75-125	10	30	
Chloroethane	ug/L	ND	10	10	10.1	10.7	101	107	75-129	7	30	
Chloroform	ug/L	ND	10	10	8.4	9.0	84	90	66-132	7	30	
Chloromethane	ug/L	ND	10	10	7.1	8.4	71	84	53-137	16	30	
cis-1,2-Dichloroethene	ug/L	ND	10	10	9.4	9.5	94	95	67-133	2	30	
cis-1,3-Dichloropropene	ug/L	ND	10	10	8.4	8.7	84	87	66-125	3	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331768 3331769

Parameter	Units	10480663020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	10	10	9.5	10.6	95	106	62-132	11	30	
Dibromomethane	ug/L	ND	10	10	8.6	9.6	86	96	67-125	11	30	
Dichlorodifluoromethane	ug/L	ND	10	10	8.2	9.3	82	93	71-142	13	30	
Dichlorofluoromethane	ug/L	ND	10	10	7.9	9.3	79	93	70-131	16	30	N2
Diisopropyl ether	ug/L	ND	10	10	8.7	9.6	87	96	63-131	11	30	
Ethyl-tert-butyl ether	ug/L	ND	10	10	9.0	10.1	90	101	66-128	11	30	
Ethylbenzene	ug/L	ND	10	10	9.5	10.6	95	106	74-126	11	30	
Hexachloro-1,3-butadiene	ug/L	ND	10	10	13.2	11.1	132	111	68-143	17	30	
Isopropylbenzene (Cumene)	ug/L	ND	10	10	10.5	12.3	105	123	74-130	16	30	
m&p-Xylene	ug/L	ND	20	20	19.0	21.2	95	106	69-132	11	30	
Methyl-tert-butyl ether	ug/L	ND	10	10	8.8	9.8	88	98	65-131	11	30	
Methylene Chloride	ug/L	ND	10	10	8.0	8.6	80	86	57-125	7	30	
n-Butylbenzene	ug/L	ND	10	10	11.4	11.8	114	118	71-131	3	30	
n-Propylbenzene	ug/L	ND	10	10	9.9	11.3	99	113	67-138	13	30	
Naphthalene	ug/L	ND	10	10	9.9	11.4	99	114	60-130	14	30	
o-Xylene	ug/L	ND	10	10	9.7	11.4	97	114	69-131	16	30	
p-Isopropyltoluene	ug/L	ND	10	10	10.9	11.6	109	116	72-133	6	30	
sec-Butylbenzene	ug/L	ND	10	10	10.3	11.4	103	114	73-134	9	30	
Styrene	ug/L	ND	10	10	10.3	11.8	103	118	72-125	14	30	
tert-Amylmethyl ether	ug/L	ND	10	10	9.4	9.8	94	98	67-125	4	30	
tert-Butyl Alcohol	ug/L	ND	100	100	90.1	104	90	104	64-137	14	30	
tert-Butylbenzene	ug/L	ND	10	10	10.5	11.7	105	117	70-143	10	30	
Tetrachloroethene	ug/L	ND	10	10	9.5	11.0	95	110	72-129	14	30	
Tetrahydrofuran	ug/L	ND	100	100	83.7	96.0	84	96	66-128	14	30	
Toluene	ug/L	ND	10	10	9.8	10.1	98	101	73-125	3	30	
trans-1,2-Dichloroethene	ug/L	ND	10	10	9.4	9.2	94	92	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	ND	10	10	9.8	10.5	98	105	61-136	6	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	25	25	27.0	27.8	108	111	45-128	3	30	
Trichloroethene	ug/L	ND	10	10	9.8	9.8	98	98	74-132	0	30	
Trichlorofluoromethane	ug/L	ND	10	10	8.2	9.5	82	95	75-139	14	30	
Vinyl acetate	ug/L	ND	10	10	9.7J	11.1	97	111	51-135		30	
Vinyl chloride	ug/L	ND	10	10	8.6	9.0	86	90	68-146	5	30	
Xylene (Total)	ug/L	ND	30	30	28.6	32.6	95	109	67-137	13	30	
1,2-Dichloroethane-d4 (S)	%.						108	109	75-136			
4-Bromofluorobenzene (S)	%.						100	99	75-125			
Toluene-d8 (S)	%.						105	105	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 617460 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481249002, 10481249003

METHOD BLANK: 3335306 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/03/19 21:16	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/03/19 21:16	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/03/19 21:16	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/03/19 21:16	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/03/19 21:16	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	07/03/19 21:16	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/03/19 21:16	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	07/03/19 21:16	
1,2,4-Trimethylbenzene	ug/L	<0.20	1.0	0.20	07/03/19 21:16	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/03/19 21:16	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/03/19 21:16	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/03/19 21:16	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/03/19 21:16	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/03/19 21:16	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/03/19 21:16	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/03/19 21:16	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	07/03/19 21:16	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/03/19 21:16	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/03/19 21:16	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/03/19 21:16	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/03/19 21:16	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/03/19 21:16	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/03/19 21:16	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/03/19 21:16	
Acetone	ug/L	<9.2	20.0	9.2	07/03/19 21:16	
Acrolein	ug/L	<1.2	40.0	1.2	07/03/19 21:16	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/03/19 21:16	
Benzene	ug/L	<0.10	0.50	0.10	07/03/19 21:16	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/03/19 21:16	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/03/19 21:16	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/03/19 21:16	
Bromoform	ug/L	<0.80	4.0	0.80	07/03/19 21:16	
Bromomethane	ug/L	<1.8	4.0	1.8	07/03/19 21:16	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/03/19 21:16	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/03/19 21:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

METHOD BLANK: 3335306 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
Chloroethane	ug/L	<0.49	1.0	0.49	07/03/19 21:16	
Chloroform	ug/L	<0.45	1.0	0.45	07/03/19 21:16	
Chloromethane	ug/L	<0.16	4.0	0.16	07/03/19 21:16	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/03/19 21:16	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	0.20	07/03/19 21:16	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/03/19 21:16	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/03/19 21:16	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/03/19 21:16	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/03/19 21:16	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/03/19 21:16	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/03/19 21:16	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/03/19 21:16	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/03/19 21:16	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/03/19 21:16	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/03/19 21:16	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/03/19 21:16	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/03/19 21:16	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/03/19 21:16	
Naphthalene	ug/L	<0.48	1.0	0.48	07/03/19 21:16	
o-Xylene	ug/L	<0.16	0.50	0.16	07/03/19 21:16	
p-Isopropyltoluene	ug/L	<0.15	1.0	0.15	07/03/19 21:16	
sec-Butylbenzene	ug/L	<0.15	1.0	0.15	07/03/19 21:16	
Styrene	ug/L	<0.19	0.50	0.19	07/03/19 21:16	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	07/03/19 21:16	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/03/19 21:16	
tert-Butylbenzene	ug/L	<0.15	1.0	0.15	07/03/19 21:16	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/03/19 21:16	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/03/19 21:16	
Toluene	ug/L	<0.083	0.50	0.083	07/03/19 21:16	
trans-1,2-Dichloroethene	ug/L	<0.12	1.0	0.12	07/03/19 21:16	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/03/19 21:16	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/03/19 21:16	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/03/19 21:16	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/03/19 21:16	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/03/19 21:16	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/03/19 21:16	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/03/19 21:16	
1,2-Dichloroethane-d4 (S)	%.	100	75-136		07/03/19 21:16	
4-Bromofluorobenzene (S)	%.	96	75-125		07/03/19 21:16	
Toluene-d8 (S)	%.	108	75-125		07/03/19 21:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

LABORATORY CONTROL SAMPLE: 3335307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	9.3	93	68-141	
1,1,1-Trichloroethane	ug/L	10	9.0	90	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	9.1	91	73-125	
1,1,2-Trichloroethane	ug/L	10	9.6	96	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	8.7	87	69-132	
1,1-Dichloroethane	ug/L	10	8.7	87	73-125	
1,1-Dichloroethene	ug/L	10	8.7	87	71-126	
1,1-Dichloropropene	ug/L	10	7.9	79	73-126	
1,2,3-Trichlorobenzene	ug/L	10	9.8	98	72-126	
1,2,3-Trichloropropane	ug/L	10	9.7	97	75-126	
1,2,4-Trichlorobenzene	ug/L	10	10.2	102	71-134	
1,2,4-Trimethylbenzene	ug/L	10	9.4	94	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	25.3	101	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	9.6	96	75-129	
1,2-Dichlorobenzene	ug/L	10	9.7	97	75-129	
1,2-Dichloroethane	ug/L	10	7.9	79	75-125	
1,2-Dichloroethene (Total)	ug/L	20	17.3	86	74-125	N2
1,2-Dichloropropane	ug/L	10	9.0	90	75-125	
1,3,5-Trimethylbenzene	ug/L	10	10.5	105	75-127	
1,3-Dichlorobenzene	ug/L	10	10.2	102	75-126	
1,3-Dichloropropane	ug/L	10	9.2	92	75-125	
1,4-Dichlorobenzene	ug/L	10	9.7	97	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	191J	95	72-129	
2,2,4-Trimethylpentane	ug/L	10	6.9	69	72-128	L2,N2
2,2-Dichloropropane	ug/L	10	8.4	84	65-138	
2-Butanone (MEK)	ug/L	50	32.6	65	59-144	
2-Chlorotoluene	ug/L	10	9.6	96	75-127	
2-Hexanone	ug/L	50	38.9	78	73-134	
4-Chlorotoluene	ug/L	10	9.4	94	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	42.2	84	62-141	
Acetone	ug/L	50	35.3	71	60-137	
Acrolein	ug/L	100	92.4	92	60-141	
Acrylonitrile	ug/L	100	83.6	84	75-129	
Benzene	ug/L	10	7.8	78	73-125	
Bromobenzene	ug/L	10	9.9	99	73-125	
Bromochloromethane	ug/L	10	9.7	97	75-135	
Bromodichloromethane	ug/L	10	8.5	85	75-125	
Bromoform	ug/L	10	9.3	93	67-136	
Bromomethane	ug/L	10	10.6	106	30-150	
Carbon disulfide	ug/L	10	7.2	72	47-137	
Carbon tetrachloride	ug/L	10	9.2	92	75-125	
Chlorobenzene	ug/L	10	9.5	95	75-125	
Chloroethane	ug/L	10	9.8	98	63-136	
Chloroform	ug/L	10	9.0	90	73-128	
Chloromethane	ug/L	10	8.7	87	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.0	90	75-125	
cis-1,3-Dichloropropene	ug/L	10	8.2	82	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

LABORATORY CONTROL SAMPLE: 3335307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	10.2	102	75-125	
Dibromomethane	ug/L	10	9.4	94	75-125	
Dichlorodifluoromethane	ug/L	10	9.2	92	63-132	
Dichlorofluoromethane	ug/L	10	10.1	101	68-127	N2
Diisopropyl ether	ug/L	10	7.9	79	71-131	
Ethyl-tert-butyl ether	ug/L	10	8.7	87	75-125	
Ethylbenzene	ug/L	10	9.2	92	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.3	93	72-134	
Isopropylbenzene (Cumene)	ug/L	10	10.4	104	75-125	
m&p-Xylene	ug/L	20	18.2	91	75-126	
Methyl-tert-butyl ether	ug/L	10	8.4	84	75-125	
Methylene Chloride	ug/L	10	8.1	81	70-125	
n-Butylbenzene	ug/L	10	9.5	95	75-126	
n-Propylbenzene	ug/L	10	9.0	90	73-127	
Naphthalene	ug/L	10	9.2	92	63-128	
o-Xylene	ug/L	10	10.2	102	75-128	
p-Isopropyltoluene	ug/L	10	9.7	97	75-125	
sec-Butylbenzene	ug/L	10	9.2	92	75-126	
Styrene	ug/L	10	11.0	110	75-125	
tert-Amylmethyl ether	ug/L	10	8.4	84	75-125	
tert-Butyl Alcohol	ug/L	100	72.1	72	75-130	L2
tert-Butylbenzene	ug/L	10	9.7	97	75-131	
Tetrachloroethene	ug/L	10	9.1	91	74-125	
Tetrahydrofuran	ug/L	100	94.5	95	64-138	
Toluene	ug/L	10	9.0	90	74-125	
trans-1,2-Dichloroethene	ug/L	10	8.3	83	68-128	
trans-1,3-Dichloropropene	ug/L	10	8.8	88	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	24.3	97	60-127	
Trichloroethene	ug/L	10	8.9	89	75-127	
Trichlorofluoromethane	ug/L	10	10.4	104	72-133	
Vinyl acetate	ug/L	10	8.7J	87	61-129	
Vinyl chloride	ug/L	10	9.3	93	75-128	
Xylene (Total)	ug/L	30	28.4	95	75-125	
1,2-Dichloroethane-d4 (S)	%.			102	75-136	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			102	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337914 3337915

Parameter	Units	10481437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	10	10	9.4	9.9	94	99	75-140	5	30	
1,1,1-Trichloroethane	ug/L	ND	10	10	9.6	9.3	96	93	74-136	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	10	10	9.6	9.5	96	95	66-134	1	30	
1,1,2-Trichloroethane	ug/L	ND	10	10	9.5	9.5	95	95	75-126	0	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337914 3337915

Parameter	Units	10481437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	10	10	9.6	9.5	96	95	65-146	1	30	
1,1-Dichloroethane	ug/L	ND	10	10	8.9	9.0	89	90	68-132	1	30	
1,1-Dichloroethene	ug/L	ND	10	10	9.4	8.7	94	87	66-139	8	30	
1,1-Dichloropropene	ug/L	ND	10	10	9.1	8.9	91	89	67-134	3	30	
1,2,3-Trichlorobenzene	ug/L	ND	10	10	10.5	10.7	105	107	67-129	1	30	
1,2,3-Trichloropropane	ug/L	ND	10	10	9.4	9.8	94	98	69-128	4	30	
1,2,4-Trichlorobenzene	ug/L	ND	10	10	11.1	11.2	111	112	65-140	1	30	
1,2,4-Trimethylbenzene	ug/L	ND	10	10	10.2	10.8	102	108	71-133	6	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	25	25	24.9	24.4	100	97	54-138	2	30	
1,2-Dibromoethane (EDB)	ug/L	ND	10	10	9.3	9.3	93	93	68-125	0	30	
1,2-Dichlorobenzene	ug/L	ND	10	10	10.3	10.9	103	109	74-136	5	30	
1,2-Dichloroethane	ug/L	ND	10	10	8.1	8.3	81	83	68-125	2	30	
1,2-Dichloroethene (Total)	ug/L	ND	20	20	17.2	18.4	86	92	71-126	7	30	N2
1,2-Dichloropropane	ug/L	ND	10	10	9.3	9.0	93	90	67-125	3	30	
1,3,5-Trimethylbenzene	ug/L	ND	10	10	11.6	12.4	116	124	68-137	6	30	
1,3-Dichlorobenzene	ug/L	ND	10	10	10.3	11.1	103	111	75-131	7	30	
1,3-Dichloropropane	ug/L	ND	10	10	9.7	9.9	97	99	71-125	2	30	
1,4-Dichlorobenzene	ug/L	ND	10	10	10	10.6	100	106	74-126	5	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	200	200	189J	206	95	103	68-125		30	
2,2,4-Trimethylpentane	ug/L	ND	10	10	9.4	8.4	94	84	54-129	12	30	N2
2,2-Dichloropropane	ug/L	ND	10	10	8.4	8.4	84	84	69-139	0	30	
2-Butanone (MEK)	ug/L	ND	50	50	34.3	35.8	69	72	54-144	4	30	
2-Chlorotoluene	ug/L	ND	10	10	10.2	10.8	102	108	75-134	6	30	
2-Hexanone	ug/L	ND	50	50	37.8	40.3	76	81	58-137	6	30	
4-Chlorotoluene	ug/L	ND	10	10	10.1	10.8	101	108	72-133	7	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	42.4	44.1	85	88	60-129	4	30	
Acetone	ug/L	ND	50	50	37.8	37.1	76	74	62-132	2	30	
Acrolein	ug/L	ND	100	100	105	108	105	108	30-150	3	30	
Acrylonitrile	ug/L	ND	100	100	85.9	87.5	86	87	68-125	2	30	
Benzene	ug/L	ND	10	10	9.1	8.8	91	88	68-125	4	30	
Bromobenzene	ug/L	ND	10	10	10.3	10.3	103	103	73-126	1	30	
Bromochloromethane	ug/L	ND	10	10	8.4	9.5	84	95	66-143	12	30	
Bromodichloromethane	ug/L	ND	10	10	8.8	8.7	88	87	74-125	0	30	
Bromoform	ug/L	ND	10	10	9.1	9.5	91	95	64-134	4	30	
Bromomethane	ug/L	ND	10	10	10.8	11.4	108	114	30-150	5	30	
Carbon disulfide	ug/L	ND	10	10	7.7	7.1	77	71	43-147	8	30	
Carbon tetrachloride	ug/L	ND	10	10	9.7	9.9	97	99	71-143	2	30	
Chlorobenzene	ug/L	ND	10	10	9.6	9.9	96	99	75-125	3	30	
Chloroethane	ug/L	ND	10	10	11.5	11.2	115	112	75-129	2	30	
Chloroform	ug/L	ND	10	10	8.6	8.4	86	84	66-132	2	30	
Chloromethane	ug/L	ND	10	10	8.4	8.2	84	82	53-137	2	30	
cis-1,2-Dichloroethene	ug/L	ND	10	10	8.5	9.5	85	95	67-133	12	30	
cis-1,3-Dichloropropene	ug/L	ND	10	10	8.3	8.0	83	80	66-125	4	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337914 3337915

Parameter	Units	10481437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	10	10	10.4	10.3	104	103	62-132	1	30	
Dibromomethane	ug/L	ND	10	10	9.8	9.8	98	98	67-125	1	30	
Dichlorodifluoromethane	ug/L	ND	10	10	8.5	8.7	85	87	71-142	2	30	
Dichlorofluoromethane	ug/L	ND	10	10	9.5	9.3	95	93	70-131	2	30	N2
Diisopropyl ether	ug/L	ND	10	10	7.6	8.2	76	82	63-131	7	30	
Ethyl-tert-butyl ether	ug/L	ND	10	10	7.9	8.3	79	83	66-128	5	30	
Ethylbenzene	ug/L	ND	10	10	9.7	10.3	97	103	74-126	5	30	
Hexachloro-1,3-butadiene	ug/L	ND	10	10	11.2	10	112	100	68-143	11	30	
Isopropylbenzene (Cumene)	ug/L	ND	10	10	10.7	12.0	107	120	74-130	12	30	
m&p-Xylene	ug/L	ND	20	20	19.3	20.8	96	104	69-132	8	30	
Methyl-tert-butyl ether	ug/L	ND	10	10	8.5	8.8	85	88	65-131	4	30	
Methylene Chloride	ug/L	ND	10	10	8.7	8.7	87	87	57-125	1	30	
n-Butylbenzene	ug/L	ND	10	10	10.9	10.7	109	107	71-131	2	30	
n-Propylbenzene	ug/L	ND	10	10	10.0	10.8	100	108	67-138	7	30	
Naphthalene	ug/L	ND	10	10	9.9	10.6	99	106	60-130	6	30	
o-Xylene	ug/L	ND	10	10	10.4	11.1	104	111	69-131	7	30	
p-Isopropyltoluene	ug/L	ND	10	10	10.6	11.2	106	112	72-133	5	30	
sec-Butylbenzene	ug/L	ND	10	10	10.5	10.7	105	107	73-134	2	30	
Styrene	ug/L	ND	10	10	10.8	11.6	108	116	72-125	7	30	
tert-Amylmethyl ether	ug/L	ND	10	10	8.7	8.7	87	87	67-125	1	30	
tert-Butyl Alcohol	ug/L	ND	100	100	75.9	88.6	76	89	64-137	15	30	
tert-Butylbenzene	ug/L	ND	10	10	11.0	11.4	110	114	70-143	3	30	
Tetrachloroethene	ug/L	9.5	10	10	18.8	20.5	92	109	72-129	9	30	
Tetrahydrofuran	ug/L	ND	100	100	97.0	92.2	97	92	66-128	5	30	
Toluene	ug/L	ND	10	10	9.6	9.4	96	94	73-125	2	30	
trans-1,2-Dichloroethene	ug/L	ND	10	10	8.7	8.9	87	89	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	ND	10	10	9.6	9.6	96	96	61-136	0	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	25	25	26.3	25.8	105	103	45-128	2	30	
Trichloroethene	ug/L	ND	10	10	9.7	9.7	97	97	74-132	0	30	
Trichlorofluoromethane	ug/L	ND	10	10	9.6	9.6	96	96	75-139	0	30	
Vinyl acetate	ug/L	ND	10	10	7.2J	7.5J	72	75	51-135		30	
Vinyl chloride	ug/L	ND	10	10	8.7	8.6	87	86	68-146	2	30	
Xylene (Total)	ug/L	ND	30	30	29.6	31.9	99	106	67-137	8	30	
1,2-Dichloroethane-d4 (S)	%.						103	105	75-136			
4-Bromofluorobenzene (S)	%.						99	97	75-125			
Toluene-d8 (S)	%.						102	101	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 618674 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 3341452 Matrix: Water
Associated Lab Samples: 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/11/19 01:06	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/11/19 01:06	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
1,2,3-Trichlorobenzene	ug/L	0.71J	1.0	0.21	07/11/19 01:06	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/11/19 01:06	
1,2,4-Trichlorobenzene	ug/L	0.60	0.50	0.20	07/11/19 01:06	P8
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/11/19 01:06	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/11/19 01:06	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/11/19 01:06	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/11/19 01:06	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/11/19 01:06	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/11/19 01:06	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/11/19 01:06	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
1,3-Dichloropropane	ug/L	<0.070	1.0	0.070	07/11/19 01:06	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/11/19 01:06	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/11/19 01:06	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/11/19 01:06	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/11/19 01:06	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/11/19 01:06	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/11/19 01:06	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/11/19 01:06	
Acetone	ug/L	<9.2	20.0	9.2	07/11/19 01:06	
Acrolein	ug/L	<1.2	10.0	1.2	07/11/19 01:06	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/11/19 01:06	
Benzene	ug/L	<0.10	0.50	0.10	07/11/19 01:06	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/11/19 01:06	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/11/19 01:06	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/11/19 01:06	
Bromoform	ug/L	<0.80	4.0	0.80	07/11/19 01:06	
Bromomethane	ug/L	<1.8	4.0	1.8	07/11/19 01:06	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/11/19 01:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

METHOD BLANK: 3341452 Matrix: Water

Associated Lab Samples: 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/11/19 01:06	
Chlorobenzene	ug/L	<0.17	1.0	0.17	07/11/19 01:06	
Chloroethane	ug/L	<0.49	1.0	0.49	07/11/19 01:06	
Chloroform	ug/L	<0.45	1.0	0.45	07/11/19 01:06	
Chloromethane	ug/L	<0.16	4.0	0.16	07/11/19 01:06	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/11/19 01:06	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/11/19 01:06	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/11/19 01:06	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/11/19 01:06	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/11/19 01:06	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/11/19 01:06	
Hexachloro-1,3-butadiene	ug/L	1.2	1.0	0.31	07/11/19 01:06	P8
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/11/19 01:06	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/11/19 01:06	
n-Butylbenzene	ug/L	0.55	0.50	0.24	07/11/19 01:06	P8
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/11/19 01:06	
Naphthalene	ug/L	1.1	1.0	0.48	07/11/19 01:06	P8
o-Xylene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
Styrene	ug/L	<0.19	0.50	0.19	07/11/19 01:06	
tert-Amylmethyl ether	ug/L	<0.11	1.0	0.11	07/11/19 01:06	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/11/19 01:06	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/11/19 01:06	
Toluene	ug/L	<0.083	0.50	0.083	07/11/19 01:06	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/11/19 01:06	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/11/19 01:06	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/11/19 01:06	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/11/19 01:06	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/11/19 01:06	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/11/19 01:06	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/11/19 01:06	
1,2-Dichloroethane-d4 (S)	%.	95	75-136		07/11/19 01:06	
4-Bromofluorobenzene (S)	%.	102	75-125		07/11/19 01:06	
Toluene-d8 (S)	%.	97	75-125		07/11/19 01:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

LABORATORY CONTROL SAMPLE: 3341453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	10.2	102	68-141	
1,1,1-Trichloroethane	ug/L	10	9.9	99	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	10.2	102	73-125	
1,1,2-Trichloroethane	ug/L	10	10.0	100	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	10.9	109	69-132	
1,1-Dichloroethane	ug/L	10	10.1	101	73-125	
1,1-Dichloroethene	ug/L	10	10.1	101	71-126	
1,1-Dichloropropene	ug/L	10	10.0	100	73-126	
1,2,3-Trichlorobenzene	ug/L	10	9.7	97	72-126	
1,2,3-Trichloropropane	ug/L	10	9.2	92	75-126	
1,2,4-Trichlorobenzene	ug/L	10	9.9	99	71-134	
1,2,4-Trimethylbenzene	ug/L	10	10.1	101	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	23.4	94	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	9.5	95	75-129	
1,2-Dichlorobenzene	ug/L	10	9.4	94	75-129	
1,2-Dichloroethane	ug/L	10	9.4	94	75-125	
1,2-Dichloroethene (Total)	ug/L	20	20.2	101	74-125	N2
1,2-Dichloropropane	ug/L	10	10.0	100	75-125	
1,3,5-Trimethylbenzene	ug/L	10	11.0	110	75-127	
1,3-Dichlorobenzene	ug/L	10	9.5	95	75-126	
1,3-Dichloropropane	ug/L	10	9.6	96	75-125	
1,4-Dichlorobenzene	ug/L	10	9.9	99	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	197J	99	72-129	
2,2,4-Trimethylpentane	ug/L	10	9.9	99	72-128	N2
2,2-Dichloropropane	ug/L	10	10.9	109	65-138	
2-Butanone (MEK)	ug/L	50	52.1	104	59-144	
2-Chlorotoluene	ug/L	10	10.0	100	75-127	
2-Hexanone	ug/L	50	56.4	113	73-134	
4-Chlorotoluene	ug/L	10	10.1	101	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	48.8	98	62-141	
Acetone	ug/L	50	57.0	114	60-137	
Acrolein	ug/L	100	88.7	89	60-141	
Acrylonitrile	ug/L	100	98.9	99	75-129	
Benzene	ug/L	10	9.7	97	73-125	
Bromobenzene	ug/L	10	9.9	99	73-125	
Bromochloromethane	ug/L	10	9.5	95	75-135	
Bromodichloromethane	ug/L	10	9.5	95	75-125	
Bromoform	ug/L	10	9.2	92	67-136	
Bromomethane	ug/L	10	12.7	127	30-150	
Carbon disulfide	ug/L	10	10.4	104	47-137	
Carbon tetrachloride	ug/L	10	10.5	105	75-125	
Chlorobenzene	ug/L	10	9.9	99	75-125	
Chloroethane	ug/L	10	10.3	103	63-136	
Chloroform	ug/L	10	9.6	96	73-128	
Chloromethane	ug/L	10	10.6	106	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.9	99	75-125	
cis-1,3-Dichloropropene	ug/L	10	9.0	90	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

LABORATORY CONTROL SAMPLE: 3341453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	9.9	99	75-125	
Dibromomethane	ug/L	10	9.8	98	75-125	
Dichlorodifluoromethane	ug/L	10	11.6	116	63-132	
Dichlorofluoromethane	ug/L	10	10.3	103	68-127	N2
Diisopropyl ether	ug/L	10	9.9	99	71-131	
Ethyl-tert-butyl ether	ug/L	10	10	100	75-125	
Ethylbenzene	ug/L	10	10.6	106	75-125	
Hexachloro-1,3-butadiene	ug/L	10	11.4	114	72-134	
Isopropylbenzene (Cumene)	ug/L	10	9.9	99	75-125	
m&p-Xylene	ug/L	20	20.7	103	75-126	
Methyl-tert-butyl ether	ug/L	10	9.3	93	75-125	
Methylene Chloride	ug/L	10	9.1	91	70-125	
n-Butylbenzene	ug/L	10	10.7	107	75-126	
n-Propylbenzene	ug/L	10	9.8	98	73-127	
Naphthalene	ug/L	10	10	100	63-128	
o-Xylene	ug/L	10	9.8	98	75-128	
p-Isopropyltoluene	ug/L	10	10.6	106	75-125	
sec-Butylbenzene	ug/L	10	10.7	107	75-126	
Styrene	ug/L	10	9.8	98	75-125	
tert-Amylmethyl ether	ug/L	10	9.6	96	75-125	
tert-Butyl Alcohol	ug/L	100	101	101	75-130	
tert-Butylbenzene	ug/L	10	10.7	107	75-131	
Tetrachloroethene	ug/L	10	10.1	101	74-125	
Tetrahydrofuran	ug/L	100	89.4	89	64-138	
Toluene	ug/L	10	10.2	102	74-125	
trans-1,2-Dichloroethene	ug/L	10	10.3	103	68-128	
trans-1,3-Dichloropropene	ug/L	10	9.8	98	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	22.2	89	60-127	
Trichloroethene	ug/L	10	10.1	101	75-127	
Trichlorofluoromethane	ug/L	10	11.2	112	72-133	
Vinyl acetate	ug/L	10	9.2J	92	61-129	
Vinyl chloride	ug/L	10	11.1	111	75-128	
Xylene (Total)	ug/L	30	30.5	102	75-125	
1,2-Dichloroethane-d4 (S)	%.			100	75-136	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341454 3341455

Parameter	Units	10482647001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	10	10	10.1	10.3	101	103	75-140	3	30	
1,1,1-Trichloroethane	ug/L	ND	10	10	10	10.3	100	103	74-136	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	10	10	10.1	10.5	101	105	66-134	4	30	
1,1,2-Trichloroethane	ug/L	ND	10	10	9.9	10.0	99	100	75-126	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341454 3341455

Parameter	Units	10482647001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	10	10	11.3	11.7	113	117	65-146	3	30	
1,1-Dichloroethane	ug/L	ND	10	10	10	10.2	100	102	68-132	2	30	
1,1-Dichloroethene	ug/L	ND	10	10	10.5	10.9	105	109	66-139	4	30	
1,1-Dichloropropene	ug/L	ND	10	10	10.4	10.7	104	107	67-134	3	30	
1,2,3-Trichlorobenzene	ug/L	ND	10	10	10.9	12.4	109	124	67-129	13	30	
1,2,3-Trichloropropane	ug/L	ND	10	10	9.1	9.5	91	95	69-128	4	30	
1,2,4-Trichlorobenzene	ug/L	ND	10	10	10.5	11.9	105	119	65-140	12	30	
1,2,4-Trimethylbenzene	ug/L	ND	10	10	10.3	11.5	103	115	71-133	12	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	25	25	23.6	23.4	94	94	54-138	1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	10	10	9.0	9.3	90	93	68-125	4	30	
1,2-Dichlorobenzene	ug/L	ND	10	10	9.5	10.4	95	104	74-136	9	30	
1,2-Dichloroethane	ug/L	ND	10	10	9.3	9.3	93	93	68-125	0	30	
1,2-Dichloroethene (Total)	ug/L	ND	20	20	19.4	19.9	97	99	71-126	2	30	N2
1,2-Dichloropropane	ug/L	ND	10	10	10.1	9.9	101	99	67-125	1	30	
1,3,5-Trimethylbenzene	ug/L	ND	10	10	10.6	12.0	106	120	68-137	12	30	
1,3-Dichlorobenzene	ug/L	ND	10	10	9.4	10.3	94	103	75-131	9	30	
1,3-Dichloropropane	ug/L	ND	10	10	9.2	9.3	92	93	71-125	1	30	
1,4-Dichlorobenzene	ug/L	ND	10	10	10	11.0	99	109	74-126	10	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	200	200	189J	197J	94	99	68-125		30	
2,2,4-Trimethylpentane	ug/L	ND	10	10	10.6	10.2	106	102	54-129	4	30	N2
2,2-Dichloropropane	ug/L	ND	10	10	10.8	11.4	108	114	69-139	6	30	
2-Butanone (MEK)	ug/L	ND	50	50	42.5	42.6	85	85	54-144	0	30	
2-Chlorotoluene	ug/L	ND	10	10	10.5	11.3	105	113	75-134	8	30	
2-Hexanone	ug/L	ND	50	50	51.3	50.4	102	100	58-137	2	30	
4-Chlorotoluene	ug/L	ND	10	10	9.9	10.7	99	107	72-133	7	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	49.9	48.2	100	96	60-129	3	30	
Acetone	ug/L	ND	50	50	43.2	42.8	86	86	62-132	1	30	
Acrolein	ug/L	ND	100	100	198	194	198	194	30-150	2	30	M1
Acrylonitrile	ug/L	ND	100	100	101	98.1	101	98	68-125	3	30	
Benzene	ug/L	ND	10	10	9.8	10.0	98	100	68-125	3	30	
Bromobenzene	ug/L	ND	10	10	9.9	10.3	99	103	73-126	4	30	
Bromochloromethane	ug/L	ND	10	10	9.4	9.5	94	95	66-143	1	30	
Bromodichloromethane	ug/L	0.59	10	10	9.9	10.1	93	95	74-125	2	30	
Bromoform	ug/L	ND	10	10	10.5	10.5	88	88	64-134	0	30	
Bromomethane	ug/L	ND	10	10	12.8	12.6	128	126	30-150	2	30	
Carbon disulfide	ug/L	ND	10	10	11.2	11.2	112	112	43-147	0	30	
Carbon tetrachloride	ug/L	6.9	10	10	17.9	18.5	110	116	71-143	3	30	
Chlorobenzene	ug/L	ND	10	10	9.7	10	97	100	75-125	2	30	
Chloroethane	ug/L	ND	10	10	10.3	10.7	103	107	75-129	4	30	
Chloroform	ug/L	21.0	10	10	32.1	32.9	111	120	66-132	3	30	
Chloromethane	ug/L	ND	10	10	11.0	11.0	110	110	53-137	0	30	
cis-1,2-Dichloroethene	ug/L	ND	10	10	9.4	9.7	94	97	67-133	3	30	
cis-1,3-Dichloropropene	ug/L	ND	10	10	9.1	9.1	91	91	66-125	0	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341454 3341455

Parameter	Units	10482647001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	10	10	9.6	9.9	96	99	62-132	3	30	
Dibromomethane	ug/L	ND	10	10	9.6	9.7	96	97	67-125	1	30	
Dichlorodifluoromethane	ug/L	ND	10	10	11.8	12.1	118	121	71-142	2	30	
Dichlorofluoromethane	ug/L	ND	10	10	10.3	10.5	103	105	70-131	2	30	N2
Diisopropyl ether	ug/L	ND	10	10	9.3	9.7	93	97	63-131	4	30	
Ethyl-tert-butyl ether	ug/L	ND	10	10	9.5	10.1	95	101	66-128	7	30	
Ethylbenzene	ug/L	ND	10	10	10.7	11.3	107	113	74-126	5	30	
Hexachloro-1,3-butadiene	ug/L	ND	10	10	12.7	12.3	127	123	68-143	3	30	
Isopropylbenzene (Cumene)	ug/L	ND	10	10	10.2	11.2	102	112	74-130	10	30	
m&p-Xylene	ug/L	ND	20	20	20.9	21.7	105	108	69-132	4	30	
Methyl-tert-butyl ether	ug/L	0.90	10	10	9.7	10.2	88	93	65-131	4	30	
Methylene Chloride	ug/L	ND	10	10	9.0	9.2	87	89	57-125	2	30	
n-Butylbenzene	ug/L	ND	10	10	11.8	13.2	118	132	71-131	10	30	M1
n-Propylbenzene	ug/L	ND	10	10	10.3	11.5	103	115	67-138	11	30	
Naphthalene	ug/L	ND	10	10	10.8	11.7	100	109	60-130	8	30	
o-Xylene	ug/L	ND	10	10	9.9	10.3	99	103	69-131	4	30	
p-Isopropyltoluene	ug/L	ND	10	10	11.0	12.7	110	127	72-133	14	30	
sec-Butylbenzene	ug/L	ND	10	10	11.6	12.8	116	128	73-134	10	30	
Styrene	ug/L	ND	10	10	9.8	10.2	98	102	72-125	4	30	
tert-Amylmethyl ether	ug/L	ND	10	10	9.1	9.4	91	94	67-125	4	30	
tert-Butyl Alcohol	ug/L	55.8	100	100	158	163	102	107	64-137	3	30	
tert-Butylbenzene	ug/L	ND	10	10	11.1	12.2	111	122	70-143	10	30	
Tetrachloroethene	ug/L	ND	10	10	10.3	10.9	103	109	72-129	6	30	
Tetrahydrofuran	ug/L	ND	100	100	89.3	92.6	89	93	66-128	4	30	
Toluene	ug/L	ND	10	10	9.9	10.4	98	103	73-125	5	30	
trans-1,2-Dichloroethene	ug/L	ND	10	10	10.0	10.2	100	102	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	ND	10	10	9.5	9.7	95	97	61-136	1	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	25	25	21.9	22.4	88	90	45-128	2	30	
Trichloroethene	ug/L	ND	10	10	9.9	9.8	99	98	74-132	1	30	
Trichlorofluoromethane	ug/L	ND	10	10	11.2	11.4	112	114	75-139	2	30	
Vinyl acetate	ug/L	ND	10	10	9.0J	9.2J	90	92	51-135		30	
Vinyl chloride	ug/L	ND	10	10	11.2	11.5	112	115	68-146	2	30	
Xylene (Total)	ug/L	ND	30	30	30.8	32.0	103	107	67-137	4	30	
1,2-Dichloroethane-d4 (S)	%.						100	99	75-136			
4-Bromofluorobenzene (S)	%.						99	101	75-125			
Toluene-d8 (S)	%.						104	104	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 618922 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481249004, 10481249005

METHOD BLANK: 3342325 Matrix: Water
Associated Lab Samples: 10481249004, 10481249005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/11/19 13:46	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/11/19 13:46	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	07/11/19 13:46	MN
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/11/19 13:46	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/11/19 13:46	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/11/19 13:46	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/11/19 13:46	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/11/19 13:46	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/11/19 13:46	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/11/19 13:46	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/11/19 13:46	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
1,3-Dichloropropane	ug/L	<0.070	1.0	0.070	07/11/19 13:46	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/11/19 13:46	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/11/19 13:46	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/11/19 13:46	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/11/19 13:46	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/11/19 13:46	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/11/19 13:46	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/11/19 13:46	
Acetone	ug/L	<9.2	20.0	9.2	07/11/19 13:46	
Acrolein	ug/L	<1.2	10.0	1.2	07/11/19 13:46	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/11/19 13:46	
Benzene	ug/L	<0.10	0.50	0.10	07/11/19 13:46	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/11/19 13:46	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/11/19 13:46	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/11/19 13:46	
Bromoform	ug/L	<0.80	4.0	0.80	07/11/19 13:46	
Bromomethane	ug/L	<1.8	4.0	1.8	07/11/19 13:46	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/11/19 13:46	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/11/19 13:46	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

METHOD BLANK: 3342325 Matrix: Water
Associated Lab Samples: 10481249004, 10481249005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	1.0	0.17	07/11/19 13:46	
Chloroethane	ug/L	<0.49	1.0	0.49	07/11/19 13:46	
Chloroform	ug/L	<0.45	1.0	0.45	07/11/19 13:46	
Chloromethane	ug/L	<0.16	4.0	0.16	07/11/19 13:46	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/11/19 13:46	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/11/19 13:46	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/11/19 13:46	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/11/19 13:46	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/11/19 13:46	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/11/19 13:46	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/11/19 13:46	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/11/19 13:46	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/11/19 13:46	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/11/19 13:46	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/11/19 13:46	
Naphthalene	ug/L	<0.48	1.0	0.48	07/11/19 13:46	
o-Xylene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
Styrene	ug/L	<0.19	0.50	0.19	07/11/19 13:46	
tert-Amylmethyl ether	ug/L	<0.11	1.0	0.11	07/11/19 13:46	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/11/19 13:46	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/11/19 13:46	
Toluene	ug/L	<0.083	0.50	0.083	07/11/19 13:46	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/11/19 13:46	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/11/19 13:46	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/11/19 13:46	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/11/19 13:46	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/11/19 13:46	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/11/19 13:46	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/11/19 13:46	
1,2-Dichloroethane-d4 (S)	%.	97	75-136		07/11/19 13:46	
4-Bromofluorobenzene (S)	%.	102	75-125		07/11/19 13:46	
Toluene-d8 (S)	%.	97	75-125		07/11/19 13:46	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

LABORATORY CONTROL SAMPLE: 3342326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	9.8	98	68-141	
1,1,1-Trichloroethane	ug/L	10	9.1	91	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	10.1	101	73-125	
1,1,2-Trichloroethane	ug/L	10	9.4	94	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	9.9	99	69-132	
1,1-Dichloroethane	ug/L	10	9.4	94	73-125	
1,1-Dichloroethene	ug/L	10	9.6	96	71-126	
1,1-Dichloropropene	ug/L	10	9.4	94	73-126	
1,2,3-Trichlorobenzene	ug/L	10	8.8	88	72-126	
1,2,3-Trichloropropane	ug/L	10	9.2	92	75-126	
1,2,4-Trichlorobenzene	ug/L	10	8.9	89	71-134	
1,2,4-Trimethylbenzene	ug/L	10	9.6	96	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	23.4	94	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	9.6	96	75-129	
1,2-Dichlorobenzene	ug/L	10	8.9	89	75-129	
1,2-Dichloroethane	ug/L	10	8.7	87	75-125	
1,2-Dichloroethene (Total)	ug/L	20	18.4	92	74-125	N2
1,2-Dichloropropane	ug/L	10	9.6	96	75-125	
1,3,5-Trimethylbenzene	ug/L	10	10.3	103	75-127	
1,3-Dichlorobenzene	ug/L	10	8.8	88	75-126	
1,3-Dichloropropane	ug/L	10	9.0	90	75-125	
1,4-Dichlorobenzene	ug/L	10	9.3	93	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	206	103	72-129	
2,2,4-Trimethylpentane	ug/L	10	9.7	97	72-128	N2
2,2-Dichloropropane	ug/L	10	10.6	106	65-138	
2-Butanone (MEK)	ug/L	50	52.5	105	59-144	
2-Chlorotoluene	ug/L	10	9.5	95	75-127	
2-Hexanone	ug/L	50	56.2	112	73-134	
4-Chlorotoluene	ug/L	10	9.2	92	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	48.9	98	62-141	
Acetone	ug/L	50	58.5	117	60-137	
Acrolein	ug/L	100	93.2	93	60-141	
Acrylonitrile	ug/L	100	100	100	75-129	
Benzene	ug/L	10	9.2	92	73-125	
Bromobenzene	ug/L	10	9.3	93	73-125	
Bromochloromethane	ug/L	10	9.0	90	75-135	
Bromodichloromethane	ug/L	10	8.9	89	75-125	
Bromoform	ug/L	10	8.9	89	67-136	
Bromomethane	ug/L	10	10.3	103	30-150	
Carbon disulfide	ug/L	10	9.6	96	47-137	
Carbon tetrachloride	ug/L	10	9.9	99	75-125	
Chlorobenzene	ug/L	10	9.3	93	75-125	
Chloroethane	ug/L	10	9.7	97	63-136	
Chloroform	ug/L	10	8.9	89	73-128	
Chloromethane	ug/L	10	9.6	96	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.2	92	75-125	
cis-1,3-Dichloropropene	ug/L	10	8.8	88	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

LABORATORY CONTROL SAMPLE: 3342326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	9.3	93	75-125	
Dibromomethane	ug/L	10	9.2	92	75-125	
Dichlorodifluoromethane	ug/L	10	10.5	105	63-132	
Dichlorofluoromethane	ug/L	10	9.6	96	68-127	N2
Diisopropyl ether	ug/L	10	9.1	91	71-131	
Ethyl-tert-butyl ether	ug/L	10	9.5	95	75-125	
Ethylbenzene	ug/L	10	9.9	99	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.3	93	72-134	
Isopropylbenzene (Cumene)	ug/L	10	9.2	92	75-125	
m&p-Xylene	ug/L	20	19.6	98	75-126	
Methyl-tert-butyl ether	ug/L	10	8.8	88	75-125	
Methylene Chloride	ug/L	10	8.6	86	70-125	
n-Butylbenzene	ug/L	10	9.5	95	75-126	
n-Propylbenzene	ug/L	10	9.0	90	73-127	
Naphthalene	ug/L	10	8.6	86	63-128	
o-Xylene	ug/L	10	9.2	92	75-128	
p-Isopropyltoluene	ug/L	10	10.0	100	75-125	
sec-Butylbenzene	ug/L	10	10.2	102	75-126	
Styrene	ug/L	10	9.1	91	75-125	
tert-Amylmethyl ether	ug/L	10	9.0	90	75-125	
tert-Butyl Alcohol	ug/L	100	94.8	95	75-130	
tert-Butylbenzene	ug/L	10	10.2	102	75-131	
Tetrachloroethene	ug/L	10	9.6	96	74-125	
Tetrahydrofuran	ug/L	100	89.2	89	64-138	
Toluene	ug/L	10	9.5	95	74-125	
trans-1,2-Dichloroethene	ug/L	10	9.2	92	68-128	
trans-1,3-Dichloropropene	ug/L	10	9.5	95	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	23.3	93	60-127	
Trichloroethene	ug/L	10	9.3	93	75-127	
Trichlorofluoromethane	ug/L	10	10.3	103	72-133	
Vinyl acetate	ug/L	10	8.7J	87	61-129	
Vinyl chloride	ug/L	10	10.3	103	75-128	
Xylene (Total)	ug/L	30	28.8	96	75-125	
1,2-Dichloroethane-d4 (S)	%.			99	75-136	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342327 3342328

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	10	10	10.3	9.8	103	98	75-140	5	30	
1,1,1-Trichloroethane	ug/L	<0.14	10	10	10.6	10.7	106	107	74-136	1	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	10	10	10.4	11.4	104	114	66-134	9	30	
1,1,2-Trichloroethane	ug/L	<0.18	10	10	10.4	9.4	104	94	75-126	11	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342327 3342328

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	10	10	12.2	11.8	122	118	65-146	3	30	
1,1-Dichloroethane	ug/L	<0.17	10	10	10.3	10.7	103	107	68-132	4	30	
1,1-Dichloroethene	ug/L	<0.16	10	10	11.0	11.0	110	110	66-139	1	30	
1,1-Dichloropropene	ug/L	<0.20	10	10	10.9	10.8	109	108	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	10	10	10.0	12.6	100	126	67-129	23	30	
1,2,3-Trichloropropane	ug/L	<0.26	10	10	10.2	10.1	102	101	69-128	1	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	10	10	9.8	11.7	98	117	65-140	18	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	10	10	10.3	12.1	103	121	71-133	16	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	25	25	24.5	25.4	98	102	54-138	4	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	10	10	9.9	9.1	99	91	68-125	9	30	
1,2-Dichlorobenzene	ug/L	<0.14	10	10	9.2	10.5	92	105	74-136	14	30	
1,2-Dichloroethane	ug/L	<0.22	10	10	9.4	9.7	94	97	68-125	3	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	20	20	20.6	20.4	103	102	71-126	1	30	N2
1,2-Dichloropropane	ug/L	<0.16	10	10	10.1	10.3	101	103	67-125	2	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	10	10	11.0	12.5	110	125	68-137	13	30	
1,3-Dichlorobenzene	ug/L	<0.16	10	10	9.6	10.9	96	109	75-131	13	30	
1,3-Dichloropropane	ug/L	<0.070	10	10	9.8	8.7	98	87	71-125	12	30	
1,4-Dichlorobenzene	ug/L	<0.17	10	10	9.9	11.4	99	114	74-126	15	30	
1,4-Dioxane (p-Dioxane)	ug/L	33.7J	200	200	191J	205	79	86	68-125		30	
2,2,4-Trimethylpentane	ug/L	<0.19	10	10	11.7	11.0	117	110	54-129	7	30	N2
2,2-Dichloropropane	ug/L	<0.17	10	10	11.4	11.3	114	113	69-139	1	30	
2-Butanone (MEK)	ug/L	<0.99	50	50	46.7	49.9	93	100	54-144	7	30	
2-Chlorotoluene	ug/L	<0.16	10	10	10.5	12.0	105	120	75-134	13	30	
2-Hexanone	ug/L	<0.88	50	50	54.1	50.6	108	101	58-137	7	30	
4-Chlorotoluene	ug/L	<0.13	10	10	10.1	11.4	101	114	72-133	12	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	50	50	51.3	50.5	103	101	60-129	2	30	
Acetone	ug/L	<9.2	50	50	44.5	46.9	89	94	62-132	5	30	
Acrolein	ug/L	<1.2	100	100	199	203	199	203	30-150	2	30	M1
Acrylonitrile	ug/L	<0.91	100	100	101	104	101	104	68-125	3	30	
Benzene	ug/L	<0.10	10	10	10.3	10.1	103	101	68-125	3	30	
Bromobenzene	ug/L	<0.21	10	10	9.9	10.8	99	108	73-126	8	30	
Bromochloromethane	ug/L	<0.27	10	10	9.2	10.0	92	100	66-143	8	30	
Bromodichloromethane	ug/L	0.52	10	10	10.1	10.3	96	98	74-125	2	30	
Bromoform	ug/L	<0.80	10	10	10.1	9.7	101	97	64-134	5	30	
Bromomethane	ug/L	<1.8	10	10	10.1	10.7	101	107	30-150	7	30	
Carbon disulfide	ug/L	0.20J	10	10	11.1	11.0	109	108	43-147	1	30	
Carbon tetrachloride	ug/L	5.9	10	10	17.1	17.3	111	113	71-143	1	30	
Chlorobenzene	ug/L	<0.17	10	10	10.0	9.4	100	94	75-125	6	30	
Chloroethane	ug/L	<0.49	10	10	10.2	10.2	102	102	75-129	0	30	
Chloroform	ug/L	21.3	10	10	30.7	31.9	94	106	66-132	4	30	
Chloromethane	ug/L	<0.16	10	10	10.3	10.4	103	104	53-137	1	30	
cis-1,2-Dichloroethene	ug/L	<0.15	10	10	10.1	10.0	101	100	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	<0.20	10	10	9.3	9.9	93	99	66-125	6	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342327 3342328

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	10	10	9.8	9.1	98	91	62-132	7	30	
Dibromomethane	ug/L	<0.16	10	10	9.6	10.1	96	101	67-125	5	30	
Dichlorodifluoromethane	ug/L	<0.23	10	10	11.6	11.9	116	119	71-142	2	30	
Dichlorofluoromethane	ug/L	<0.14	10	10	9.9	10	99	100	70-131	0	30	N2
Diisopropyl ether	ug/L	<0.13	10	10	9.6	9.9	96	99	63-131	3	30	
Ethyl-tert-butyl ether	ug/L	<0.18	10	10	9.9	10.0	99	100	66-128	1	30	
Ethylbenzene	ug/L	<0.14	10	10	10.9	10.5	109	105	74-126	4	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	10	10	11.9	12.1	119	121	68-143	2	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	10	10	10.3	10.4	103	104	74-130	1	30	
m&p-Xylene	ug/L	<0.31	20	20	21.5	20.5	108	103	69-132	5	30	
Methyl-tert-butyl ether	ug/L	1.5	10	10	10.9	11.1	94	95	65-131	1	30	
Methylene Chloride	ug/L	<0.98	10	10	9.3	9.4	93	94	57-125	1	30	
n-Butylbenzene	ug/L	<0.24	10	10	11.0	12.7	110	127	71-131	14	30	
n-Propylbenzene	ug/L	<0.10	10	10	10.2	11.7	102	117	67-138	13	30	
Naphthalene	ug/L	<0.48	10	10	8.8	11.0	88	110	60-130	22	30	
o-Xylene	ug/L	<0.16	10	10	9.8	9.5	98	95	69-131	4	30	
p-Isopropyltoluene	ug/L	<0.15	10	10	11.3	13.0	113	130	72-133	15	30	
sec-Butylbenzene	ug/L	<0.15	10	10	11.7	13.1	117	131	73-134	12	30	
Styrene	ug/L	<0.19	10	10	10.0	9.5	100	95	72-125	6	30	
tert-Amylmethyl ether	ug/L	<0.11	10	10	9.5	10.0	95	100	67-125	5	30	
tert-Butyl Alcohol	ug/L	134	100	100	240	256	106	121	64-137	6	30	
tert-Butylbenzene	ug/L	<0.15	10	10	11.3	12.6	113	126	70-143	11	30	
Tetrachloroethene	ug/L	<0.17	10	10	10.7	10.3	107	103	72-129	3	30	
Tetrahydrofuran	ug/L	<2.2	100	100	95.2	99.9	95	100	66-128	5	30	
Toluene	ug/L	<0.083	10	10	10.8	10	108	100	73-125	8	30	
trans-1,2-Dichloroethene	ug/L	<0.12	10	10	10.5	10.3	105	103	62-137	1	30	
trans-1,3-Dichloropropene	ug/L	<0.18	10	10	10.2	9.4	102	94	61-136	7	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	25	25	25.1	25.0	100	100	45-128	0	30	
Trichloroethene	ug/L	<0.15	10	10	10.3	10.5	103	105	74-132	2	30	
Trichlorofluoromethane	ug/L	<0.23	10	10	11.1	11.1	111	111	75-139	1	30	
Vinyl acetate	ug/L	<1.1	10	10	9.0J	9.5J	90	95	51-135		30	
Vinyl chloride	ug/L	<0.092	10	10	11.2	10.9	112	109	68-146	2	30	
Xylene (Total)	ug/L	<0.31	30	30	31.3	30.0	104	100	67-137	4	30	
1,2-Dichloroethane-d4 (S)	%.						100	98	75-136			
4-Bromofluorobenzene (S)	%.						102	102	75-125			
Toluene-d8 (S)	%.						106	94	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 618408 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005

METHOD BLANK: 3339767 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/10/19 11:46	

LABORATORY CONTROL SAMPLE & LCSD: 3339768 3339769

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.1	42.4	105	106	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339770 3339771

Parameter	Units	10481219008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	196	40	40	239	242	108	117	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339772 3339773

Parameter	Units	10481283006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	87100 ug/L	40	40	125	130	96	107	80-120	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 618410 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 3339776 Matrix: Water
Associated Lab Samples: 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/10/19 07:44	

LABORATORY CONTROL SAMPLE & LCSD: 3339777 3339778

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.0	42.0	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339779 3339780

Parameter	Units	10481249006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	79.5	40	40	122	121	106	104	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339781 3339782

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	254	40	40	309	318	137	158	80-120	3	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 617188 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011

METHOD BLANK: 3333844 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0J	10.0	5.0	07/03/19 08:41	

LABORATORY CONTROL SAMPLE: 3333845

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	966	97	80-120	

SAMPLE DUPLICATE: 3333846

Parameter	Units	10481219002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	195	202	4	5	

SAMPLE DUPLICATE: 3333847

Parameter	Units	10481219003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	562	534	5	5	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 617443 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10481249012, 10481249013

METHOD BLANK: 3335255 Matrix: Water
Associated Lab Samples: 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	07/03/19 14:23	

LABORATORY CONTROL SAMPLE: 3335256

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	990	99	80-120	

SAMPLE DUPLICATE: 3335257

Parameter	Units	10481249014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	278	288	4	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 148126 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 655460 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	07/03/19 16:12	

LABORATORY CONTROL SAMPLE: 655461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.22	109	90-110	

MATRIX SPIKE SAMPLE: 655463

Parameter	Units	10481249014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.0088J	2	75-125	M1

SAMPLE DUPLICATE: 655462

Parameter	Units	10481249014 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 616503 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 3330230 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	06/28/19 17:19	
Nitrate as N	mg/L	<0.012	0.10	0.012	06/28/19 17:19	
Sulfate	mg/L	0.49J	1.2	0.28	06/28/19 17:19	

LABORATORY CONTROL SAMPLE: 3330231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.6	101	90-110	
Nitrate as N	mg/L	1	0.96	96	90-110	
Sulfate	mg/L	12.5	12.0	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3330232 3330233

Parameter	Units	10481249002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.4	12.5	12.5	13.7	13.7	98	98	90-110	0	20	
Nitrate as N	mg/L	0.22	1	1	1.2	1.2	96	96	90-110	0	20	
Sulfate	mg/L	1.9	12.5	12.5	14.6	14.5	101	101	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3330234 3330235

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.5	12.5	12.5	20.6	20.6	89	89	90-110	0	20	M1
Nitrate as N	mg/L	<0.012	1	1	0.98	0.98	98	98	90-110	0	20	
Sulfate	mg/L	5.1	12.5	12.5	17.3	17.3	97	98	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 617810 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 3336997 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	07/06/19 14:57	FS

LABORATORY CONTROL SAMPLE: 3336998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	102	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3336999 3337000

Parameter	Units	10481249013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	5.3	5	5	11.0	10.5	113	104	90-110	4	20	E,M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337001 3337002

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	0.99	1.0	99	101	90-110	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 618373 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 3339410 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/10/19 15:26	

LABORATORY CONTROL SAMPLE: 3339411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	295	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339412 3339413

Parameter	Units	10481000008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	247	238	95	92	90-110	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339414 3339415

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	237	241	92	94	90-110	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

QC Batch: 169858 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

METHOD BLANK: 671395 Matrix: Water
Associated Lab Samples: 10481249002, 10481249003, 10481249004, 10481249005, 10481249006, 10481249007, 10481249008, 10481249009, 10481249010, 10481249011, 10481249012, 10481249013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	07/08/19 15:12	

LABORATORY CONTROL SAMPLE: 671396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.3	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 671397 671398

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.6	25	25	27.0	27.2	102	102	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 671399 671400

Parameter	Units	10481444004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.1	25	25	26.3	26.1	101	100	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
FS	The sample was filtered in the laboratory prior to analysis.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
P8	Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

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METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481249002	MW6S-GW-062719	RSK 175	617222		
10481249003	MW11S-GW-062719	RSK 175	617222		
10481249004	MW12S-GW-062719	RSK 175	617222		
10481249005	MW10S-GW-062719	RSK 175	617222		
10481249006	MW9S-GW-062719	RSK 175	617371		
10481249007	MW25S-GW-062719	RSK 175	617371		
10481249008	MW24S-GW-062719	RSK 175	617524		
10481249009	MW8S-GW-062719	RSK 175	617524		
10481249010	MW7S-GW-062719	RSK 175	617524		
10481249011	MW1S-GW-062719	RSK 175	617524		
10481249012	MW19D-GW-062719	RSK 175	617524		
10481249013	MW-FD3-GW-062719	RSK 175	617524		
10481249002	MW6S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249003	MW11S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249004	MW12S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249005	MW10S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249006	MW9S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249007	MW25S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249008	MW24S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249009	MW8S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249010	MW7S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249011	MW1S-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249012	MW19D-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249013	MW-FD3-GW-062719	EPA 3010	616661	EPA 6010D	618837
10481249002	MW6S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249003	MW11S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249004	MW12S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249005	MW10S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249006	MW9S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249007	MW25S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249008	MW24S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249009	MW8S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249010	MW7S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249011	MW1S-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249012	MW19D-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249013	MW-FD3-GW-062719	EPA 7470A	616705	EPA 7470A	618852
10481249001	TRIP BLANK 1	EPA 8260B	616759		
10481249002	MW6S-GW-062719	EPA 8260B	617460		
10481249003	MW11S-GW-062719	EPA 8260B	617460		
10481249004	MW12S-GW-062719	EPA 8260B	618922		
10481249005	MW10S-GW-062719	EPA 8260B	618922		
10481249006	MW9S-GW-062719	EPA 8260B	618674		
10481249007	MW25S-GW-062719	EPA 8260B	618674		
10481249008	MW24S-GW-062719	EPA 8260B	618674		
10481249009	MW8S-GW-062719	EPA 8260B	618674		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481249010	MW7S-GW-062719	EPA 8260B	618674		
10481249011	MW1S-GW-062719	EPA 8260B	618674		
10481249012	MW19D-GW-062719	EPA 8260B	618674		
10481249013	MW-FD3-GW-062719	EPA 8260B	618674		
10481249002	MW6S-GW-062719	SM 2320B	618408		
10481249003	MW11S-GW-062719	SM 2320B	618408		
10481249004	MW12S-GW-062719	SM 2320B	618408		
10481249005	MW10S-GW-062719	SM 2320B	618408		
10481249006	MW9S-GW-062719	SM 2320B	618410		
10481249007	MW25S-GW-062719	SM 2320B	618410		
10481249008	MW24S-GW-062719	SM 2320B	618410		
10481249009	MW8S-GW-062719	SM 2320B	618410		
10481249010	MW7S-GW-062719	SM 2320B	618410		
10481249011	MW1S-GW-062719	SM 2320B	618410		
10481249012	MW19D-GW-062719	SM 2320B	618410		
10481249013	MW-FD3-GW-062719	SM 2320B	618410		
10481249002	MW6S-GW-062719	SM 2540C	617188		
10481249003	MW11S-GW-062719	SM 2540C	617188		
10481249004	MW12S-GW-062719	SM 2540C	617188		
10481249005	MW10S-GW-062719	SM 2540C	617188		
10481249006	MW9S-GW-062719	SM 2540C	617188		
10481249007	MW25S-GW-062719	SM 2540C	617188		
10481249008	MW24S-GW-062719	SM 2540C	617188		
10481249009	MW8S-GW-062719	SM 2540C	617188		
10481249010	MW7S-GW-062719	SM 2540C	617188		
10481249011	MW1S-GW-062719	SM 2540C	617188		
10481249012	MW19D-GW-062719	SM 2540C	617443		
10481249013	MW-FD3-GW-062719	SM 2540C	617443		
10481249002	MW6S-GW-062719	SM 4500-S-2 D	148126		
10481249003	MW11S-GW-062719	SM 4500-S-2 D	148126		
10481249004	MW12S-GW-062719	SM 4500-S-2 D	148126		
10481249005	MW10S-GW-062719	SM 4500-S-2 D	148126		
10481249006	MW9S-GW-062719	SM 4500-S-2 D	148126		
10481249007	MW25S-GW-062719	SM 4500-S-2 D	148126		
10481249008	MW24S-GW-062719	SM 4500-S-2 D	148126		
10481249009	MW8S-GW-062719	SM 4500-S-2 D	148126		
10481249010	MW7S-GW-062719	SM 4500-S-2 D	148126		
10481249011	MW1S-GW-062719	SM 4500-S-2 D	148126		
10481249012	MW19D-GW-062719	SM 4500-S-2 D	148126		
10481249013	MW-FD3-GW-062719	SM 4500-S-2 D	148126		
10481249002	MW6S-GW-062719	EPA 300.0	616503		
10481249003	MW11S-GW-062719	EPA 300.0	616503		
10481249004	MW12S-GW-062719	EPA 300.0	616503		
10481249005	MW10S-GW-062719	EPA 300.0	616503		
10481249006	MW9S-GW-062719	EPA 300.0	616503		
10481249007	MW25S-GW-062719	EPA 300.0	616503		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481249

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481249008	**MW24S-GW-062719**	EPA 300.0	616503		
10481249009	**MW8S-GW-062719**	EPA 300.0	616503		
10481249010	**MW7S-GW-062719**	EPA 300.0	616503		
10481249011	**MW1S-GW-062719**	EPA 300.0	616503		
10481249012	**MW19D-GW-062719**	EPA 300.0	616503		
10481249013	**MW-FD3-GW-062719**	EPA 300.0	616503		
10481249002	**MW6S-GW-062719**	EPA 353.2	617810		
10481249003	**MW11S-GW-062719**	EPA 353.2	617810		
10481249004	**MW12S-GW-062719**	EPA 353.2	617810		
10481249005	**MW10S-GW-062719**	EPA 353.2	617810		
10481249006	**MW9S-GW-062719**	EPA 353.2	617810		
10481249007	**MW25S-GW-062719**	EPA 353.2	617810		
10481249008	**MW24S-GW-062719**	EPA 353.2	617810		
10481249009	**MW8S-GW-062719**	EPA 353.2	617810		
10481249010	**MW7S-GW-062719**	EPA 353.2	617810		
10481249011	**MW1S-GW-062719**	EPA 353.2	617810		
10481249012	**MW19D-GW-062719**	EPA 353.2	617810		
10481249013	**MW-FD3-GW-062719**	EPA 353.2	617810		
10481249002	**MW6S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249003	**MW11S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249004	**MW12S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249005	**MW10S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249006	**MW9S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249007	**MW25S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249008	**MW24S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249009	**MW8S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249010	**MW7S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249011	**MW1S-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249012	**MW19D-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249013	**MW-FD3-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249002	**MW6S-GW-062719**	SM 5310C	169858		
10481249003	**MW11S-GW-062719**	SM 5310C	169858		
10481249004	**MW12S-GW-062719**	SM 5310C	169858		
10481249005	**MW10S-GW-062719**	SM 5310C	169858		
10481249006	**MW9S-GW-062719**	SM 5310C	169858		
10481249007	**MW25S-GW-062719**	SM 5310C	169858		
10481249008	**MW24S-GW-062719**	SM 5310C	169858		
10481249009	**MW8S-GW-062719**	SM 5310C	169858		
10481249010	**MW7S-GW-062719**	SM 5310C	169858		
10481249011	**MW1S-GW-062719**	SM 5310C	169858		
10481249012	**MW19D-GW-062719**	SM 5310C	169858		
10481249013	**MW-FD3-GW-062719**	SM 5310C	169858		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: CH2M Hill	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR
Spokane, WA 99201	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Email:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 9900758938
Phone: Fax:	Project Name: Freeman WA-Grain Handling Facility	Pace Project Manager: Jennifer Gross
Requested Due Date: *10 Day Standard*	Project #: 1497	Pace Profile #: *36447 / 4*

Regulatory Agency

State / Location: WA / Freeman

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB) C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Low Level VOCs by 8260	6010/7470 T22 Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	
	MATRIX: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS													Requested Analysis Filtered (Y/N)	Y												
1	TRIP BLANK 1	WT	G	06/27/19	0700		3				X				X												~~001~~
2	MW6S-GW-062719			06/27/19	0740		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			001
3	MW11S-GW-062719			06/27/19	0820		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			002
4	MW12S-GW-062719			06/27/19	0845		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			003
5	MW10S-GW-062719			06/27/19	0915		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			004
6	MW9S-GW-062719			06/27/19	1015		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			005
7	MW25S-GW-062719			06/27/19	1045		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			006
8	MW24S-GW-062719			06/27/19	1110		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			007
9	MW8S-GW-062719			06/27/19	1145		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			008
10	MW7S-GW-062719			06/27/19	1200		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			009
11	MW1S-GW-062719			06/27/19	1230		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			010
12	~~Marlow 2~~ MW19D-GW-062719			06/27/19	1500		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			011
13	~~ADDITIONAL COMMENTS~~ MW-FD3-GW-062719			06/27/19	0800		3	TIME	X	X	X	X	ACCEPTED BY / AFFILIATION	X	X	X	X	X	DATE	X	X	TIME			SAMPLE CONDITIONS		
				Natalie Dowdy	06/27/19	1700		AS4 Pace											6/28/19		0840	0.6	Y	Y	Y	
				JACOBS																		2.9	Y			
																						5.5	Y			
																						4.2	Y	↓	↓	

Short hold analyses are in bold

*Field filtered by client

WO# : 10481249

10481249

SAMPLER NAME AND SIGNATURE		
PRINT Name of SAMPLER:	Natalie Dowdy	
SIGNATURE of SAMPLER:	Natalie Dowdy	DATE Signed: 06/27/19

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 09May2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.28	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CH2M Hill

Project #: WO#: 10481249

PM: JMG Due Date: 07/03/19

CLIENT: UPRR_Jacobs

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial See Exception ☑

Tracking Number: 4934 3730 8017

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☑ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.8, 3.1, 5.7, 4.4 °C

Correction Factor: -0.2 **Cooler Temp Corrected w/temp blank:** 0.6, 2.9, 5.5, 4.2 °C

Average Corrected Temp (no temp blank only): _____ °C See Exceptions ☐

USDA Regulated Soil: (☑ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: ASH 6-28-19

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☑ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other _____
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☑ Yes ☑ Yes	☐ No ☐ No		8. Sample & RSK received broken (1/3)
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other _____	☑ Yes	☐ No		11. If no, write ID/ Date/Time on Container Below: See Exception ☐
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	12. Sample # 1-13;
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	☐ NaOH ☑ HNO_3 1/1 ☑ H_2SO_4 1/1 ☑ Zinc Acetate 1/1
Exceptions: VOA, Coliform, TOC, DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS JMG 070119	☒ Yes	☐ No	☑ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# See Exception ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
				13. See Exception ☑
Headspace in VOA Vials (greater than 6mm)?	☑ Yes	☐ No	☐ N/A	
Trip Blank Present?	☐ Yes	☑ No	☐ N/A	14. Trip blanks not present ASH 6-28-19
Trip Blank Custody Seals Present?	☐ Yes	☑ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 213017

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Mark Ochsner Date/Time: 06/27/18

Comments/Resolution: WA certs not required for RSK or sulfide.

Field Data Required? ☐ Yes ☐ No

Project Manager Review: Jenni Gross Date: 07/01/19

Note: Whenever there is a discrepancy affecting [illegible] compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: _____

Pace Analytical	Document Name: **Headspace Exception**	Document Revised: 17Dec2018 Page 1 of 1
	Document No.: **F-MN-C-276-Rev.01**	Issuing Authority: Pace Minnesota Quality Office

Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
MW24S-GW-062719	1	0	2	3	Y

Pace Analytical	Document Name: SCUR Exception Form – Coolers Above 6°C	Document Revised: 08Apr2019 Page 1 of 1
	Document No.: F-MN-C-298-Rev.02	Issuing Authority: Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions: **Workorder #:** 10481249

Out of Temp Sample IDs	Container Type	# of Containers
~~4934~~		

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature

4934	3730	8017	0.6
"	"	8006	2.9
"	"	8028	5.5
4486	7792	7107	4.2

Other Issues

Issue Type: ID doesn't match COC

Sample ID	Container Type	# of Containers
FD4-GW-062719	BP2Z	1
	BP2U	1
	BP3N	1
	BP3S	1
	BP4U	1
	VG9S	2
	VG9H	3
	VSG	3

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

PRE

Chain of Custody

WO# : 12131532

12131532

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes [ ] No

Workorder: 10481249 **Workorder Name:** 1497 Freeman WA-Grain Handling

Owner Received Date: 6/28/2019 **Results Requested By:** 7/15/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 VG9S	5632354 / 5310 TOC	LAB USE ONLY
1	MW6S-GW-062719	PS	6/27/2019 07:40	10481249002	Water	2	X	
2	MW11S-GW-0627219	PS	6/27/2019 08:20	10481249003	Water	2	X	
3	MW12S-GW-0627219	PS	6/27/2019 08:45	10481249004	Water	2	X	
4	MW10S-GW-0627219	PS	6/27/2019 09:15	10481249005	Water	2	X	
5	MW9S-GW-0627219	PS	6/27/2019 10:15	10481249006	Water	2	X	
6	MW25S-GW-0627219	PS	6/27/2019 10:45	10481249007	Water	2	X	
7	MW24S-GW-0627219	PS	6/27/2019 11:10	10481249008	Water	2	X	
8	MW8S-GW-0627219	PS	6/27/2019 11:45	10481249009	Water	2	X	
9	MW7S-GW-0627219	PS	6/27/2019 12:00	10481249010	Water	2	X	
10	MW1S-GW-0627219	PS	6/27/2019 12:30	10481249011	Water	2	X	
11	MW19D-GW-0627219	PS	6/27/2019 15:00	10481249012	Water	2	X	
12	MW19D-FD3-0627219	PS	6/27/2019 08:00	10481249013	Water	2	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	Aaron Pace 7/2/19	1710	7-2-19	1900
2	7-3-19	0:30	7/3/19	8:25
3				

Comments

Cooler Temperature on Receipt 0.7 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #:

WO#: 12131532

PM: CLJ **Due Date: 07/17/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.4 Cooler Temp Corrected °C: 0.7 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 7/3/19 DC

Comments: Bm 7/3/19

					Comments
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.	
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.	
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.	
Sampler Name and Signature on COC?	☐ Yes	☒ No	☐ N/A	4.	
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.	If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.	
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.	
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.	
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.	
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A		
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.	
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11.	Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.	
-Includes Date/Time/ID/Analysis Matrix: WT					
All containers needing acid/base preservation properly preserved?	☒ Yes	☐ No	☐ N/A	13.	Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	14.	
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	15.	
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	16.	
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A		
Pace Trip Blank Lot # (if purchased):					

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Nikki Jarvis Date: 7/3/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

WO# : 20110976

20110976

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: W

Cert. Needed: ☐ Yes ☒ No

Workorder: 10481249 **Workorder Name:** 1497 Freeman WA-Grain Handling

Owner Received Date: 6/28/2019 **Results Requested By:** 7/15/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	5636267 / 4500 Sulfide	LAB USE ONLY
1	MW6S-GW-062719	PS	6/27/2019 07:40	10481249002	Water	1	X	
2	MW11S-GW-0627219	PS	6/27/2019 08:20	10481249003	Water	1	X	
3	MW12S-GW-0627219	PS	6/27/2019 08:45	10481249004	Water	1	X	
4	MW10S-GW-0627219	PS	6/27/2019 09:15	10481249005	Water	1	X	
5	MW9S-GW-0627219	PS	6/27/2019 10:15	10481249006	Water	1	X	
6	MW25S-GW-0627219	PS	6/27/2019 10:45	10481249007	Water	1	X	
7	MW24S-GW-0627219	PS	6/27/2019 11:10	10481249008	Water	1	X	
8	MW8S-GW-0627219	PS	6/27/2019 11:45	10481249009	Water	1	X	
9	MW7S-GW-0627219	PS	6/27/2019 12:00	10481249010	Water	1	X	
10	MW1S-GW-0627219	PS	6/27/2019 12:30	10481249011	Water	1	X	
11	MW19D-GW-0627219	PS	6/27/2019 15:00	10481249012	Water	1	X	
12	MW19D-FD3-0627219	PS	6/27/2019 08:00	10481249013	Water	1	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1		7/1/19 1715		
2		7-2-19 0820		7-2-19 0820
3				

Comments: SHORT HOLD

Cooler Temperature on Receipt 1.4 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO#: 20110976

PM: CMM Due Date: 07/12/19

CLIENT: PASI-MINN

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Re

Project #: [illegible]

Courier: ☐ Pace Courier ☐ Hired Courier ☒ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☒Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☒ Therm Fisher IR 7

Type of Ice: (Wet) Blue None Samples on ice: [see COC]

Cooler Temperature: [see COC] Temp should be above freezing to 6°C

Date and Initials of person examining contents: 07-02-19 NP

Temp must be measured from Temperature blank when present

			Comments:
Temperature Blank Present"?	☐Yes	☒No ☐N/A	1
Chain of Custody Present:	☒Yes	☐No ☐N/A	2
Chain of Custody Complete:	☒Yes	☐No ☐N/A	3
Chain of Custody Relinquished:	☒Yes	☐No ☐N/A	4
Sampler Name & Signature on COC:	☒Yes	☐No ☐N/A	5
Samples Arrived within Hold Time:	☒Yes	☐No ☐N/A	6
Sufficient Volume:	☒Yes	☐No ☐N/A	7
Correct Containers Used:	☒Yes	☐No ☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☐No ☒N/A	9
Sample Labels match COC:	☒Yes	☐No ☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☒Yes	☐No ☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☒Yes	☐No ☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☒Yes	☐No ☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☒N/A	14
Trip Blank Present:	☐Yes	☒No	15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 16, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 01, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10481444001	**MW13S-GW-062819**	Water	06/28/19 07:55	07/01/19 08:40
10481444002	**TRIP BLANK 1**	Water	06/28/19 07:00	07/01/19 08:40
10481444003	**FD5-GW-062819**	Water	06/28/19 14:00	07/01/19 08:40
10481444004	**W26-GW-062819**	Water	06/28/19 08:50	07/01/19 08:40
10481444005	**W20-GW-062819**	Water	06/28/19 10:20	07/01/19 08:40

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SAMPLE ANALYTE COUNT

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10481444001	**MW13S-GW-062819**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481444002	**TRIP BLANK 1**	EPA 8260B	DS2	83	PASI-M
10481444003	**FD5-GW-062819**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481444004	**W26-GW-062819**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10481444005	**W20-GW-062819**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

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SUMMARY OF DETECTION

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481444001	**MW13S-GW-062819**					
EPA 6010D	Barium, Dissolved	60.8	ug/L	10.0	07/11/19 16:11	
EPA 6010D	Beryllium, Dissolved	0.38J	ug/L	5.0	07/11/19 16:11	B
EPA 6010D	Chromium, Dissolved	1.5J	ug/L	10.0	07/11/19 16:11	
EPA 6010D	Cobalt, Dissolved	0.58J	ug/L	10.0	07/11/19 16:11	
EPA 6010D	Nickel, Dissolved	2.7J	ug/L	20.0	07/11/19 16:11	
EPA 6010D	Vanadium, Dissolved	10.4J	ug/L	15.0	07/11/19 16:11	
EPA 6010D	Zinc, Dissolved	14.7J	ug/L	20.0	07/11/19 16:11	
EPA 8260B	Acetone	10.4J	ug/L	20.0	07/11/19 04:28	
EPA 8260B	Carbon tetrachloride	0.56	ug/L	0.50	07/11/19 04:28	
SM 2320B	Alkalinity, Total as CaCO3	152	mg/L	5.0	07/11/19 09:03	
SM 2540C	Total Dissolved Solids	200	mg/L	10.0	07/05/19 10:00	
EPA 300.0	Chloride	1.2J	mg/L	1.2	07/03/19 05:43	
EPA 300.0	Nitrate as N	0.38	mg/L	0.10	07/03/19 05:43	H3
EPA 300.0	Sulfate	5.8	mg/L	1.2	07/03/19 05:43	
EPA 353.2	Nitrogen, NO2 plus NO3	0.43	mg/L	0.10	07/11/19 13:34	
SM 5310C	Total Organic Carbon	0.73J	mg/L	1.0	07/08/19 20:09	
10481444003	**FD5-GW-062819**					
EPA 6010D	Barium, Dissolved	60.7	ug/L	10.0	07/11/19 16:12	
EPA 6010D	Beryllium, Dissolved	0.24J	ug/L	5.0	07/11/19 16:12	B
EPA 6010D	Chromium, Dissolved	1.4J	ug/L	10.0	07/11/19 16:12	
EPA 6010D	Cobalt, Dissolved	2.1J	ug/L	10.0	07/11/19 16:12	
EPA 6010D	Vanadium, Dissolved	10.2J	ug/L	15.0	07/11/19 16:12	
EPA 6010D	Zinc, Dissolved	11.8J	ug/L	20.0	07/11/19 16:12	
EPA 8260B	Carbon tetrachloride	0.35J	ug/L	0.50	07/11/19 04:44	
SM 2320B	Alkalinity, Total as CaCO3	154	mg/L	5.0	07/11/19 09:10	
SM 2540C	Total Dissolved Solids	196	mg/L	10.0	07/05/19 10:00	
EPA 300.0	Chloride	1.2J	mg/L	1.2	07/03/19 05:59	
EPA 300.0	Nitrate as N	0.38	mg/L	0.10	07/03/19 05:59	H3
EPA 300.0	Sulfate	6.2	mg/L	1.2	07/03/19 05:59	
EPA 353.2	Nitrogen, NO2 plus NO3	0.42	mg/L	0.10	07/11/19 13:36	
SM 5310C	Total Organic Carbon	0.78J	mg/L	1.0	07/08/19 21:48	
10481444004	**W26-GW-062819**					
EPA 6010D	Barium, Dissolved	6.5J	ug/L	10.0	07/11/19 16:15	B
EPA 6010D	Beryllium, Dissolved	0.19J	ug/L	5.0	07/11/19 16:15	B
EPA 6010D	Cadmium, Dissolved	0.48J	ug/L	3.0	07/11/19 16:15	
EPA 6010D	Cobalt, Dissolved	2.0J	ug/L	10.0	07/11/19 16:15	
EPA 6010D	Vanadium, Dissolved	6.7J	ug/L	15.0	07/11/19 16:15	
EPA 6010D	Zinc, Dissolved	83.5	ug/L	20.0	07/11/19 16:15	
EPA 8260B	Carbon tetrachloride	31.8	ug/L	0.50	07/11/19 05:01	
EPA 8260B	Chloroform	2.5	ug/L	1.0	07/11/19 05:01	
EPA 8260B	Isopropylbenzene (Cumene)	0.53	ug/L	0.50	07/11/19 05:01	
EPA 8260B	Toluene	0.14J	ug/L	0.50	07/11/19 05:01	
SM 2320B	Alkalinity, Total as CaCO3	150	mg/L	5.0	07/11/19 10:01	
SM 2540C	Total Dissolved Solids	223	mg/L	10.0	07/05/19 10:00	
EPA 300.0	Chloride	4.1	mg/L	1.2	07/03/19 06:29	
EPA 300.0	Nitrate as N	2.8	mg/L	0.10	07/03/19 06:29	H3

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481444004	**W26-GW-062819**					
EPA 300.0	Sulfate	9.3	mg/L	1.2	07/03/19 06:29	
EPA 353.2	Nitrogen, NO2 plus NO3	2.9	mg/L	0.50	07/11/19 14:49	
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	07/08/19 20:51	
10481444005	**W20-GW-062819**					
RSK 175	Methane	2870	ug/L	10.0	07/05/19 18:31	E
EPA 6010D	Barium, Dissolved	23.1	ug/L	10.0	07/11/19 16:27	
EPA 6010D	Nickel, Dissolved	1.5J	ug/L	20.0	07/11/19 16:27	
SM 2320B	Alkalinity, Total as CaCO3	63.0	mg/L	5.0	07/11/19 10:09	
SM 2540C	Total Dissolved Solids	80.0	mg/L	10.0	07/05/19 10:00	
SM 4500-S-2 D	Sulfide, Total	0.0068J	mg/L	0.020	07/09/19 12:14	H3
EPA 300.0	Chloride	1.8	mg/L	1.2	07/03/19 06:44	
EPA 300.0	Sulfate	0.54J	mg/L	1.2	07/03/19 06:44	
SM 5310C	Total Organic Carbon	3.1	mg/L	1.0	07/08/19 21:34	

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 617735

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- DUP (Lab ID: 3336526)
  - Methane
- W20-GW-062819 (Lab ID: 10481444005)
  - Methane

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 616661

B: Analyte was detected in the associated method blank.
- BLANK for HBN 616661 [MPRP/943 (Lab ID: 3331252)
  - Barium, Dissolved
  - Beryllium, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 618674

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3341452)
  - 1,2,4-Trichlorobenzene
  - Hexachloro-1,3-butadiene
  - Naphthalene
  - n-Butylbenzene

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 618674

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10482647001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3341454)
  - Acrolein
- MSD (Lab ID: 3341455)
  - Acrolein
  - n-Butylbenzene

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 16, 2019

QC Batch: 618922

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3342327)
  - Acrolein
- MSD (Lab ID: 3342328)
  - Acrolein

Additional Comments:

Analyte Comments:

QC Batch: 618674

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3341452)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- FD5-GW-062819 (Lab ID: 10481444003)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3341453)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3341454)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3341455)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW13S-GW-062819 (Lab ID: 10481444001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- W26-GW-062819 (Lab ID: 10481444004)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3341452)
  - 1,2,4-Trichlorobenzene

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 16, 2019

Analyte Comments:

QC Batch: 618674

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3341452)
  - Hexachloro-1,3-butadiene
  - Naphthalene
  - n-Butylbenzene

QC Batch: 618922

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3342325)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3342326)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3342327)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3342328)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- TRIP BLANK 1 (Lab ID: 10481444002)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.
- FD5-GW-062819 (Lab ID: 10481444003)
- MW13S-GW-062819 (Lab ID: 10481444001)
- W20-GW-062819 (Lab ID: 10481444005)
- W26-GW-062819 (Lab ID: 10481444004)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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(612)607-1700

PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.
- FD5-GW-062819 (Lab ID: 10481444003)
- MW13S-GW-062819 (Lab ID: 10481444001)
- W20-GW-062819 (Lab ID: 10481444005)
- W26-GW-062819 (Lab ID: 10481444004)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 616957

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10480916003,10480916004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3332638)
  - Chloride
  - Sulfate
- MS (Lab ID: 3333282)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3332639)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3333283)
  - Chloride
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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(612)607-1700

PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
4 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: MW13S-GW-062819 **Lab ID: 10481444001** Collected: 06/28/19 07:55 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/05/19 17:41	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/05/19 17:41	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/05/19 17:41	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 16:11	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 16:11	7440-38-2	
Barium, Dissolved	**60.8**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 16:11	7440-39-3	
Beryllium, Dissolved	**0.38J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 16:11	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 16:11	7440-43-9	
Chromium, Dissolved	**1.5J**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 16:11	7440-47-3	
Cobalt, Dissolved	**0.58J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 16:11	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 16:11	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 16:11	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 16:11	7439-98-7	
Nickel, Dissolved	**2.7J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 16:11	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 16:11	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 16:11	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 16:11	7440-28-0	
Vanadium, Dissolved	**10.4J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 16:11	7440-62-2	
Zinc, Dissolved	**14.7J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 16:11	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/02/19 09:50	07/05/19 14:21	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:28	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 04:28	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:28	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:28	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 04:28	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:28	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:28	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:28	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 04:28	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 04:28	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:28	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:28	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 04:28	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 04:28	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 04:28	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 04:28	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 04:28	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 04:28	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 04:28	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:28	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: MW13S-GW-062819 **Lab ID: 10481444001** Collected: 06/28/19 07:55 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 04:28	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:28	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 04:28	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 04:28	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 04:28	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 04:28	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:28	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 04:28	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 04:28	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 04:28	108-10-1	
Acetone	**10.4J**	ug/L	20.0	9.2	1		07/11/19 04:28	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 04:28	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 04:28	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 04:28	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 04:28	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 04:28	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 04:28	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 04:28	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 04:28	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 04:28	75-15-0	
Carbon tetrachloride	**0.56**	ug/L	0.50	0.19	1		07/11/19 04:28	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 04:28	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 04:28	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/11/19 04:28	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 04:28	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 04:28	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 04:28	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 04:28	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 04:28	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 04:28	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:28	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 04:28	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 04:28	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:28	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:28	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 04:28	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 04:28	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 04:28	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:28	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 04:28	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 04:28	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 04:28	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 04:28	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 04:28	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 04:28	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 04:28	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: MW13S-GW-062819 **Lab ID: 10481444001** Collected: 06/28/19 07:55 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:28	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:28	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 04:28	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 04:28	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 04:28	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:28	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:28	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:28	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 04:28	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 04:28	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:28	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 04:28	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:28	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 04:28	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-136		1		07/11/19 04:28	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		07/11/19 04:28	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		07/11/19 04:28	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**152**	mg/L	5.0	2.0	1		07/11/19 09:03		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**200**	mg/L	10.0	5.0	1		07/05/19 10:00		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/09/19 12:11	18496-25-8	H3
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.2J**	mg/L	1.2	0.12	1		07/03/19 05:43	16887-00-6	
Nitrate as N	**0.38**	mg/L	0.10	0.012	1		07/03/19 05:43	14797-55-8	H3
Sulfate	**5.8**	mg/L	1.2	0.28	1		07/03/19 05:43	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.43**	mg/L	0.10	0.018	1		07/11/19 13:34		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:30		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.73J**	mg/L	1.0	0.39	1		07/08/19 20:09	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: TRIP BLANK 1 **Lab ID: 10481444002** Collected: 06/28/19 07:00 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 15:43	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 15:43	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 15:43	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 15:43	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 15:43	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 15:43	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 15:43	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 15:43	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 15:43	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 15:43	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 15:43	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 15:43	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 15:43	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 15:43	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 15:43	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 15:43	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 15:43	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 15:43	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 15:43	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 15:43	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 15:43	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 15:43	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 15:43	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 15:43	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 15:43	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 15:43	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 15:43	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 15:43	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 15:43	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 15:43	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 15:43	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 15:43	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 15:43	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 15:43	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 15:43	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 15:43	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 15:43	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 15:43	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 15:43	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 15:43	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/11/19 15:43	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 15:43	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 15:43	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/11/19 15:43	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 15:43	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 15:43	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: TRIP BLANK 1 **Lab ID: 10481444002** Collected: 06/28/19 07:00 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 15:43	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 15:43	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 15:43	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 15:43	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 15:43	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 15:43	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 15:43	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 15:43	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 15:43	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 15:43	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 15:43	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 15:43	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 15:43	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 15:43	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 15:43	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 15:43	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 15:43	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 15:43	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 15:43	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 15:43	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 15:43	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 15:43	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 15:43	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 15:43	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 15:43	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 15:43	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 15:43	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 15:43	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 15:43	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 15:43	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 15:43	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 15:43	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 15:43	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 15:43	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/11/19 15:43	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		07/11/19 15:43	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/11/19 15:43	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: FD5-GW-062819 **Lab ID: 10481444003** Collected: 06/28/19 14:00 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/05/19 18:17	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/05/19 18:17	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/05/19 18:17	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 16:12	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 16:12	7440-38-2	
Barium, Dissolved	**60.7**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 16:12	7440-39-3	
Beryllium, Dissolved	**0.24J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 16:12	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 16:12	7440-43-9	
Chromium, Dissolved	**1.4J**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 16:12	7440-47-3	
Cobalt, Dissolved	**2.1J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 16:12	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 16:12	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 16:12	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 16:12	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 16:12	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 16:12	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 16:12	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 16:12	7440-28-0	
Vanadium, Dissolved	**10.2J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 16:12	7440-62-2	
Zinc, Dissolved	**11.8J**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 16:12	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/02/19 09:50	07/05/19 14:23	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:44	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 04:44	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:44	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:44	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 04:44	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:44	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:44	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:44	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 04:44	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 04:44	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:44	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:44	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 04:44	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 04:44	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 04:44	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 04:44	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 04:44	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 04:44	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 04:44	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:44	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: FD5-GW-062819 **Lab ID: 10481444003** Collected: 06/28/19 14:00 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 04:44	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:44	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 04:44	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 04:44	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 04:44	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 04:44	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:44	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 04:44	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 04:44	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 04:44	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 04:44	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 04:44	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 04:44	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 04:44	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 04:44	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 04:44	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 04:44	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 04:44	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 04:44	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 04:44	75-15-0	
Carbon tetrachloride	**0.35J**	ug/L	0.50	0.19	1		07/11/19 04:44	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 04:44	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 04:44	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/11/19 04:44	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 04:44	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 04:44	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 04:44	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 04:44	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 04:44	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 04:44	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:44	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 04:44	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 04:44	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:44	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:44	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 04:44	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 04:44	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 04:44	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 04:44	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 04:44	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 04:44	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 04:44	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 04:44	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 04:44	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 04:44	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 04:44	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: FD5-GW-062819 **Lab ID: 10481444003** Collected: 06/28/19 14:00 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:44	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 04:44	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 04:44	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 04:44	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 04:44	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 04:44	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:44	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:44	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 04:44	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 04:44	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 04:44	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 04:44	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 04:44	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 04:44	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		07/11/19 04:44	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		07/11/19 04:44	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		07/11/19 04:44	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**154**	mg/L	5.0	2.0	1		07/11/19 09:10		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**196**	mg/L	10.0	5.0	1		07/05/19 10:00		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/09/19 12:15	18496-25-8	H3
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.2J**	mg/L	1.2	0.12	1		07/03/19 05:59	16887-00-6	
Nitrate as N	**0.38**	mg/L	0.10	0.012	1		07/03/19 05:59	14797-55-8	H3
Sulfate	**6.2**	mg/L	1.2	0.28	1		07/03/19 05:59	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.42**	mg/L	0.10	0.018	1		07/11/19 13:36		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:30		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.78J**	mg/L	1.0	0.39	1		07/08/19 21:48	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: W26-GW-062819 **Lab ID: 10481444004** Collected: 06/28/19 08:50 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/05/19 18:24	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/05/19 18:24	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/05/19 18:24	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 16:15	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 16:15	7440-38-2	
Barium, Dissolved	**6.5J**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 16:15	7440-39-3	B
Beryllium, Dissolved	**0.19J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 16:15	7440-41-7	B
Cadmium, Dissolved	**0.48J**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 16:15	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 16:15	7440-47-3	
Cobalt, Dissolved	**2.0J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 16:15	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 16:15	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 16:15	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 16:15	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 16:15	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 16:15	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 16:15	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 16:15	7440-28-0	
Vanadium, Dissolved	**6.7J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 16:15	7440-62-2	
Zinc, Dissolved	**83.5**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 16:15	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/02/19 09:50	07/05/19 14:30	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:01	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 05:01	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 05:01	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 05:01	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 05:01	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 05:01	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:01	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:01	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 05:01	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 05:01	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:01	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:01	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 05:01	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 05:01	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 05:01	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 05:01	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 05:01	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 05:01	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 05:01	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:01	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: W26-GW-062819 **Lab ID: 10481444004** Collected: 06/28/19 08:50 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 05:01	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 05:01	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 05:01	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 05:01	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 05:01	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 05:01	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:01	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 05:01	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 05:01	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 05:01	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 05:01	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 05:01	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 05:01	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 05:01	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 05:01	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 05:01	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 05:01	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 05:01	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 05:01	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 05:01	75-15-0	
Carbon tetrachloride	**31.8**	ug/L	0.50	0.19	1		07/11/19 05:01	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 05:01	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 05:01	75-00-3	
Chloroform	**2.5**	ug/L	1.0	0.45	1		07/11/19 05:01	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 05:01	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 05:01	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 05:01	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 05:01	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 05:01	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 05:01	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 05:01	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 05:01	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 05:01	87-68-3	
Isopropylbenzene (Cumene)	**0.53**	ug/L	0.50	0.18	1		07/11/19 05:01	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:01	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 05:01	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 05:01	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 05:01	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 05:01	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 05:01	109-99-9	
Toluene	**0.14J**	ug/L	0.50	0.083	1		07/11/19 05:01	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 05:01	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 05:01	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 05:01	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 05:01	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 05:01	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: W26-GW-062819 **Lab ID: 10481444004** Collected: 06/28/19 08:50 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 05:01	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:01	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 05:01	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 05:01	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 05:01	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:01	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 05:01	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 05:01	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 05:01	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 05:01	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 05:01	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 05:01	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 05:01	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 05:01	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/11/19 05:01	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/11/19 05:01	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/11/19 05:01	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**150**	mg/L	5.0	2.0	1		07/11/19 10:01		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**223**	mg/L	10.0	5.0	1		07/05/19 10:00		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/09/19 12:13	18496-25-8	H3
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**4.1**	mg/L	1.2	0.12	1		07/03/19 06:29	16887-00-6	
Nitrate as N	**2.8**	mg/L	0.10	0.012	1		07/03/19 06:29	14797-55-8	H3
Sulfate	**9.3**	mg/L	1.2	0.28	1		07/03/19 06:29	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**2.9**	mg/L	0.50	0.088	5		07/11/19 14:49		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:30		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.1**	mg/L	1.0	0.39	1		07/08/19 20:51	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: W20-GW-062819 **Lab ID: 10481444005** Collected: 06/28/19 10:20 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**2870**	ug/L	10.0	4.9	1		07/05/19 18:31	74-82-8	E
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/05/19 18:31	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/05/19 18:31	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 16:27	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 16:27	7440-38-2	
Barium, Dissolved	**23.1**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 16:27	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 16:27	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 16:27	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 16:27	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 16:27	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 16:27	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 16:27	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 16:27	7439-98-7	
Nickel, Dissolved	**1.5J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 16:27	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 16:27	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 16:27	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 16:27	7440-28-0	
Vanadium, Dissolved	**<0.43**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 16:27	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 16:27	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/02/19 09:50	07/05/19 14:40	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**63.0**	mg/L	5.0	2.0	1		07/11/19 10:09		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**80.0**	mg/L	10.0	5.0	1		07/05/19 10:00		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.0068J**	mg/L	0.020	0.0054	1		07/09/19 12:14	18496-25-8	H3
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.8**	mg/L	1.2	0.12	1		07/03/19 06:44	16887-00-6	
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		07/03/19 06:44	14797-55-8	H3
Sulfate	**0.54J**	mg/L	1.2	0.28	1		07/03/19 06:44	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		07/11/19 13:38		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:31		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Sample: W20-GW-062819 **Lab ID: 10481444005** Collected: 06/28/19 10:20 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.1**	mg/L	1.0	0.39	1		07/08/19 21:34	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 617735 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 3336522 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/05/19 15:10	
Ethene	ug/L	<2.9	10.0	2.9	07/05/19 15:10	
Methane	ug/L	<4.9	10.0	4.9	07/05/19 15:10	

LABORATORY CONTROL SAMPLE & LCSD: 3336523 3336524

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	111	118	98	104	85-115	6	20	
Ethene	ug/L	106	104	109	98	103	85-115	5	20	
Methane	ug/L	60.7	57.5	60.4	95	100	85-115	5	20	

SAMPLE DUPLICATE: 3336526

Parameter	Units	10481698001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	15.1	14.8	2	20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	8860	8700	2	20	E

SAMPLE DUPLICATE: 3336827

Parameter	Units	75111134001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	<3.0		20	
Ethene	ug/L	ND	<2.9		20	
Methane	ug/L	ND	<4.9		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 616797 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 3331878 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/05/19 14:14	

LABORATORY CONTROL SAMPLE: 3331879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.4	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331880 3331881

Parameter	Units	10481444003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.5	5.4	109	109	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 616661 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 3331252 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	07/11/19 15:33	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	07/11/19 15:33	
Barium, Dissolved	ug/L	1.7J	10.0	0.60	07/11/19 15:33	
Beryllium, Dissolved	ug/L	0.12J	5.0	0.12	07/11/19 15:33	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	07/11/19 15:33	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	07/11/19 15:33	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	07/11/19 15:33	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	07/11/19 15:33	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	07/11/19 15:33	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	07/11/19 15:33	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	07/11/19 15:33	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	07/11/19 15:33	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	07/11/19 15:33	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	07/11/19 15:33	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	07/11/19 15:33	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	07/11/19 15:33	

LABORATORY CONTROL SAMPLE: 3331253

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	973	97	80-120	
Arsenic, Dissolved	ug/L	1000	969	97	80-120	
Barium, Dissolved	ug/L	1000	971	97	80-120	
Beryllium, Dissolved	ug/L	1000	980	98	80-120	
Cadmium, Dissolved	ug/L	1000	989	99	80-120	
Chromium, Dissolved	ug/L	1000	962	96	80-120	
Cobalt, Dissolved	ug/L	1000	959	96	80-120	
Copper, Dissolved	ug/L	1000	929	93	80-120	
Lead, Dissolved	ug/L	1000	971	97	80-120	
Molybdenum, Dissolved	ug/L	1000	986	99	80-120	
Nickel, Dissolved	ug/L	1000	963	96	80-120	
Selenium, Dissolved	ug/L	1000	989	99	80-120	
Silver, Dissolved	ug/L	500	481	96	80-120	
Thallium, Dissolved	ug/L	1000	957	96	80-120	
Vanadium, Dissolved	ug/L	1000	961	96	80-120	
Zinc, Dissolved	ug/L	1000	978	98	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331254 3331255

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	978	989	98	99	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	970	984	97	98	75-125	1	20	
Barium, Dissolved	ug/L	20.1	1000	1000	976	987	96	97	75-125	1	20	
Beryllium, Dissolved	ug/L	0.16J	1000	1000	981	996	98	100	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	965	975	96	97	75-125	1	20	
Chromium, Dissolved	ug/L	2.7J	1000	1000	955	967	95	96	75-125	1	20	
Cobalt, Dissolved	ug/L	0.83J	1000	1000	937	949	94	95	75-125	1	20	
Copper, Dissolved	ug/L	118	1000	1000	1060	1070	94	95	75-125	1	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	951	963	95	96	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	990	1010	99	101	75-125	2	20	
Nickel, Dissolved	ug/L	17.7J	1000	1000	956	966	94	95	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	978	992	98	99	75-125	1	20	
Silver, Dissolved	ug/L	<0.40	500	500	485	490	97	98	75-125	1	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	954	959	95	96	75-125	0	20	
Vanadium, Dissolved	ug/L	0.74J	1000	1000	960	971	96	97	75-125	1	20	
Zinc, Dissolved	ug/L	1630	1000	1000	2540	2550	91	91	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 618674 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004

METHOD BLANK: 3341452 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/11/19 01:06	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/11/19 01:06	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
1,2,3-Trichlorobenzene	ug/L	0.71J	1.0	0.21	07/11/19 01:06	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/11/19 01:06	
1,2,4-Trichlorobenzene	ug/L	0.60	0.50	0.20	07/11/19 01:06	P8
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/11/19 01:06	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/11/19 01:06	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/11/19 01:06	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/11/19 01:06	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/11/19 01:06	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/11/19 01:06	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/11/19 01:06	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
1,3-Dichloropropane	ug/L	<0.070	1.0	0.070	07/11/19 01:06	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/11/19 01:06	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/11/19 01:06	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/11/19 01:06	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/11/19 01:06	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/11/19 01:06	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/11/19 01:06	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/11/19 01:06	
Acetone	ug/L	<9.2	20.0	9.2	07/11/19 01:06	
Acrolein	ug/L	<1.2	10.0	1.2	07/11/19 01:06	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/11/19 01:06	
Benzene	ug/L	<0.10	0.50	0.10	07/11/19 01:06	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/11/19 01:06	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/11/19 01:06	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/11/19 01:06	
Bromoform	ug/L	<0.80	4.0	0.80	07/11/19 01:06	
Bromomethane	ug/L	<1.8	4.0	1.8	07/11/19 01:06	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/11/19 01:06	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/11/19 01:06	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

METHOD BLANK: 3341452 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	1.0	0.17	07/11/19 01:06	
Chloroethane	ug/L	<0.49	1.0	0.49	07/11/19 01:06	
Chloroform	ug/L	<0.45	1.0	0.45	07/11/19 01:06	
Chloromethane	ug/L	<0.16	4.0	0.16	07/11/19 01:06	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/11/19 01:06	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/11/19 01:06	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/11/19 01:06	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/11/19 01:06	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/11/19 01:06	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/11/19 01:06	
Hexachloro-1,3-butadiene	ug/L	1.2	1.0	0.31	07/11/19 01:06	P8
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/11/19 01:06	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/11/19 01:06	
n-Butylbenzene	ug/L	0.55	0.50	0.24	07/11/19 01:06	P8
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/11/19 01:06	
Naphthalene	ug/L	1.1	1.0	0.48	07/11/19 01:06	P8
o-Xylene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
Styrene	ug/L	<0.19	0.50	0.19	07/11/19 01:06	
tert-Amylmethyl ether	ug/L	<0.11	1.0	0.11	07/11/19 01:06	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/11/19 01:06	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/11/19 01:06	
Toluene	ug/L	<0.083	0.50	0.083	07/11/19 01:06	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/11/19 01:06	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/11/19 01:06	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/11/19 01:06	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/11/19 01:06	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/11/19 01:06	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/11/19 01:06	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/11/19 01:06	
1,2-Dichloroethane-d4 (S)	%.	95	75-136		07/11/19 01:06	
4-Bromofluorobenzene (S)	%.	102	75-125		07/11/19 01:06	
Toluene-d8 (S)	%.	97	75-125		07/11/19 01:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

LABORATORY CONTROL SAMPLE: 3341453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	10.2	102	68-141	
1,1,1-Trichloroethane	ug/L	10	9.9	99	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	10.2	102	73-125	
1,1,2-Trichloroethane	ug/L	10	10.0	100	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	10.9	109	69-132	
1,1-Dichloroethane	ug/L	10	10.1	101	73-125	
1,1-Dichloroethene	ug/L	10	10.1	101	71-126	
1,1-Dichloropropene	ug/L	10	10.0	100	73-126	
1,2,3-Trichlorobenzene	ug/L	10	9.7	97	72-126	
1,2,3-Trichloropropane	ug/L	10	9.2	92	75-126	
1,2,4-Trichlorobenzene	ug/L	10	9.9	99	71-134	
1,2,4-Trimethylbenzene	ug/L	10	10.1	101	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	23.4	94	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	9.5	95	75-129	
1,2-Dichlorobenzene	ug/L	10	9.4	94	75-129	
1,2-Dichloroethane	ug/L	10	9.4	94	75-125	
1,2-Dichloroethene (Total)	ug/L	20	20.2	101	74-125	N2
1,2-Dichloropropane	ug/L	10	10.0	100	75-125	
1,3,5-Trimethylbenzene	ug/L	10	11.0	110	75-127	
1,3-Dichlorobenzene	ug/L	10	9.5	95	75-126	
1,3-Dichloropropane	ug/L	10	9.6	96	75-125	
1,4-Dichlorobenzene	ug/L	10	9.9	99	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	197J	99	72-129	
2,2,4-Trimethylpentane	ug/L	10	9.9	99	72-128	N2
2,2-Dichloropropane	ug/L	10	10.9	109	65-138	
2-Butanone (MEK)	ug/L	50	52.1	104	59-144	
2-Chlorotoluene	ug/L	10	10.0	100	75-127	
2-Hexanone	ug/L	50	56.4	113	73-134	
4-Chlorotoluene	ug/L	10	10.1	101	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	48.8	98	62-141	
Acetone	ug/L	50	57.0	114	60-137	
Acrolein	ug/L	100	88.7	89	60-141	
Acrylonitrile	ug/L	100	98.9	99	75-129	
Benzene	ug/L	10	9.7	97	73-125	
Bromobenzene	ug/L	10	9.9	99	73-125	
Bromochloromethane	ug/L	10	9.5	95	75-135	
Bromodichloromethane	ug/L	10	9.5	95	75-125	
Bromoform	ug/L	10	9.2	92	67-136	
Bromomethane	ug/L	10	12.7	127	30-150	
Carbon disulfide	ug/L	10	10.4	104	47-137	
Carbon tetrachloride	ug/L	10	10.5	105	75-125	
Chlorobenzene	ug/L	10	9.9	99	75-125	
Chloroethane	ug/L	10	10.3	103	63-136	
Chloroform	ug/L	10	9.6	96	73-128	
Chloromethane	ug/L	10	10.6	106	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.9	99	75-125	
cis-1,3-Dichloropropene	ug/L	10	9.0	90	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

LABORATORY CONTROL SAMPLE: 3341453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	9.9	99	75-125	
Dibromomethane	ug/L	10	9.8	98	75-125	
Dichlorodifluoromethane	ug/L	10	11.6	116	63-132	
Dichlorofluoromethane	ug/L	10	10.3	103	68-127	N2
Diisopropyl ether	ug/L	10	9.9	99	71-131	
Ethyl-tert-butyl ether	ug/L	10	10	100	75-125	
Ethylbenzene	ug/L	10	10.6	106	75-125	
Hexachloro-1,3-butadiene	ug/L	10	11.4	114	72-134	
Isopropylbenzene (Cumene)	ug/L	10	9.9	99	75-125	
m&p-Xylene	ug/L	20	20.7	103	75-126	
Methyl-tert-butyl ether	ug/L	10	9.3	93	75-125	
Methylene Chloride	ug/L	10	9.1	91	70-125	
n-Butylbenzene	ug/L	10	10.7	107	75-126	
n-Propylbenzene	ug/L	10	9.8	98	73-127	
Naphthalene	ug/L	10	10	100	63-128	
o-Xylene	ug/L	10	9.8	98	75-128	
p-Isopropyltoluene	ug/L	10	10.6	106	75-125	
sec-Butylbenzene	ug/L	10	10.7	107	75-126	
Styrene	ug/L	10	9.8	98	75-125	
tert-Amylmethyl ether	ug/L	10	9.6	96	75-125	
tert-Butyl Alcohol	ug/L	100	101	101	75-130	
tert-Butylbenzene	ug/L	10	10.7	107	75-131	
Tetrachloroethene	ug/L	10	10.1	101	74-125	
Tetrahydrofuran	ug/L	100	89.4	89	64-138	
Toluene	ug/L	10	10.2	102	74-125	
trans-1,2-Dichloroethene	ug/L	10	10.3	103	68-128	
trans-1,3-Dichloropropene	ug/L	10	9.8	98	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	22.2	89	60-127	
Trichloroethene	ug/L	10	10.1	101	75-127	
Trichlorofluoromethane	ug/L	10	11.2	112	72-133	
Vinyl acetate	ug/L	10	9.2J	92	61-129	
Vinyl chloride	ug/L	10	11.1	111	75-128	
Xylene (Total)	ug/L	30	30.5	102	75-125	
1,2-Dichloroethane-d4 (S)	%.			100	75-136	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341454 3341455

Parameter	Units	10482647001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	10	10	10.1	10.3	101	103	75-140	3	30	
1,1,1-Trichloroethane	ug/L	ND	10	10	10	10.3	100	103	74-136	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	10	10	10.1	10.5	101	105	66-134	4	30	
1,1,2-Trichloroethane	ug/L	ND	10	10	9.9	10.0	99	100	75-126	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341454 3341455

Parameter	Units	10482647001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	10	10	11.3	11.7	113	117	65-146	3	30	
1,1-Dichloroethane	ug/L	ND	10	10	10	10.2	100	102	68-132	2	30	
1,1-Dichloroethene	ug/L	ND	10	10	10.5	10.9	105	109	66-139	4	30	
1,1-Dichloropropene	ug/L	ND	10	10	10.4	10.7	104	107	67-134	3	30	
1,2,3-Trichlorobenzene	ug/L	ND	10	10	10.9	12.4	109	124	67-129	13	30	
1,2,3-Trichloropropane	ug/L	ND	10	10	9.1	9.5	91	95	69-128	4	30	
1,2,4-Trichlorobenzene	ug/L	ND	10	10	10.5	11.9	105	119	65-140	12	30	
1,2,4-Trimethylbenzene	ug/L	ND	10	10	10.3	11.5	103	115	71-133	12	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	25	25	23.6	23.4	94	94	54-138	1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	10	10	9.0	9.3	90	93	68-125	4	30	
1,2-Dichlorobenzene	ug/L	ND	10	10	9.5	10.4	95	104	74-136	9	30	
1,2-Dichloroethane	ug/L	ND	10	10	9.3	9.3	93	93	68-125	0	30	
1,2-Dichloroethene (Total)	ug/L	ND	20	20	19.4	19.9	97	99	71-126	2	30	N2
1,2-Dichloropropane	ug/L	ND	10	10	10.1	9.9	101	99	67-125	1	30	
1,3,5-Trimethylbenzene	ug/L	ND	10	10	10.6	12.0	106	120	68-137	12	30	
1,3-Dichlorobenzene	ug/L	ND	10	10	9.4	10.3	94	103	75-131	9	30	
1,3-Dichloropropane	ug/L	ND	10	10	9.2	9.3	92	93	71-125	1	30	
1,4-Dichlorobenzene	ug/L	ND	10	10	10	11.0	99	109	74-126	10	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	200	200	189J	197J	94	99	68-125		30	
2,2,4-Trimethylpentane	ug/L	ND	10	10	10.6	10.2	106	102	54-129	4	30	N2
2,2-Dichloropropane	ug/L	ND	10	10	10.8	11.4	108	114	69-139	6	30	
2-Butanone (MEK)	ug/L	ND	50	50	42.5	42.6	85	85	54-144	0	30	
2-Chlorotoluene	ug/L	ND	10	10	10.5	11.3	105	113	75-134	8	30	
2-Hexanone	ug/L	ND	50	50	51.3	50.4	102	100	58-137	2	30	
4-Chlorotoluene	ug/L	ND	10	10	9.9	10.7	99	107	72-133	7	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	49.9	48.2	100	96	60-129	3	30	
Acetone	ug/L	ND	50	50	43.2	42.8	86	86	62-132	1	30	
Acrolein	ug/L	ND	100	100	198	194	198	194	30-150	2	30	M1
Acrylonitrile	ug/L	ND	100	100	101	98.1	101	98	68-125	3	30	
Benzene	ug/L	ND	10	10	9.8	10.0	98	100	68-125	3	30	
Bromobenzene	ug/L	ND	10	10	9.9	10.3	99	103	73-126	4	30	
Bromochloromethane	ug/L	ND	10	10	9.4	9.5	94	95	66-143	1	30	
Bromodichloromethane	ug/L	0.59	10	10	9.9	10.1	93	95	74-125	2	30	
Bromoform	ug/L	ND	10	10	10.5	10.5	88	88	64-134	0	30	
Bromomethane	ug/L	ND	10	10	12.8	12.6	128	126	30-150	2	30	
Carbon disulfide	ug/L	ND	10	10	11.2	11.2	112	112	43-147	0	30	
Carbon tetrachloride	ug/L	6.9	10	10	17.9	18.5	110	116	71-143	3	30	
Chlorobenzene	ug/L	ND	10	10	9.7	10	97	100	75-125	2	30	
Chloroethane	ug/L	ND	10	10	10.3	10.7	103	107	75-129	4	30	
Chloroform	ug/L	21.0	10	10	32.1	32.9	111	120	66-132	3	30	
Chloromethane	ug/L	ND	10	10	11.0	11.0	110	110	53-137	0	30	
cis-1,2-Dichloroethene	ug/L	ND	10	10	9.4	9.7	94	97	67-133	3	30	
cis-1,3-Dichloropropene	ug/L	ND	10	10	9.1	9.1	91	91	66-125	0	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341454 3341455

Parameter	Units	10482647001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	10	10	9.6	9.9	96	99	62-132	3	30	
Dibromomethane	ug/L	ND	10	10	9.6	9.7	96	97	67-125	1	30	
Dichlorodifluoromethane	ug/L	ND	10	10	11.8	12.1	118	121	71-142	2	30	
Dichlorofluoromethane	ug/L	ND	10	10	10.3	10.5	103	105	70-131	2	30	N2
Diisopropyl ether	ug/L	ND	10	10	9.3	9.7	93	97	63-131	4	30	
Ethyl-tert-butyl ether	ug/L	ND	10	10	9.5	10.1	95	101	66-128	7	30	
Ethylbenzene	ug/L	ND	10	10	10.7	11.3	107	113	74-126	5	30	
Hexachloro-1,3-butadiene	ug/L	ND	10	10	12.7	12.3	127	123	68-143	3	30	
Isopropylbenzene (Cumene)	ug/L	ND	10	10	10.2	11.2	102	112	74-130	10	30	
m&p-Xylene	ug/L	ND	20	20	20.9	21.7	105	108	69-132	4	30	
Methyl-tert-butyl ether	ug/L	0.90	10	10	9.7	10.2	88	93	65-131	4	30	
Methylene Chloride	ug/L	ND	10	10	9.0	9.2	87	89	57-125	2	30	
n-Butylbenzene	ug/L	ND	10	10	11.8	13.2	118	132	71-131	10	30	M1
n-Propylbenzene	ug/L	ND	10	10	10.3	11.5	103	115	67-138	11	30	
Naphthalene	ug/L	ND	10	10	10.8	11.7	100	109	60-130	8	30	
o-Xylene	ug/L	ND	10	10	9.9	10.3	99	103	69-131	4	30	
p-Isopropyltoluene	ug/L	ND	10	10	11.0	12.7	110	127	72-133	14	30	
sec-Butylbenzene	ug/L	ND	10	10	11.6	12.8	116	128	73-134	10	30	
Styrene	ug/L	ND	10	10	9.8	10.2	98	102	72-125	4	30	
tert-Amylmethyl ether	ug/L	ND	10	10	9.1	9.4	91	94	67-125	4	30	
tert-Butyl Alcohol	ug/L	55.8	100	100	158	163	102	107	64-137	3	30	
tert-Butylbenzene	ug/L	ND	10	10	11.1	12.2	111	122	70-143	10	30	
Tetrachloroethene	ug/L	ND	10	10	10.3	10.9	103	109	72-129	6	30	
Tetrahydrofuran	ug/L	ND	100	100	89.3	92.6	89	93	66-128	4	30	
Toluene	ug/L	ND	10	10	9.9	10.4	98	103	73-125	5	30	
trans-1,2-Dichloroethene	ug/L	ND	10	10	10.0	10.2	100	102	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	ND	10	10	9.5	9.7	95	97	61-136	1	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	25	25	21.9	22.4	88	90	45-128	2	30	
Trichloroethene	ug/L	ND	10	10	9.9	9.8	99	98	74-132	1	30	
Trichlorofluoromethane	ug/L	ND	10	10	11.2	11.4	112	114	75-139	2	30	
Vinyl acetate	ug/L	ND	10	10	9.0J	9.2J	90	92	51-135		30	
Vinyl chloride	ug/L	ND	10	10	11.2	11.5	112	115	68-146	2	30	
Xylene (Total)	ug/L	ND	30	30	30.8	32.0	103	107	67-137	4	30	
1,2-Dichloroethane-d4 (S)	%.						100	99	75-136			
4-Bromofluorobenzene (S)	%.						99	101	75-125			
Toluene-d8 (S)	%.						104	104	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 618922 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481444002

METHOD BLANK: 3342325 Matrix: Water
Associated Lab Samples: 10481444002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/11/19 13:46	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/11/19 13:46	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	07/11/19 13:46	MN
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/11/19 13:46	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/11/19 13:46	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/11/19 13:46	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/11/19 13:46	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/11/19 13:46	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/11/19 13:46	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/11/19 13:46	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/11/19 13:46	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
1,3-Dichloropropane	ug/L	<0.070	1.0	0.070	07/11/19 13:46	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/11/19 13:46	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/11/19 13:46	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/11/19 13:46	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/11/19 13:46	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/11/19 13:46	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/11/19 13:46	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/11/19 13:46	
Acetone	ug/L	<9.2	20.0	9.2	07/11/19 13:46	
Acrolein	ug/L	<1.2	10.0	1.2	07/11/19 13:46	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/11/19 13:46	
Benzene	ug/L	<0.10	0.50	0.10	07/11/19 13:46	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/11/19 13:46	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/11/19 13:46	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/11/19 13:46	
Bromoform	ug/L	<0.80	4.0	0.80	07/11/19 13:46	
Bromomethane	ug/L	<1.8	4.0	1.8	07/11/19 13:46	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/11/19 13:46	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/11/19 13:46	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

METHOD BLANK: 3342325 Matrix: Water
Associated Lab Samples: 10481444002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	1.0	0.17	07/11/19 13:46	
Chloroethane	ug/L	<0.49	1.0	0.49	07/11/19 13:46	
Chloroform	ug/L	<0.45	1.0	0.45	07/11/19 13:46	
Chloromethane	ug/L	<0.16	4.0	0.16	07/11/19 13:46	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/11/19 13:46	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/11/19 13:46	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/11/19 13:46	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/11/19 13:46	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/11/19 13:46	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/11/19 13:46	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/11/19 13:46	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/11/19 13:46	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/11/19 13:46	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/11/19 13:46	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/11/19 13:46	
Naphthalene	ug/L	<0.48	1.0	0.48	07/11/19 13:46	
o-Xylene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
Styrene	ug/L	<0.19	0.50	0.19	07/11/19 13:46	
tert-Amylmethyl ether	ug/L	<0.11	1.0	0.11	07/11/19 13:46	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/11/19 13:46	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/11/19 13:46	
Toluene	ug/L	<0.083	0.50	0.083	07/11/19 13:46	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/11/19 13:46	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/11/19 13:46	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/11/19 13:46	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/11/19 13:46	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/11/19 13:46	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/11/19 13:46	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/11/19 13:46	
1,2-Dichloroethane-d4 (S)	%.	97	75-136		07/11/19 13:46	
4-Bromofluorobenzene (S)	%.	102	75-125		07/11/19 13:46	
Toluene-d8 (S)	%.	97	75-125		07/11/19 13:46	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

LABORATORY CONTROL SAMPLE: 3342326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	9.8	98	68-141	
1,1,1-Trichloroethane	ug/L	10	9.1	91	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	10.1	101	73-125	
1,1,2-Trichloroethane	ug/L	10	9.4	94	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	9.9	99	69-132	
1,1-Dichloroethane	ug/L	10	9.4	94	73-125	
1,1-Dichloroethene	ug/L	10	9.6	96	71-126	
1,1-Dichloropropene	ug/L	10	9.4	94	73-126	
1,2,3-Trichlorobenzene	ug/L	10	8.8	88	72-126	
1,2,3-Trichloropropane	ug/L	10	9.2	92	75-126	
1,2,4-Trichlorobenzene	ug/L	10	8.9	89	71-134	
1,2,4-Trimethylbenzene	ug/L	10	9.6	96	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	23.4	94	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	9.6	96	75-129	
1,2-Dichlorobenzene	ug/L	10	8.9	89	75-129	
1,2-Dichloroethane	ug/L	10	8.7	87	75-125	
1,2-Dichloroethene (Total)	ug/L	20	18.4	92	74-125	N2
1,2-Dichloropropane	ug/L	10	9.6	96	75-125	
1,3,5-Trimethylbenzene	ug/L	10	10.3	103	75-127	
1,3-Dichlorobenzene	ug/L	10	8.8	88	75-126	
1,3-Dichloropropane	ug/L	10	9.0	90	75-125	
1,4-Dichlorobenzene	ug/L	10	9.3	93	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	206	103	72-129	
2,2,4-Trimethylpentane	ug/L	10	9.7	97	72-128	N2
2,2-Dichloropropane	ug/L	10	10.6	106	65-138	
2-Butanone (MEK)	ug/L	50	52.5	105	59-144	
2-Chlorotoluene	ug/L	10	9.5	95	75-127	
2-Hexanone	ug/L	50	56.2	112	73-134	
4-Chlorotoluene	ug/L	10	9.2	92	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	48.9	98	62-141	
Acetone	ug/L	50	58.5	117	60-137	
Acrolein	ug/L	100	93.2	93	60-141	
Acrylonitrile	ug/L	100	100	100	75-129	
Benzene	ug/L	10	9.2	92	73-125	
Bromobenzene	ug/L	10	9.3	93	73-125	
Bromochloromethane	ug/L	10	9.0	90	75-135	
Bromodichloromethane	ug/L	10	8.9	89	75-125	
Bromoform	ug/L	10	8.9	89	67-136	
Bromomethane	ug/L	10	10.3	103	30-150	
Carbon disulfide	ug/L	10	9.6	96	47-137	
Carbon tetrachloride	ug/L	10	9.9	99	75-125	
Chlorobenzene	ug/L	10	9.3	93	75-125	
Chloroethane	ug/L	10	9.7	97	63-136	
Chloroform	ug/L	10	8.9	89	73-128	
Chloromethane	ug/L	10	9.6	96	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.2	92	75-125	
cis-1,3-Dichloropropene	ug/L	10	8.8	88	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

LABORATORY CONTROL SAMPLE: 3342326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	9.3	93	75-125	
Dibromomethane	ug/L	10	9.2	92	75-125	
Dichlorodifluoromethane	ug/L	10	10.5	105	63-132	
Dichlorofluoromethane	ug/L	10	9.6	96	68-127	N2
Diisopropyl ether	ug/L	10	9.1	91	71-131	
Ethyl-tert-butyl ether	ug/L	10	9.5	95	75-125	
Ethylbenzene	ug/L	10	9.9	99	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.3	93	72-134	
Isopropylbenzene (Cumene)	ug/L	10	9.2	92	75-125	
m&p-Xylene	ug/L	20	19.6	98	75-126	
Methyl-tert-butyl ether	ug/L	10	8.8	88	75-125	
Methylene Chloride	ug/L	10	8.6	86	70-125	
n-Butylbenzene	ug/L	10	9.5	95	75-126	
n-Propylbenzene	ug/L	10	9.0	90	73-127	
Naphthalene	ug/L	10	8.6	86	63-128	
o-Xylene	ug/L	10	9.2	92	75-128	
p-Isopropyltoluene	ug/L	10	10.0	100	75-125	
sec-Butylbenzene	ug/L	10	10.2	102	75-126	
Styrene	ug/L	10	9.1	91	75-125	
tert-Amylmethyl ether	ug/L	10	9.0	90	75-125	
tert-Butyl Alcohol	ug/L	100	94.8	95	75-130	
tert-Butylbenzene	ug/L	10	10.2	102	75-131	
Tetrachloroethene	ug/L	10	9.6	96	74-125	
Tetrahydrofuran	ug/L	100	89.2	89	64-138	
Toluene	ug/L	10	9.5	95	74-125	
trans-1,2-Dichloroethene	ug/L	10	9.2	92	68-128	
trans-1,3-Dichloropropene	ug/L	10	9.5	95	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	23.3	93	60-127	
Trichloroethene	ug/L	10	9.3	93	75-127	
Trichlorofluoromethane	ug/L	10	10.3	103	72-133	
Vinyl acetate	ug/L	10	8.7J	87	61-129	
Vinyl chloride	ug/L	10	10.3	103	75-128	
Xylene (Total)	ug/L	30	28.8	96	75-125	
1,2-Dichloroethane-d4 (S)	%.			99	75-136	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342327 3342328

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	10	10	10.3	9.8	103	98	75-140	5	30	
1,1,1-Trichloroethane	ug/L	<0.14	10	10	10.6	10.7	106	107	74-136	1	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	10	10	10.4	11.4	104	114	66-134	9	30	
1,1,2-Trichloroethane	ug/L	<0.18	10	10	10.4	9.4	104	94	75-126	11	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342327 3342328

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	10	10	12.2	11.8	122	118	65-146	3	30	
1,1-Dichloroethane	ug/L	<0.17	10	10	10.3	10.7	103	107	68-132	4	30	
1,1-Dichloroethene	ug/L	<0.16	10	10	11.0	11.0	110	110	66-139	1	30	
1,1-Dichloropropene	ug/L	<0.20	10	10	10.9	10.8	109	108	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	10	10	10.0	12.6	100	126	67-129	23	30	
1,2,3-Trichloropropane	ug/L	<0.26	10	10	10.2	10.1	102	101	69-128	1	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	10	10	9.8	11.7	98	117	65-140	18	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	10	10	10.3	12.1	103	121	71-133	16	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	25	25	24.5	25.4	98	102	54-138	4	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	10	10	9.9	9.1	99	91	68-125	9	30	
1,2-Dichlorobenzene	ug/L	<0.14	10	10	9.2	10.5	92	105	74-136	14	30	
1,2-Dichloroethane	ug/L	<0.22	10	10	9.4	9.7	94	97	68-125	3	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	20	20	20.6	20.4	103	102	71-126	1	30	N2
1,2-Dichloropropane	ug/L	<0.16	10	10	10.1	10.3	101	103	67-125	2	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	10	10	11.0	12.5	110	125	68-137	13	30	
1,3-Dichlorobenzene	ug/L	<0.16	10	10	9.6	10.9	96	109	75-131	13	30	
1,3-Dichloropropane	ug/L	<0.070	10	10	9.8	8.7	98	87	71-125	12	30	
1,4-Dichlorobenzene	ug/L	<0.17	10	10	9.9	11.4	99	114	74-126	15	30	
1,4-Dioxane (p-Dioxane)	ug/L	33.7J	200	200	191J	205	79	86	68-125		30	
2,2,4-Trimethylpentane	ug/L	<0.19	10	10	11.7	11.0	117	110	54-129	7	30	N2
2,2-Dichloropropane	ug/L	<0.17	10	10	11.4	11.3	114	113	69-139	1	30	
2-Butanone (MEK)	ug/L	<0.99	50	50	46.7	49.9	93	100	54-144	7	30	
2-Chlorotoluene	ug/L	<0.16	10	10	10.5	12.0	105	120	75-134	13	30	
2-Hexanone	ug/L	<0.88	50	50	54.1	50.6	108	101	58-137	7	30	
4-Chlorotoluene	ug/L	<0.13	10	10	10.1	11.4	101	114	72-133	12	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	50	50	51.3	50.5	103	101	60-129	2	30	
Acetone	ug/L	<9.2	50	50	44.5	46.9	89	94	62-132	5	30	
Acrolein	ug/L	<1.2	100	100	199	203	199	203	30-150	2	30	M1
Acrylonitrile	ug/L	<0.91	100	100	101	104	101	104	68-125	3	30	
Benzene	ug/L	<0.10	10	10	10.3	10.1	103	101	68-125	3	30	
Bromobenzene	ug/L	<0.21	10	10	9.9	10.8	99	108	73-126	8	30	
Bromochloromethane	ug/L	<0.27	10	10	9.2	10.0	92	100	66-143	8	30	
Bromodichloromethane	ug/L	0.52	10	10	10.1	10.3	96	98	74-125	2	30	
Bromoform	ug/L	<0.80	10	10	10.1	9.7	101	97	64-134	5	30	
Bromomethane	ug/L	<1.8	10	10	10.1	10.7	101	107	30-150	7	30	
Carbon disulfide	ug/L	0.20J	10	10	11.1	11.0	109	108	43-147	1	30	
Carbon tetrachloride	ug/L	5.9	10	10	17.1	17.3	111	113	71-143	1	30	
Chlorobenzene	ug/L	<0.17	10	10	10.0	9.4	100	94	75-125	6	30	
Chloroethane	ug/L	<0.49	10	10	10.2	10.2	102	102	75-129	0	30	
Chloroform	ug/L	21.3	10	10	30.7	31.9	94	106	66-132	4	30	
Chloromethane	ug/L	<0.16	10	10	10.3	10.4	103	104	53-137	1	30	
cis-1,2-Dichloroethene	ug/L	<0.15	10	10	10.1	10.0	101	100	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	<0.20	10	10	9.3	9.9	93	99	66-125	6	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342327 3342328

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	10	10	9.8	9.1	98	91	62-132	7	30	
Dibromomethane	ug/L	<0.16	10	10	9.6	10.1	96	101	67-125	5	30	
Dichlorodifluoromethane	ug/L	<0.23	10	10	11.6	11.9	116	119	71-142	2	30	
Dichlorofluoromethane	ug/L	<0.14	10	10	9.9	10	99	100	70-131	0	30	N2
Diisopropyl ether	ug/L	<0.13	10	10	9.6	9.9	96	99	63-131	3	30	
Ethyl-tert-butyl ether	ug/L	<0.18	10	10	9.9	10.0	99	100	66-128	1	30	
Ethylbenzene	ug/L	<0.14	10	10	10.9	10.5	109	105	74-126	4	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	10	10	11.9	12.1	119	121	68-143	2	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	10	10	10.3	10.4	103	104	74-130	1	30	
m&p-Xylene	ug/L	<0.31	20	20	21.5	20.5	108	103	69-132	5	30	
Methyl-tert-butyl ether	ug/L	1.5	10	10	10.9	11.1	94	95	65-131	1	30	
Methylene Chloride	ug/L	<0.98	10	10	9.3	9.4	93	94	57-125	1	30	
n-Butylbenzene	ug/L	<0.24	10	10	11.0	12.7	110	127	71-131	14	30	
n-Propylbenzene	ug/L	<0.10	10	10	10.2	11.7	102	117	67-138	13	30	
Naphthalene	ug/L	<0.48	10	10	8.8	11.0	88	110	60-130	22	30	
o-Xylene	ug/L	<0.16	10	10	9.8	9.5	98	95	69-131	4	30	
p-Isopropyltoluene	ug/L	<0.15	10	10	11.3	13.0	113	130	72-133	15	30	
sec-Butylbenzene	ug/L	<0.15	10	10	11.7	13.1	117	131	73-134	12	30	
Styrene	ug/L	<0.19	10	10	10.0	9.5	100	95	72-125	6	30	
tert-Amylmethyl ether	ug/L	<0.11	10	10	9.5	10.0	95	100	67-125	5	30	
tert-Butyl Alcohol	ug/L	134	100	100	240	256	106	121	64-137	6	30	
tert-Butylbenzene	ug/L	<0.15	10	10	11.3	12.6	113	126	70-143	11	30	
Tetrachloroethene	ug/L	<0.17	10	10	10.7	10.3	107	103	72-129	3	30	
Tetrahydrofuran	ug/L	<2.2	100	100	95.2	99.9	95	100	66-128	5	30	
Toluene	ug/L	<0.083	10	10	10.8	10	108	100	73-125	8	30	
trans-1,2-Dichloroethene	ug/L	<0.12	10	10	10.5	10.3	105	103	62-137	1	30	
trans-1,3-Dichloropropene	ug/L	<0.18	10	10	10.2	9.4	102	94	61-136	7	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	25	25	25.1	25.0	100	100	45-128	0	30	
Trichloroethene	ug/L	<0.15	10	10	10.3	10.5	103	105	74-132	2	30	
Trichlorofluoromethane	ug/L	<0.23	10	10	11.1	11.1	111	111	75-139	1	30	
Vinyl acetate	ug/L	<1.1	10	10	9.0J	9.5J	90	95	51-135		30	
Vinyl chloride	ug/L	<0.092	10	10	11.2	10.9	112	109	68-146	2	30	
Xylene (Total)	ug/L	<0.31	30	30	31.3	30.0	104	100	67-137	4	30	
1,2-Dichloroethane-d4 (S)	%.						100	98	75-136			
4-Bromofluorobenzene (S)	%.						102	102	75-125			
Toluene-d8 (S)	%.						106	94	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 618685 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 3341524 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/11/19 06:48	

LABORATORY CONTROL SAMPLE & LCSD: 3341525 3341526

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.3	42.3	106	106	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341527 3341528

Parameter	Units	10481594002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	97.2	40	40	140	141	106	109	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341529 3341530

Parameter	Units	10481767002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	86.0	40	40	125	124	97	96	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 617577 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 3335934 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	07/05/19 10:00	

LABORATORY CONTROL SAMPLE: 3335935

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	952	95	80-120	

SAMPLE DUPLICATE: 3335936

Parameter	Units	10481444003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	196	193	2	5	

SAMPLE DUPLICATE: 3335937

Parameter	Units	10481587003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	296	300	1	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 148670 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 657922 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	07/09/19 13:14	

LABORATORY CONTROL SAMPLE: 657923

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.22	109	90-110	

MATRIX SPIKE SAMPLE: 657925

Parameter	Units	10481444001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.20	101	75-125	H3

SAMPLE DUPLICATE: 657924

Parameter	Units	10481444001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	H3

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 616957 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 3332636 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	07/02/19 17:51	
Nitrate as N	mg/L	<0.012	0.10	0.012	07/02/19 17:51	
Sulfate	mg/L	<0.28	1.2	0.28	07/02/19 17:51	

LABORATORY CONTROL SAMPLE: 3332637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.5	100	90-110	
Nitrate as N	mg/L	1	0.97	97	90-110	
Sulfate	mg/L	12.5	11.5	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3332638 3332639

Parameter	Units	10480916003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	11.5	12.5	12.5	22.3	21.8	86	82	90-110	2	20	M1
Nitrate as N	mg/L	0.054J	1	1	0.97	0.95	92	90	90-110	2	20	
Sulfate	mg/L	21.3	12.5	12.5	31.4	30.7	81	75	90-110	2	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3333282 3333283

Parameter	Units	10480916004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	10.2	12.5	12.5	20.4	20.4	82	82	90-110	0	20	M1
Nitrate as N	mg/L	ND	1	1	0.93	0.92	93	92	90-110	1	20	
Sulfate	mg/L	21.1	12.5	12.5	30.0	30.0	72	71	90-110	0	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 618877 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 3342143 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	07/11/19 13:54	FS

LABORATORY CONTROL SAMPLE: 3342144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.96	96	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342145 3342146

Parameter	Units	10481512004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.1	1.1	108	107	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342147 3342148

Parameter	Units	10481512005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.0	1.1	104	108	90-110	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 618373 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 3339410 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/10/19 15:26	

LABORATORY CONTROL SAMPLE: 3339411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	295	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339412 3339413

Parameter	Units	10481000008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	247	238	95	92	90-110	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339414 3339415

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	237	241	92	94	90-110	2	20	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

QC Batch: 169858 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

METHOD BLANK: 671395 Matrix: Water
Associated Lab Samples: 10481444001, 10481444003, 10481444004, 10481444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	07/08/19 15:12	

LABORATORY CONTROL SAMPLE: 671396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.3	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 671397 671398

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.6	25	25	27.0	27.2	102	102	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 671399 671400

Parameter	Units	10481444004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.1	25	25	26.3	26.1	101	100	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

WORKORDER QUALIFIERS

WO: 10481444

[1]	Samples requiring thermal preservation were received outside of recommended temperature limits of 0-6 degrees Celsius.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
FS	The sample was filtered in the laboratory prior to analysis.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
P8	Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

REPORT OF LABORATORY ANALYSIS

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METHOD CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481444001	**MW13S-GW-062819**	RSK 175	617735		
10481444003	**FD5-GW-062819**	RSK 175	617735		
10481444004	**W26-GW-062819**	RSK 175	617735		
10481444005	**W20-GW-062819**	RSK 175	617735		
10481444001	**MW13S-GW-062819**	EPA 3010	616661	EPA 6010D	618837
10481444003	**FD5-GW-062819**	EPA 3010	616661	EPA 6010D	618837
10481444004	**W26-GW-062819**	EPA 3010	616661	EPA 6010D	618837
10481444005	**W20-GW-062819**	EPA 3010	616661	EPA 6010D	618837
10481444001	**MW13S-GW-062819**	EPA 7470A	616797	EPA 7470A	617179
10481444003	**FD5-GW-062819**	EPA 7470A	616797	EPA 7470A	617179
10481444004	**W26-GW-062819**	EPA 7470A	616797	EPA 7470A	617179
10481444005	**W20-GW-062819**	EPA 7470A	616797	EPA 7470A	617179
10481444001	**MW13S-GW-062819**	EPA 8260B	618674		
10481444002	**TRIP BLANK 1**	EPA 8260B	618922		
10481444003	**FD5-GW-062819**	EPA 8260B	618674		
10481444004	**W26-GW-062819**	EPA 8260B	618674		
10481444001	**MW13S-GW-062819**	SM 2320B	618685		
10481444003	**FD5-GW-062819**	SM 2320B	618685		
10481444004	**W26-GW-062819**	SM 2320B	618685		
10481444005	**W20-GW-062819**	SM 2320B	618685		
10481444001	**MW13S-GW-062819**	SM 2540C	617577		
10481444003	**FD5-GW-062819**	SM 2540C	617577		
10481444004	**W26-GW-062819**	SM 2540C	617577		
10481444005	**W20-GW-062819**	SM 2540C	617577		
10481444001	**MW13S-GW-062819**	SM 4500-S-2 D	148670		
10481444003	**FD5-GW-062819**	SM 4500-S-2 D	148670		
10481444004	**W26-GW-062819**	SM 4500-S-2 D	148670		
10481444005	**W20-GW-062819**	SM 4500-S-2 D	148670		
10481444001	**MW13S-GW-062819**	EPA 300.0	616957		
10481444003	**FD5-GW-062819**	EPA 300.0	616957		
10481444004	**W26-GW-062819**	EPA 300.0	616957		
10481444005	**W20-GW-062819**	EPA 300.0	616957		
10481444001	**MW13S-GW-062819**	EPA 353.2	618877		
10481444003	**FD5-GW-062819**	EPA 353.2	618877		
10481444004	**W26-GW-062819**	EPA 353.2	618877		
10481444005	**W20-GW-062819**	EPA 353.2	618877		
10481444001	**MW13S-GW-062819**	EPA 410.4	618373	EPA 410.4	618458
10481444003	**FD5-GW-062819**	EPA 410.4	618373	EPA 410.4	618458
10481444004	**W26-GW-062819**	EPA 410.4	618373	EPA 410.4	618458
10481444005	**W20-GW-062819**	EPA 410.4	618373	EPA 410.4	618458
10481444001	**MW13S-GW-062819**	SM 5310C	169858		
10481444003	**FD5-GW-062819**	SM 5310C	169858		
10481444004	**W26-GW-062819**	SM 5310C	169858		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481444

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481444005	**W20-GW-062819**	SM 5310C	169858		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Do

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must

WO# : 10481444

10481444

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: UPRR Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh (awalsh@up.com)	
Address: 1400 W. 52nd Ave. Denver, CO 80221	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR	Regulatory Agency
Email: awalsh@up.com	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	
Phone: Fax:	Purchase Order #: 1497-38-Rev0	Pace Quote: Contract# 9900758938	State / Location
Requested Due Date: 24 Hr / 3 Day / 10 Day	Project Name: Freeman,WA-Cenex Harvest Lease	Pace Project Manager: Jennifer Gross	WA / Freeman
	Project #:	Pace Profile #: 36447 / 1	

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Y/N	Analyses Test: Low Level VOCs by 8260	Hold: 6010/7470 T22 Dis. Metals	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite	
	MATRIX: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS													Y										
1	MW13S-GW-062819	WT	G	06/28/19	0755		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	001
2	TRIP BLANK 1			06/29/19	0700		3				X				X									002
3	FD5-GW-062819			06/29/19	1400		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	003
4	W26-GW-062819			06/29/19	0850		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	004
5	W20-GW-062819	↓	↓	06/29/19	1020		10	X	X	X	[illegible]	X			[illegible]	X	X	X	X	X	X	X	X	Seperate VOCs 00
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Natalie Dowdy / JACOBS	06/29/19	1500	PACE	7/1/19	840	9.8	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Natalie Dowdy

SIGNATURE of SAMPLER: Natalie Dowdy

DATE Signed: 06/29/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 09May2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.28	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR Jacobs

Project #: WO#: 10481444

PM: JMG Due Date: 07/08/19

CLIENT: UPRR_Jacobs

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial See Exception ☐

Tracking Number: 4934 3730 7992

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☑ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☐ Wet ☐ Blue ☐ None ☐ Dry ☑ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 10.0 °C

Correction Factor: -0.2 **Cooler Temp Corrected w/temp blank:** 9.8 °C

Average Corrected Temp (no temp blank only): _____ °C See Exceptions ☐

USDA Regulated Soil: (☑ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: SJW 7/1/19

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No SJW 7/1/19

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☑ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☑ Nitrate ☑ Nitrite ☐ Orthophos ☑ Other Low Level VOCs
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used?	☑ Yes	☐ No		8.
-Pace Containers Used?	☑ Yes	☐ No		
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☑ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** See Exception ☐
Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other _____				
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	12. Sample # 1, 3-5: Y Y Y
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	☐ NaOH ☑ HNO_3 ☑ H_2SO_4 ☑ Zinc Acetate
JMG 070119 Exceptions: VOA, Coliform, TOC, DOC, Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☑ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# 220416A See Exception ☒
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☑ Yes	☐ No	☐ N/A	13. See Exception ☐
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 213047

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Mark and Brad Date/Time: 06/27/18

Comments/Resolution: WA certs not required for RSK or sulfide. Client notified of temperature and headspace.

Project Manager Review: Jenni Gross Date: 07/01/19

Field Data Required? ☐ Yes ☐ No

Note: Whenever there is a discrepancy affecting North Carolina compliance (i.e. out of hold, incorrect preservative, out of temp, incorrect containers), a copy of this form will be sent to the North Carolina DEHNR Certification Office.

Labeled by: [illegible]

Pace Analytical	Document Name: SCUR Exception Form – Coolers Above 6°C	Document Revised: 08Apr2019 Page 1 of 1
	Document No.: F-MN-C-298-Rev.02	Issuing Authority: Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions: **Workorder #:** 10481444

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☒Yes ☐No

If yes, indicate who was contacted/date/time.

If no, indicate reason why

JMG CONTACTED 07/01/19 @ 930 OUT of temp

Multiple Cooler Project? ☐Yes ☐No

If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature	

Other Issues

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Pace Analytical	Document Name: **Headspace Exception**	Document Revised: 17Dec2018 Page 1 of 1
	Document No.: **F-MN-C-276-Rev.01**	Issuing Authority: Pace Minnesota Quality Office

Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
MW135	2	0	1	3	N
TripBlank	0	0	3	3	N
FD5	3	0	0	3	N
W26	0	0	3	3	N
~~W20~~	~~0~~	~~0~~	~~3~~	~~3~~	~~N~~ COV 07/01/15

PRE

Chain of Custody

WO# : 12131535

12131535

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes [ ] No

Workorder: 10481444 **Workorder Name:** Freeman,WA-Cenex Harvest Lease **Owner Received Date:** 7/1/2019 **Results Requested By:** 7/16/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	MW13S-GW-062819	PS	6/28/2019 07:55	10481444001	Water	2						X												
2	FD5-GW-062819	PS	6/28/2019 14:00	10481444003	Water	2						X												
3	W26-GW-062819	PS	6/28/2019 08:50	10481444004	Water	2						X												
4	W20-GW-062819	PS	6/28/2019 10:20	10481444005	Water	2						X												
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	Aaron Pace 7/2/19	1730	RLC Pace 7-2-19	1900
2	RLC 7-3-19	0:30	B. Mathews	7/3/19 0915
3				

Comments

Cooler Temperature on Receipt 0.7 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #:

WO#: 12131535

PM: CLJ **Due Date: 07/17/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.4 Cooler Temp Corrected °C: 0.7 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 7/3/19 DC BM 7/3/19

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation properly preserved?	☑ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Nikki Jarvi Date: 7/3/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

WO# : 20111446

20111446

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: W

Cert. Needed: ☐ Yes ☒ No

Workorder: 10481444 **Workorder Name:** Freeman,WA-Cenex Harvest Lease

Owner Received Date: 7/1/2019 Results Requested By: 7/16/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	5636267 / 4500 Sulfide	LAB USE ONLY
1	MW13S-GW-062819	PS	6/28/2019 07:55	10481444001	Water	1	X	
2	FD5-GW-062819	PS	6/28/2019 14:00	10481444003	Water	1	X	
3	W26-GW-062819	PS	6/28/2019 08:50	10481444004	Water	1	X	
4	W20-GW-062819	PS	6/28/2019 10:20	10481444005	Water	1	X	
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	Cary Mann/ PACE	7/5/19 1700		
2	FedEx	7-6-19 0910	mell Pace	7-6-19
3				

Comments: 0910

Cooler Temperature on Receipt 1.9 °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon R

WO#: 20111446

PM: CMM **Due Date: 07/16/19**

CLIENT: PASI-MINN

Proj

Courier: ☒ Pace Courier ☐ Hired Courier ☒ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☐Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☒ Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 07-06-19

Temp must be measured from Temperature blank when present

Temperature Blank Present"?	☒Yes ☐No ☐N/A	1	
Chain of Custody Present:	☒Yes ☐No ☐N/A	2	
Chain of Custody Complete:	☒Yes ☐No ☐N/A	3	
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	4	
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	5	
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	6	
Sufficient Volume:	☒Yes ☐No ☐N/A	7	
Correct Containers Used:	☒Yes ☐No ☐N/A	8	
Filtered vol. Rec. for Diss. tests	☐Yes ☐No ☒N/A	9	
Sample Labels match COC:	☒Yes ☐No ☐N/A	10	
All containers received within manafacture's precautionary and/or expiration dates.	☒Yes ☐No ☐N/A	11	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☒Yes ☐No ☐N/A	12	
All containers preservation checked found to be in compliance with EPA recommendation.	☒Yes ☐No ☐N/A	13	If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	14	
Trip Blank Present:	☐Yes ☒No	15	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 15, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 01, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10481445001	**W20-GW-062819**	Water	06/28/19 10:20	07/01/19 08:40

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10481445001	**W20-GW-062819**	EPA 8260B	AEZ	83	PASI-M

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481445001	**W20-GW-062819**					
EPA 8260B	Benzene	0.25J	ug/L	0.50	07/11/19 05:18	
EPA 8260B	Toluene	0.15J	ug/L	0.50	07/11/19 05:18	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 15, 2019

General Information:
1 sample was analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 618674

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3341452)
  - 1,2,4-Trichlorobenzene
  - Hexachloro-1,3-butadiene
  - Naphthalene
  - n-Butylbenzene

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 618674

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10482647001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3341454)
  - Acrolein
- MSD (Lab ID: 3341455)
  - Acrolein
  - n-Butylbenzene

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 15, 2019

Additional Comments:

Analyte Comments:

QC Batch: 618674

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3341452)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3341453)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3341454)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3341455)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- W20-GW-062819 (Lab ID: 10481445001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3341452)
  - 1,2,4-Trichlorobenzene
  - Hexachloro-1,3-butadiene
  - Naphthalene
  - n-Butylbenzene

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Sample: W20-GW-062819 **Lab ID: 10481445001** Collected: 06/28/19 10:20 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:18	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 05:18	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 05:18	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 05:18	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 05:18	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 05:18	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:18	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:18	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 05:18	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 05:18	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:18	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:18	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 05:18	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 05:18	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 05:18	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 05:18	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 05:18	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 05:18	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 05:18	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:18	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 05:18	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 05:18	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/11/19 05:18	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 05:18	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 05:18	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 05:18	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:18	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 05:18	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 05:18	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 05:18	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 05:18	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 05:18	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 05:18	107-13-1	
Benzene	**0.25J**	ug/L	0.50	0.10	1		07/11/19 05:18	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 05:18	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 05:18	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 05:18	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 05:18	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 05:18	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/11/19 05:18	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/11/19 05:18	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 05:18	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 05:18	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/11/19 05:18	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 05:18	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 05:18	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Sample: W20-GW-062819 **Lab ID: 10481445001** Collected: 06/28/19 10:20 Received: 07/01/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 05:18	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 05:18	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 05:18	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 05:18	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 05:18	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 05:18	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 05:18	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 05:18	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:18	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 05:18	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 05:18	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 05:18	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 05:18	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 05:18	109-99-9	
Toluene	**0.15J**	ug/L	0.50	0.083	1		07/11/19 05:18	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 05:18	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 05:18	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 05:18	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 05:18	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 05:18	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 05:18	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 05:18	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 05:18	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 05:18	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 05:18	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 05:18	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 05:18	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 05:18	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 05:18	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/11/19 05:18	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 05:18	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 05:18	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 05:18	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 05:18	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/11/19 05:18	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/11/19 05:18	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		07/11/19 05:18	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

QC Batch: 618674 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481445001

METHOD BLANK: 3341452 Matrix: Water
Associated Lab Samples: 10481445001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/11/19 01:06	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/11/19 01:06	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
1,2,3-Trichlorobenzene	ug/L	0.71J	1.0	0.21	07/11/19 01:06	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/11/19 01:06	
1,2,4-Trichlorobenzene	ug/L	0.60	0.50	0.20	07/11/19 01:06	P8
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/11/19 01:06	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/11/19 01:06	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/11/19 01:06	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/11/19 01:06	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/11/19 01:06	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/11/19 01:06	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/11/19 01:06	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
1,3-Dichloropropane	ug/L	<0.070	1.0	0.070	07/11/19 01:06	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/11/19 01:06	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/11/19 01:06	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/11/19 01:06	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/11/19 01:06	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/11/19 01:06	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/11/19 01:06	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/11/19 01:06	
Acetone	ug/L	<9.2	20.0	9.2	07/11/19 01:06	
Acrolein	ug/L	<1.2	10.0	1.2	07/11/19 01:06	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/11/19 01:06	
Benzene	ug/L	<0.10	0.50	0.10	07/11/19 01:06	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/11/19 01:06	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/11/19 01:06	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/11/19 01:06	
Bromoform	ug/L	<0.80	4.0	0.80	07/11/19 01:06	
Bromomethane	ug/L	<1.8	4.0	1.8	07/11/19 01:06	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/11/19 01:06	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/11/19 01:06	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

METHOD BLANK: 3341452 Matrix: Water
Associated Lab Samples: 10481445001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	1.0	0.17	07/11/19 01:06	
Chloroethane	ug/L	<0.49	1.0	0.49	07/11/19 01:06	
Chloroform	ug/L	<0.45	1.0	0.45	07/11/19 01:06	
Chloromethane	ug/L	<0.16	4.0	0.16	07/11/19 01:06	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 01:06	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/11/19 01:06	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/11/19 01:06	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/11/19 01:06	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/11/19 01:06	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/11/19 01:06	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/11/19 01:06	
Hexachloro-1,3-butadiene	ug/L	1.2	1.0	0.31	07/11/19 01:06	P8
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/11/19 01:06	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/11/19 01:06	
n-Butylbenzene	ug/L	0.55	0.50	0.24	07/11/19 01:06	P8
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/11/19 01:06	
Naphthalene	ug/L	1.1	1.0	0.48	07/11/19 01:06	P8
o-Xylene	ug/L	<0.16	0.50	0.16	07/11/19 01:06	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
Styrene	ug/L	<0.19	0.50	0.19	07/11/19 01:06	
tert-Amylmethyl ether	ug/L	<0.11	1.0	0.11	07/11/19 01:06	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/11/19 01:06	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 01:06	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/11/19 01:06	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/11/19 01:06	
Toluene	ug/L	<0.083	0.50	0.083	07/11/19 01:06	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/11/19 01:06	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/11/19 01:06	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/11/19 01:06	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/11/19 01:06	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/11/19 01:06	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/11/19 01:06	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/11/19 01:06	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/11/19 01:06	
1,2-Dichloroethane-d4 (S)	%.	95	75-136		07/11/19 01:06	
4-Bromofluorobenzene (S)	%.	102	75-125		07/11/19 01:06	
Toluene-d8 (S)	%.	97	75-125		07/11/19 01:06	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

LABORATORY CONTROL SAMPLE: 3341453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	10.2	102	68-141	
1,1,1-Trichloroethane	ug/L	10	9.9	99	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	10.2	102	73-125	
1,1,2-Trichloroethane	ug/L	10	10.0	100	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	10.9	109	69-132	
1,1-Dichloroethane	ug/L	10	10.1	101	73-125	
1,1-Dichloroethene	ug/L	10	10.1	101	71-126	
1,1-Dichloropropene	ug/L	10	10.0	100	73-126	
1,2,3-Trichlorobenzene	ug/L	10	9.7	97	72-126	
1,2,3-Trichloropropane	ug/L	10	9.2	92	75-126	
1,2,4-Trichlorobenzene	ug/L	10	9.9	99	71-134	
1,2,4-Trimethylbenzene	ug/L	10	10.1	101	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	23.4	94	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	9.5	95	75-129	
1,2-Dichlorobenzene	ug/L	10	9.4	94	75-129	
1,2-Dichloroethane	ug/L	10	9.4	94	75-125	
1,2-Dichloroethene (Total)	ug/L	20	20.2	101	74-125	N2
1,2-Dichloropropane	ug/L	10	10.0	100	75-125	
1,3,5-Trimethylbenzene	ug/L	10	11.0	110	75-127	
1,3-Dichlorobenzene	ug/L	10	9.5	95	75-126	
1,3-Dichloropropane	ug/L	10	9.6	96	75-125	
1,4-Dichlorobenzene	ug/L	10	9.9	99	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	197J	99	72-129	
2,2,4-Trimethylpentane	ug/L	10	9.9	99	72-128	N2
2,2-Dichloropropane	ug/L	10	10.9	109	65-138	
2-Butanone (MEK)	ug/L	50	52.1	104	59-144	
2-Chlorotoluene	ug/L	10	10.0	100	75-127	
2-Hexanone	ug/L	50	56.4	113	73-134	
4-Chlorotoluene	ug/L	10	10.1	101	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	48.8	98	62-141	
Acetone	ug/L	50	57.0	114	60-137	
Acrolein	ug/L	100	88.7	89	60-141	
Acrylonitrile	ug/L	100	98.9	99	75-129	
Benzene	ug/L	10	9.7	97	73-125	
Bromobenzene	ug/L	10	9.9	99	73-125	
Bromochloromethane	ug/L	10	9.5	95	75-135	
Bromodichloromethane	ug/L	10	9.5	95	75-125	
Bromoform	ug/L	10	9.2	92	67-136	
Bromomethane	ug/L	10	12.7	127	30-150	
Carbon disulfide	ug/L	10	10.4	104	47-137	
Carbon tetrachloride	ug/L	10	10.5	105	75-125	
Chlorobenzene	ug/L	10	9.9	99	75-125	
Chloroethane	ug/L	10	10.3	103	63-136	
Chloroform	ug/L	10	9.6	96	73-128	
Chloromethane	ug/L	10	10.6	106	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.9	99	75-125	
cis-1,3-Dichloropropene	ug/L	10	9.0	90	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

LABORATORY CONTROL SAMPLE: 3341453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	9.9	99	75-125	
Dibromomethane	ug/L	10	9.8	98	75-125	
Dichlorodifluoromethane	ug/L	10	11.6	116	63-132	
Dichlorofluoromethane	ug/L	10	10.3	103	68-127	N2
Diisopropyl ether	ug/L	10	9.9	99	71-131	
Ethyl-tert-butyl ether	ug/L	10	10	100	75-125	
Ethylbenzene	ug/L	10	10.6	106	75-125	
Hexachloro-1,3-butadiene	ug/L	10	11.4	114	72-134	
Isopropylbenzene (Cumene)	ug/L	10	9.9	99	75-125	
m&p-Xylene	ug/L	20	20.7	103	75-126	
Methyl-tert-butyl ether	ug/L	10	9.3	93	75-125	
Methylene Chloride	ug/L	10	9.1	91	70-125	
n-Butylbenzene	ug/L	10	10.7	107	75-126	
n-Propylbenzene	ug/L	10	9.8	98	73-127	
Naphthalene	ug/L	10	10	100	63-128	
o-Xylene	ug/L	10	9.8	98	75-128	
p-Isopropyltoluene	ug/L	10	10.6	106	75-125	
sec-Butylbenzene	ug/L	10	10.7	107	75-126	
Styrene	ug/L	10	9.8	98	75-125	
tert-Amylmethyl ether	ug/L	10	9.6	96	75-125	
tert-Butyl Alcohol	ug/L	100	101	101	75-130	
tert-Butylbenzene	ug/L	10	10.7	107	75-131	
Tetrachloroethene	ug/L	10	10.1	101	74-125	
Tetrahydrofuran	ug/L	100	89.4	89	64-138	
Toluene	ug/L	10	10.2	102	74-125	
trans-1,2-Dichloroethene	ug/L	10	10.3	103	68-128	
trans-1,3-Dichloropropene	ug/L	10	9.8	98	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	22.2	89	60-127	
Trichloroethene	ug/L	10	10.1	101	75-127	
Trichlorofluoromethane	ug/L	10	11.2	112	72-133	
Vinyl acetate	ug/L	10	9.2J	92	61-129	
Vinyl chloride	ug/L	10	11.1	111	75-128	
Xylene (Total)	ug/L	30	30.5	102	75-125	
1,2-Dichloroethane-d4 (S)	%.			100	75-136	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341454 3341455

Parameter	Units	10482647001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	10	10	10.1	10.3	101	103	75-140	3	30	
1,1,1-Trichloroethane	ug/L	ND	10	10	10	10.3	100	103	74-136	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	10	10	10.1	10.5	101	105	66-134	4	30	
1,1,2-Trichloroethane	ug/L	ND	10	10	9.9	10.0	99	100	75-126	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341454 3341455

Parameter	Units	10482647001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	10	10	11.3	11.7	113	117	65-146	3	30	
1,1-Dichloroethane	ug/L	ND	10	10	10	10.2	100	102	68-132	2	30	
1,1-Dichloroethene	ug/L	ND	10	10	10.5	10.9	105	109	66-139	4	30	
1,1-Dichloropropene	ug/L	ND	10	10	10.4	10.7	104	107	67-134	3	30	
1,2,3-Trichlorobenzene	ug/L	ND	10	10	10.9	12.4	109	124	67-129	13	30	
1,2,3-Trichloropropane	ug/L	ND	10	10	9.1	9.5	91	95	69-128	4	30	
1,2,4-Trichlorobenzene	ug/L	ND	10	10	10.5	11.9	105	119	65-140	12	30	
1,2,4-Trimethylbenzene	ug/L	ND	10	10	10.3	11.5	103	115	71-133	12	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	25	25	23.6	23.4	94	94	54-138	1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	10	10	9.0	9.3	90	93	68-125	4	30	
1,2-Dichlorobenzene	ug/L	ND	10	10	9.5	10.4	95	104	74-136	9	30	
1,2-Dichloroethane	ug/L	ND	10	10	9.3	9.3	93	93	68-125	0	30	
1,2-Dichloroethene (Total)	ug/L	ND	20	20	19.4	19.9	97	99	71-126	2	30	N2
1,2-Dichloropropane	ug/L	ND	10	10	10.1	9.9	101	99	67-125	1	30	
1,3,5-Trimethylbenzene	ug/L	ND	10	10	10.6	12.0	106	120	68-137	12	30	
1,3-Dichlorobenzene	ug/L	ND	10	10	9.4	10.3	94	103	75-131	9	30	
1,3-Dichloropropane	ug/L	ND	10	10	9.2	9.3	92	93	71-125	1	30	
1,4-Dichlorobenzene	ug/L	ND	10	10	10	11.0	99	109	74-126	10	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	200	200	189J	197J	94	99	68-125		30	
2,2,4-Trimethylpentane	ug/L	ND	10	10	10.6	10.2	106	102	54-129	4	30	N2
2,2-Dichloropropane	ug/L	ND	10	10	10.8	11.4	108	114	69-139	6	30	
2-Butanone (MEK)	ug/L	ND	50	50	42.5	42.6	85	85	54-144	0	30	
2-Chlorotoluene	ug/L	ND	10	10	10.5	11.3	105	113	75-134	8	30	
2-Hexanone	ug/L	ND	50	50	51.3	50.4	102	100	58-137	2	30	
4-Chlorotoluene	ug/L	ND	10	10	9.9	10.7	99	107	72-133	7	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	49.9	48.2	100	96	60-129	3	30	
Acetone	ug/L	ND	50	50	43.2	42.8	86	86	62-132	1	30	
Acrolein	ug/L	ND	100	100	198	194	198	194	30-150	2	30	M1
Acrylonitrile	ug/L	ND	100	100	101	98.1	101	98	68-125	3	30	
Benzene	ug/L	ND	10	10	9.8	10.0	98	100	68-125	3	30	
Bromobenzene	ug/L	ND	10	10	9.9	10.3	99	103	73-126	4	30	
Bromochloromethane	ug/L	ND	10	10	9.4	9.5	94	95	66-143	1	30	
Bromodichloromethane	ug/L	0.59	10	10	9.9	10.1	93	95	74-125	2	30	
Bromoform	ug/L	ND	10	10	10.5	10.5	88	88	64-134	0	30	
Bromomethane	ug/L	ND	10	10	12.8	12.6	128	126	30-150	2	30	
Carbon disulfide	ug/L	ND	10	10	11.2	11.2	112	112	43-147	0	30	
Carbon tetrachloride	ug/L	6.9	10	10	17.9	18.5	110	116	71-143	3	30	
Chlorobenzene	ug/L	ND	10	10	9.7	10	97	100	75-125	2	30	
Chloroethane	ug/L	ND	10	10	10.3	10.7	103	107	75-129	4	30	
Chloroform	ug/L	21.0	10	10	32.1	32.9	111	120	66-132	3	30	
Chloromethane	ug/L	ND	10	10	11.0	11.0	110	110	53-137	0	30	
cis-1,2-Dichloroethene	ug/L	ND	10	10	9.4	9.7	94	97	67-133	3	30	
cis-1,3-Dichloropropene	ug/L	ND	10	10	9.1	9.1	91	91	66-125	0	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341454 3341455

Parameter	Units	10482647001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	10	10	9.6	9.9	96	99	62-132	3	30	
Dibromomethane	ug/L	ND	10	10	9.6	9.7	96	97	67-125	1	30	
Dichlorodifluoromethane	ug/L	ND	10	10	11.8	12.1	118	121	71-142	2	30	
Dichlorofluoromethane	ug/L	ND	10	10	10.3	10.5	103	105	70-131	2	30	N2
Diisopropyl ether	ug/L	ND	10	10	9.3	9.7	93	97	63-131	4	30	
Ethyl-tert-butyl ether	ug/L	ND	10	10	9.5	10.1	95	101	66-128	7	30	
Ethylbenzene	ug/L	ND	10	10	10.7	11.3	107	113	74-126	5	30	
Hexachloro-1,3-butadiene	ug/L	ND	10	10	12.7	12.3	127	123	68-143	3	30	
Isopropylbenzene (Cumene)	ug/L	ND	10	10	10.2	11.2	102	112	74-130	10	30	
m&p-Xylene	ug/L	ND	20	20	20.9	21.7	105	108	69-132	4	30	
Methyl-tert-butyl ether	ug/L	0.90	10	10	9.7	10.2	88	93	65-131	4	30	
Methylene Chloride	ug/L	ND	10	10	9.0	9.2	87	89	57-125	2	30	
n-Butylbenzene	ug/L	ND	10	10	11.8	13.2	118	132	71-131	10	30	M1
n-Propylbenzene	ug/L	ND	10	10	10.3	11.5	103	115	67-138	11	30	
Naphthalene	ug/L	ND	10	10	10.8	11.7	100	109	60-130	8	30	
o-Xylene	ug/L	ND	10	10	9.9	10.3	99	103	69-131	4	30	
p-Isopropyltoluene	ug/L	ND	10	10	11.0	12.7	110	127	72-133	14	30	
sec-Butylbenzene	ug/L	ND	10	10	11.6	12.8	116	128	73-134	10	30	
Styrene	ug/L	ND	10	10	9.8	10.2	98	102	72-125	4	30	
tert-Amylmethyl ether	ug/L	ND	10	10	9.1	9.4	91	94	67-125	4	30	
tert-Butyl Alcohol	ug/L	55.8	100	100	158	163	102	107	64-137	3	30	
tert-Butylbenzene	ug/L	ND	10	10	11.1	12.2	111	122	70-143	10	30	
Tetrachloroethene	ug/L	ND	10	10	10.3	10.9	103	109	72-129	6	30	
Tetrahydrofuran	ug/L	ND	100	100	89.3	92.6	89	93	66-128	4	30	
Toluene	ug/L	ND	10	10	9.9	10.4	98	103	73-125	5	30	
trans-1,2-Dichloroethene	ug/L	ND	10	10	10.0	10.2	100	102	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	ND	10	10	9.5	9.7	95	97	61-136	1	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	25	25	21.9	22.4	88	90	45-128	2	30	
Trichloroethene	ug/L	ND	10	10	9.9	9.8	99	98	74-132	1	30	
Trichlorofluoromethane	ug/L	ND	10	10	11.2	11.4	112	114	75-139	2	30	
Vinyl acetate	ug/L	ND	10	10	9.0J	9.2J	90	92	51-135		30	
Vinyl chloride	ug/L	ND	10	10	11.2	11.5	112	115	68-146	2	30	
Xylene (Total)	ug/L	ND	30	30	30.8	32.0	103	107	67-137	4	30	
1,2-Dichloroethane-d4 (S)	%.						100	99	75-136			
4-Bromofluorobenzene (S)	%.						99	101	75-125			
Toluene-d8 (S)	%.						104	104	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

WORKORDER QUALIFIERS

WO: 10481445

[1]	Samples requiring thermal preservation were received outside of recommended temperature limits of 0-6 degrees Celsius.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
P8	Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10481445

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481445001	**W20-GW-062819**	EPA 8260B	618674		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: UPRR_Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh (awalsh@up.com)	
Address: 1400 W. 52nd Ave. Denver, CO 80221	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR	
Email: awalsh@up.com	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	Regulatory Agency
Phone: Fax:	Purchase Order #: 1497-38-Rev0	Pace Quote: Contract# 9900758938	
Requested Due Date: *24 Hr / 3 Day / 10 Day*	Project Name: Freeman,WA-Cenex Harvest Lease	Pace Project Manager: Jennifer Gross	State / Location
	Project #:	Pace Profile #: *36447 / 1*	WA / Freeman

WO#: 10481445

10481445

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Requested Analysis Filtered (Y/N) Analyses Test Y/N	Low Level VOCs by 8260	Hold	
1	W20-GW-062819	WT	G	06/28/19	1020		3				X				X		001
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11	–																
12																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Natalie Dowdy / JACOBS	06/29/19	1500	PACE	7/1/19	840	9-8	N	Y	Y

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Natalie Dowdy		
SIGNATURE of SAMPLER:	Natalie Dowdy	DATE Signed:	06/28/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 09May2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.28	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt **Client Name:** UPRR JACOBS **Project #:** **WO#: 10481445**

PM: JMG **Due Date: 07/09/19**

CLIENT: UPRR_Jacobs

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial See Exception ☐

Tracking Number: 4934 3730 7992

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☒ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☐ Wet ☐ Blue ☐ None ☐ Dry ☒ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 10.0 °C **Average Corrected Temp (no temp blank only):** °C See Exceptions ☐

Correction Factor: -0.2 **Cooler Temp Corrected w/temp blank:** 9.8 °C

USDA Regulated Soil: (☒ N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** 7/1/19 GP

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☒ Yes	☐ No		
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** See Exception ☐
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☒ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# See Exception ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	13. See Exception ☐
Trip Blank Present?	☐ Yes	☒ No	☐ N/A	14. TB SHARED w/ WO: 10481444
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased): 213647

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Brad / Mark Date/Time: 07/01/19 Field Data Required? ☐ Yes ☐ No

Comments/Resolution: Notified client about temperature.

Project Manager Review: Jenni Gross Date: 07/01/19

Note: Whenever there is a discrepancy affecting North ... samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: GP

Pace Analytical	Document Name: SCUR Exception Form – Coolers Above 6°C	Document Revised: 08Apr2019 Page 1 of 1
	Document No.: F-MN-C-298-Rev.02	Issuing Authority: Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions:

Workorder #: 10481445

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☑ Yes ☐ No

If yes, indicate who was contacted/date/time.
If no, indicate reason why

JMG contacted 07/01/19 @ 930
out of temp

Multiple Cooler Project? ☐ Yes ☐ No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature

Other Issues

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

July 16, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on June 28, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

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CERTIFICATIONS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10481249014	**Marlow2-GW-062719**	Water	06/27/19 13:30	06/28/19 08:40

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10481249014	**Marlow2-GW-062719**	RSK 175	AMC	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10481249014	**Marlow2-GW-062719**					
EPA 6010D	Barium, Dissolved	20.1	ug/L	10.0	07/11/19 15:59	
EPA 6010D	Beryllium, Dissolved	0.16J	ug/L	5.0	07/11/19 15:59	B
EPA 6010D	Chromium, Dissolved	2.7J	ug/L	10.0	07/11/19 15:59	
EPA 6010D	Cobalt, Dissolved	0.83J	ug/L	10.0	07/11/19 15:59	
EPA 6010D	Copper, Dissolved	118	ug/L	10.0	07/11/19 15:59	
EPA 6010D	Nickel, Dissolved	17.7J	ug/L	20.0	07/11/19 15:59	
EPA 6010D	Vanadium, Dissolved	0.74J	ug/L	15.0	07/11/19 15:59	
EPA 6010D	Zinc, Dissolved	1630	ug/L	20.0	07/11/19 15:59	
EPA 8260B	1,4-Dioxane (p-Dioxane)	33.7J	ug/L	200	07/11/19 17:41	
EPA 8260B	Bromodichloromethane	0.52	ug/L	0.50	07/11/19 17:41	
EPA 8260B	Carbon disulfide	0.20J	ug/L	1.0	07/11/19 17:41	
EPA 8260B	Carbon tetrachloride	5.9	ug/L	0.50	07/11/19 17:41	
EPA 8260B	Chloroform	21.3	ug/L	1.0	07/11/19 17:41	
EPA 8260B	Methyl-tert-butyl ether	1.5	ug/L	0.50	07/11/19 17:41	
EPA 8260B	tert-Butyl Alcohol	134	ug/L	10.0	07/11/19 17:41	
SM 2320B	Alkalinity, Total as CaCO3	254	mg/L	5.0	07/10/19 10:10	M1
SM 2540C	Total Dissolved Solids	278	mg/L	10.0	07/03/19 14:23	
EPA 300.0	Chloride	9.5	mg/L	1.2	06/28/19 22:10	M1
EPA 300.0	Sulfate	5.1	mg/L	1.2	06/28/19 22:10	
SM 5310C	Total Organic Carbon	1.6	mg/L	1.0	07/08/19 16:08	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 616661

B: Analyte was detected in the associated method blank.
- BLANK for HBN 616661 [MPRP/943 (Lab ID: 3331252)
  - Beryllium, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 618922

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3342327)
  - Acrolein
- MSD (Lab ID: 3342328)
  - Acrolein

Additional Comments:

Analyte Comments:

QC Batch: 618922

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3342325)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 16, 2019

Analyte Comments:

QC Batch: 618922

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3342325)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3342326)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3342327)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3342328)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- Marlow2-GW-062719 (Lab ID: 10481249014)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 618410

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249006,10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3339781)
  - Alkalinity, Total as CaCO3
- MSD (Lab ID: 3339782)
  - Alkalinity, Total as CaCO3

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 148126

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 655463)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 616503

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249002,10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3330234)
  - Chloride
- MSD (Lab ID: 3330235)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 617810

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10481249013,10481249014

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3336999)
  - Nitrogen, NO2 plus NO3

Additional Comments:

Analyte Comments:

QC Batch: 617810

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 3336999)
  - Nitrogen, NO2 plus NO3
- MSD (Lab ID: 3337000)
  - Nitrogen, NO2 plus NO3

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Minneapolis, MN 55414
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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: July 16, 2019

General Information:
1 sample was analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Sample: Marlow2-GW-062719 **Lab ID: 10481249014** Collected: 06/27/19 13:30 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/03/19 20:37	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/03/19 20:37	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/03/19 20:37	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/11/19 05:30	07/11/19 15:59	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/11/19 05:30	07/11/19 15:59	7440-38-2	
Barium, Dissolved	**20.1**	ug/L	10.0	0.60	1	07/11/19 05:30	07/11/19 15:59	7440-39-3	
Beryllium, Dissolved	**0.16J**	ug/L	5.0	0.12	1	07/11/19 05:30	07/11/19 15:59	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/11/19 05:30	07/11/19 15:59	7440-43-9	
Chromium, Dissolved	**2.7J**	ug/L	10.0	0.66	1	07/11/19 05:30	07/11/19 15:59	7440-47-3	
Cobalt, Dissolved	**0.83J**	ug/L	10.0	0.50	1	07/11/19 05:30	07/11/19 15:59	7440-48-4	
Copper, Dissolved	**118**	ug/L	10.0	1.2	1	07/11/19 05:30	07/11/19 15:59	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/11/19 05:30	07/11/19 15:59	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/11/19 05:30	07/11/19 15:59	7439-98-7	
Nickel, Dissolved	**17.7J**	ug/L	20.0	1.1	1	07/11/19 05:30	07/11/19 15:59	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/11/19 05:30	07/11/19 15:59	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/11/19 05:30	07/11/19 15:59	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/11/19 05:30	07/11/19 15:59	7440-28-0	
Vanadium, Dissolved	**0.74J**	ug/L	15.0	0.43	1	07/11/19 05:30	07/11/19 15:59	7440-62-2	
Zinc, Dissolved	**1630**	ug/L	20.0	6.3	1	07/11/19 05:30	07/11/19 15:59	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/11/19 08:48	07/11/19 20:45	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/11/19 17:41	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/11/19 17:41	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 17:41	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/11/19 17:41	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/11/19 17:41	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/11/19 17:41	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 17:41	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 17:41	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/11/19 17:41	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/11/19 17:41	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 17:41	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 17:41	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/11/19 17:41	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/11/19 17:41	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 17:41	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/11/19 17:41	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/11/19 17:41	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 17:41	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 17:41	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 17:41	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Sample: Marlow2-GW-062719 **Lab ID: 10481249014** Collected: 06/27/19 13:30 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/11/19 17:41	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 17:41	106-46-7	
1,4-Dioxane (p-Dioxane)	**33.7J**	ug/L	200	16.3	1		07/11/19 17:41	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/11/19 17:41	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/11/19 17:41	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/11/19 17:41	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 17:41	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/11/19 17:41	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/11/19 17:41	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/11/19 17:41	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/11/19 17:41	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/11/19 17:41	107-02-8	M1
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/11/19 17:41	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 17:41	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/11/19 17:41	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/11/19 17:41	74-97-5	
Bromodichloromethane	**0.52**	ug/L	0.50	0.22	1		07/11/19 17:41	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/11/19 17:41	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/11/19 17:41	74-83-9	
Carbon disulfide	**0.20J**	ug/L	1.0	0.078	1		07/11/19 17:41	75-15-0	
Carbon tetrachloride	**5.9**	ug/L	0.50	0.19	1		07/11/19 17:41	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/11/19 17:41	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/11/19 17:41	75-00-3	
Chloroform	**21.3**	ug/L	1.0	0.45	1		07/11/19 17:41	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/11/19 17:41	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/11/19 17:41	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/11/19 17:41	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/11/19 17:41	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/11/19 17:41	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/11/19 17:41	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/11/19 17:41	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/11/19 17:41	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 17:41	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/11/19 17:41	98-82-8	
Methyl-tert-butyl ether	**1.5**	ug/L	0.50	0.16	1		07/11/19 17:41	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/11/19 17:41	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/11/19 17:41	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/11/19 17:41	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/11/19 17:41	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/11/19 17:41	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/11/19 17:41	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/11/19 17:41	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/11/19 17:41	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/11/19 17:41	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/11/19 17:41	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/11/19 17:41	1330-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Sample: Marlow2-GW-062719 **Lab ID: 10481249014** Collected: 06/27/19 13:30 Received: 06/28/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 17:41	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/11/19 17:41	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/11/19 17:41	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/11/19 17:41	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/11/19 17:41	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/11/19 17:41	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 17:41	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 17:41	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/11/19 17:41	994-05-8	
tert-Butyl Alcohol	**134**	ug/L	10.0	1.2	1		07/11/19 17:41	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/11/19 17:41	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/11/19 17:41	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/11/19 17:41	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/11/19 17:41	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/11/19 17:41	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/11/19 17:41	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	75-125		1		07/11/19 17:41	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**254**	mg/L	5.0	2.0	1		07/10/19 10:10		M1
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**278**	mg/L	10.0	5.0	1		07/03/19 14:23		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/03/19 16:41	18496-25-8	M1
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**9.5**	mg/L	1.2	0.12	1		06/28/19 22:10	16887-00-6	M1
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		06/28/19 22:10	14797-55-8	
Sulfate	**5.1**	mg/L	1.2	0.28	1		06/28/19 22:10	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		07/06/19 14:54		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/10/19 08:38	07/10/19 15:29		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.6**	mg/L	1.0	0.39	1		07/08/19 16:08	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 617524
QC Batch Method: RSK 175
Analysis Method: RSK 175
Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10481249014

METHOD BLANK: 3335656 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/03/19 20:30	
Ethene	ug/L	<2.9	10.0	2.9	07/03/19 20:30	
Methane	ug/L	<4.9	10.0	4.9	07/03/19 20:30	

LABORATORY CONTROL SAMPLE & LCSD: 3335657 3335658

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	116	116	102	102	85-115	0	20	
Ethene	ug/L	106	108	107	102	101	85-115	1	20	
Methane	ug/L	60.7	60.5	59.3	100	98	85-115	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3335660 3335661

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethane	ug/L	<3.0	114	114	109	109	96	96	30-150	0	20	
Ethene	ug/L	<2.9	106	106	101	101	95	95	30-150	0	20	
Methane	ug/L	<4.9	60.7	60.7	55.6	55.6	92	92	30-150	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 616705 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10481249014

METHOD BLANK: 3331452 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/11/19 20:09	

LABORATORY CONTROL SAMPLE: 3331453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331454 3331455

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.1	5.1	103	102	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 616661
QC Batch Method: EPA 3010
Analysis Method: EPA 6010D
Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10481249014

METHOD BLANK: 3331252 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	07/11/19 15:33	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	07/11/19 15:33	
Barium, Dissolved	ug/L	1.7J	10.0	0.60	07/11/19 15:33	
Beryllium, Dissolved	ug/L	0.12J	5.0	0.12	07/11/19 15:33	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	07/11/19 15:33	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	07/11/19 15:33	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	07/11/19 15:33	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	07/11/19 15:33	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	07/11/19 15:33	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	07/11/19 15:33	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	07/11/19 15:33	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	07/11/19 15:33	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	07/11/19 15:33	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	07/11/19 15:33	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	07/11/19 15:33	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	07/11/19 15:33	

LABORATORY CONTROL SAMPLE: 3331253

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	973	97	80-120	
Arsenic, Dissolved	ug/L	1000	969	97	80-120	
Barium, Dissolved	ug/L	1000	971	97	80-120	
Beryllium, Dissolved	ug/L	1000	980	98	80-120	
Cadmium, Dissolved	ug/L	1000	989	99	80-120	
Chromium, Dissolved	ug/L	1000	962	96	80-120	
Cobalt, Dissolved	ug/L	1000	959	96	80-120	
Copper, Dissolved	ug/L	1000	929	93	80-120	
Lead, Dissolved	ug/L	1000	971	97	80-120	
Molybdenum, Dissolved	ug/L	1000	986	99	80-120	
Nickel, Dissolved	ug/L	1000	963	96	80-120	
Selenium, Dissolved	ug/L	1000	989	99	80-120	
Silver, Dissolved	ug/L	500	481	96	80-120	
Thallium, Dissolved	ug/L	1000	957	96	80-120	
Vanadium, Dissolved	ug/L	1000	961	96	80-120	
Zinc, Dissolved	ug/L	1000	978	98	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331254 3331255

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	978	989	98	99	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	970	984	97	98	75-125	1	20	
Barium, Dissolved	ug/L	20.1	1000	1000	976	987	96	97	75-125	1	20	
Beryllium, Dissolved	ug/L	0.16J	1000	1000	981	996	98	100	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	965	975	96	97	75-125	1	20	
Chromium, Dissolved	ug/L	2.7J	1000	1000	955	967	95	96	75-125	1	20	
Cobalt, Dissolved	ug/L	0.83J	1000	1000	937	949	94	95	75-125	1	20	
Copper, Dissolved	ug/L	118	1000	1000	1060	1070	94	95	75-125	1	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	951	963	95	96	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	990	1010	99	101	75-125	2	20	
Nickel, Dissolved	ug/L	17.7J	1000	1000	956	966	94	95	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	978	992	98	99	75-125	1	20	
Silver, Dissolved	ug/L	<0.40	500	500	485	490	97	98	75-125	1	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	954	959	95	96	75-125	0	20	
Vanadium, Dissolved	ug/L	0.74J	1000	1000	960	971	96	97	75-125	1	20	
Zinc, Dissolved	ug/L	1630	1000	1000	2540	2550	91	91	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 618922 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10481249014

METHOD BLANK: 3342325 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/11/19 13:46	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/11/19 13:46	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	07/11/19 13:46	MN
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/11/19 13:46	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/11/19 13:46	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/11/19 13:46	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/11/19 13:46	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/11/19 13:46	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/11/19 13:46	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/11/19 13:46	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/11/19 13:46	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
1,3-Dichloropropane	ug/L	<0.070	1.0	0.070	07/11/19 13:46	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/11/19 13:46	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/11/19 13:46	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/11/19 13:46	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/11/19 13:46	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/11/19 13:46	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/11/19 13:46	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/11/19 13:46	
Acetone	ug/L	<9.2	20.0	9.2	07/11/19 13:46	
Acrolein	ug/L	<1.2	10.0	1.2	07/11/19 13:46	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/11/19 13:46	
Benzene	ug/L	<0.10	0.50	0.10	07/11/19 13:46	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/11/19 13:46	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/11/19 13:46	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/11/19 13:46	
Bromoform	ug/L	<0.80	4.0	0.80	07/11/19 13:46	
Bromomethane	ug/L	<1.8	4.0	1.8	07/11/19 13:46	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/11/19 13:46	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/11/19 13:46	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

METHOD BLANK: 3342325 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	1.0	0.17	07/11/19 13:46	
Chloroethane	ug/L	<0.49	1.0	0.49	07/11/19 13:46	
Chloroform	ug/L	<0.45	1.0	0.45	07/11/19 13:46	
Chloromethane	ug/L	<0.16	4.0	0.16	07/11/19 13:46	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/11/19 13:46	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/11/19 13:46	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/11/19 13:46	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/11/19 13:46	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/11/19 13:46	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/11/19 13:46	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/11/19 13:46	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/11/19 13:46	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/11/19 13:46	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/11/19 13:46	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/11/19 13:46	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/11/19 13:46	
Naphthalene	ug/L	<0.48	1.0	0.48	07/11/19 13:46	
o-Xylene	ug/L	<0.16	0.50	0.16	07/11/19 13:46	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
Styrene	ug/L	<0.19	0.50	0.19	07/11/19 13:46	
tert-Amylmethyl ether	ug/L	<0.11	1.0	0.11	07/11/19 13:46	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/11/19 13:46	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/11/19 13:46	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/11/19 13:46	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/11/19 13:46	
Toluene	ug/L	<0.083	0.50	0.083	07/11/19 13:46	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/11/19 13:46	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/11/19 13:46	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/11/19 13:46	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/11/19 13:46	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/11/19 13:46	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/11/19 13:46	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/11/19 13:46	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/11/19 13:46	
1,2-Dichloroethane-d4 (S)	%.	97	75-136		07/11/19 13:46	
4-Bromofluorobenzene (S)	%.	102	75-125		07/11/19 13:46	
Toluene-d8 (S)	%.	97	75-125		07/11/19 13:46	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

LABORATORY CONTROL SAMPLE: 3342326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	9.8	98	68-141	
1,1,1-Trichloroethane	ug/L	10	9.1	91	75-129	
1,1,2,2-Tetrachloroethane	ug/L	10	10.1	101	73-125	
1,1,2-Trichloroethane	ug/L	10	9.4	94	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	10	9.9	99	69-132	
1,1-Dichloroethane	ug/L	10	9.4	94	73-125	
1,1-Dichloroethene	ug/L	10	9.6	96	71-126	
1,1-Dichloropropene	ug/L	10	9.4	94	73-126	
1,2,3-Trichlorobenzene	ug/L	10	8.8	88	72-126	
1,2,3-Trichloropropane	ug/L	10	9.2	92	75-126	
1,2,4-Trichlorobenzene	ug/L	10	8.9	89	71-134	
1,2,4-Trimethylbenzene	ug/L	10	9.6	96	72-134	
1,2-Dibromo-3-chloropropane	ug/L	25	23.4	94	60-135	
1,2-Dibromoethane (EDB)	ug/L	10	9.6	96	75-129	
1,2-Dichlorobenzene	ug/L	10	8.9	89	75-129	
1,2-Dichloroethane	ug/L	10	8.7	87	75-125	
1,2-Dichloroethene (Total)	ug/L	20	18.4	92	74-125	N2
1,2-Dichloropropane	ug/L	10	9.6	96	75-125	
1,3,5-Trimethylbenzene	ug/L	10	10.3	103	75-127	
1,3-Dichlorobenzene	ug/L	10	8.8	88	75-126	
1,3-Dichloropropane	ug/L	10	9.0	90	75-125	
1,4-Dichlorobenzene	ug/L	10	9.3	93	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	200	206	103	72-129	
2,2,4-Trimethylpentane	ug/L	10	9.7	97	72-128	N2
2,2-Dichloropropane	ug/L	10	10.6	106	65-138	
2-Butanone (MEK)	ug/L	50	52.5	105	59-144	
2-Chlorotoluene	ug/L	10	9.5	95	75-127	
2-Hexanone	ug/L	50	56.2	112	73-134	
4-Chlorotoluene	ug/L	10	9.2	92	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	50	48.9	98	62-141	
Acetone	ug/L	50	58.5	117	60-137	
Acrolein	ug/L	100	93.2	93	60-141	
Acrylonitrile	ug/L	100	100	100	75-129	
Benzene	ug/L	10	9.2	92	73-125	
Bromobenzene	ug/L	10	9.3	93	73-125	
Bromochloromethane	ug/L	10	9.0	90	75-135	
Bromodichloromethane	ug/L	10	8.9	89	75-125	
Bromoform	ug/L	10	8.9	89	67-136	
Bromomethane	ug/L	10	10.3	103	30-150	
Carbon disulfide	ug/L	10	9.6	96	47-137	
Carbon tetrachloride	ug/L	10	9.9	99	75-125	
Chlorobenzene	ug/L	10	9.3	93	75-125	
Chloroethane	ug/L	10	9.7	97	63-136	
Chloroform	ug/L	10	8.9	89	73-128	
Chloromethane	ug/L	10	9.6	96	55-130	
cis-1,2-Dichloroethene	ug/L	10	9.2	92	75-125	
cis-1,3-Dichloropropene	ug/L	10	8.8	88	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

LABORATORY CONTROL SAMPLE: 3342326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	10	9.3	93	75-125	
Dibromomethane	ug/L	10	9.2	92	75-125	
Dichlorodifluoromethane	ug/L	10	10.5	105	63-132	
Dichlorofluoromethane	ug/L	10	9.6	96	68-127	N2
Diisopropyl ether	ug/L	10	9.1	91	71-131	
Ethyl-tert-butyl ether	ug/L	10	9.5	95	75-125	
Ethylbenzene	ug/L	10	9.9	99	75-125	
Hexachloro-1,3-butadiene	ug/L	10	9.3	93	72-134	
Isopropylbenzene (Cumene)	ug/L	10	9.2	92	75-125	
m&p-Xylene	ug/L	20	19.6	98	75-126	
Methyl-tert-butyl ether	ug/L	10	8.8	88	75-125	
Methylene Chloride	ug/L	10	8.6	86	70-125	
n-Butylbenzene	ug/L	10	9.5	95	75-126	
n-Propylbenzene	ug/L	10	9.0	90	73-127	
Naphthalene	ug/L	10	8.6	86	63-128	
o-Xylene	ug/L	10	9.2	92	75-128	
p-Isopropyltoluene	ug/L	10	10.0	100	75-125	
sec-Butylbenzene	ug/L	10	10.2	102	75-126	
Styrene	ug/L	10	9.1	91	75-125	
tert-Amylmethyl ether	ug/L	10	9.0	90	75-125	
tert-Butyl Alcohol	ug/L	100	94.8	95	75-130	
tert-Butylbenzene	ug/L	10	10.2	102	75-131	
Tetrachloroethene	ug/L	10	9.6	96	74-125	
Tetrahydrofuran	ug/L	100	89.2	89	64-138	
Toluene	ug/L	10	9.5	95	74-125	
trans-1,2-Dichloroethene	ug/L	10	9.2	92	68-128	
trans-1,3-Dichloropropene	ug/L	10	9.5	95	75-125	
trans-1,4-Dichloro-2-butene	ug/L	25	23.3	93	60-127	
Trichloroethene	ug/L	10	9.3	93	75-127	
Trichlorofluoromethane	ug/L	10	10.3	103	72-133	
Vinyl acetate	ug/L	10	8.7J	87	61-129	
Vinyl chloride	ug/L	10	10.3	103	75-128	
Xylene (Total)	ug/L	30	28.8	96	75-125	
1,2-Dichloroethane-d4 (S)	%.			99	75-136	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342327 3342328

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	10	10	10.3	9.8	103	98	75-140	5	30	
1,1,1-Trichloroethane	ug/L	<0.14	10	10	10.6	10.7	106	107	74-136	1	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	10	10	10.4	11.4	104	114	66-134	9	30	
1,1,2-Trichloroethane	ug/L	<0.18	10	10	10.4	9.4	104	94	75-126	11	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342327 3342328

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	10	10	12.2	11.8	122	118	65-146	3	30	
1,1-Dichloroethane	ug/L	<0.17	10	10	10.3	10.7	103	107	68-132	4	30	
1,1-Dichloroethene	ug/L	<0.16	10	10	11.0	11.0	110	110	66-139	1	30	
1,1-Dichloropropene	ug/L	<0.20	10	10	10.9	10.8	109	108	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	10	10	10.0	12.6	100	126	67-129	23	30	
1,2,3-Trichloropropane	ug/L	<0.26	10	10	10.2	10.1	102	101	69-128	1	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	10	10	9.8	11.7	98	117	65-140	18	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	10	10	10.3	12.1	103	121	71-133	16	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	25	25	24.5	25.4	98	102	54-138	4	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	10	10	9.9	9.1	99	91	68-125	9	30	
1,2-Dichlorobenzene	ug/L	<0.14	10	10	9.2	10.5	92	105	74-136	14	30	
1,2-Dichloroethane	ug/L	<0.22	10	10	9.4	9.7	94	97	68-125	3	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	20	20	20.6	20.4	103	102	71-126	1	30	N2
1,2-Dichloropropane	ug/L	<0.16	10	10	10.1	10.3	101	103	67-125	2	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	10	10	11.0	12.5	110	125	68-137	13	30	
1,3-Dichlorobenzene	ug/L	<0.16	10	10	9.6	10.9	96	109	75-131	13	30	
1,3-Dichloropropane	ug/L	<0.070	10	10	9.8	8.7	98	87	71-125	12	30	
1,4-Dichlorobenzene	ug/L	<0.17	10	10	9.9	11.4	99	114	74-126	15	30	
1,4-Dioxane (p-Dioxane)	ug/L	33.7J	200	200	191J	205	79	86	68-125		30	
2,2,4-Trimethylpentane	ug/L	<0.19	10	10	11.7	11.0	117	110	54-129	7	30	N2
2,2-Dichloropropane	ug/L	<0.17	10	10	11.4	11.3	114	113	69-139	1	30	
2-Butanone (MEK)	ug/L	<0.99	50	50	46.7	49.9	93	100	54-144	7	30	
2-Chlorotoluene	ug/L	<0.16	10	10	10.5	12.0	105	120	75-134	13	30	
2-Hexanone	ug/L	<0.88	50	50	54.1	50.6	108	101	58-137	7	30	
4-Chlorotoluene	ug/L	<0.13	10	10	10.1	11.4	101	114	72-133	12	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	50	50	51.3	50.5	103	101	60-129	2	30	
Acetone	ug/L	<9.2	50	50	44.5	46.9	89	94	62-132	5	30	
Acrolein	ug/L	<1.2	100	100	199	203	199	203	30-150	2	30	M1
Acrylonitrile	ug/L	<0.91	100	100	101	104	101	104	68-125	3	30	
Benzene	ug/L	<0.10	10	10	10.3	10.1	103	101	68-125	3	30	
Bromobenzene	ug/L	<0.21	10	10	9.9	10.8	99	108	73-126	8	30	
Bromochloromethane	ug/L	<0.27	10	10	9.2	10.0	92	100	66-143	8	30	
Bromodichloromethane	ug/L	0.52	10	10	10.1	10.3	96	98	74-125	2	30	
Bromoform	ug/L	<0.80	10	10	10.1	9.7	101	97	64-134	5	30	
Bromomethane	ug/L	<1.8	10	10	10.1	10.7	101	107	30-150	7	30	
Carbon disulfide	ug/L	0.20J	10	10	11.1	11.0	109	108	43-147	1	30	
Carbon tetrachloride	ug/L	5.9	10	10	17.1	17.3	111	113	71-143	1	30	
Chlorobenzene	ug/L	<0.17	10	10	10.0	9.4	100	94	75-125	6	30	
Chloroethane	ug/L	<0.49	10	10	10.2	10.2	102	102	75-129	0	30	
Chloroform	ug/L	21.3	10	10	30.7	31.9	94	106	66-132	4	30	
Chloromethane	ug/L	<0.16	10	10	10.3	10.4	103	104	53-137	1	30	
cis-1,2-Dichloroethene	ug/L	<0.15	10	10	10.1	10.0	101	100	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	<0.20	10	10	9.3	9.9	93	99	66-125	6	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3342327 3342328

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	10	10	9.8	9.1	98	91	62-132	7	30	
Dibromomethane	ug/L	<0.16	10	10	9.6	10.1	96	101	67-125	5	30	
Dichlorodifluoromethane	ug/L	<0.23	10	10	11.6	11.9	116	119	71-142	2	30	
Dichlorofluoromethane	ug/L	<0.14	10	10	9.9	10	99	100	70-131	0	30	N2
Diisopropyl ether	ug/L	<0.13	10	10	9.6	9.9	96	99	63-131	3	30	
Ethyl-tert-butyl ether	ug/L	<0.18	10	10	9.9	10.0	99	100	66-128	1	30	
Ethylbenzene	ug/L	<0.14	10	10	10.9	10.5	109	105	74-126	4	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	10	10	11.9	12.1	119	121	68-143	2	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	10	10	10.3	10.4	103	104	74-130	1	30	
m&p-Xylene	ug/L	<0.31	20	20	21.5	20.5	108	103	69-132	5	30	
Methyl-tert-butyl ether	ug/L	1.5	10	10	10.9	11.1	94	95	65-131	1	30	
Methylene Chloride	ug/L	<0.98	10	10	9.3	9.4	93	94	57-125	1	30	
n-Butylbenzene	ug/L	<0.24	10	10	11.0	12.7	110	127	71-131	14	30	
n-Propylbenzene	ug/L	<0.10	10	10	10.2	11.7	102	117	67-138	13	30	
Naphthalene	ug/L	<0.48	10	10	8.8	11.0	88	110	60-130	22	30	
o-Xylene	ug/L	<0.16	10	10	9.8	9.5	98	95	69-131	4	30	
p-Isopropyltoluene	ug/L	<0.15	10	10	11.3	13.0	113	130	72-133	15	30	
sec-Butylbenzene	ug/L	<0.15	10	10	11.7	13.1	117	131	73-134	12	30	
Styrene	ug/L	<0.19	10	10	10.0	9.5	100	95	72-125	6	30	
tert-Amylmethyl ether	ug/L	<0.11	10	10	9.5	10.0	95	100	67-125	5	30	
tert-Butyl Alcohol	ug/L	134	100	100	240	256	106	121	64-137	6	30	
tert-Butylbenzene	ug/L	<0.15	10	10	11.3	12.6	113	126	70-143	11	30	
Tetrachloroethene	ug/L	<0.17	10	10	10.7	10.3	107	103	72-129	3	30	
Tetrahydrofuran	ug/L	<2.2	100	100	95.2	99.9	95	100	66-128	5	30	
Toluene	ug/L	<0.083	10	10	10.8	10	108	100	73-125	8	30	
trans-1,2-Dichloroethene	ug/L	<0.12	10	10	10.5	10.3	105	103	62-137	1	30	
trans-1,3-Dichloropropene	ug/L	<0.18	10	10	10.2	9.4	102	94	61-136	7	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	25	25	25.1	25.0	100	100	45-128	0	30	
Trichloroethene	ug/L	<0.15	10	10	10.3	10.5	103	105	74-132	2	30	
Trichlorofluoromethane	ug/L	<0.23	10	10	11.1	11.1	111	111	75-139	1	30	
Vinyl acetate	ug/L	<1.1	10	10	9.0J	9.5J	90	95	51-135		30	
Vinyl chloride	ug/L	<0.092	10	10	11.2	10.9	112	109	68-146	2	30	
Xylene (Total)	ug/L	<0.31	30	30	31.3	30.0	104	100	67-137	4	30	
1,2-Dichloroethane-d4 (S)	%.						100	98	75-136			
4-Bromofluorobenzene (S)	%.						102	102	75-125			
Toluene-d8 (S)	%.						106	94	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 618410 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10481249014

METHOD BLANK: 3339776 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/10/19 07:44	

LABORATORY CONTROL SAMPLE & LCSD: 3339777 3339778

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.0	42.0	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339779 3339780

Parameter	Units	10481249006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	79.5	40	40	122	121	106	104	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339781 3339782

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	254	40	40	309	318	137	158	80-120	3	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 617443 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10481249014

METHOD BLANK: 3335255 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	07/03/19 14:23	

LABORATORY CONTROL SAMPLE: 3335256

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	990	99	80-120	

SAMPLE DUPLICATE: 3335257

Parameter	Units	10481249014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	278	288	4	5	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 148126 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10481249014

METHOD BLANK: 655460 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	07/03/19 16:12	

LABORATORY CONTROL SAMPLE: 655461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.22	109	90-110	

MATRIX SPIKE SAMPLE: 655463

Parameter	Units	10481249014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.0088J	2	75-125	M1

SAMPLE DUPLICATE: 655462

Parameter	Units	10481249014 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 616503 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10481249014

METHOD BLANK: 3330230 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	06/28/19 17:19	
Nitrate as N	mg/L	<0.012	0.10	0.012	06/28/19 17:19	
Sulfate	mg/L	0.49J	1.2	0.28	06/28/19 17:19	

LABORATORY CONTROL SAMPLE: 3330231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.6	101	90-110	
Nitrate as N	mg/L	1	0.96	96	90-110	
Sulfate	mg/L	12.5	12.0	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3330232 3330233

Parameter	Units	10481249002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.4	12.5	12.5	13.7	13.7	98	98	90-110	0	20	
Nitrate as N	mg/L	0.22	1	1	1.2	1.2	96	96	90-110	0	20	
Sulfate	mg/L	1.9	12.5	12.5	14.6	14.5	101	101	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3330234 3330235

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.5	12.5	12.5	20.6	20.6	89	89	90-110	0	20	M1
Nitrate as N	mg/L	<0.012	1	1	0.98	0.98	98	98	90-110	0	20	
Sulfate	mg/L	5.1	12.5	12.5	17.3	17.3	97	98	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 617810 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10481249014

METHOD BLANK: 3336997 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	07/06/19 14:57	FS

LABORATORY CONTROL SAMPLE: 3336998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	102	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3336999 3337000

Parameter	Units	10481249013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	5.3	5	5	11.0	10.5	113	104	90-110	4	20	E,M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337001 3337002

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	0.99	1.0	99	101	90-110	2	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 618373 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10481249014

METHOD BLANK: 3339410 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/10/19 15:26	

LABORATORY CONTROL SAMPLE: 3339411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	295	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339412 3339413

Parameter	Units	10481000008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	247	238	95	92	90-110	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339414 3339415

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	237	241	92	94	90-110	2	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

QC Batch: 169858 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10481249014

METHOD BLANK: 671395 Matrix: Water
Associated Lab Samples: 10481249014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	07/08/19 15:12	

LABORATORY CONTROL SAMPLE: 671396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.3	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 671397 671398

Parameter	Units	10481249014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.6	25	25	27.0	27.2	102	102	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 671399 671400

Parameter	Units	10481444004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.1	25	25	26.3	26.1	101	100	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
FS	The sample was filtered in the laboratory prior to analysis.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10481482

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10481249014	**Marlow2-GW-062719**	RSK 175	617524		
10481249014	**Marlow2-GW-062719**	EPA 3010	616661	EPA 6010D	618837
10481249014	**Marlow2-GW-062719**	EPA 7470A	616705	EPA 7470A	618852
10481249014	**Marlow2-GW-062719**	EPA 8260B	618922		
10481249014	**Marlow2-GW-062719**	SM 2320B	618410		
10481249014	**Marlow2-GW-062719**	SM 2540C	617443		
10481249014	**Marlow2-GW-062719**	SM 4500-S-2 D	148126		
10481249014	**Marlow2-GW-062719**	EPA 300.0	616503		
10481249014	**Marlow2-GW-062719**	EPA 353.2	617810		
10481249014	**Marlow2-GW-062719**	EPA 410.4	618373	EPA 410.4	618458
10481249014	**Marlow2-GW-062719**	SM 5310C	169858		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

10481482

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: CH2M Hill	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh	
Address: 999 W. Riverside Ave, Suite 500	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR	
Spokane, WA 99201	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	Regulatory Agency
Email:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 9900758938	
Phone: Fax:	Project Name: Freeman WA-Grain Handling Facility	Pace Project Manager: Jennifer Gross	State / Location
Requested Due Date: *10 Day Standard*	Project #: 1497	Pace Profile #: *36447 / 4*	WA / Freeman

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left) Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Y/N	Analyses Test: Low Level VOCs by 8260	6010/7470 T22 Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	Requested Analysis Filtered (Y/N)
1	Marlow2-GW-062719	WT	G	06/27/19	1330		39	X	X	X	X	X		Y	X	X	X	X	X	X	X	X	X		X	~~60~~ 6/27/19
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11				–																						
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Short hold analyses are in bold	Natalie Dowdy	06/27/19	1700	ASA Pace	6-28-19	0840
*Field filtered by client						

SAMPLE CONDITIONS			
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
0.6	Y	Y	Y
2.9	Y	Y	Y
5.5	Y	Y	Y
4.2	Y	Y	Y
JMG	070119		

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Natalie Dowdy

SIGNATURE of SAMPLER: Natalie Dowdy

DATE Signed: 06/27/2019

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 09May2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.28	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CH2M Hill

Project #: WO#: 10481249

PM: JMG Due Date: 07/03/19

CLIENT: UPRR_Jacobs

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial See Exception ☑

Tracking Number: 4934 3730 8017

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☑ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.8, 3.1, 5.7, 4.4 °C

Correction Factor: -0.2 **Cooler Temp Corrected w/temp blank:** 0.6, 2.9, 5.5, 4.2 °C

Average Corrected Temp (no temp blank only): ____ °C See Exceptions ☐

USDA Regulated Soil: (☑ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: ASH 6-28-19

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☑ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other _____
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used?	☑ Yes	☐ No		8. ~~Sample & RSK received broken (1/3)~~ JMG 070119
-Pace Containers Used?	☑ Yes	☐ No		
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☑ Yes	☐ No		11. If no, write ID/ Date/Time on Container Below: See Exception ☐
Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other _____				
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	12. Sample # 1-13;
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	☐ NaOH ☑ HNO_3 1/1 ☑ H_2SO_4 1/1 ☑ Zinc Acetate 1/1
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS JMG 070119	☒ Yes	☐ No	~~☐ N/A~~	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# See Exception ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
	JMG 070119			13. See Exception
Headspace in VOA Vials (greater than 6mm)?	~~☑ Yes~~	☒ No	☐ N/A	JMG 070119 ☑
Trip Blank Present?	☐ Yes	☑ No	☐ N/A	14. ~~Trip blanks not present~~ ASH 6-28-19
Trip Blank Custody Seals Present?	☐ Yes	☑ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 213017

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Marck Ochsner Date/Time: 06/27/18

Comments/Resolution: WA certs not required for RSK and sulfide.

Field Data Required? ☐ Yes ☐ No

Project Manager Review: Jenni Gross Date: 07/01/19

Note: Whenever there is a discrepancy affecting N... lance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: _____

Pace Analytical	Document Name: SCUR Exception Form – Coolers Above 6°C	Document Revised: 08Apr2019 Page 1 of 1
	Document No.: F-MN-C-298-Rev.02	Issuing Authority: Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions: **Workorder #:** 10481482

Out of Temp Sample IDs	Container Type	# of Containers
~~4934~~ 4934		

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature			
4934	3730	8017	0.6
"	"	8006	2.9
"	"	8028	5.5
4486	7792	7107	4.2

Other Issues

Issue Type: ID doesn't match COC

Sample ID	Container Type	# of Containers
FD4-GW-062719	BP2Z	1
	BP2U	1
	BP3N	1
JMG 070119	BP3S	1
	BRHU	1
	VG9S	2
	VG9H	3
	VSG	3

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

PRE

Chain of Custody

WO#: 12131533

12131533

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: ☒ Yes ☐ No

Workorder: 10481482 **Workorder Name:** 1497 Freeman WA-Grain Handling **Owner Received Date:** 6/28/2019 **Results Requested By:** 7/15/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 VG9S						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	Marlow2-GW-062719	RQS	6/27/2019 13:30	10481249014	Water	6						X												MS/MSD
2																								
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	Pace 7/2/19	1715	RLC 7-2-19	1900
2	RLC 7-3-19	0:30	B. Mathews	7/3/19 0930
3				

Comments

Cooler Temperature on Receipt 0.7 °C **Custody Seal** (Y) or N **Received on Ice** (Y) or N **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #:

WO#: 12131533

PM: CLJ **Due Date: 07/16/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.4 Cooler Temp Corrected °C: 0.7 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 7/3/19 DC BM 7/3/19

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☐ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☒ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Nikki Jarvis Date: 7/3/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

WO# : 20110978

20110978

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 6/28/2019 **Results Requested By:** 7/15/2019

Workorder: 10481482 **Workorder Name:** 1497 Freeman WA-Grain Handling

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	5636267 / 4500 Sulfide	LAB USE ONLY
1	Marlow2-GW-062719	RQS	6/27/2019 13:30	10481249014	Water	3	X	MS/MSD
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	7/1/19 1715		
2	[signature] FedEx	7-2-19 0820	[signature]	7-2-19
3				

Comments: 082 a

Cooler Temperature on Receipt 1.4 °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO#: 20110978

Pace Analytical

Sample Condition Upon R

PM: CMM Due Date: 07/15/19
CLIENT: PASI-MINN

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Proj

Courier: ☐ Pace Courier ☐ Hired Courier ☒ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☒Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☒ Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 07-02-19 MD

Temp must be measured from Temperature blank when present

			Comments:
Temperature Blank Present"?	☐Yes	☒No ☐N/A	1
Chain of Custody Present:	☒Yes	☐No ☐N/A	2
Chain of Custody Complete:	☒Yes	☐No ☐N/A	3
Chain of Custody Relinquished:	☒Yes	☐No ☐N/A	4
Sampler Name & Signature on COC:	☒Yes	☐No ☐N/A	5
Samples Arrived within Hold Time:	☒Yes	☐No ☐N/A	6
Sufficient Volume:	☒Yes	☐No ☐N/A	7
Correct Containers Used:	☒Yes	☐No ☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☐No ☒N/A	9
Sample Labels match COC:	☒Yes	☐No ☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☒Yes	☐No ☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☒Yes	☐No ☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☒Yes	☐No ☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☒N/A	14
Trip Blank Present:	☐Yes	☐No	15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

August 01, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 19, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10483755001	**MW28-GW-071819**	Water	07/18/19 14:10	07/19/19 08:50
10483755002	**TB-071819**	Water	07/18/19 07:00	07/19/19 08:50

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10483755001	**MW28-GW-071819**	RSK 175	MJD	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10483755002	**TB-071819**	EPA 8260B	DS2	83	PASI-M

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10483755001	**MW28-GW-071819**					
EPA 6010D	Barium, Dissolved	11.6	ug/L	10.0	07/22/19 16:38	
EPA 6010D	Cobalt, Dissolved	0.97J	ug/L	10.0	07/22/19 16:38	
EPA 6010D	Copper, Dissolved	6.2J	ug/L	10.0	07/22/19 16:38	
EPA 6010D	Lead, Dissolved	2.8J	ug/L	10.0	07/22/19 16:38	
EPA 6010D	Vanadium, Dissolved	8.9J	ug/L	15.0	07/22/19 16:38	
EPA 6010D	Zinc, Dissolved	28.4	ug/L	20.0	07/22/19 16:38	
EPA 8260B	Carbon tetrachloride	314	ug/L	2.5	07/26/19 14:06	
EPA 8260B	Chloroform	15.1	ug/L	1.0	07/25/19 13:15	
EPA 8260B	Toluene	0.14J	ug/L	0.50	07/25/19 13:15	
SM 2320B	Alkalinity, Total as CaCO3	166	mg/L	5.0	07/25/19 15:36	
SM 2540C	Total Dissolved Solids	286	mg/L	10.0	07/24/19 10:14	
EPA 300.0	Chloride	6.9	mg/L	1.2	07/20/19 11:17	M1
EPA 300.0	Nitrate as N	4.7	mg/L	0.10	07/20/19 11:17	M1
EPA 300.0	Sulfate	23.6	mg/L	1.2	07/20/19 11:17	M1
EPA 353.2	Nitrogen, NO2 plus NO3	4.7	mg/L	0.50	07/27/19 17:58	
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	07/24/19 07:08	

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 621041

R1: RPD value was outside control limits.
- DUP (Lab ID: 3353128)
  - Ethane
  - Methane

Additional Comments:

Analyte Comments:

QC Batch: 621041

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- DUP (Lab ID: 3353128)
  - Methane

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
2 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- MW28-GW-071819 (Lab ID: 10483755001)
- TB-071819 (Lab ID: 10483755002)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 621901

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- MS (Lab ID: 3362415)
  - Acrolein
- MSD (Lab ID: 3362416)
  - Acrolein

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 621901

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
- LCS (Lab ID: 3356998)
  - Acrolein

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: August 01, 2019

QC Batch: 621901

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10485116001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 3362415)
  - Acrolein
- MSD (Lab ID: 3362416)
  - Acrolein

Additional Comments:

Analyte Comments:

QC Batch: 621901

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3356997)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3356998)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3362415)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3362416)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW28-GW-071819 (Lab ID: 10483755001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- TB-071819 (Lab ID: 10483755002)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 150638

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20113842001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 668691)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 620814

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10483755001,10483885005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3351814)
  - Chloride
  - Nitrate as N
  - Sulfate
- MS (Lab ID: 3352033)
  - Sulfate
- MSD (Lab ID: 3351815)
  - Chloride
  - Nitrate as N
  - Sulfate
- MSD (Lab ID: 3352034)
  - Sulfate

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MSD (Lab ID: 3352034)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Sample: MW28-GW-071819 **Lab ID: 10483755001** Collected: 07/18/19 14:10 Received: 07/19/19 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/22/19 19:33	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/22/19 19:33	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/22/19 19:33	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/22/19 04:53	07/22/19 16:38	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/22/19 04:53	07/22/19 16:38	7440-38-2	
Barium, Dissolved	**11.6**	ug/L	10.0	0.60	1	07/22/19 04:53	07/22/19 16:38	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/22/19 04:53	07/22/19 16:38	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/22/19 04:53	07/22/19 16:38	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/22/19 04:53	07/22/19 16:38	7440-47-3	
Cobalt, Dissolved	**0.97J**	ug/L	10.0	0.50	1	07/22/19 04:53	07/22/19 16:38	7440-48-4	
Copper, Dissolved	**6.2J**	ug/L	10.0	1.2	1	07/22/19 04:53	07/22/19 16:38	7440-50-8	
Lead, Dissolved	**2.8J**	ug/L	10.0	2.0	1	07/22/19 04:53	07/22/19 16:38	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/22/19 04:53	07/22/19 16:38	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/22/19 04:53	07/22/19 16:38	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/22/19 04:53	07/22/19 16:38	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/22/19 04:53	07/22/19 16:38	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/22/19 04:53	07/22/19 16:38	7440-28-0	
Vanadium, Dissolved	**8.9J**	ug/L	15.0	0.43	1	07/22/19 04:53	07/22/19 16:38	7440-62-2	
Zinc, Dissolved	**28.4**	ug/L	20.0	6.3	1	07/22/19 04:53	07/22/19 16:38	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/22/19 08:38	07/23/19 12:24	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/25/19 13:15	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	1.0	0.14	1		07/25/19 13:15	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/25/19 13:15	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/25/19 13:15	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/25/19 13:15	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/25/19 13:15	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		07/25/19 13:15	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/25/19 13:15	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/25/19 13:15	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/25/19 13:15	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 13:15	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 13:15	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/25/19 13:15	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	1.0	0.24	1		07/25/19 13:15	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/25/19 13:15	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		07/25/19 13:15	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/25/19 13:15	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/25/19 13:15	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/25/19 13:15	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 13:15	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Sample: MW28-GW-071819 **Lab ID: 10483755001** Collected: 07/18/19 14:10 Received: 07/19/19 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/25/19 13:15	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 13:15	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/25/19 13:15	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/25/19 13:15	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/25/19 13:15	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/25/19 13:15	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 13:15	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/25/19 13:15	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/25/19 13:15	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/25/19 13:15	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/25/19 13:15	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/25/19 13:15	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/25/19 13:15	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/25/19 13:15	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/25/19 13:15	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/25/19 13:15	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/25/19 13:15	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/25/19 13:15	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/25/19 13:15	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/25/19 13:15	75-15-0	
Carbon tetrachloride	**314**	ug/L	2.5	0.94	5		07/26/19 14:06	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 13:15	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/25/19 13:15	75-00-3	
Chloroform	**15.1**	ug/L	1.0	0.45	1		07/25/19 13:15	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/25/19 13:15	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/25/19 13:15	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/25/19 13:15	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/25/19 13:15	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/25/19 13:15	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/25/19 13:15	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/25/19 13:15	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/25/19 13:15	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/25/19 13:15	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/25/19 13:15	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/25/19 13:15	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/25/19 13:15	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/25/19 13:15	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/25/19 13:15	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 13:15	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/25/19 13:15	109-99-9	
Toluene	**0.14J**	ug/L	0.50	0.083	1		07/25/19 13:15	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/25/19 13:15	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/25/19 13:15	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/25/19 13:15	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/25/19 13:15	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/25/19 13:15	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Sample: MW28-GW-071819 **Lab ID: 10483755001** Collected: 07/18/19 14:10 Received: 07/19/19 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 13:15	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 13:15	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/25/19 13:15	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/25/19 13:15	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/25/19 13:15	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 13:15	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 13:15	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 13:15	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/25/19 13:15	994-05-8	L2
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/25/19 13:15	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 13:15	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/25/19 13:15	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/25/19 13:15	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/25/19 13:15	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	96	%.	75-136		1		07/25/19 13:15	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		07/25/19 13:15	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		07/25/19 13:15	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**166**	mg/L	5.0	2.0	1		07/25/19 15:36		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**286**	mg/L	10.0	5.0	1		07/24/19 10:14		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/24/19 14:58	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**6.9**	mg/L	1.2	0.12	1		07/20/19 11:17	16887-00-6	M1
Nitrate as N	**4.7**	mg/L	0.10	0.012	1		07/20/19 11:17	14797-55-8	M1
Sulfate	**23.6**	mg/L	1.2	0.28	1		07/20/19 11:17	14808-79-8	M1
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**4.7**	mg/L	0.50	0.088	5		07/27/19 17:58		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/24/19 13:52	07/24/19 17:13		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.1**	mg/L	1.0	0.39	1		07/24/19 07:08	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Sample: TB-071819 **Lab ID: 10483755002** Collected: 07/18/19 07:00 Received: 07/19/19 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/25/19 11:40	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	1.0	0.14	1		07/25/19 11:40	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/25/19 11:40	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/25/19 11:40	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/25/19 11:40	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/25/19 11:40	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		07/25/19 11:40	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/25/19 11:40	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/25/19 11:40	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/25/19 11:40	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 11:40	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 11:40	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/25/19 11:40	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	1.0	0.24	1		07/25/19 11:40	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/25/19 11:40	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		07/25/19 11:40	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/25/19 11:40	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/25/19 11:40	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/25/19 11:40	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 11:40	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/25/19 11:40	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 11:40	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/25/19 11:40	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/25/19 11:40	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/25/19 11:40	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/25/19 11:40	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 11:40	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/25/19 11:40	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/25/19 11:40	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/25/19 11:40	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/25/19 11:40	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/25/19 11:40	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/25/19 11:40	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/25/19 11:40	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/25/19 11:40	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/25/19 11:40	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/25/19 11:40	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/25/19 11:40	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/25/19 11:40	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/25/19 11:40	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/25/19 11:40	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 11:40	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/25/19 11:40	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/25/19 11:40	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/25/19 11:40	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/25/19 11:40	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Sample: TB-071819 **Lab ID: 10483755002** Collected: 07/18/19 07:00 Received: 07/19/19 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/25/19 11:40	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/25/19 11:40	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/25/19 11:40	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/25/19 11:40	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/25/19 11:40	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/25/19 11:40	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/25/19 11:40	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/25/19 11:40	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/25/19 11:40	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/25/19 11:40	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/25/19 11:40	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/25/19 11:40	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 11:40	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/25/19 11:40	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/25/19 11:40	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/25/19 11:40	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/25/19 11:40	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/25/19 11:40	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/25/19 11:40	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/25/19 11:40	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 11:40	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 11:40	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/25/19 11:40	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/25/19 11:40	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/25/19 11:40	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 11:40	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 11:40	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 11:40	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/25/19 11:40	994-05-8	L2
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/25/19 11:40	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 11:40	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/25/19 11:40	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/25/19 11:40	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/25/19 11:40	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/25/19 11:40	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		07/25/19 11:40	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/25/19 11:40	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 621041 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10483755001

METHOD BLANK: 3353125 Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/22/19 12:20	
Ethene	ug/L	<2.9	10.0	2.9	07/22/19 12:20	
Methane	ug/L	<4.9	10.0	4.9	07/22/19 12:20	

LABORATORY CONTROL SAMPLE & LCSD: 3353126 3353127

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	117	115	103	101	85-115	2	20	
Ethene	ug/L	106	108	107	102	101	85-115	1	20	
Methane	ug/L	60.7	59.9	58.6	99	97	85-115	2	20	

SAMPLE DUPLICATE: 3353128

Parameter	Units	10483572004 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	145	116	22	20	R1
Ethene	ug/L	1190	1090	9	20	
Methane	ug/L	17900	13900	25	20	E,R1

SAMPLE DUPLICATE: 3353129

Parameter	Units	10483755001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 620890 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10483755001

METHOD BLANK: 3352473 Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/23/19 12:11	

LABORATORY CONTROL SAMPLE: 3352474

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.4	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3352475 3352476

Parameter	Units	10483566012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	5.1	5.2	102	104	80-120	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 620881
QC Batch Method: EPA 3010
Analysis Method: EPA 6010D
Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10483755001

METHOD BLANK: 3352437
Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	07/22/19 16:31	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	07/22/19 16:31	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	07/22/19 16:31	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	07/22/19 16:31	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	07/22/19 16:31	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	07/22/19 16:31	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	07/22/19 16:31	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	07/22/19 16:31	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	07/22/19 16:31	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	07/22/19 16:31	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	07/22/19 16:31	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	07/22/19 16:31	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	07/22/19 16:31	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	07/22/19 16:31	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	07/22/19 16:31	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	07/22/19 16:31	

LABORATORY CONTROL SAMPLE: 3352438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	981	98	80-120	
Arsenic, Dissolved	ug/L	1000	982	98	80-120	
Barium, Dissolved	ug/L	1000	995	100	80-120	
Beryllium, Dissolved	ug/L	1000	1010	101	80-120	
Cadmium, Dissolved	ug/L	1000	1020	102	80-120	
Chromium, Dissolved	ug/L	1000	993	99	80-120	
Cobalt, Dissolved	ug/L	1000	994	99	80-120	
Copper, Dissolved	ug/L	1000	968	97	80-120	
Lead, Dissolved	ug/L	1000	1000	100	80-120	
Molybdenum, Dissolved	ug/L	1000	988	99	80-120	
Nickel, Dissolved	ug/L	1000	996	100	80-120	
Selenium, Dissolved	ug/L	1000	1020	102	80-120	
Silver, Dissolved	ug/L	500	491	98	80-120	
Thallium, Dissolved	ug/L	1000	965	97	80-120	
Vanadium, Dissolved	ug/L	1000	989	99	80-120	
Zinc, Dissolved	ug/L	1000	1010	101	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3352439 3352440

Parameter	Units	10483755001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	987	963	99	96	75-125	3	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1010	966	101	96	75-125	4	20	
Barium, Dissolved	ug/L	11.6	1000	1000	1020	977	100	97	75-125	4	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	1030	992	103	99	75-125	4	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1020	976	102	98	75-125	5	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1000	967	100	97	75-125	4	20	
Cobalt, Dissolved	ug/L	0.97J	1000	1000	987	948	99	95	75-125	4	20	
Copper, Dissolved	ug/L	6.2J	1000	1000	986	949	98	94	75-125	4	20	
Lead, Dissolved	ug/L	2.8J	1000	1000	1000	962	100	96	75-125	4	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	998	967	100	97	75-125	3	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	988	951	99	95	75-125	4	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1030	988	102	98	75-125	4	20	
Silver, Dissolved	ug/L	<0.40	500	500	499	483	100	97	75-125	3	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	979	941	98	94	75-125	4	20	
Vanadium, Dissolved	ug/L	8.9J	1000	1000	1010	978	100	97	75-125	3	20	
Zinc, Dissolved	ug/L	28.4	1000	1000	1040	984	101	96	75-125	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 621901 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10483755001, 10483755002

METHOD BLANK: 3356997 Matrix: Water
Associated Lab Samples: 10483755001, 10483755002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/25/19 11:16	
1,1,1-Trichloroethane	ug/L	<0.14	1.0	0.14	07/25/19 11:16	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/25/19 11:16	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/25/19 11:16	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
1,1-Dichloroethene	ug/L	<0.16	1.0	0.16	07/25/19 11:16	
1,1-Dichloropropene	ug/L	<0.20	1.0	0.20	07/25/19 11:16	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	07/25/19 11:16	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/25/19 11:16	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	07/25/19 11:16	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/25/19 11:16	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/25/19 11:16	
1,2-Dibromoethane (EDB)	ug/L	<0.24	1.0	0.24	07/25/19 11:16	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/25/19 11:16	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	07/25/19 11:16	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/25/19 11:16	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/25/19 11:16	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/25/19 11:16	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/25/19 11:16	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	07/25/19 11:16	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/25/19 11:16	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/25/19 11:16	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/25/19 11:16	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/25/19 11:16	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/25/19 11:16	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/25/19 11:16	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/25/19 11:16	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/25/19 11:16	
Acetone	ug/L	<9.2	20.0	9.2	07/25/19 11:16	
Acrolein	ug/L	<1.2	10.0	1.2	07/25/19 11:16	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/25/19 11:16	
Benzene	ug/L	<0.10	0.50	0.10	07/25/19 11:16	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/25/19 11:16	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/25/19 11:16	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/25/19 11:16	
Bromoform	ug/L	<0.80	4.0	0.80	07/25/19 11:16	
Bromomethane	ug/L	<1.8	4.0	1.8	07/25/19 11:16	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/25/19 11:16	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/25/19 11:16	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

METHOD BLANK: 3356997 Matrix: Water
Associated Lab Samples: 10483755001, 10483755002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
Chloroethane	ug/L	<0.49	1.0	0.49	07/25/19 11:16	
Chloroform	ug/L	<0.45	1.0	0.45	07/25/19 11:16	
Chloromethane	ug/L	<0.16	4.0	0.16	07/25/19 11:16	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/25/19 11:16	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/25/19 11:16	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/25/19 11:16	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/25/19 11:16	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/25/19 11:16	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/25/19 11:16	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/25/19 11:16	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/25/19 11:16	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/25/19 11:16	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/25/19 11:16	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/25/19 11:16	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/25/19 11:16	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/25/19 11:16	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/25/19 11:16	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/25/19 11:16	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/25/19 11:16	
Naphthalene	ug/L	<0.48	1.0	0.48	07/25/19 11:16	
o-Xylene	ug/L	<0.16	0.50	0.16	07/25/19 11:16	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/25/19 11:16	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/25/19 11:16	
Styrene	ug/L	<0.19	0.50	0.19	07/25/19 11:16	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	07/25/19 11:16	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/25/19 11:16	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/25/19 11:16	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/25/19 11:16	
Toluene	ug/L	<0.083	0.50	0.083	07/25/19 11:16	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/25/19 11:16	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/25/19 11:16	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/25/19 11:16	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/25/19 11:16	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/25/19 11:16	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/25/19 11:16	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/25/19 11:16	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/25/19 11:16	
1,2-Dichloroethane-d4 (S)	%.	94	75-136		07/25/19 11:16	
4-Bromofluorobenzene (S)	%.	100	75-125		07/25/19 11:16	
Toluene-d8 (S)	%.	100	75-125		07/25/19 11:16	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

LABORATORY CONTROL SAMPLE: 3356998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.4	97	68-141	
1,1,1-Trichloroethane	ug/L	20	15.4	77	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	20.1	101	73-125	
1,1,2-Trichloroethane	ug/L	20	19.4	97	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	17.3	87	69-132	
1,1-Dichloroethane	ug/L	20	17.8	89	73-125	
1,1-Dichloroethene	ug/L	20	17.4	87	71-126	
1,1-Dichloropropene	ug/L	20	16.5	83	73-126	
1,2,3-Trichlorobenzene	ug/L	20	19.3	96	72-126	
1,2,3-Trichloropropane	ug/L	20	18.9	94	75-126	
1,2,4-Trichlorobenzene	ug/L	20	18.9	94	71-134	
1,2,4-Trimethylbenzene	ug/L	20	19.4	97	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	42.7	85	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	19.1	96	75-129	
1,2-Dichlorobenzene	ug/L	20	18.9	94	75-129	
1,2-Dichloroethane	ug/L	20	17.7	88	75-125	
1,2-Dichloroethene (Total)	ug/L	40	36.4	91	74-125	N2
1,2-Dichloropropane	ug/L	20	19.5	98	75-125	
1,3,5-Trimethylbenzene	ug/L	20	19.0	95	75-127	
1,3-Dichlorobenzene	ug/L	20	19.0	95	75-126	
1,3-Dichloropropane	ug/L	20	19.3	97	75-125	
1,4-Dichlorobenzene	ug/L	20	18.5	93	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	377	94	72-129	
2,2,4-Trimethylpentane	ug/L	20	17.6	88	72-128	N2
2,2-Dichloropropane	ug/L	20	14.9	75	65-138	
2-Butanone (MEK)	ug/L	100	92.5	93	59-144	
2-Chlorotoluene	ug/L	20	19.0	95	75-127	
2-Hexanone	ug/L	100	108	108	73-134	
4-Chlorotoluene	ug/L	20	18.7	94	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.9	100	62-141	
Acetone	ug/L	100	111	111	60-137	
Acrolein	ug/L	200	340	170	60-141	L3
Acrylonitrile	ug/L	200	191	95	75-129	
Benzene	ug/L	20	17.3	87	73-125	
Bromobenzene	ug/L	20	18.8	94	73-125	
Bromochloromethane	ug/L	20	18.3	92	75-135	
Bromodichloromethane	ug/L	20	19.3	96	75-125	
Bromoform	ug/L	20	17.4	87	67-136	
Bromomethane	ug/L	20	18.1	91	30-150	
Carbon disulfide	ug/L	20	18.1	90	47-137	
Carbon tetrachloride	ug/L	20	17.3	87	75-125	
Chlorobenzene	ug/L	20	18.6	93	75-125	
Chloroethane	ug/L	20	21.2	106	63-136	
Chloroform	ug/L	20	17.0	85	73-128	
Chloromethane	ug/L	20	20.5	102	55-130	
cis-1,2-Dichloroethene	ug/L	20	18.4	92	75-125	
cis-1,3-Dichloropropene	ug/L	20	19.2	96	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

LABORATORY CONTROL SAMPLE: 3356998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	18.0	90	75-125	
Dibromomethane	ug/L	20	20.4	102	75-125	
Dichlorodifluoromethane	ug/L	20	19.0	95	63-132	
Dichlorofluoromethane	ug/L	20	19.0	95	68-127	N2
Diisopropyl ether	ug/L	20	18.1	90	71-131	
Ethyl-tert-butyl ether	ug/L	20	16.8	84	75-125	
Ethylbenzene	ug/L	20	18.9	94	75-125	
Hexachloro-1,3-butadiene	ug/L	20	18.6	93	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.6	98	75-125	
m&p-Xylene	ug/L	40	38.1	95	75-126	
Methyl-tert-butyl ether	ug/L	20	17.9	90	75-125	
Methylene Chloride	ug/L	20	18.1	90	70-125	
n-Butylbenzene	ug/L	20	19.3	96	75-126	
n-Propylbenzene	ug/L	20	19.0	95	73-127	
Naphthalene	ug/L	20	19.0	95	63-128	
o-Xylene	ug/L	20	18.8	94	75-128	
p-Isopropyltoluene	ug/L	20	19.3	97	75-125	
sec-Butylbenzene	ug/L	20	19.1	96	75-126	
Styrene	ug/L	20	19.3	96	75-125	
tert-Amylmethyl ether	ug/L	20	14.8	74	75-125	L2
tert-Butyl Alcohol	ug/L	200	153	76	75-130	
tert-Butylbenzene	ug/L	20	20.1	100	75-131	
Tetrachloroethene	ug/L	20	17.5	88	74-125	
Tetrahydrofuran	ug/L	200	187	94	64-138	
Toluene	ug/L	20	18.5	93	74-125	
trans-1,2-Dichloroethene	ug/L	20	18.0	90	68-128	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	44.0	88	60-127	
Trichloroethene	ug/L	20	19.5	97	75-127	
Trichlorofluoromethane	ug/L	20	18.3	91	72-133	
Vinyl acetate	ug/L	20	18.0	90	61-129	
Vinyl chloride	ug/L	20	21.4	107	75-128	
Xylene (Total)	ug/L	60	56.9	95	75-125	
1,2-Dichloroethane-d4 (S)	%.			94	75-136	
4-Bromofluorobenzene (S)	%.			99	75-125	
Toluene-d8 (S)	%.			97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362415 3362416

Parameter	Units	10485116001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	20.2	22.1	101	111	75-140	9	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	18.2	18.4	91	92	74-136	1	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.8	21.5	99	108	66-134	8	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.5	20.5	97	102	75-126	5	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362415 3362416

Parameter	Units	10485116001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20	20.8	22.5	104	113	65-146	8	30	
1,1-Dichloroethane	ug/L	ND	20	20	19.7	20.3	98	101	68-132	3	30	
1,1-Dichloroethene	ug/L	ND	20	20	20.4	20.9	102	104	66-139	2	30	
1,1-Dichloropropene	ug/L	ND	20	20	19.3	20.3	97	102	67-134	5	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	20.3	21.7	102	108	67-129	6	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	18.2	20.3	91	101	69-128	11	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.3	21.6	101	108	65-140	6	30	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	20.5	22.4	103	112	71-133	9	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	41.3	46.5	83	93	54-138	12	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	18.7	19.9	94	99	68-125	6	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	19.8	21.6	99	108	74-136	9	30	
1,2-Dichloroethane	ug/L	ND	20	20	17.7	18.9	88	95	68-125	7	30	
1,2-Dichloroethene (Total)	ug/L	ND	40	40	40.2	40.0	101	100	71-126	1	30	N2
1,2-Dichloropropane	ug/L	ND	20	20	20.3	21.0	101	105	67-125	3	30	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	20.3	22.4	102	112	68-137	9	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	19.7	21.7	98	108	75-131	10	30	
1,3-Dichloropropane	ug/L	ND	20	20	19.0	20.6	95	103	71-125	8	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	19.3	20.7	97	103	74-126	7	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	396	403	99	101	68-125	2	30	
2,2,4-Trimethylpentane	ug/L	ND	20	20	22.3	21.5	111	108	54-129	3	30	N2
2,2-Dichloropropane	ug/L	ND	20	20	17.2	18.1	86	90	69-139	5	30	
2-Butanone (MEK)	ug/L	ND	100	100	74.2	86.4	71	83	54-144	15	30	
2-Chlorotoluene	ug/L	ND	20	20	20.1	22.4	100	112	75-134	11	30	
2-Hexanone	ug/L	ND	100	100	91.9	104	92	104	58-137	12	30	
4-Chlorotoluene	ug/L	ND	20	20	20.0	22.0	100	110	72-133	10	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	92.4	105	92	105	60-129	13	30	
Acetone	ug/L	ND	100	100	81.1	80.9	81	81	62-132	0	30	
Acrolein	ug/L	ND	200	200	835	987	417	493	30-150	17	30	CH,M0
Acrylonitrile	ug/L	ND	200	200	180	201	90	100	68-125	11	30	
Benzene	ug/L	ND	20	20	18.6	20.1	93	101	68-125	8	30	
Bromobenzene	ug/L	ND	20	20	19.3	20.9	97	105	73-126	8	30	
Bromochloromethane	ug/L	ND	20	20	18.7	20.1	94	101	66-143	7	30	
Bromodichloromethane	ug/L	ND	20	20	19.9	20.3	99	102	74-125	2	30	
Bromoform	ug/L	ND	20	20	17.1	19.8	86	99	64-134	14	30	
Bromomethane	ug/L	ND	20	20	17.6	21.2	88	106	30-150	18	30	
Carbon disulfide	ug/L	ND	20	20	22.4	21.6	112	108	43-147	4	30	
Carbon tetrachloride	ug/L	ND	20	20	20.2	20.6	101	103	71-143	2	30	
Chlorobenzene	ug/L	ND	20	20	19.0	20.2	95	101	75-125	6	30	
Chloroethane	ug/L	ND	20	20	20.0	23.9	100	120	75-129	18	30	
Chloroform	ug/L	ND	20	20	17.3	18.7	87	93	66-132	7	30	
Chloromethane	ug/L	ND	20	20	21.7	23.1	109	115	53-137	6	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.8	20.0	99	100	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.3	19.0	97	95	66-125	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362415 3362416

Parameter	Units	10485116001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	20	20	17.7	19.9	89	99	62-132	11	30	
Dibromomethane	ug/L	ND	20	20	19.8	22.1	99	111	67-125	11	30	
Dichlorodifluoromethane	ug/L	ND	20	20	18.6	24.0	93	120	71-142	25	30	
Dichlorofluoromethane	ug/L	ND	20	20	17.3	21.4	86	107	70-131	21	30	N2
Diisopropyl ether	ug/L	ND	20	20	17.9	19.7	89	99	63-131	10	30	
Ethyl-tert-butyl ether	ug/L	ND	20	20	16.7	19.0	84	95	66-128	13	30	
Ethylbenzene	ug/L	ND	20	20	20.2	21.7	101	109	74-126	7	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	23.0	19.8	115	99	68-143	15	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	21.8	23.7	109	119	74-130	8	30	
m&p-Xylene	ug/L	ND	40	40	40.5	43.9	101	110	69-132	8	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	17.5	19.9	87	99	65-131	13	30	
Methylene Chloride	ug/L	ND	20	20	18.2	19.7	91	98	57-125	8	30	
n-Butylbenzene	ug/L	ND	20	20	22.1	22.0	110	110	71-131	0	30	
n-Propylbenzene	ug/L	ND	20	20	21.0	23.0	105	115	67-138	9	30	
Naphthalene	ug/L	ND	20	20	18.1	21.5	91	107	60-130	17	30	
o-Xylene	ug/L	ND	20	20	19.7	21.6	98	108	69-131	9	30	
p-Isopropyltoluene	ug/L	ND	20	20	21.8	22.6	109	113	72-133	3	30	
sec-Butylbenzene	ug/L	ND	20	20	21.7	22.2	109	111	73-134	2	30	
Styrene	ug/L	ND	20	20	19.4	21.3	97	106	72-125	9	30	
tert-Amylmethyl ether	ug/L	ND	20	20	14.9	16.9	74	85	67-125	13	30	
tert-Butyl Alcohol	ug/L	ND	200	200	163	181	81	91	64-137	11	30	
tert-Butylbenzene	ug/L	ND	20	20	22.1	24.1	111	120	70-143	8	30	
Tetrachloroethene	ug/L	ND	20	20	19.7	21.5	99	107	72-129	9	30	
Tetrahydrofuran	ug/L	ND	200	200	185	196	93	98	66-128	6	30	
Toluene	ug/L	ND	20	20	20.1	20.5	100	102	73-125	2	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.5	20.0	102	100	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.5	20.0	92	100	61-136	8	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	42.8	46.7	86	93	45-128	9	30	
Trichloroethene	ug/L	ND	20	20	21.4	21.2	107	106	74-132	1	30	
Trichlorofluoromethane	ug/L	ND	20	20	17.9	22.4	89	112	75-139	22	30	
Vinyl acetate	ug/L	ND	20	20	17.2	19.0	86	95	51-135	10	30	
Vinyl chloride	ug/L	ND	20	20	21.2	25.9	106	130	68-146	20	30	
Xylene (Total)	ug/L	ND	60	60	60.2	65.5	100	109	67-137	8	30	
1,2-Dichloroethane-d4 (S)	%.						91	97	75-136			
4-Bromofluorobenzene (S)	%.						102	101	75-125			
Toluene-d8 (S)	%.						98	99	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 621923 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10483755001

METHOD BLANK: 3357052 Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/25/19 13:24	

LABORATORY CONTROL SAMPLE & LCSD: 3357053 3357054

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.0	42.0	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3357055 3357056

Parameter	Units	10484355001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	124	40	40	164	164	101	99	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3357057 3357058

Parameter	Units	10483764005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	284	40	40	319	318	89	85	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 621435 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10483755001

METHOD BLANK: 3354873 Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	07/24/19 10:14	

LABORATORY CONTROL SAMPLE: 3354874

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	980	98	80-120	

SAMPLE DUPLICATE: 3354875

Parameter	Units	10483749001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	870	908	4	5	

SAMPLE DUPLICATE: 3354876

Parameter	Units	10483838004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	9660	10100	5	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 150638 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10483755001

METHOD BLANK: 668688 Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	07/24/19 14:56	

LABORATORY CONTROL SAMPLE: 668689

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.19	96	90-110	

MATRIX SPIKE SAMPLE: 668691

Parameter	Units	20113842001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	ND	0.2	0.11	54	75-125	M1

SAMPLE DUPLICATE: 668690

Parameter	Units	20113842001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.0054		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 620814 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10483755001

METHOD BLANK: 3351812 Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	07/20/19 16:22	
Nitrate as N	mg/L	<0.012	0.10	0.012	07/20/19 16:22	
Sulfate	mg/L	0.46J	1.2	0.28	07/20/19 16:22	

LABORATORY CONTROL SAMPLE: 3351813

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.1	96	90-110	
Nitrate as N	mg/L	1	1.0	100	90-110	
Sulfate	mg/L	12.5	12.7	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3351814 3351815

Parameter	Units	10483755001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.9	12.5	12.5	17.2	17.7	82	86	90-110	3	20	M1
Nitrate as N	mg/L	4.7	1	1	4.7	5.0	5	31	90-110	5	20	M1
Sulfate	mg/L	23.6	12.5	12.5	31.0	32.3	59	70	90-110	4	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3352033 3352034

Parameter	Units	10483885005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	159	125	125	271	271	90	89	90-110	0	20	M6
Nitrate as N	mg/L	<0.012	1	1	0.98	0.97	98	97	90-110	1	20	
Sulfate	mg/L	31.6	12.5	12.5	40.0	39.9	67	66	90-110	0	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 622126 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10483755001

METHOD BLANK: 3358413 Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	07/27/19 18:01	FS

LABORATORY CONTROL SAMPLE: 3358414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.95	95	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358415 3358416

Parameter	Units	10483576001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.071J	1	1	1.1	1.1	103	106	90-110	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358417 3358418

Parameter	Units	10484168001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.47	1	1	1.5	1.5	104	103	90-110	1	20	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 621551 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10483755001

METHOD BLANK: 3355453 Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/24/19 17:11	

LABORATORY CONTROL SAMPLE: 3355454

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	309	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3355455 3355456

Parameter	Units	10483391001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	ND	250	250	268	264	101	99	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3355457 3355458

Parameter	Units	10483391002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	ND	250	250	256	269	93	98	90-110	5	20	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

QC Batch: 171031 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10483755001

METHOD BLANK: 676530 Matrix: Water
Associated Lab Samples: 10483755001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	07/24/19 01:17	

LABORATORY CONTROL SAMPLE: 676531

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 676532 676533

Parameter	Units	10483932001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	ND	25	25	26.5	26.9	105	106	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 676534 676535

Parameter	Units	10483641006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.8	25	25	29.2	29.7	102	104	80-120	2	20	

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QUALIFIERS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
FS	The sample was filtered in the laboratory prior to analysis.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10483755

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10483755001	**MW28-GW-071819**	RSK 175	621041		
10483755001	**MW28-GW-071819**	EPA 3010	620881	EPA 6010D	621113
10483755001	**MW28-GW-071819**	EPA 7470A	620890	EPA 7470A	621255
10483755001	**MW28-GW-071819**	EPA 8260B	621901		
10483755002	**TB-071819**	EPA 8260B	621901		
10483755001	**MW28-GW-071819**	SM 2320B	621923		
10483755001	**MW28-GW-071819**	SM 2540C	621435		
10483755001	**MW28-GW-071819**	SM 4500-S-2 D	150638		
10483755001	**MW28-GW-071819**	EPA 300.0	620814		
10483755001	**MW28-GW-071819**	EPA 353.2	622126		
10483755001	**MW28-GW-071819**	EPA 410.4	621551	EPA 410.4	621730
10483755001	**MW28-GW-071819**	SM 5310C	171031		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request D

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields mu

WO# : 10483755

10483755

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: UPRR Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh (awalsh@up.com)	
Address: 1400 W. 52nd Ave. Denver, CO 80221	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR	
Email: awalsh@up.com	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	Regulatory Agency
Phone: Fax:	Purchase Order #: 1497-38-Rev0	Pace Quote: Contract# 9900758938	
Requested Due Date: 24 Hr / 3 Day (10 Day)	Project Name: Freeman,WA-Cenex Harvest Lease	Pace Project Manager: Jennifer Gross	State / Location WA / Freeman
	Project #:	Pace Profile #: 36447 / 1	

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test: Y/N	Low Level VOCs by 8260	6010/7470 Dissolved Metals	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK 175	COD 410.4	Nitrate + Nitrite	Requested Analysis Filtered (Y/N)	
1	MW28-GW-071819	WT	G	7/18	1410	—	—	—	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	N	Field Filtered
2	TB-071819	↓	↓	↓	700	↓	↓	↓	3				X				X											002
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	J. Ci Jacobs	7/18/19	1600	PACE	7/19/19	8:50	1.8	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Espinoza

SIGNATURE of SAMPLER: J. Ci DATE Signed: 7/18/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 09May2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.28**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR_Jacobs

Project #: **WO#: 10483755**

PM: JMG **Due Date: 08/02/19**

CLIENT: UPRR_Jacobs

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exception** ☐

Tracking Number: 4934 3730 7904

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☐ T1(0461) ☑ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 1.7 °C **Average Corrected Temp (no temp blank only):** _____ °C **See Exceptions** ☐

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 1.8 °C

USDA Regulated Soil: (☑ N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** RMC 7/19/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☑ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☑ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☑ Yes ☑ Yes	☐ No ☐ No		8.
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☑ Yes	☐ No	☐ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☑ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other	☑ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	12. Sample # 1: 1/1 1/1 1/1 ☐ NaOH ☑ HNO_3 ☑ H_2SO_4 ☑ Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	
Exceptions: VOA Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS JMG 071919	☒ Yes	☐ No	☑ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip 10D4281
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☑ No	☐ N/A	13. **See Exception** ☑
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	14. Pace Trip Blank Lot # (if purchased): 052719-3C4R
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Mark Ochsner Date/Time: 06/27/18

Comments/Resolution: WA certs not required for sulfide or RSK.

Project Manager Review: _____ Date: 07/19/19

Note: Whenever there is a discrepancy affecting hold, incorrect preservative, out of temp, incorre... JENNI GROSS ...liance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of

Labeled by: EPT (2)

Pace Analytical	Document Name: **Headspace Exception**	Document Revised: 17Dec2018 Page 1 of 1
	Document No.: **F-MN-C-276-Rev.01**	Issuing Authority: Pace Minnesota Quality Office

Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
MW28-GW-071819	0	0	3	3	N
TB-071819	0	0	3	3	N

PRE

WO# : 12132464

12132464

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes ☐ No

Workorder: 10483755 **Workorder Name:** Freeman,WA-Cenex Harvest Lease **Owner Received Date:** 7/19/2019 **Results Requested By:** 8/2/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S					Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	MW28-GW-071819	PS	7/18/2019 14:10	10483755001	Water	2					X												
2																							
3																							
4																							
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	7/19/19 1800	[signature] 7/19/19	1815
2	[signature] 7/19/19	2320	B Mathews	7/22/19 0700
3				

Comments

Cooler Temperature on Receipt 1.6 °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #:

WO#: 12132464

PM: RK1 **Due Date: 08/02/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 1.3 Cooler Temp Corrected °C: 1.6 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 7/19/19 DC BM 7/22/19

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☒ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation properly preserved?	☒ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Lauren Feiler Date: 7/22/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

Chain of Custody

WO# : 20113626

20113626

ytical elabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WI

Cert. Needed: ☐

Workorder: 10483755 **Workorder Name:** Freeman,WA-Cenex Harvest Lease **Owner Received Date:** 7/19/2019 **Results Requested By:** 8/2/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	Preserved Containers: ZnAc2	Requested Analysis: 5636267 / 4500 Sulfide	LAB USE ONLY
1	MW28-GW-071819	PS	7/18/2019 14:10	10483755001	Water	1		X	
2									
3									
4									
5									

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	7/19/19 1655	FEDEX	
2	FEDEX 7-20-19 1115		[signature]	7-20-19 1115
3				

Comments:

Cooler Temperature on Receipt 1.7 °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO#: 20113626

PM: CMM Due Date: 08/02/

CLIENT: PASI-MINN

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon I

Pro,

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑ Yes ☐ No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 07-20-19 MB

Temp must be measured from Temperature blank when present

				Comments:
Temperature Blank Present"?	☐Yes	☑No	☐N/A	1
Chain of Custody Present:	☑Yes	☐No	☐N/A	2
Chain of Custody Complete:	☑Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6
Sufficient Volume:	☑Yes	☐No	☐N/A	7
Correct Containers Used:	☑Yes	☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☐No	☑N/A	9
Sample Labels match COC:	☑Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14
Trip Blank Present:	☐Yes	☑No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Sulfide

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

August 05, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 23, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10484200001	**MW29-GW-071919**	Water	07/19/19 11:00	07/23/19 08:40
10484200002	**TB-071919**	Water	07/19/19 07:00	07/23/19 08:40

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10484200001	**MW29-GW-071919**	RSK 175	MJD	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10484200002	**TB-071919**	EPA 8260B	DS2	83	PASI-M

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10484200001	**MW29-GW-071919**					
EPA 6010D	Barium, Dissolved	16.5	ug/L	10.0	07/26/19 13:02	
EPA 6010D	Beryllium, Dissolved	0.19J	ug/L	5.0	07/26/19 13:02	
EPA 6010D	Cobalt, Dissolved	0.86J	ug/L	10.0	07/26/19 13:02	
EPA 6010D	Copper, Dissolved	2.1J	ug/L	10.0	07/26/19 13:02	
EPA 6010D	Vanadium, Dissolved	7.8J	ug/L	15.0	07/26/19 13:02	
EPA 6010D	Zinc, Dissolved	9.9J	ug/L	20.0	07/26/19 13:02	
EPA 8260B	Carbon tetrachloride	399	ug/L	2.5	07/26/19 13:42	HS
EPA 8260B	Chloroform	22.1	ug/L	1.0	07/25/19 14:03	
EPA 8260B	Toluene	0.20J	ug/L	0.50	07/25/19 14:03	
SM 2320B	Alkalinity, Total as CaCO3	180	mg/L	5.0	07/30/19 14:29	
SM 2540C	Total Dissolved Solids	308	mg/L	10.0	07/25/19 09:12	
SM 4500-S-2 D	Sulfide, Total	0.0058J	mg/L	0.020	07/25/19 12:23	
EPA 300.0	Chloride	9.0	mg/L	1.2	07/24/19 07:56	
EPA 300.0	Nitrate as N	4.7	mg/L	0.10	07/24/19 07:56	H3
EPA 300.0	Sulfate	21.0	mg/L	1.2	07/24/19 07:56	
EPA 353.2	Nitrogen, NO2 plus NO3	4.8	mg/L	1.0	08/01/19 14:20	
EPA 410.4	Chemical Oxygen Demand	18.8J	mg/L	50.0	07/24/19 17:15	
SM 5310C	Total Organic Carbon	1.3	mg/L	1.0	07/26/19 10:59	

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
2 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- MW29-GW-071919 (Lab ID: 10484200001)
- TB-071919 (Lab ID: 10484200002)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 621901

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- MS (Lab ID: 3362415)
  - Acrolein
- MSD (Lab ID: 3362416)
  - Acrolein

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 621901

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
- LCS (Lab ID: 3356998)
  - Acrolein

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: August 05, 2019

QC Batch: 621901

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10485116001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 3362415)
  - Acrolein
- MSD (Lab ID: 3362416)
  - Acrolein

Additional Comments:

Analyte Comments:

QC Batch: 621901

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3356997)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3356998)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3362415)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3362416)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW29-GW-071919 (Lab ID: 10484200001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- TB-071919 (Lab ID: 10484200002)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 621741

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 3356310)
  - Total Dissolved Solids

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 150885

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20113849001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 669881)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.
- MW29-GW-071919 (Lab ID: 10484200001)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 621239

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10484099001,10484099008

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3355106)
  - Sulfate
- MSD (Lab ID: 3355107)
  - Sulfate

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
- MS (Lab ID: 3355106)
  - Chloride
- MSD (Lab ID: 3355107)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: August 05, 2019

General Information:
1 sample was analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Sample: MW29-GW-071919 **Lab ID: 10484200001** Collected: 07/19/19 11:00 Received: 07/23/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/24/19 11:16	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/24/19 11:16	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/24/19 11:16	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/25/19 05:59	07/26/19 13:02	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/25/19 05:59	07/26/19 13:02	7440-38-2	
Barium, Dissolved	**16.5**	ug/L	10.0	0.60	1	07/25/19 05:59	07/26/19 13:02	7440-39-3	
Beryllium, Dissolved	**0.19J**	ug/L	5.0	0.12	1	07/25/19 05:59	07/26/19 13:02	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/25/19 05:59	07/26/19 13:02	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/25/19 05:59	07/26/19 13:02	7440-47-3	
Cobalt, Dissolved	**0.86J**	ug/L	10.0	0.50	1	07/25/19 05:59	07/26/19 13:02	7440-48-4	
Copper, Dissolved	**2.1J**	ug/L	10.0	1.2	1	07/25/19 05:59	07/26/19 13:02	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/25/19 05:59	07/26/19 13:02	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/25/19 05:59	07/26/19 13:02	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/25/19 05:59	07/26/19 13:02	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/25/19 05:59	07/26/19 13:02	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/25/19 05:59	07/26/19 13:02	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/25/19 05:59	07/26/19 13:02	7440-28-0	
Vanadium, Dissolved	**7.8J**	ug/L	15.0	0.43	1	07/25/19 05:59	07/26/19 13:02	7440-62-2	
Zinc, Dissolved	**9.9J**	ug/L	20.0	6.3	1	07/25/19 05:59	07/26/19 13:02	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/25/19 10:14	07/29/19 11:49	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/25/19 14:03	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	1.0	0.14	1		07/25/19 14:03	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/25/19 14:03	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/25/19 14:03	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/25/19 14:03	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/25/19 14:03	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		07/25/19 14:03	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/25/19 14:03	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/25/19 14:03	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/25/19 14:03	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 14:03	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 14:03	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/25/19 14:03	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	1.0	0.24	1		07/25/19 14:03	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/25/19 14:03	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		07/25/19 14:03	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/25/19 14:03	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/25/19 14:03	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/25/19 14:03	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 14:03	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Sample: MW29-GW-071919 **Lab ID: 10484200001** Collected: 07/19/19 11:00 Received: 07/23/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/25/19 14:03	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 14:03	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/25/19 14:03	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/25/19 14:03	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/25/19 14:03	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/25/19 14:03	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 14:03	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/25/19 14:03	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/25/19 14:03	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/25/19 14:03	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/25/19 14:03	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/25/19 14:03	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/25/19 14:03	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/25/19 14:03	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/25/19 14:03	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/25/19 14:03	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/25/19 14:03	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/25/19 14:03	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/25/19 14:03	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/25/19 14:03	75-15-0	
Carbon tetrachloride	**399**	ug/L	2.5	0.94	5		07/26/19 13:42	56-23-5	HS
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 14:03	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/25/19 14:03	75-00-3	
Chloroform	**22.1**	ug/L	1.0	0.45	1		07/25/19 14:03	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/25/19 14:03	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/25/19 14:03	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/25/19 14:03	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/25/19 14:03	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/25/19 14:03	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/25/19 14:03	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/25/19 14:03	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/25/19 14:03	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/25/19 14:03	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/25/19 14:03	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/25/19 14:03	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/25/19 14:03	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/25/19 14:03	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/25/19 14:03	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 14:03	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/25/19 14:03	109-99-9	
Toluene	**0.20J**	ug/L	0.50	0.083	1		07/25/19 14:03	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/25/19 14:03	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/25/19 14:03	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/25/19 14:03	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/25/19 14:03	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/25/19 14:03	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Sample: MW29-GW-071919 **Lab ID: 10484200001** Collected: 07/19/19 11:00 Received: 07/23/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 14:03	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 14:03	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/25/19 14:03	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/25/19 14:03	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/25/19 14:03	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 14:03	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 14:03	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 14:03	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/25/19 14:03	994-05-8	L2
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/25/19 14:03	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 14:03	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/25/19 14:03	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/25/19 14:03	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/25/19 14:03	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		07/25/19 14:03	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		07/25/19 14:03	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/25/19 14:03	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**180**	mg/L	5.0	2.0	1		07/30/19 14:29		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**308**	mg/L	10.0	5.0	1		07/25/19 09:12		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.0058J**	mg/L	0.020	0.0054	1		07/25/19 12:23	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**9.0**	mg/L	1.2	0.12	1		07/24/19 07:56	16887-00-6	
Nitrate as N	**4.7**	mg/L	0.10	0.012	1		07/24/19 07:56	14797-55-8	H3
Sulfate	**21.0**	mg/L	1.2	0.28	1		07/24/19 07:56	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**4.8**	mg/L	1.0	0.18	10		08/01/19 14:20		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**18.8J**	mg/L	50.0	17.0	1	07/24/19 13:52	07/24/19 17:15		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.3**	mg/L	1.0	0.39	1		07/26/19 10:59	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Sample: TB-071919 **Lab ID: 10484200002** Collected: 07/19/19 07:00 Received: 07/23/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/25/19 12:04	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	1.0	0.14	1		07/25/19 12:04	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/25/19 12:04	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/25/19 12:04	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/25/19 12:04	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/25/19 12:04	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		07/25/19 12:04	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		07/25/19 12:04	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		07/25/19 12:04	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/25/19 12:04	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 12:04	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 12:04	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/25/19 12:04	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	1.0	0.24	1		07/25/19 12:04	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/25/19 12:04	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		07/25/19 12:04	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/25/19 12:04	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/25/19 12:04	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/25/19 12:04	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 12:04	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		07/25/19 12:04	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 12:04	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/25/19 12:04	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/25/19 12:04	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/25/19 12:04	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/25/19 12:04	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 12:04	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/25/19 12:04	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/25/19 12:04	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/25/19 12:04	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/25/19 12:04	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/25/19 12:04	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/25/19 12:04	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/25/19 12:04	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/25/19 12:04	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/25/19 12:04	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/25/19 12:04	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/25/19 12:04	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/25/19 12:04	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/25/19 12:04	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/25/19 12:04	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 12:04	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/25/19 12:04	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/25/19 12:04	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/25/19 12:04	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/25/19 12:04	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Sample: TB-071919 **Lab ID: 10484200002** Collected: 07/19/19 07:00 Received: 07/23/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/25/19 12:04	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/25/19 12:04	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/25/19 12:04	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/25/19 12:04	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/25/19 12:04	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/25/19 12:04	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/25/19 12:04	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/25/19 12:04	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/25/19 12:04	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/25/19 12:04	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/25/19 12:04	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/25/19 12:04	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/25/19 12:04	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/25/19 12:04	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		07/25/19 12:04	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/25/19 12:04	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/25/19 12:04	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/25/19 12:04	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/25/19 12:04	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/25/19 12:04	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 12:04	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/25/19 12:04	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/25/19 12:04	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/25/19 12:04	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/25/19 12:04	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/25/19 12:04	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 12:04	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 12:04	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		07/25/19 12:04	994-05-8	L2
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/25/19 12:04	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/25/19 12:04	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/25/19 12:04	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/25/19 12:04	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/25/19 12:04	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		07/25/19 12:04	17060-07-0	HS
Toluene-d8 (S)	100	%.	75-125		1		07/25/19 12:04	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		07/25/19 12:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 621494
QC Batch Method: RSK 175
Analysis Method: RSK 175
Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10484200001

METHOD BLANK: 3355179 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/24/19 09:59	
Ethene	ug/L	<2.9	10.0	2.9	07/24/19 09:59	
Methane	ug/L	<4.9	10.0	4.9	07/24/19 09:59	

LABORATORY CONTROL SAMPLE & LCSD: 3355180 3355181

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	117	114	103	100	85-115	3	20	
Ethene	ug/L	106	108	106	102	100	85-115	2	20	
Methane	ug/L	60.7	60.7	57.9	100	95	85-115	5	20	

SAMPLE DUPLICATE: 3355858

Parameter	Units	10484200001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 621594 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10484200001

METHOD BLANK: 3355614 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/29/19 11:33	

LABORATORY CONTROL SAMPLE: 3355615

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.5	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3355616 3355617

Parameter	Units	10484100012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	4.9	5.2	98	105	80-120	7	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 621577
QC Batch Method: EPA 3010
Analysis Method: EPA 6010D
Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10484200001

METHOD BLANK: 3355541 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	07/26/19 12:48	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	07/26/19 12:48	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	07/26/19 12:48	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	07/26/19 12:48	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	07/26/19 12:48	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	07/26/19 12:48	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	07/26/19 12:48	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	07/26/19 12:48	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	07/26/19 12:48	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	07/26/19 12:48	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	07/26/19 12:48	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	07/26/19 12:48	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	07/26/19 12:48	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	07/26/19 12:48	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	07/26/19 12:48	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	07/26/19 12:48	

LABORATORY CONTROL SAMPLE: 3355542

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	1010	101	80-120	
Arsenic, Dissolved	ug/L	1000	1010	101	80-120	
Barium, Dissolved	ug/L	1000	1000	100	80-120	
Beryllium, Dissolved	ug/L	1000	1020	102	80-120	
Cadmium, Dissolved	ug/L	1000	1020	102	80-120	
Chromium, Dissolved	ug/L	1000	993	99	80-120	
Cobalt, Dissolved	ug/L	1000	997	100	80-120	
Copper, Dissolved	ug/L	1000	981	98	80-120	
Lead, Dissolved	ug/L	1000	1000	100	80-120	
Molybdenum, Dissolved	ug/L	1000	1010	101	80-120	
Nickel, Dissolved	ug/L	1000	995	100	80-120	
Selenium, Dissolved	ug/L	1000	1040	104	80-120	
Silver, Dissolved	ug/L	500	499	100	80-120	
Thallium, Dissolved	ug/L	1000	996	100	80-120	
Vanadium, Dissolved	ug/L	1000	995	100	80-120	
Zinc, Dissolved	ug/L	1000	1010	101	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3355543 3355544

Parameter	Units	10484048001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<20.0	1000	1000	1040	1030	104	103	75-125	1	20	
Arsenic, Dissolved	ug/L	<20.0	1000	1000	1060	1060	106	106	75-125	0	20	
Barium, Dissolved	ug/L	84.7	1000	1000	1070	1070	98	99	75-125	0	20	
Beryllium, Dissolved	ug/L	<5.0	1000	1000	1070	1070	107	107	75-125	0	20	
Cadmium, Dissolved	ug/L	<3.0	1000	1000	980	979	98	98	75-125	0	20	
Chromium, Dissolved	ug/L	<10.0	1000	1000	984	986	98	99	75-125	0	20	
Cobalt, Dissolved	ug/L	23.3	1000	1000	989	988	97	96	75-125	0	20	
Copper, Dissolved	ug/L	<10.0	1000	1000	1040	1040	104	104	75-125	0	20	
Lead, Dissolved	ug/L	<10.0	1000	1000	975	973	97	97	75-125	0	20	
Molybdenum, Dissolved	ug/L	22.0	1000	1000	1050	1040	103	102	75-125	1	20	
Nickel, Dissolved	ug/L	35.0	1000	1000	991	990	96	96	75-125	0	20	
Selenium, Dissolved	ug/L	<20.0	1000	1000	1070	1060	107	106	75-125	1	20	
Silver, Dissolved	ug/L	<10.0	500	500	534	532	107	106	75-125	0	20	
Thallium, Dissolved	ug/L	<20.0	1000	1000	965	973	96	97	75-125	1	20	
Vanadium, Dissolved	ug/L	<15.0	1000	1000	1020	1020	102	102	75-125	0	20	
Zinc, Dissolved	ug/L	<20.0	1000	1000	977	978	96	96	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 621901 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10484200001, 10484200002

METHOD BLANK: 3356997 Matrix: Water
Associated Lab Samples: 10484200001, 10484200002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/25/19 11:16	
1,1,1-Trichloroethane	ug/L	<0.14	1.0	0.14	07/25/19 11:16	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/25/19 11:16	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/25/19 11:16	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
1,1-Dichloroethene	ug/L	<0.16	1.0	0.16	07/25/19 11:16	
1,1-Dichloropropene	ug/L	<0.20	1.0	0.20	07/25/19 11:16	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	07/25/19 11:16	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/25/19 11:16	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	07/25/19 11:16	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/25/19 11:16	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/25/19 11:16	
1,2-Dibromoethane (EDB)	ug/L	<0.24	1.0	0.24	07/25/19 11:16	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/25/19 11:16	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	07/25/19 11:16	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/25/19 11:16	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/25/19 11:16	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/25/19 11:16	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/25/19 11:16	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	07/25/19 11:16	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/25/19 11:16	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/25/19 11:16	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/25/19 11:16	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/25/19 11:16	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/25/19 11:16	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/25/19 11:16	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/25/19 11:16	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/25/19 11:16	
Acetone	ug/L	<9.2	20.0	9.2	07/25/19 11:16	
Acrolein	ug/L	<1.2	10.0	1.2	07/25/19 11:16	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/25/19 11:16	
Benzene	ug/L	<0.10	0.50	0.10	07/25/19 11:16	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/25/19 11:16	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/25/19 11:16	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/25/19 11:16	
Bromoform	ug/L	<0.80	4.0	0.80	07/25/19 11:16	
Bromomethane	ug/L	<1.8	4.0	1.8	07/25/19 11:16	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/25/19 11:16	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/25/19 11:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

METHOD BLANK: 3356997 Matrix: Water
Associated Lab Samples: 10484200001, 10484200002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
Chloroethane	ug/L	<0.49	1.0	0.49	07/25/19 11:16	
Chloroform	ug/L	<0.45	1.0	0.45	07/25/19 11:16	
Chloromethane	ug/L	<0.16	4.0	0.16	07/25/19 11:16	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/25/19 11:16	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/25/19 11:16	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/25/19 11:16	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/25/19 11:16	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/25/19 11:16	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/25/19 11:16	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/25/19 11:16	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/25/19 11:16	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/25/19 11:16	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/25/19 11:16	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/25/19 11:16	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/25/19 11:16	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/25/19 11:16	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/25/19 11:16	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/25/19 11:16	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/25/19 11:16	
Naphthalene	ug/L	<0.48	1.0	0.48	07/25/19 11:16	
o-Xylene	ug/L	<0.16	0.50	0.16	07/25/19 11:16	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/25/19 11:16	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/25/19 11:16	
Styrene	ug/L	<0.19	0.50	0.19	07/25/19 11:16	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	07/25/19 11:16	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/25/19 11:16	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/25/19 11:16	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/25/19 11:16	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/25/19 11:16	
Toluene	ug/L	<0.083	0.50	0.083	07/25/19 11:16	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/25/19 11:16	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/25/19 11:16	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/25/19 11:16	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/25/19 11:16	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/25/19 11:16	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/25/19 11:16	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/25/19 11:16	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/25/19 11:16	
1,2-Dichloroethane-d4 (S)	%.	94	75-136		07/25/19 11:16	
4-Bromofluorobenzene (S)	%.	100	75-125		07/25/19 11:16	
Toluene-d8 (S)	%.	100	75-125		07/25/19 11:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

LABORATORY CONTROL SAMPLE: 3356998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.4	97	68-141	
1,1,1-Trichloroethane	ug/L	20	15.4	77	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	20.1	101	73-125	
1,1,2-Trichloroethane	ug/L	20	19.4	97	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	17.3	87	69-132	
1,1-Dichloroethane	ug/L	20	17.8	89	73-125	
1,1-Dichloroethene	ug/L	20	17.4	87	71-126	
1,1-Dichloropropene	ug/L	20	16.5	83	73-126	
1,2,3-Trichlorobenzene	ug/L	20	19.3	96	72-126	
1,2,3-Trichloropropane	ug/L	20	18.9	94	75-126	
1,2,4-Trichlorobenzene	ug/L	20	18.9	94	71-134	
1,2,4-Trimethylbenzene	ug/L	20	19.4	97	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	42.7	85	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	19.1	96	75-129	
1,2-Dichlorobenzene	ug/L	20	18.9	94	75-129	
1,2-Dichloroethane	ug/L	20	17.7	88	75-125	
1,2-Dichloroethene (Total)	ug/L	40	36.4	91	74-125	N2
1,2-Dichloropropane	ug/L	20	19.5	98	75-125	
1,3,5-Trimethylbenzene	ug/L	20	19.0	95	75-127	
1,3-Dichlorobenzene	ug/L	20	19.0	95	75-126	
1,3-Dichloropropane	ug/L	20	19.3	97	75-125	
1,4-Dichlorobenzene	ug/L	20	18.5	93	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	377	94	72-129	
2,2,4-Trimethylpentane	ug/L	20	17.6	88	72-128	N2
2,2-Dichloropropane	ug/L	20	14.9	75	65-138	
2-Butanone (MEK)	ug/L	100	92.5	93	59-144	
2-Chlorotoluene	ug/L	20	19.0	95	75-127	
2-Hexanone	ug/L	100	108	108	73-134	
4-Chlorotoluene	ug/L	20	18.7	94	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.9	100	62-141	
Acetone	ug/L	100	111	111	60-137	
Acrolein	ug/L	200	340	170	60-141	L3
Acrylonitrile	ug/L	200	191	95	75-129	
Benzene	ug/L	20	17.3	87	73-125	
Bromobenzene	ug/L	20	18.8	94	73-125	
Bromochloromethane	ug/L	20	18.3	92	75-135	
Bromodichloromethane	ug/L	20	19.3	96	75-125	
Bromoform	ug/L	20	17.4	87	67-136	
Bromomethane	ug/L	20	18.1	91	30-150	
Carbon disulfide	ug/L	20	18.1	90	47-137	
Carbon tetrachloride	ug/L	20	17.3	87	75-125	
Chlorobenzene	ug/L	20	18.6	93	75-125	
Chloroethane	ug/L	20	21.2	106	63-136	
Chloroform	ug/L	20	17.0	85	73-128	
Chloromethane	ug/L	20	20.5	102	55-130	
cis-1,2-Dichloroethene	ug/L	20	18.4	92	75-125	
cis-1,3-Dichloropropene	ug/L	20	19.2	96	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

LABORATORY CONTROL SAMPLE: 3356998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	18.0	90	75-125	
Dibromomethane	ug/L	20	20.4	102	75-125	
Dichlorodifluoromethane	ug/L	20	19.0	95	63-132	
Dichlorofluoromethane	ug/L	20	19.0	95	68-127	N2
Diisopropyl ether	ug/L	20	18.1	90	71-131	
Ethyl-tert-butyl ether	ug/L	20	16.8	84	75-125	
Ethylbenzene	ug/L	20	18.9	94	75-125	
Hexachloro-1,3-butadiene	ug/L	20	18.6	93	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.6	98	75-125	
m&p-Xylene	ug/L	40	38.1	95	75-126	
Methyl-tert-butyl ether	ug/L	20	17.9	90	75-125	
Methylene Chloride	ug/L	20	18.1	90	70-125	
n-Butylbenzene	ug/L	20	19.3	96	75-126	
n-Propylbenzene	ug/L	20	19.0	95	73-127	
Naphthalene	ug/L	20	19.0	95	63-128	
o-Xylene	ug/L	20	18.8	94	75-128	
p-Isopropyltoluene	ug/L	20	19.3	97	75-125	
sec-Butylbenzene	ug/L	20	19.1	96	75-126	
Styrene	ug/L	20	19.3	96	75-125	
tert-Amylmethyl ether	ug/L	20	14.8	74	75-125	L2
tert-Butyl Alcohol	ug/L	200	153	76	75-130	
tert-Butylbenzene	ug/L	20	20.1	100	75-131	
Tetrachloroethene	ug/L	20	17.5	88	74-125	
Tetrahydrofuran	ug/L	200	187	94	64-138	
Toluene	ug/L	20	18.5	93	74-125	
trans-1,2-Dichloroethene	ug/L	20	18.0	90	68-128	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	44.0	88	60-127	
Trichloroethene	ug/L	20	19.5	97	75-127	
Trichlorofluoromethane	ug/L	20	18.3	91	72-133	
Vinyl acetate	ug/L	20	18.0	90	61-129	
Vinyl chloride	ug/L	20	21.4	107	75-128	
Xylene (Total)	ug/L	60	56.9	95	75-125	
1,2-Dichloroethane-d4 (S)	%.			94	75-136	
4-Bromofluorobenzene (S)	%.			99	75-125	
Toluene-d8 (S)	%.			97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362415 3362416

Parameter	Units	10485116001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	20.2	22.1	101	111	75-140	9	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	18.2	18.4	91	92	74-136	1	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.8	21.5	99	108	66-134	8	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.5	20.5	97	102	75-126	5	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362415 3362416

Parameter	Units	10485116001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20	20.8	22.5	104	113	65-146	8	30	
1,1-Dichloroethane	ug/L	ND	20	20	19.7	20.3	98	101	68-132	3	30	
1,1-Dichloroethene	ug/L	ND	20	20	20.4	20.9	102	104	66-139	2	30	
1,1-Dichloropropene	ug/L	ND	20	20	19.3	20.3	97	102	67-134	5	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	20.3	21.7	102	108	67-129	6	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	18.2	20.3	91	101	69-128	11	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.3	21.6	101	108	65-140	6	30	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	20.5	22.4	103	112	71-133	9	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	41.3	46.5	83	93	54-138	12	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	18.7	19.9	94	99	68-125	6	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	19.8	21.6	99	108	74-136	9	30	
1,2-Dichloroethane	ug/L	ND	20	20	17.7	18.9	88	95	68-125	7	30	
1,2-Dichloroethene (Total)	ug/L	ND	40	40	40.2	40.0	101	100	71-126	1	30	N2
1,2-Dichloropropane	ug/L	ND	20	20	20.3	21.0	101	105	67-125	3	30	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	20.3	22.4	102	112	68-137	9	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	19.7	21.7	98	108	75-131	10	30	
1,3-Dichloropropane	ug/L	ND	20	20	19.0	20.6	95	103	71-125	8	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	19.3	20.7	97	103	74-126	7	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	396	403	99	101	68-125	2	30	
2,2,4-Trimethylpentane	ug/L	ND	20	20	22.3	21.5	111	108	54-129	3	30	N2
2,2-Dichloropropane	ug/L	ND	20	20	17.2	18.1	86	90	69-139	5	30	
2-Butanone (MEK)	ug/L	ND	100	100	74.2	86.4	71	83	54-144	15	30	
2-Chlorotoluene	ug/L	ND	20	20	20.1	22.4	100	112	75-134	11	30	
2-Hexanone	ug/L	ND	100	100	91.9	104	92	104	58-137	12	30	
4-Chlorotoluene	ug/L	ND	20	20	20.0	22.0	100	110	72-133	10	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	92.4	105	92	105	60-129	13	30	
Acetone	ug/L	ND	100	100	81.1	80.9	81	81	62-132	0	30	
Acrolein	ug/L	ND	200	200	835	987	417	493	30-150	17	30	CH,M0
Acrylonitrile	ug/L	ND	200	200	180	201	90	100	68-125	11	30	
Benzene	ug/L	ND	20	20	18.6	20.1	93	101	68-125	8	30	
Bromobenzene	ug/L	ND	20	20	19.3	20.9	97	105	73-126	8	30	
Bromochloromethane	ug/L	ND	20	20	18.7	20.1	94	101	66-143	7	30	
Bromodichloromethane	ug/L	ND	20	20	19.9	20.3	99	102	74-125	2	30	
Bromoform	ug/L	ND	20	20	17.1	19.8	86	99	64-134	14	30	
Bromomethane	ug/L	ND	20	20	17.6	21.2	88	106	30-150	18	30	
Carbon disulfide	ug/L	ND	20	20	22.4	21.6	112	108	43-147	4	30	
Carbon tetrachloride	ug/L	ND	20	20	20.2	20.6	101	103	71-143	2	30	
Chlorobenzene	ug/L	ND	20	20	19.0	20.2	95	101	75-125	6	30	
Chloroethane	ug/L	ND	20	20	20.0	23.9	100	120	75-129	18	30	
Chloroform	ug/L	ND	20	20	17.3	18.7	87	93	66-132	7	30	
Chloromethane	ug/L	ND	20	20	21.7	23.1	109	115	53-137	6	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.8	20.0	99	100	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.3	19.0	97	95	66-125	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362415 3362416

Parameter	Units	10485116001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	20	20	17.7	19.9	89	99	62-132	11	30	
Dibromomethane	ug/L	ND	20	20	19.8	22.1	99	111	67-125	11	30	
Dichlorodifluoromethane	ug/L	ND	20	20	18.6	24.0	93	120	71-142	25	30	
Dichlorofluoromethane	ug/L	ND	20	20	17.3	21.4	86	107	70-131	21	30	N2
Diisopropyl ether	ug/L	ND	20	20	17.9	19.7	89	99	63-131	10	30	
Ethyl-tert-butyl ether	ug/L	ND	20	20	16.7	19.0	84	95	66-128	13	30	
Ethylbenzene	ug/L	ND	20	20	20.2	21.7	101	109	74-126	7	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	23.0	19.8	115	99	68-143	15	30	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	21.8	23.7	109	119	74-130	8	30	
m&p-Xylene	ug/L	ND	40	40	40.5	43.9	101	110	69-132	8	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	17.5	19.9	87	99	65-131	13	30	
Methylene Chloride	ug/L	ND	20	20	18.2	19.7	91	98	57-125	8	30	
n-Butylbenzene	ug/L	ND	20	20	22.1	22.0	110	110	71-131	0	30	
n-Propylbenzene	ug/L	ND	20	20	21.0	23.0	105	115	67-138	9	30	
Naphthalene	ug/L	ND	20	20	18.1	21.5	91	107	60-130	17	30	
o-Xylene	ug/L	ND	20	20	19.7	21.6	98	108	69-131	9	30	
p-Isopropyltoluene	ug/L	ND	20	20	21.8	22.6	109	113	72-133	3	30	
sec-Butylbenzene	ug/L	ND	20	20	21.7	22.2	109	111	73-134	2	30	
Styrene	ug/L	ND	20	20	19.4	21.3	97	106	72-125	9	30	
tert-Amylmethyl ether	ug/L	ND	20	20	14.9	16.9	74	85	67-125	13	30	
tert-Butyl Alcohol	ug/L	ND	200	200	163	181	81	91	64-137	11	30	
tert-Butylbenzene	ug/L	ND	20	20	22.1	24.1	111	120	70-143	8	30	
Tetrachloroethene	ug/L	ND	20	20	19.7	21.5	99	107	72-129	9	30	
Tetrahydrofuran	ug/L	ND	200	200	185	196	93	98	66-128	6	30	
Toluene	ug/L	ND	20	20	20.1	20.5	100	102	73-125	2	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.5	20.0	102	100	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.5	20.0	92	100	61-136	8	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	42.8	46.7	86	93	45-128	9	30	
Trichloroethene	ug/L	ND	20	20	21.4	21.2	107	106	74-132	1	30	
Trichlorofluoromethane	ug/L	ND	20	20	17.9	22.4	89	112	75-139	22	30	
Vinyl acetate	ug/L	ND	20	20	17.2	19.0	86	95	51-135	10	30	
Vinyl chloride	ug/L	ND	20	20	21.2	25.9	106	130	68-146	20	30	
Xylene (Total)	ug/L	ND	60	60	60.2	65.5	100	109	67-137	8	30	
1,2-Dichloroethane-d4 (S)	%.						91	97	75-136			
4-Bromofluorobenzene (S)	%.						102	101	75-125			
Toluene-d8 (S)	%.						98	99	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 622928
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10484200001

METHOD BLANK: 3362408 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/30/19 13:18	

LABORATORY CONTROL SAMPLE & LCSD: 3362409 3362410

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.3	42.4	106	106	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362411 3362412

Parameter	Units	10484306002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	235	40	40	273	273	96	94	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362413 3362414

Parameter	Units	10484165001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	157	40	40	194	192	93	86	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 621741 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10484200001

METHOD BLANK: 3356308 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	07/25/19 09:12	

LABORATORY CONTROL SAMPLE: 3356309

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	988	99	80-120	

SAMPLE DUPLICATE: 3356310

Parameter	Units	10483978007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	399	363	9	5	D6

SAMPLE DUPLICATE: 3356311

Parameter	Units	10484168002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	206	200	3	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 150885 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10484200001

METHOD BLANK: 669878 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	07/25/19 12:47	

LABORATORY CONTROL SAMPLE: 669879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.19	97	90-110	

MATRIX SPIKE SAMPLE: 669881

Parameter	Units	20113849001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.045	0.2	0.16	56	75-125	M1

SAMPLE DUPLICATE: 669880

Parameter	Units	20113849001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.045	0.040	12	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 621239 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10484200001

METHOD BLANK: 3354000 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.30J	1.2	0.12	07/24/19 04:20	
Nitrate as N	mg/L	<0.012	0.10	0.012	07/24/19 04:20	
Sulfate	mg/L	0.46J	1.2	0.28	07/24/19 04:20	

LABORATORY CONTROL SAMPLE: 3354001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	11.8	94	90-110	
Nitrate as N	mg/L	1	0.93	93	90-110	
Sulfate	mg/L	12.5	12.1	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3354002 3354003

Parameter	Units	10484099008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	168	125	125	290	284	98	93	90-110	2	20	
Nitrate as N	mg/L	<0.012	1	1	0.90	0.90	90	90	90-110	0	20	
Sulfate	mg/L	0.58J	12.5	12.5	12.2	12.2	93	93	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3355106 3355107

Parameter	Units	10484099001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	256	125	125	357	351	81	76	90-110	2	20	M6
Nitrate as N	mg/L	<0.012	1	1	0.91	0.91	91	91	90-110	0	20	
Sulfate	mg/L	20.3	12.5	12.5	30.0	30.2	78	80	90-110	1	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 623534 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10484200001

METHOD BLANK: 3365677 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	08/01/19 13:40	FS

LABORATORY CONTROL SAMPLE: 3365678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	100	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365679 3365680

Parameter	Units	10484278004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.0	0.98	103	97	90-110	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365681 3365682

Parameter	Units	10484278005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.1	1.0	106	101	90-110	5	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 621551 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10484200001

METHOD BLANK: 3355453 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/24/19 17:11	

LABORATORY CONTROL SAMPLE: 3355454

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	309	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3355455 3355456

Parameter	Units	10483391001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	ND	250	250	268	264	101	99	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3355457 3355458

Parameter	Units	10483391002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	ND	250	250	256	269	93	98	90-110	5	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

QC Batch: 171248 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10484200001

METHOD BLANK: 677658 Matrix: Water
Associated Lab Samples: 10484200001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	07/26/19 02:58	

LABORATORY CONTROL SAMPLE: 677659

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.2	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 677660 677661

Parameter	Units	10484168001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.44J	25	25	25.8	26.2	101	103	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 677662 677663

Parameter	Units	10484165006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.6	25	25	28.7	28.6	100	100	80-120	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
FS	The sample was filtered in the laboratory prior to analysis.
H3	Sample was received or analysis requested beyond the recognized method holding time.
HS	Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484200

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10484200001	**MW29-GW-071919**	RSK 175	621494		
10484200001	**MW29-GW-071919**	EPA 3010	621577	EPA 6010D	622027
10484200001	**MW29-GW-071919**	EPA 7470A	621594	EPA 7470A	622179
10484200001	**MW29-GW-071919**	EPA 8260B	621901		
10484200002	**TB-071919**	EPA 8260B	621901		
10484200001	**MW29-GW-071919**	SM 2320B	622928		
10484200001	**MW29-GW-071919**	SM 2540C	621741		
10484200001	**MW29-GW-071919**	SM 4500-S-2 D	150885		
10484200001	**MW29-GW-071919**	EPA 300.0	621239		
10484200001	**MW29-GW-071919**	EPA 353.2	623534		
10484200001	**MW29-GW-071919**	EPA 410.4	621551	EPA 410.4	621730
10484200001	**MW29-GW-071919**	SM 5310C	171248		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: CH2M Hill	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Lindsey Baumann	Company: UPRR
Email:	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Phone: Fax:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 758938
Requested Due Date: *10 Day Standard*	Project Name: Freeman WA-Grain Handling Facility	Pace Project Manager: Jennifer Gross
	Project #: 1497	Pace Profile #: *36447 / 4*

Regulatory Agency

State / Location: WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	Requested Analysis Filtered (Y/N)
1	MW29-GW-071919	WT	G	07/19/2019	1100	—	13	X	X	X	X	X		Y	X	X	X	X	X	X	X	X	X	X				001
2	TB-071919	↓	↓	↓	0700	↓	3				X				X													002
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

WO# : 10484200

10484200

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Short hold analyses are in **bold**	K-Sav / Jacobs	7/19/19	1600	Fridge	7/19/19	1600				
*Field filtered by client	Fridge	7/22/19	1000	(NJ) Pace	7/23/19	8:40	0.3	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kaila Savage

SIGNATURE of SAMPLER: K-Sav

DATE Signed: 7/22/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 09May2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.28**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CH2M Hill

Project #: **WO#: 10484200**

PM: JMG **Due Date: 08/06/19**

CLIENT: UPRR_Jacobs

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exception** ☐

Tracking Number: 7475 9635 3396

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other: PB **Temp Blank?** ☐ Yes ☐ No

Thermometer: ☐ T1(0461) ☑ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.2 °C **Average Corrected Temp (no temp blank only):** °C **See Exceptions** ☐

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 0.3 °C

USDA Regulated Soil: (☑ N/A, water sample/Other:) **Date/Initials of Person Examining Contents:** WD 7/23/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☐ Yes	☒ No	JMG	4.
Short Hold Time Analysis (<72 hr)?	☑ Yes	☐ No	072319	5. ☐ Fecal Coliform ☑ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☑ Nitrate ☑ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☑ Yes ☑ Yes	☐ No ☐ No		8.
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other	☑ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	12. Sample # 1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	☐ NaOH ☑ HNO_3 Y1 ☑ H_2SO_4 Y1 ☑ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☑ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine: 0-6 Roll 13-640-500; 0-6 Strip; 0-14 Strip 10D423
Headspace in VOA Vials (greater than 6mm)?	☑ Yes	☐ No	☐ N/A	13. **See Exception** ☐
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 050619-3CYR

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Mark / Brad Date/Time: 07/23/19

Comments/Resolution: 06/27/19 Mark O. WA certs are not required for RSK or Sulfide. 07/23/19-notified client of past hold nitrate and headspace in voa vials.

Project Manager Review: Jenni Gross Date: 07/23/19

Note: Whenever there is a discrepancy affectin[g] hold, incorrect preservative, out of temp, incor[rect] mpliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of

Labeled by: WD

Pace Analytical	Document Name: **Headspace Exception**	Document Revised: 17Dec2018 Page 1 of 1
	Document No.: **F-MN-C-276-Rev.01**	Issuing Authority: Pace Minnesota Quality Office

Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
MW29-GW-071919	3	0	0	3	N

Chain of Custody

WO# : 12132619

12132619

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes ☐

Owner Received Date: 7/23/2019 Results Requested By: 8/6/2019

Workorder: 10484200 **Workorder Name:** 1497 Freeman WA-Grain Handling

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 VG9S						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	MW29-GW-071919	PS	7/19/2019 11:00	10484200001	Water	2						X												
2																								
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	7/23/19 1105	B. Mathews	7/24/19 1040
2				
3				

Comments

Cooler Temperature on Receipt 1.5 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace Mpls

Project #: **WO#: 12132619**

PM: RK1 **Due Date: 08/02/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☑ Other: SD

Tracking Number:

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: Temp Blank? ☑ Yes ☐ No

Thermometer Used: ☑ 140792808 Type of Ice: ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read °C: 1.2 Cooler Temp Corrected °C: 1.5 Biological Tissue Frozen? ☐ Yes ☐ No ☑ NA

Temp should be above freezing to 6°C Correction Factor: +0.3 Date and Initials of Person Examining Contents: BM 7/24/19

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☑ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Lavena Ferrer Date: 7/24/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

Chain of Custody

WO#: 20114001

20114001

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcc

rigin: WA

Cert. Needed: ☐ Yes ☒ No

Workorder: 10484200 **Workorder Name:** 1497 Freeman WA-Grain Handling **Owner Received Date:** 7/23/2019 **Results Requested By:** 8/6/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	5636267 / 4500 Sulfide	LAB USE ONLY
1	MW29-GW-071919	PS	7/19/2019 11:00	10484200001	Water	1	X	
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	Scott Wade	7/23/19 1745	Fedex	7/24/ 820
2	Fedex	7/24 820	Scott Wade	7/24 820
3				

Comments

Cooler Temperature on Receipt 2.5 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO#:20114001

PM: CMM Due Date: 08/06/
CLIENT: PASI-MINN

Pace Analytical

Sample Condition Upon Re

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Proje

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC]

Custody Seals intact: ☑ Yes ☐ No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 7-24-14 CAC

Temp must be measured from Temperature blank when present

		Comments:
Temperature Blank Present"?	☑ Yes ☐ No ☐ N/A	1
Chain of Custody Present:	☑ Yes ☐ No ☐ N/A	2
Chain of Custody Complete:	☑ Yes ☐ No ☐ N/A	3
Chain of Custody Relinquished:	☑ Yes ☐ No ☐ N/A	4
Sampler Name & Signature on COC:	☐ Yes ☐ No ☑ N/A	5
Samples Arrived within Hold Time:	☑ Yes ☐ No ☐ N/A	6
Sufficient Volume:	☑ Yes ☐ No ☐ N/A	7
Correct Containers Used:	☑ Yes ☐ No ☐ N/A	8
Filtered vol. Rec. for Diss. tests	☐ Yes ☐ No ☑ N/A	9
Sample Labels match COC:	☑ Yes ☐ No ☐ N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑ Yes ☐ No ☐ N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑ Yes ☐ No ☐ N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑ Yes ☐ No ☐ N/A	13 If No, was preservative added? ☐ Yes ☐ No If added record lot no.: HNO3 ______ H2SO4 ______
Headspace in VOA Vials (>6mm):	☐ Yes ☐ No ☑ N/A	14
Trip Blank Present:	☐ Yes ☑ No	15

Client Notification/ Resolution:

Person Contacted: ______________________ Date/Time: ____________

Comments/ Resolution: ______________________

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 31, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 25, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10484657001	**MW30-GW-072319**	Water	07/23/19 10:45	07/25/19 09:50
10484657002	**MW34-GW-072319**	Water	07/23/19 16:00	07/25/19 09:50
10484657003	**MW33-GW-072319**	Water	07/24/19 13:30	07/25/19 09:50
10484657004	**TB-072419**	Water	07/24/19 07:00	07/25/19 09:50

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10484657001	**MW30-GW-072319**	RSK 175	MJD	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10484657002	**MW34-GW-072319**	RSK 175	MJD	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10484657003	**MW33-GW-072319**	RSK 175	MJD	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		EPA 300.0	KEO	3	PASI-M
		SM 5310C	CSD	1	PASI-V
10484657004	**TB-072419**	EPA 8260B	AEZ	83	PASI-M

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SUMMARY OF DETECTION

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10484657001	**MW30-GW-072319**					
EPA 6010D	Barium, Dissolved	11.1	ug/L	10.0	07/29/19 10:28	
EPA 6010D	Copper, Dissolved	3.3J	ug/L	10.0	07/29/19 10:28	
EPA 6010D	Vanadium, Dissolved	5.8J	ug/L	15.0	07/29/19 10:28	
EPA 6010D	Zinc, Dissolved	16.1J	ug/L	20.0	07/29/19 10:28	
EPA 8260B	Carbon tetrachloride	103	ug/L	2.5	07/30/19 13:57	
EPA 8260B	Chloroform	5.0	ug/L	1.0	07/27/19 00:47	
EPA 8260B	Toluene	0.29J	ug/L	0.50	07/27/19 00:47	
SM 2320B	Alkalinity, Total as CaCO3	174	mg/L	5.0	07/26/19 13:19	
SM 2540C	Total Dissolved Solids	223	mg/L	10.0	07/29/19 15:17	
EPA 300.0	Chloride	2.7	mg/L	1.2	07/26/19 12:41	
EPA 300.0	Nitrate as N	1.1	mg/L	0.10	07/26/19 12:41	
EPA 300.0	Sulfate	4.0	mg/L	1.2	07/26/19 12:41	
EPA 353.2	Nitrogen, NO2 plus NO3	1.1	mg/L	0.10	07/27/19 17:46	
SM 5310C	Total Organic Carbon	0.96J	mg/L	1.0	07/29/19 15:55	
10484657002	**MW34-GW-072319**					
EPA 6010D	Barium, Dissolved	45.3	ug/L	10.0	07/29/19 10:29	
EPA 6010D	Chromium, Dissolved	1.3J	ug/L	10.0	07/29/19 10:29	
EPA 6010D	Cobalt, Dissolved	17.3	ug/L	10.0	07/29/19 10:29	
EPA 6010D	Copper, Dissolved	4.1J	ug/L	10.0	07/29/19 10:29	
EPA 6010D	Molybdenum, Dissolved	27.0	ug/L	15.0	07/29/19 10:29	
EPA 6010D	Nickel, Dissolved	24.1	ug/L	20.0	07/29/19 10:29	
EPA 6010D	Vanadium, Dissolved	7.7J	ug/L	15.0	07/29/19 10:29	
EPA 6010D	Zinc, Dissolved	17.1J	ug/L	20.0	07/29/19 10:29	
EPA 8260B	2-Butanone (MEK)	13.0	ug/L	5.0	07/27/19 01:04	
EPA 8260B	2-Hexanone	1.8J	ug/L	5.0	07/27/19 01:04	
EPA 8260B	Acetone	10.5J	ug/L	20.0	07/27/19 01:04	
EPA 8260B	Carbon tetrachloride	13.1	ug/L	0.50	07/27/19 01:04	
EPA 8260B	Isopropylbenzene (Cumene)	0.47J	ug/L	0.50	07/27/19 01:04	
EPA 8260B	Toluene	0.64	ug/L	0.50	07/27/19 01:04	
EPA 8260B	tert-Butyl Alcohol	24.5	ug/L	10.0	07/27/19 01:04	
SM 2320B	Alkalinity, Total as CaCO3	233	mg/L	5.0	07/26/19 12:36	
SM 2540C	Total Dissolved Solids	366	mg/L	10.0	07/29/19 15:17	
EPA 300.0	Chloride	4.9	mg/L	1.2	07/26/19 12:56	
EPA 300.0	Nitrate as N	0.079J	mg/L	0.10	07/26/19 12:56	
EPA 300.0	Sulfate	71.3	mg/L	1.2	07/26/19 12:56	
EPA 353.2	Nitrogen, NO2 plus NO3	0.056J	mg/L	0.10	07/27/19 17:47	
SM 5310C	Total Organic Carbon	1.6	mg/L	1.0	07/29/19 16:11	
10484657003	**MW33-GW-072319**					
EPA 6010D	Barium, Dissolved	43.5	ug/L	10.0	07/29/19 10:35	
EPA 6010D	Cadmium, Dissolved	0.33J	ug/L	3.0	07/29/19 10:35	
EPA 6010D	Chromium, Dissolved	4.9J	ug/L	10.0	07/29/19 10:35	
EPA 6010D	Cobalt, Dissolved	2.3J	ug/L	10.0	07/29/19 10:35	
EPA 6010D	Copper, Dissolved	15.6	ug/L	10.0	07/29/19 10:35	
EPA 6010D	Lead, Dissolved	2.1J	ug/L	10.0	07/29/19 10:35	
EPA 6010D	Molybdenum, Dissolved	5.1J	ug/L	15.0	07/29/19 10:35	
EPA 6010D	Nickel, Dissolved	3.7J	ug/L	20.0	07/29/19 10:35	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10484657003	**MW33-GW-072319**					
EPA 6010D	Vanadium, Dissolved	3.5J	ug/L	15.0	07/29/19 10:35	
EPA 6010D	Zinc, Dissolved	81.2	ug/L	20.0	07/29/19 10:35	
EPA 8260B	2-Butanone (MEK)	7.0	ug/L	5.0	07/27/19 01:20	
EPA 8260B	2-Hexanone	2.4J	ug/L	5.0	07/27/19 01:20	
EPA 8260B	Benzene	0.37J	ug/L	0.50	07/27/19 01:20	
EPA 8260B	Carbon tetrachloride	11.2	ug/L	0.50	07/27/19 01:20	
EPA 8260B	Chloroform	1.0	ug/L	1.0	07/27/19 01:20	
EPA 8260B	Isopropylbenzene (Cumene)	0.46J	ug/L	0.50	07/27/19 01:20	
EPA 8260B	Toluene	1.0	ug/L	0.50	07/27/19 01:20	
EPA 8260B	m&p-Xylene	0.84J	ug/L	1.0	07/27/19 01:20	
EPA 8260B	tert-Butyl Alcohol	8.1J	ug/L	10.0	07/27/19 01:20	
EPA 300.0	Chloride	6.6	mg/L	1.2	07/26/19 11:04	M1
EPA 300.0	Nitrate as N	0.044J	mg/L	0.10	07/26/19 11:04	
EPA 300.0	Sulfate	9.5	mg/L	1.2	07/26/19 11:04	M1
SM 5310C	Total Organic Carbon	2.3	mg/L	1.0	07/29/19 16:28	
10484657004	**TB-072419**					
EPA 8260B	Toluene	0.22J	ug/L	0.50	07/26/19 23:56	

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
3 samples were analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 622430

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- DUP (Lab ID: 3360139)
  - Methane

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
3 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
3 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
4 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 622311

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10485097001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3362288)
  - Acrolein
  - Ethylbenzene
- MSD (Lab ID: 3362289)
  - Acrolein

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 31, 2019

Analyte Comments:

QC Batch: 622311

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3358959)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3358960)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3362288)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3362289)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW30-GW-072319 (Lab ID: 10484657001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW33-GW-072319 (Lab ID: 10484657003)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW34-GW-072319 (Lab ID: 10484657002)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- TB-072419 (Lab ID: 10484657004)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
3 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 621968

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10484510001,10484657003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3357396)
  - Chloride
  - Sulfate
- MS (Lab ID: 3358530)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3357397)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3358531)
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
3 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: MW30-GW-072319 **Lab ID: 10484657001** Collected: 07/23/19 10:45 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/27/19 16:08	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/27/19 16:08	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/27/19 16:08	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/26/19 14:07	07/29/19 10:28	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/26/19 14:07	07/29/19 10:28	7440-38-2	
Barium, Dissolved	**11.1**	ug/L	10.0	0.60	1	07/26/19 14:07	07/29/19 10:28	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/26/19 14:07	07/29/19 10:28	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/26/19 14:07	07/29/19 10:28	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/26/19 14:07	07/29/19 10:28	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	07/26/19 14:07	07/29/19 10:28	7440-48-4	
Copper, Dissolved	**3.3J**	ug/L	10.0	1.2	1	07/26/19 14:07	07/29/19 10:28	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/26/19 14:07	07/29/19 10:28	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	07/26/19 14:07	07/29/19 10:28	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/26/19 14:07	07/29/19 10:28	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/26/19 14:07	07/29/19 10:28	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/26/19 14:07	07/29/19 10:28	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/26/19 14:07	07/29/19 10:28	7440-28-0	
Vanadium, Dissolved	**5.8J**	ug/L	15.0	0.43	1	07/26/19 14:07	07/29/19 10:28	7440-62-2	
Zinc, Dissolved	**16.1J**	ug/L	20.0	6.3	1	07/26/19 14:07	07/29/19 10:28	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/26/19 18:16	07/29/19 12:07	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:47	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/27/19 00:47	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 00:47	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/27/19 00:47	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/27/19 00:47	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 00:47	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:47	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:47	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/27/19 00:47	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/27/19 00:47	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:47	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:47	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/27/19 00:47	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/27/19 00:47	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 00:47	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 00:47	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/27/19 00:47	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 00:47	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 00:47	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:47	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: MW30-GW-072319 **Lab ID: 10484657001** Collected: 07/23/19 10:45 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/27/19 00:47	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 00:47	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/27/19 00:47	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/27/19 00:47	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/27/19 00:47	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/27/19 00:47	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:47	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/27/19 00:47	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/27/19 00:47	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/27/19 00:47	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/27/19 00:47	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/27/19 00:47	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/27/19 00:47	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 00:47	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/27/19 00:47	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/27/19 00:47	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 00:47	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/27/19 00:47	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/27/19 00:47	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/27/19 00:47	75-15-0	
Carbon tetrachloride	**103**	ug/L	2.5	0.94	5		07/30/19 13:57	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/27/19 00:47	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/27/19 00:47	75-00-3	
Chloroform	**5.0**	ug/L	1.0	0.45	1		07/27/19 00:47	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 00:47	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/27/19 00:47	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/27/19 00:47	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/27/19 00:47	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/27/19 00:47	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/27/19 00:47	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/27/19 00:47	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 00:47	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 00:47	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/27/19 00:47	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:47	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/27/19 00:47	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/27/19 00:47	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/27/19 00:47	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 00:47	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/27/19 00:47	109-99-9	
Toluene	**0.29J**	ug/L	0.50	0.083	1		07/27/19 00:47	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/27/19 00:47	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/27/19 00:47	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/27/19 00:47	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/27/19 00:47	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/27/19 00:47	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: MW30-GW-072319 **Lab ID: 10484657001** Collected: 07/23/19 10:45 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 00:47	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:47	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 00:47	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/27/19 00:47	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 00:47	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:47	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 00:47	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 00:47	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/27/19 00:47	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/27/19 00:47	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 00:47	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 00:47	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/27/19 00:47	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/27/19 00:47	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-136		1		07/27/19 00:47	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/27/19 00:47	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		07/27/19 00:47	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**174**	mg/L	5.0	2.0	1		07/26/19 13:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**223**	mg/L	10.0	5.0	1		07/29/19 15:17		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/30/19 13:38	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.7**	mg/L	1.2	0.12	1		07/26/19 12:41	16887-00-6	
Nitrate as N	**1.1**	mg/L	0.10	0.012	1		07/26/19 12:41	14797-55-8	
Sulfate	**4.0**	mg/L	1.2	0.28	1		07/26/19 12:41	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.1**	mg/L	0.10	0.018	1		07/27/19 17:46		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/30/19 09:03	07/30/19 14:59		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.96J**	mg/L	1.0	0.39	1		07/29/19 15:55	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: MW34-GW-072319 **Lab ID: 10484657002** Collected: 07/23/19 16:00 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/27/19 16:22	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/27/19 16:22	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/27/19 16:22	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/26/19 14:07	07/29/19 10:29	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/26/19 14:07	07/29/19 10:29	7440-38-2	
Barium, Dissolved	**45.3**	ug/L	10.0	0.60	1	07/26/19 14:07	07/29/19 10:29	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/26/19 14:07	07/29/19 10:29	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/26/19 14:07	07/29/19 10:29	7440-43-9	
Chromium, Dissolved	**1.3J**	ug/L	10.0	0.66	1	07/26/19 14:07	07/29/19 10:29	7440-47-3	
Cobalt, Dissolved	**17.3**	ug/L	10.0	0.50	1	07/26/19 14:07	07/29/19 10:29	7440-48-4	
Copper, Dissolved	**4.1J**	ug/L	10.0	1.2	1	07/26/19 14:07	07/29/19 10:29	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/26/19 14:07	07/29/19 10:29	7439-92-1	
Molybdenum, Dissolved	**27.0**	ug/L	15.0	3.8	1	07/26/19 14:07	07/29/19 10:29	7439-98-7	
Nickel, Dissolved	**24.1**	ug/L	20.0	1.1	1	07/26/19 14:07	07/29/19 10:29	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/26/19 14:07	07/29/19 10:29	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/26/19 14:07	07/29/19 10:29	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/26/19 14:07	07/29/19 10:29	7440-28-0	
Vanadium, Dissolved	**7.7J**	ug/L	15.0	0.43	1	07/26/19 14:07	07/29/19 10:29	7440-62-2	
Zinc, Dissolved	**17.1J**	ug/L	20.0	6.3	1	07/26/19 14:07	07/29/19 10:29	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/26/19 18:16	07/29/19 12:14	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:04	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:04	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:04	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:04	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/27/19 01:04	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:04	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:04	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:04	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/27/19 01:04	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/27/19 01:04	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:04	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:04	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/27/19 01:04	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/27/19 01:04	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:04	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 01:04	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/27/19 01:04	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 01:04	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:04	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:04	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: MW34-GW-072319 **Lab ID: 10484657002** Collected: 07/23/19 16:00 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/27/19 01:04	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:04	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/27/19 01:04	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/27/19 01:04	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/27/19 01:04	594-20-7	
2-Butanone (MEK)	**13.0**	ug/L	5.0	0.99	1		07/27/19 01:04	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:04	95-49-8	
2-Hexanone	**1.8J**	ug/L	5.0	0.88	1		07/27/19 01:04	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/27/19 01:04	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/27/19 01:04	108-10-1	
Acetone	**10.5J**	ug/L	20.0	9.2	1		07/27/19 01:04	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/27/19 01:04	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/27/19 01:04	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 01:04	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/27/19 01:04	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/27/19 01:04	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 01:04	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/27/19 01:04	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/27/19 01:04	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/27/19 01:04	75-15-0	
Carbon tetrachloride	**13.1**	ug/L	0.50	0.19	1		07/27/19 01:04	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/27/19 01:04	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/27/19 01:04	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/27/19 01:04	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 01:04	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:04	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/27/19 01:04	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/27/19 01:04	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/27/19 01:04	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/27/19 01:04	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:04	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:04	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 01:04	87-68-3	
Isopropylbenzene (Cumene)	**0.47J**	ug/L	0.50	0.18	1		07/27/19 01:04	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:04	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/27/19 01:04	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/27/19 01:04	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/27/19 01:04	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:04	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/27/19 01:04	109-99-9	
Toluene	**0.64**	ug/L	0.50	0.083	1		07/27/19 01:04	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/27/19 01:04	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/27/19 01:04	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/27/19 01:04	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/27/19 01:04	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/27/19 01:04	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: MW34-GW-072319 **Lab ID: 10484657002** Collected: 07/23/19 16:00 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:04	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:04	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 01:04	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/27/19 01:04	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 01:04	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:04	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:04	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:04	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/27/19 01:04	994-05-8	
tert-Butyl Alcohol	**24.5**	ug/L	10.0	1.2	1		07/27/19 01:04	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:04	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:04	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:04	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/27/19 01:04	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-136		1		07/27/19 01:04	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		07/27/19 01:04	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		07/27/19 01:04	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**233**	mg/L	5.0	2.0	1		07/26/19 12:36		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**366**	mg/L	10.0	5.0	1		07/29/19 15:17		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/30/19 13:38	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**4.9**	mg/L	1.2	0.12	1		07/26/19 12:56	16887-00-6	
Nitrate as N	**0.079J**	mg/L	0.10	0.012	1		07/26/19 12:56	14797-55-8	
Sulfate	**71.3**	mg/L	1.2	0.28	1		07/26/19 12:56	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.056J**	mg/L	0.10	0.018	1		07/27/19 17:47		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/30/19 09:03	07/30/19 14:59		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.6**	mg/L	1.0	0.39	1		07/29/19 16:11	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: MW33-GW-072319 **Lab ID: 10484657003** Collected: 07/24/19 13:30 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/27/19 16:29	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/27/19 16:29	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/27/19 16:29	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/26/19 14:07	07/29/19 10:35	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/26/19 14:07	07/29/19 10:35	7440-38-2	
Barium, Dissolved	**43.5**	ug/L	10.0	0.60	1	07/26/19 14:07	07/29/19 10:35	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/26/19 14:07	07/29/19 10:35	7440-41-7	
Cadmium, Dissolved	**0.33J**	ug/L	3.0	0.28	1	07/26/19 14:07	07/29/19 10:35	7440-43-9	
Chromium, Dissolved	**4.9J**	ug/L	10.0	0.66	1	07/26/19 14:07	07/29/19 10:35	7440-47-3	
Cobalt, Dissolved	**2.3J**	ug/L	10.0	0.50	1	07/26/19 14:07	07/29/19 10:35	7440-48-4	
Copper, Dissolved	**15.6**	ug/L	10.0	1.2	1	07/26/19 14:07	07/29/19 10:35	7440-50-8	
Lead, Dissolved	**2.1J**	ug/L	10.0	2.0	1	07/26/19 14:07	07/29/19 10:35	7439-92-1	
Molybdenum, Dissolved	**5.1J**	ug/L	15.0	3.8	1	07/26/19 14:07	07/29/19 10:35	7439-98-7	
Nickel, Dissolved	**3.7J**	ug/L	20.0	1.1	1	07/26/19 14:07	07/29/19 10:35	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/26/19 14:07	07/29/19 10:35	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/26/19 14:07	07/29/19 10:35	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/26/19 14:07	07/29/19 10:35	7440-28-0	
Vanadium, Dissolved	**3.5J**	ug/L	15.0	0.43	1	07/26/19 14:07	07/29/19 10:35	7440-62-2	
Zinc, Dissolved	**81.2**	ug/L	20.0	6.3	1	07/26/19 14:07	07/29/19 10:35	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/26/19 18:16	07/29/19 12:16	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:20	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:20	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:20	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:20	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/27/19 01:20	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:20	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:20	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:20	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/27/19 01:20	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/27/19 01:20	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:20	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:20	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/27/19 01:20	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/27/19 01:20	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:20	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 01:20	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/27/19 01:20	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 01:20	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:20	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:20	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: MW33-GW-072319 **Lab ID: 10484657003** Collected: 07/24/19 13:30 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/27/19 01:20	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:20	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/27/19 01:20	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/27/19 01:20	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/27/19 01:20	594-20-7	
2-Butanone (MEK)	**7.0**	ug/L	5.0	0.99	1		07/27/19 01:20	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:20	95-49-8	
2-Hexanone	**2.4J**	ug/L	5.0	0.88	1		07/27/19 01:20	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/27/19 01:20	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/27/19 01:20	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/27/19 01:20	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/27/19 01:20	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/27/19 01:20	107-13-1	
Benzene	**0.37J**	ug/L	0.50	0.10	1		07/27/19 01:20	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/27/19 01:20	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/27/19 01:20	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 01:20	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/27/19 01:20	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/27/19 01:20	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/27/19 01:20	75-15-0	
Carbon tetrachloride	**11.2**	ug/L	0.50	0.19	1		07/27/19 01:20	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/27/19 01:20	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/27/19 01:20	75-00-3	
Chloroform	**1.0**	ug/L	1.0	0.45	1		07/27/19 01:20	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 01:20	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:20	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/27/19 01:20	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/27/19 01:20	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/27/19 01:20	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/27/19 01:20	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:20	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:20	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 01:20	87-68-3	
Isopropylbenzene (Cumene)	**0.46J**	ug/L	0.50	0.18	1		07/27/19 01:20	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:20	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/27/19 01:20	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/27/19 01:20	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/27/19 01:20	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:20	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/27/19 01:20	109-99-9	
Toluene	**1.0**	ug/L	0.50	0.083	1		07/27/19 01:20	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/27/19 01:20	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/27/19 01:20	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/27/19 01:20	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/27/19 01:20	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/27/19 01:20	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: MW33-GW-072319 **Lab ID: 10484657003** Collected: 07/24/19 13:30 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:20	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:20	10061-01-5	
m&p-Xylene	**0.84J**	ug/L	1.0	0.31	1		07/27/19 01:20	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/27/19 01:20	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 01:20	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:20	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:20	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:20	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/27/19 01:20	994-05-8	
tert-Butyl Alcohol	**8.1J**	ug/L	10.0	1.2	1		07/27/19 01:20	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:20	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:20	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:20	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/27/19 01:20	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-136		1		07/27/19 01:20	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		07/27/19 01:20	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		07/27/19 01:20	460-00-4	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**6.6**	mg/L	1.2	0.12	1		07/26/19 11:04	16887-00-6	M1
Nitrate as N	**0.044J**	mg/L	0.10	0.012	1		07/26/19 11:04	14797-55-8	
Sulfate	**9.5**	mg/L	1.2	0.28	1		07/26/19 11:04	14808-79-8	M1
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.3**	mg/L	1.0	0.39	1		07/29/19 16:28	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: TB-072419 **Lab ID: 10484657004** Collected: 07/24/19 07:00 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/26/19 23:56	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/26/19 23:56	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/26/19 23:56	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/26/19 23:56	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/26/19 23:56	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/26/19 23:56	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/26/19 23:56	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/26/19 23:56	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/26/19 23:56	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/26/19 23:56	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/26/19 23:56	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/26/19 23:56	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/26/19 23:56	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/26/19 23:56	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/26/19 23:56	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/26/19 23:56	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/26/19 23:56	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/26/19 23:56	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/26/19 23:56	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/26/19 23:56	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/26/19 23:56	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/26/19 23:56	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/26/19 23:56	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/26/19 23:56	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/26/19 23:56	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/26/19 23:56	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/26/19 23:56	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/26/19 23:56	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/26/19 23:56	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/26/19 23:56	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/26/19 23:56	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/26/19 23:56	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/26/19 23:56	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/26/19 23:56	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/26/19 23:56	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/26/19 23:56	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/26/19 23:56	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/26/19 23:56	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/26/19 23:56	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/26/19 23:56	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/26/19 23:56	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/26/19 23:56	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/26/19 23:56	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/26/19 23:56	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/26/19 23:56	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/26/19 23:56	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Sample: TB-072419 **Lab ID: 10484657004** Collected: 07/24/19 07:00 Received: 07/25/19 09:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/26/19 23:56	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/26/19 23:56	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/26/19 23:56	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/26/19 23:56	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/26/19 23:56	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/26/19 23:56	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/26/19 23:56	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/26/19 23:56	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/26/19 23:56	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/26/19 23:56	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/26/19 23:56	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/26/19 23:56	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/26/19 23:56	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/26/19 23:56	109-99-9	
Toluene	**0.22J**	ug/L	0.50	0.083	1		07/26/19 23:56	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/26/19 23:56	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/26/19 23:56	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/26/19 23:56	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/26/19 23:56	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/26/19 23:56	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/26/19 23:56	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/26/19 23:56	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/26/19 23:56	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/26/19 23:56	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/26/19 23:56	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/26/19 23:56	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/26/19 23:56	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/26/19 23:56	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/26/19 23:56	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/26/19 23:56	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/26/19 23:56	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/26/19 23:56	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/26/19 23:56	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/26/19 23:56	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-136		1		07/26/19 23:56	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/26/19 23:56	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		07/26/19 23:56	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 622430 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10484657001, 10484657002, 10484657003

METHOD BLANK: 3360136 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002, 10484657003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/27/19 15:02	
Ethene	ug/L	<2.9	10.0	2.9	07/27/19 15:02	
Methane	ug/L	<4.9	10.0	4.9	07/27/19 15:02	

LABORATORY CONTROL SAMPLE & LCSD: 3360137 3360138

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	108	111	95	98	85-115	3	20	
Ethene	ug/L	106	99.8	103	94	97	85-115	3	20	
Methane	ug/L	60.7	56.5	58.0	93	96	85-115	3	20	

SAMPLE DUPLICATE: 3360139

Parameter	Units	10484534001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	186	192	3	20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	7200	7360	2	20	E

SAMPLE DUPLICATE: 3360140

Parameter	Units	10484657001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 622272 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10484657001, 10484657002, 10484657003

METHOD BLANK: 3358822 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002, 10484657003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/29/19 11:58	

LABORATORY CONTROL SAMPLE: 3358823

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.4	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358824 3358825

Parameter	Units	10484657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.4	5.4	108	108	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 622271 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10484657001, 10484657002, 10484657003

METHOD BLANK: 3358818 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002, 10484657003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	07/29/19 10:15	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	07/29/19 10:15	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	07/29/19 10:15	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	07/29/19 10:15	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	07/29/19 10:15	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	07/29/19 10:15	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	07/29/19 10:15	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	07/29/19 10:15	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	07/29/19 10:15	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	07/29/19 10:15	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	07/29/19 10:15	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	07/29/19 10:15	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	07/29/19 10:15	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	07/29/19 10:15	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	07/29/19 10:15	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	07/29/19 10:15	

LABORATORY CONTROL SAMPLE: 3358819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	994	99	80-120	
Arsenic, Dissolved	ug/L	1000	1020	102	80-120	
Barium, Dissolved	ug/L	1000	1010	101	80-120	
Beryllium, Dissolved	ug/L	1000	1030	103	80-120	
Cadmium, Dissolved	ug/L	1000	1040	104	80-120	
Chromium, Dissolved	ug/L	1000	1000	100	80-120	
Cobalt, Dissolved	ug/L	1000	1010	101	80-120	
Copper, Dissolved	ug/L	1000	985	98	80-120	
Lead, Dissolved	ug/L	1000	1020	102	80-120	
Molybdenum, Dissolved	ug/L	1000	1020	102	80-120	
Nickel, Dissolved	ug/L	1000	1010	101	80-120	
Selenium, Dissolved	ug/L	1000	1060	106	80-120	
Silver, Dissolved	ug/L	500	502	100	80-120	
Thallium, Dissolved	ug/L	1000	1000	100	80-120	
Vanadium, Dissolved	ug/L	1000	1010	101	80-120	
Zinc, Dissolved	ug/L	1000	1040	104	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358820 3358821

Parameter	Units	10484705001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	952	1010	95	100	75-125	5	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	967	1010	97	101	75-125	5	20	
Barium, Dissolved	ug/L	41.0	1000	1000	988	1050	95	101	75-125	6	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	976	1030	98	103	75-125	6	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	978	1030	98	103	75-125	5	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	944	1000	94	100	75-125	6	20	
Cobalt, Dissolved	ug/L	1.2J	1000	1000	939	994	94	99	75-125	6	20	
Copper, Dissolved	ug/L	1.3J	1000	1000	939	990	94	99	75-125	5	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	958	1010	96	100	75-125	5	20	
Molybdenum, Dissolved	ug/L	4.4J	1000	1000	967	1020	96	102	75-125	6	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	936	990	94	99	75-125	6	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	999	1040	100	104	75-125	4	20	
Silver, Dissolved	ug/L	<0.40	500	500	488	502	98	100	75-125	3	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	961	1000	96	100	75-125	4	20	
Vanadium, Dissolved	ug/L	0.98J	1000	1000	954	1010	95	101	75-125	5	20	
Zinc, Dissolved	ug/L	12.7J	1000	1000	972	1020	96	101	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 622311 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10484657001, 10484657002, 10484657003, 10484657004

METHOD BLANK: 3358959 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002, 10484657003, 10484657004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/26/19 23:23	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/26/19 23:23	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/26/19 23:23	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/26/19 23:23	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/26/19 23:23	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	07/26/19 23:23	MN
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/26/19 23:23	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/26/19 23:23	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/26/19 23:23	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/26/19 23:23	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/26/19 23:23	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/26/19 23:23	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/26/19 23:23	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/26/19 23:23	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
1,3-Dichloropropane	ug/L	<0.070	1.0	0.070	07/26/19 23:23	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/26/19 23:23	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/26/19 23:23	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/26/19 23:23	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/26/19 23:23	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/26/19 23:23	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/26/19 23:23	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/26/19 23:23	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/26/19 23:23	
Acetone	ug/L	<9.2	20.0	9.2	07/26/19 23:23	
Acrolein	ug/L	<1.2	10.0	1.2	07/26/19 23:23	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/26/19 23:23	
Benzene	ug/L	<0.10	0.50	0.10	07/26/19 23:23	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/26/19 23:23	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/26/19 23:23	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/26/19 23:23	
Bromoform	ug/L	<0.80	4.0	0.80	07/26/19 23:23	
Bromomethane	ug/L	<1.8	4.0	1.8	07/26/19 23:23	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/26/19 23:23	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/26/19 23:23	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

METHOD BLANK: 3358959 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002, 10484657003, 10484657004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	1.0	0.17	07/26/19 23:23	
Chloroethane	ug/L	<0.49	1.0	0.49	07/26/19 23:23	
Chloroform	ug/L	<0.45	1.0	0.45	07/26/19 23:23	
Chloromethane	ug/L	<0.16	4.0	0.16	07/26/19 23:23	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/26/19 23:23	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/26/19 23:23	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/26/19 23:23	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/26/19 23:23	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/26/19 23:23	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/26/19 23:23	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/26/19 23:23	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/26/19 23:23	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/26/19 23:23	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/26/19 23:23	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/26/19 23:23	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/26/19 23:23	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/26/19 23:23	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/26/19 23:23	
Naphthalene	ug/L	0.74J	1.0	0.48	07/26/19 23:23	
o-Xylene	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/26/19 23:23	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/26/19 23:23	
Styrene	ug/L	<0.19	0.50	0.19	07/26/19 23:23	
tert-Amylmethyl ether	ug/L	<0.11	1.0	0.11	07/26/19 23:23	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/26/19 23:23	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/26/19 23:23	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/26/19 23:23	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/26/19 23:23	
Toluene	ug/L	<0.083	0.50	0.083	07/26/19 23:23	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/26/19 23:23	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/26/19 23:23	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/26/19 23:23	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/26/19 23:23	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/26/19 23:23	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/26/19 23:23	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/26/19 23:23	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/26/19 23:23	
1,2-Dichloroethane-d4 (S)	%.	104	75-136		07/26/19 23:23	
4-Bromofluorobenzene (S)	%.	98	75-125		07/26/19 23:23	
Toluene-d8 (S)	%.	98	75-125		07/26/19 23:23	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

LABORATORY CONTROL SAMPLE: 3358960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.5	103	68-141	
1,1,1-Trichloroethane	ug/L	20	19.4	97	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.5	108	73-125	
1,1,2-Trichloroethane	ug/L	20	21.8	109	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.2	101	69-132	
1,1-Dichloroethane	ug/L	20	20.4	102	73-125	
1,1-Dichloroethene	ug/L	20	18.6	93	71-126	
1,1-Dichloropropene	ug/L	20	19.3	97	73-126	
1,2,3-Trichlorobenzene	ug/L	20	15.4	77	72-126	
1,2,3-Trichloropropane	ug/L	20	20.3	101	75-126	
1,2,4-Trichlorobenzene	ug/L	20	17.3	87	71-134	
1,2,4-Trimethylbenzene	ug/L	20	21.0	105	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	44.5	89	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	21.5	107	75-129	
1,2-Dichlorobenzene	ug/L	20	19.2	96	75-129	
1,2-Dichloroethane	ug/L	20	20.3	102	75-125	
1,2-Dichloroethene (Total)	ug/L	40	37.3	93	74-125	N2
1,2-Dichloropropane	ug/L	20	20.4	102	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.5	102	75-127	
1,3-Dichlorobenzene	ug/L	20	18.6	93	75-126	
1,3-Dichloropropane	ug/L	20	20.5	102	75-125	
1,4-Dichlorobenzene	ug/L	20	19.8	99	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	383	96	72-129	
2,2,4-Trimethylpentane	ug/L	20	18.3	91	72-128	N2
2,2-Dichloropropane	ug/L	20	20.5	102	65-138	
2-Butanone (MEK)	ug/L	100	110	110	59-144	
2-Chlorotoluene	ug/L	20	20.5	103	75-127	
2-Hexanone	ug/L	100	122	122	73-134	
4-Chlorotoluene	ug/L	20	19.6	98	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	116	116	62-141	
Acetone	ug/L	100	104	104	60-137	
Acrolein	ug/L	200	229	114	60-141	
Acrylonitrile	ug/L	200	217	108	75-129	
Benzene	ug/L	20	19.6	98	73-125	
Bromobenzene	ug/L	20	19.4	97	73-125	
Bromochloromethane	ug/L	20	19.8	99	75-135	
Bromodichloromethane	ug/L	20	18.9	94	75-125	
Bromoform	ug/L	20	17.9	89	67-136	
Bromomethane	ug/L	20	17.8	89	30-150	
Carbon disulfide	ug/L	20	16.5	83	47-137	
Carbon tetrachloride	ug/L	20	19.9	99	75-125	
Chlorobenzene	ug/L	20	20.0	100	75-125	
Chloroethane	ug/L	20	22.1	110	63-136	
Chloroform	ug/L	20	19.6	98	73-128	
Chloromethane	ug/L	20	21.2	106	55-130	
cis-1,2-Dichloroethene	ug/L	20	19.0	95	75-125	
cis-1,3-Dichloropropene	ug/L	20	18.3	92	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

LABORATORY CONTROL SAMPLE: 3358960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.4	102	75-125	
Dibromomethane	ug/L	20	19.8	99	75-125	
Dichlorodifluoromethane	ug/L	20	24.7	124	63-132	
Dichlorofluoromethane	ug/L	20	21.6	108	68-127	N2
Diisopropyl ether	ug/L	20	20.4	102	71-131	
Ethyl-tert-butyl ether	ug/L	20	20.2	101	75-125	
Ethylbenzene	ug/L	20	21.5	107	75-125	
Hexachloro-1,3-butadiene	ug/L	20	16.7	84	72-134	
Isopropylbenzene (Cumene)	ug/L	20	20.2	101	75-125	
m&p-Xylene	ug/L	40	40.9	102	75-126	
Methyl-tert-butyl ether	ug/L	20	19.8	99	75-125	
Methylene Chloride	ug/L	20	19.0	95	70-125	
n-Butylbenzene	ug/L	20	20.6	103	75-126	
n-Propylbenzene	ug/L	20	19.2	96	73-127	
Naphthalene	ug/L	20	15.8	79	63-128	
o-Xylene	ug/L	20	19.9	99	75-128	
p-Isopropyltoluene	ug/L	20	20.8	104	75-125	
sec-Butylbenzene	ug/L	20	20.7	104	75-126	
Styrene	ug/L	20	19.7	99	75-125	
tert-Amylmethyl ether	ug/L	20	20.3	101	75-125	
tert-Butyl Alcohol	ug/L	200	221	110	75-130	
tert-Butylbenzene	ug/L	20	20.6	103	75-131	
Tetrachloroethene	ug/L	20	19.6	98	74-125	
Tetrahydrofuran	ug/L	200	186	93	64-138	
Toluene	ug/L	20	20.1	100	74-125	
trans-1,2-Dichloroethene	ug/L	20	18.3	92	68-128	
trans-1,3-Dichloropropene	ug/L	20	20.5	103	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	46.2	92	60-127	
Trichloroethene	ug/L	20	18.8	94	75-127	
Trichlorofluoromethane	ug/L	20	23.0	115	72-133	
Vinyl acetate	ug/L	20	18.4	92	61-129	
Vinyl chloride	ug/L	20	21.9	110	75-128	
Xylene (Total)	ug/L	60	60.8	101	75-125	
1,2-Dichloroethane-d4 (S)	%.			108	75-136	
4-Bromofluorobenzene (S)	%.			98	75-125	
Toluene-d8 (S)	%.			108	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362288 3362289

Parameter	Units	10485097001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	200	200	218	217	109	109	75-140	1	30	
1,1,1-Trichloroethane	ug/L	ND	200	200	216	199	108	100	74-136	8	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	200	200	225	228	112	114	66-134	1	30	
1,1,2-Trichloroethane	ug/L	ND	200	200	228	212	114	106	75-126	7	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362288 3362289

Parameter	Units	10485097001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	200	200	231	220	116	110	65-146	5	30	
1,1-Dichloroethane	ug/L	ND	200	200	217	205	108	102	68-132	6	30	
1,1-Dichloroethene	ug/L	ND	200	200	205	193	103	97	66-139	6	30	
1,1-Dichloropropene	ug/L	ND	200	200	215	200	107	100	67-134	7	30	
1,2,3-Trichlorobenzene	ug/L	ND	200	200	195	196	98	98	67-129	1	30	
1,2,3-Trichloropropane	ug/L	ND	200	200	210	207	105	104	69-128	1	30	
1,2,4-Trichlorobenzene	ug/L	ND	200	200	208	206	104	103	65-140	1	30	
1,2,4-Trimethylbenzene	ug/L	11.9	200	200	240	231	114	110	71-133	3	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	500	500	482	476	96	95	54-138	1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	200	200	209	193	104	97	68-125	8	30	
1,2-Dichlorobenzene	ug/L	ND	200	200	205	204	103	102	74-136	1	30	
1,2-Dichloroethane	ug/L	ND	200	200	208	201	104	101	68-125	3	30	
1,2-Dichloroethene (Total)	ug/L	ND	400	400	404	384	101	96	71-126	5	30	N2
1,2-Dichloropropane	ug/L	ND	200	200	214	207	107	104	67-125	3	30	
1,3,5-Trimethylbenzene	ug/L	ND	200	200	231	221	114	109	68-137	4	30	
1,3-Dichlorobenzene	ug/L	ND	200	200	204	200	102	100	75-131	2	30	
1,3-Dichloropropane	ug/L	ND	200	200	210	203	105	101	71-125	3	30	
1,4-Dichlorobenzene	ug/L	ND	200	200	218	215	109	107	74-126	2	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	4000	4000	3660	3710	91	93	68-125	1	30	
2,2,4-Trimethylpentane	ug/L	ND	200	200	202	197	101	98	54-129	3	30	N2
2,2-Dichloropropane	ug/L	ND	200	200	228	215	114	107	69-139	6	30	
2-Butanone (MEK)	ug/L	ND	1000	1000	987	1090	99	109	54-144	10	30	
2-Chlorotoluene	ug/L	ND	200	200	231	222	115	111	75-134	4	30	
2-Hexanone	ug/L	ND	1000	1000	1250	1170	125	117	58-137	6	30	
4-Chlorotoluene	ug/L	ND	200	200	217	212	109	106	72-133	2	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	1000	1000	1200	1220	120	122	60-129	2	30	
Acetone	ug/L	ND	1000	1000	903	884	88	86	62-132	2	30	
Acrolein	ug/L	ND	2000	2000	4350	4240	218	212	30-150	3	30	M1
Acrylonitrile	ug/L	ND	2000	2000	2290	2230	114	110	68-125	3	30	
Benzene	ug/L	326	200	200	537	518	106	96	68-125	4	30	
Bromobenzene	ug/L	ND	200	200	209	203	105	102	73-126	3	30	
Bromochloromethane	ug/L	ND	200	200	204	193	102	97	66-143	5	30	
Bromodichloromethane	ug/L	ND	200	200	202	196	101	98	74-125	3	30	
Bromoform	ug/L	ND	200	200	188	190	94	95	64-134	1	30	
Bromomethane	ug/L	ND	200	200	204	211	102	106	30-150	4	30	
Carbon disulfide	ug/L	ND	200	200	184	172	92	86	43-147	7	30	
Carbon tetrachloride	ug/L	ND	200	200	222	212	111	106	71-143	5	30	
Chlorobenzene	ug/L	ND	200	200	213	205	107	102	75-125	4	30	
Chloroethane	ug/L	ND	200	200	222	209	111	104	75-129	6	30	
Chloroform	ug/L	ND	200	200	211	194	106	97	66-132	9	30	
Chloromethane	ug/L	ND	200	200	227	218	114	109	53-137	4	30	
cis-1,2-Dichloroethene	ug/L	ND	200	200	200	196	100	98	67-133	2	30	
cis-1,3-Dichloropropene	ug/L	ND	200	200	187	183	93	91	66-125	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362288 3362289

Parameter	Units	10485097001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	200	200	208	204	104	102	62-132	2	30	
Dibromomethane	ug/L	ND	200	200	203	199	101	100	67-125	2	30	
Dichlorodifluoromethane	ug/L	ND	200	200	272	254	136	127	71-142	7	30	
Dichlorofluoromethane	ug/L	ND	200	200	229	211	114	106	70-131	8	30	N2
Diisopropyl ether	ug/L	ND	200	200	213	204	107	102	63-131	5	30	
Ethyl-tert-butyl ether	ug/L	ND	200	200	211	199	106	99	66-128	6	30	
Ethylbenzene	ug/L	184	200	200	453	432	135	124	74-126	5	30	M1
Hexachloro-1,3-butadiene	ug/L	ND	200	200	208	210	104	105	68-143	1	30	
Isopropylbenzene (Cumene)	ug/L	11.6	200	200	236	224	112	106	74-130	5	30	
m&p-Xylene	ug/L	56.9	400	400	509	488	113	108	69-132	4	30	
Methyl-tert-butyl ether	ug/L	5.2	200	200	203	198	99	97	65-131	2	30	
Methylene Chloride	ug/L	ND	200	200	195	184	95	89	57-125	6	30	
n-Butylbenzene	ug/L	ND	200	200	241	236	121	118	71-131	2	30	
n-Propylbenzene	ug/L	13.5	200	200	233	226	110	106	67-138	3	30	
Naphthalene	ug/L	ND	200	200	198	202	99	101	60-130	2	30	
o-Xylene	ug/L	ND	200	200	219	211	107	103	69-131	4	30	
p-Isopropyltoluene	ug/L	ND	200	200	236	228	118	114	72-133	4	30	
sec-Butylbenzene	ug/L	ND	200	200	235	228	117	114	73-134	3	30	
Styrene	ug/L	ND	200	200	211	202	106	101	72-125	4	30	
tert-Amylmethyl ether	ug/L	ND	200	200	209	204	104	102	67-125	2	30	
tert-Butyl Alcohol	ug/L	ND	2000	2000	2240	2160	112	108	64-137	4	30	
tert-Butylbenzene	ug/L	ND	200	200	230	220	115	110	70-143	4	30	
Tetrachloroethene	ug/L	ND	200	200	217	214	109	107	72-129	2	30	
Tetrahydrofuran	ug/L	ND	2000	2000	1860	1800	93	90	66-128	3	30	
Toluene	ug/L	11.4	200	200	229	217	109	103	73-125	5	30	
trans-1,2-Dichloroethene	ug/L	ND	200	200	204	188	102	94	62-137	8	30	
trans-1,3-Dichloropropene	ug/L	ND	200	200	210	199	105	99	61-136	6	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	500	500	469	452	94	90	45-128	4	30	
Trichloroethene	ug/L	ND	200	200	205	196	102	98	74-132	4	30	
Trichlorofluoromethane	ug/L	ND	200	200	248	233	124	116	75-139	6	30	
Vinyl acetate	ug/L	ND	200	200	196	193	98	97	51-135	2	30	
Vinyl chloride	ug/L	ND	200	200	232	219	116	109	68-146	6	30	
Xylene (Total)	ug/L	56.9	600	600	728	699	112	107	67-137	4	30	
1,2-Dichloroethane-d4 (S)	%.						107	106	75-136			
4-Bromofluorobenzene (S)	%.						98	99	75-125			
Toluene-d8 (S)	%.						107	107	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 622301 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10484657001, 10484657002

METHOD BLANK: 3358911 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/26/19 11:44	

LABORATORY CONTROL SAMPLE & LCSD: 3358912 3358913

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.8	42.6	107	106	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358914 3358915

Parameter	Units	10484657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	174	40	40	215	218	102	109	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358916 3358917

Parameter	Units	10483985012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	102000 ug/L	40	40	143	143	103	104	80-120	0	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 622378 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10484657001, 10484657002

METHOD BLANK: 3359334 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	07/29/19 15:17	

LABORATORY CONTROL SAMPLE: 3359335

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	998	100	80-120	

SAMPLE DUPLICATE: 3359336

Parameter	Units	10484413005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	340	342	1	5	

SAMPLE DUPLICATE: 3359337

Parameter	Units	10484413008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	333	329	1	5	

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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 151411 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10484657001, 10484657002

METHOD BLANK: 672132 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	07/30/19 11:38	

LABORATORY CONTROL SAMPLE: 672133

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.18	92	90-110	

MATRIX SPIKE SAMPLE: 672135

Parameter	Units	10484705001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.17	86	75-125	

SAMPLE DUPLICATE: 672134

Parameter	Units	10484705001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 621968 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10484657001, 10484657002, 10484657003

METHOD BLANK: 3357394 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002, 10484657003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	07/26/19 10:49	
Nitrate as N	mg/L	<0.012	0.10	0.012	07/26/19 10:49	
Sulfate	mg/L	<0.28	1.2	0.28	07/26/19 10:49	

LABORATORY CONTROL SAMPLE: 3357395

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.0	96	90-110	
Nitrate as N	mg/L	1	0.95	95	90-110	
Sulfate	mg/L	12.5	11.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3357396 3357397

Parameter	Units	10484510001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	292	62.5	62.5	330	331	61	62	90-110	0	20	M1
Nitrate as N	mg/L	<0.012	1	1	0.93	0.94	93	94	90-110	1	20	
Sulfate	mg/L	6.9	12.5	12.5	17.8	17.9	87	89	90-110	1	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358530 3358531

Parameter	Units	10484657003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.6	12.5	12.5	17.7	17.8	88	90	90-110	1	20	M1
Nitrate as N	mg/L	0.044J	1	1	0.95	0.95	90	91	90-110	1	20	
Sulfate	mg/L	9.5	12.5	12.5	20.3	20.6	87	89	90-110	1	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 622129 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10484657001, 10484657002

METHOD BLANK: 3358427 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	07/27/19 17:56	FS

LABORATORY CONTROL SAMPLE: 3358428

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.92	92	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358429 3358430

Parameter	Units	10483881001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.60	1	1	1.6	1.6	94	102	90-110	5	20	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3360141 3360142

Parameter	Units	10483866001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.16	1	1	1.1	1.1	96	97	90-110	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 622620 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10484657001, 10484657002

METHOD BLANK: 3360877 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/30/19 14:58	

LABORATORY CONTROL SAMPLE: 3360878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	302	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3360879 3360880

Parameter	Units	10484657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	244	241	98	97	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3360881 3360882

Parameter	Units	10484510001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	44.9J	250	250	295	293	100	99	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

QC Batch: 171438 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10484657001, 10484657002, 10484657003

METHOD BLANK: 678649 Matrix: Water
Associated Lab Samples: 10484657001, 10484657002, 10484657003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	07/29/19 15:21	

LABORATORY CONTROL SAMPLE: 678650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.5	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 678651 678652

Parameter	Units	10484488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.80J	25	25	26.1	26.4	101	102	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 678653 678654

Parameter	Units	10484413021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.7	25	25	28.8	29.2	100	102	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALIFIERS

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
FS	The sample was filtered in the laboratory prior to analysis.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
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METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman,WA-Grain Handling
Pace Project No.: 10484657

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10484657001	**MW30-GW-072319**	RSK 175	622430		
10484657002	**MW34-GW-072319**	RSK 175	622430		
10484657003	**MW33-GW-072319**	RSK 175	622430		
10484657001	**MW30-GW-072319**	EPA 3010	622271	EPA 6010D	622552
10484657002	**MW34-GW-072319**	EPA 3010	622271	EPA 6010D	622552
10484657003	**MW33-GW-072319**	EPA 3010	622271	EPA 6010D	622552
10484657001	**MW30-GW-072319**	EPA 7470A	622272	EPA 7470A	622582
10484657002	**MW34-GW-072319**	EPA 7470A	622272	EPA 7470A	622582
10484657003	**MW33-GW-072319**	EPA 7470A	622272	EPA 7470A	622582
10484657001	**MW30-GW-072319**	EPA 8260B	622311		
10484657002	**MW34-GW-072319**	EPA 8260B	622311		
10484657003	**MW33-GW-072319**	EPA 8260B	622311		
10484657004	**TB-072419**	EPA 8260B	622311		
10484657001	**MW30-GW-072319**	SM 2320B	622301		
10484657002	**MW34-GW-072319**	SM 2320B	622301		
10484657001	**MW30-GW-072319**	SM 2540C	622378		
10484657002	**MW34-GW-072319**	SM 2540C	622378		
10484657001	**MW30-GW-072319**	SM 4500-S-2 D	151411		
10484657002	**MW34-GW-072319**	SM 4500-S-2 D	151411		
10484657001	**MW30-GW-072319**	EPA 300.0	621968		
10484657002	**MW34-GW-072319**	EPA 300.0	621968		
10484657003	**MW33-GW-072319**	EPA 300.0	621968		
10484657001	**MW30-GW-072319**	EPA 353.2	622129		
10484657002	**MW34-GW-072319**	EPA 353.2	622129		
10484657001	**MW30-GW-072319**	EPA 410.4	622620	EPA 410.4	622871
10484657002	**MW34-GW-072319**	EPA 410.4	622620	EPA 410.4	622871
10484657001	**MW30-GW-072319**	SM 5310C	171438		
10484657002	**MW34-GW-072319**	SM 5310C	171438		
10484657003	**MW33-GW-072319**	SM 5310C	171438		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: CH2M Hill	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Lindsey Baumann	Company: UPRR
	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Email:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 758938
Phone: Fax:	Project Name: Freeman WA-Grain Handling Facility	Pace Project Manager: Jennifer Gross
Requested Due Date: *10 Day Standard*	Project #: 1497	Pace Profile #: *36447 / 4*

Regulatory Agency: —

State / Location: WA / Freeman

Requested Analysis Filtered (Y/N): Y

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	
1	MW30-GW-072319	WT	G	7/23/2019	1045	-	13	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X			GW1
2	MW34-GW-072319			7/23/2019	1600	-	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X			GW2
3	MW33-GW-072419			7/24/2019	1330	-	10		X	X	X			X					X		X		X			GW3
4	TB-072419			7/24/2019	0700	-	3				X															GW4
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

WO# : 10484657

10484657

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Short hold analyses are in **bold**	Karla Savage/Jacobs	7/24/2019	1600	[illegible] Paul	7/24/19	950	3.5	Y	N	Y
*Field filtered by client										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Karla Savage					
SIGNATURE of SAMPLER:	[signature]	DATE Signed: 7/24/2019				

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 09May2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.28	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt **Client Name:** CH2M Hill **Project #:** **WO#: 10484657**

PM: JMG **Due Date: 08/08/19**

CLIENT: UPRR_Jacobs

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Pace [ ] SpeeDee [ ] Commercial **See Exception** [ ]

Tracking Number: 4934 3731 4490

Custody Seal on Cooler/Box Present? [ ] Yes [X] No **Seals Intact?** [ ] Yes [X] No **Biological Tissue Frozen?** [ ] Yes [ ] No [X] N/A

Packing Material: [X] Bubble Wrap [X] Bubble Bags [ ] None [ ] Other: _____ **Temp Blank?** [X] Yes [ ] No

Thermometer: [ ] T1(0461) [X] T2(1336) [ ] T3(0459) [ ] T4(0254) [ ] T5(0489) **Type of Ice:** [X] Wet [ ] Blue [ ] None [ ] Dry [ ] Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 3.4 °C **Average Corrected Temp (no temp blank only):** °C **See Exceptions** [ ]

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 3.5 °C

USDA Regulated Soil: ([X] N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** 7.25.19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? [ ] Yes [ ] No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? [ ] Yes [ ] No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	[X] Yes	[ ] No		1.
Chain of Custody Relinquished?	[X] Yes	[ ] No		2.
Sampler Name and/or Signature on COC?	[X] Yes	[ ] No	[ ] N/A	3.
Samples Arrived within Hold Time?	[X] Yes	[ ] No		4.
Short Hold Time Analysis (<72 hr)?	[X] Yes	[ ] No		5. [ ] Fecal Coliform [ ] HPC [ ] Total Coliform/E coli [ ] BOD/cBOD [ ] Hex Chrome [ ] Turbidity [X] Nitrate [ ] Nitrite [ ] Orthophos [ ] Other
Rush Turn Around Time Requested?	[ ] Yes	[X] No		6.
Sufficient Volume?	[X] Yes	[ ] No		7.
Correct Containers Used? -Pace Containers Used?	[X] Yes [X] Yes	[ ] No [ ] No		8.
Containers Intact?	[X] Yes	[ ] No		9.
Field Filtered Volume Received for Dissolved Tests?	[ ] Yes	[ ] No	[X] N/A	10. Is sediment visible in the dissolved container? [ ] Yes [ ] No
Is sufficient information available to reconcile the samples to the COC? Matrix: [X] Water [ ] Soil [ ] Oil [ ] Other	[X] Yes	[ ] No		11. If no, write ID/ Date/Time on Container Below: **See Exception** [ ]
All containers needing acid/base preservation have been checked?	[X] Yes	[ ] No	[ ] N/A	12. Sample # 1-3 1-2 [ ] NaOH [X] HNO_3 ½ [X] H_2SO_4 ½ [ ] Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	[X] Yes	[ ] No	[ ] N/A	
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	[X] Yes	[ ] No	[ ] N/A	Positive for Res. Chlorine? [ ] Yes [ ] No **pH Paper Lot#** **See Exception** [ ]
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	[ ] Yes	[X] No	[ ] N/A	13. **See Exception** [ ]
Trip Blank Present?	[X] Yes	[ ] No	[ ] N/A	14.
Trip Blank Custody Seals Present?	[X] Yes	[ ] No	[ ] N/A	Pace Trip Blank Lot # (if purchased): 23097

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** [ ] Yes [ ] No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: ~~Spoke to Jonathan, pump died while sampling and he will be collecting additional parameters for MW-33. Complete 300.0 analysis with container submitted, he will be collecting N+N 7/26.~~

Project Manager Review: _____ **Date:** 07/26/2019

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: CH (2)

WO# : 20114542

20114542

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 7/25/2019 **Results Requested By:** 7/31/19 JMH 8/8/2019

Workorder: 10484657 **Workorder Name:** 1497 Freeman,WA-Grain Handling

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	5636267 / 4500 Sulfide	LAB USE ONLY
1	MW30-GW-072319	PS	7/23/2019 10:45	10484657001	Water	1	X	
2	MW34-GW-072319	PS	7/23/2019 16:00	10484657002	Water	1	X	
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	7/26/19 1555		
2	[signature]	7-27-19	0920 [signature] Pace	7-27-19
3				

Comments: 0920

Cooler Temperature on Receipt 1.1 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO#: 20114542

Pace Analytical

Sample Condition Upon R

PM: CMM Due Date: 08/08/1

CLIENT: PASI-MINN

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Proj

Courier: ☐ Pace Courier ☐ Hired Courier ☒ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☒Yes ☐No

Therometer Used: ▫ Therm Fisher IR 5 ▫ Therm Fisher IR 6 ▫ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 07-27-19 JB

Temp must be measured from Temperature blank when present

				Comments:
Temperature Blank Present"?	☒Yes	☐No	☐N/A	1
Chain of Custody Present:	☒Yes	☐No	☐N/A	2
Chain of Custody Complete:	☒Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☒Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	5
Samples Arrived within Hold Time:	☒Yes	☐No	☐N/A	6
Sufficient Volume:	☒Yes	☐No	☐N/A	7
Correct Containers Used:	☒Yes	☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☐No	☒N/A	9
Sample Labels match COC:	☒Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☒Yes	☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☒Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☒Yes	☐No	☐N/A	13 If No, was preserative added? ▫Yes ▫No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☒N/A	14
Trip Blank Present:	☐Yes	☒No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

WO#: 12132826

PM: RK1 Due Date: 07/30/19

CLIENT: PACE MPLS

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [x] Yes ☐ No

Owner Received Date: 7/25/2019 Results Requested By: ~~8/8/2019~~ 7/30/19

Workorder: 10484657 **Workorder Name:** 1497 Freeman,WA-Grain Handling

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	MW30-GW-072319	PS	7/23/2019 10:45	10484657001	Water	2						X												
2	MW34-GW-072319	PS	7/23/2019 16:00	10484657002	Water	2						X												
3	MW33-GW-072319	PS	7/24/2019 13:30	10484657003	Water	2						X												
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace	7/26/19 1710	[signature] 7/26/19	1900
2	[signature] 7/26/19	2330	Nicole Jaime 7/29/19	0810
3				

Comments

Cooler Temperature on Receipt 1.5 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: **WO#: 12132826**

PM: RK1 **Due Date: 07/30/19**

CLIENT: PACE MPLS

Courier: ☐Fed Ex ☐UPS ☐USPS ☐Client ☐Commercial ☒Pace ☐Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒Yes ☐No Seals Intact? ☒Yes ☐No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒Bubble Wrap ☒Bubble Bags ☐None ☐Other: Temp Blank? ☒Yes ☐No

Thermometer Used: ☒140792808 Type of Ice: ☐Wet ☐Blue ☐None ☒Samples on ice, cooling process has begun

Cooler Temp Read °C: 1.2 Cooler Temp Corrected °C: 1.5 Biological Tissue Frozen? ☐Yes ☐No ☒NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 7/26/19 DC

NG 7/29/19

				Comments:
Chain of Custody Present?	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out?	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished?	☒Yes	☐No	☐N/A	3.
Sampler Name and Signature on COC?	☐Yes	☒No	☐N/A	4.
Samples Arrived within Hold Time?	☒Yes	☐No	☐N/A	5. If Fecal: ☐<8 hours ☐>8, <24 hours ☐>24 hours
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time Requested?	☒Yes	☐No	☐N/A	7. Due 7/30/19
Sufficient Volume?	☒Yes	☐No	☐N/A	8.
Correct Containers Used?	☒Yes	☐No	☐N/A	9.
-Pace Containers Used?	☒Yes	☐No	☐N/A	
Containers Intact?	☒Yes	☐No	☐N/A	10.
Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☒Yes	☐No	☐N/A	12.
All containers needing acid/base preservation properly preserved?	☒Yes	☐No	☐N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐Yes	☐No	☒N/A	14.
Headspace in VOA Vials (>6mm)?	☐Yes	☒No	☐N/A	15.
Trip Blank Present?	☐Yes	☒No	☐N/A	16.
Trip Blank Custody Seals Present?	☐Yes	☐No	☒N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐Yes ☐No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Lauren Ferur Date: 7/29/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 31, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 26, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10484705001	**MW32-GW-072519**	Water	07/25/19 10:30	07/26/19 08:45
10484705002	**MW27-GW-072519**	Water	07/25/19 13:00	07/26/19 08:45
10484705003	**TB-072519**	Water	07/25/19 07:00	07/26/19 08:45

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10484705001	**MW32-GW-072519**	RSK 175	MJD	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10484705002	**MW27-GW-072519**	RSK 175	MJD	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10484705003	**TB-072519**	EPA 8260B	AEZ	83	PASI-M

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10484705001	**MW32-GW-072519**					
EPA 6010D	Barium, Dissolved	41.0	ug/L	10.0	07/29/19 10:18	
EPA 6010D	Cobalt, Dissolved	1.2J	ug/L	10.0	07/29/19 10:18	
EPA 6010D	Copper, Dissolved	1.3J	ug/L	10.0	07/29/19 10:18	
EPA 6010D	Molybdenum, Dissolved	4.4J	ug/L	15.0	07/29/19 10:18	
EPA 6010D	Vanadium, Dissolved	0.98J	ug/L	15.0	07/29/19 10:18	
EPA 6010D	Zinc, Dissolved	12.7J	ug/L	20.0	07/29/19 10:18	
EPA 8260B	Toluene	0.27J	ug/L	0.50	07/27/19 01:37	
SM 2320B	Alkalinity, Total as CaCO3	166	mg/L	5.0	07/26/19 12:41	
SM 2540C	Total Dissolved Solids	222	mg/L	10.0	07/29/19 15:17	
EPA 300.0	Chloride	2.5	mg/L	1.2	07/26/19 14:43	
EPA 300.0	Sulfate	7.1	mg/L	1.2	07/26/19 14:43	
SM 5310C	Total Organic Carbon	1.2	mg/L	1.0	07/29/19 16:45	
10484705002	**MW27-GW-072519**					
EPA 6010D	Barium, Dissolved	42.3	ug/L	10.0	07/29/19 10:26	
EPA 6010D	Beryllium, Dissolved	0.21J	ug/L	5.0	07/29/19 10:26	
EPA 6010D	Cobalt, Dissolved	1.1J	ug/L	10.0	07/29/19 10:26	
EPA 6010D	Copper, Dissolved	1.7J	ug/L	10.0	07/29/19 10:26	
EPA 6010D	Molybdenum, Dissolved	5.8J	ug/L	15.0	07/29/19 10:26	
EPA 6010D	Nickel, Dissolved	2.6J	ug/L	20.0	07/29/19 10:26	
EPA 6010D	Vanadium, Dissolved	10.8J	ug/L	15.0	07/29/19 10:26	
EPA 6010D	Zinc, Dissolved	10.7J	ug/L	20.0	07/29/19 10:26	
EPA 7470A	Mercury, Dissolved	0.10J	ug/L	0.20	07/29/19 12:05	
EPA 8260B	Carbon tetrachloride	15.6	ug/L	0.50	07/27/19 01:54	
EPA 8260B	Chloroform	5.7	ug/L	1.0	07/27/19 01:54	
EPA 8260B	Toluene	0.28J	ug/L	0.50	07/27/19 01:54	
SM 2320B	Alkalinity, Total as CaCO3	150	mg/L	5.0	07/26/19 12:46	
SM 2540C	Total Dissolved Solids	333	mg/L	10.0	07/29/19 15:17	
EPA 300.0	Chloride	4.2	mg/L	1.2	07/26/19 14:58	
EPA 300.0	Nitrate as N	0.18	mg/L	0.10	07/26/19 14:58	
EPA 300.0	Sulfate	42.7	mg/L	1.2	07/26/19 14:58	
EPA 410.4	Chemical Oxygen Demand	19.8J	mg/L	50.0	07/30/19 15:02	
SM 5310C	Total Organic Carbon	3.5	mg/L	1.0	07/29/19 17:02	
10484705003	**TB-072519**					
EPA 8260B	Toluene	0.31J	ug/L	0.50	07/27/19 00:13	

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
3 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 622311

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10485097001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3362288)
  - Acrolein
  - Ethylbenzene
- MSD (Lab ID: 3362289)
  - Acrolein

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: July 31, 2019

Analyte Comments:

QC Batch: 622311

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3358959)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3358960)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3362288)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3362289)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW27-GW-072519 (Lab ID: 10484705002)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW32-GW-072519 (Lab ID: 10484705001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- TB-072519 (Lab ID: 10484705003)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 621968

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10484510001,10484657003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3357396)
  - Chloride
  - Sulfate
- MS (Lab ID: 3358530)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3357397)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3358531)
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: July 31, 2019

General Information:
2 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Sample: MW32-GW-072519 **Lab ID: 10484705001** Collected: 07/25/19 10:30 Received: 07/26/19 08:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/27/19 19:51	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/27/19 19:51	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/27/19 19:51	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/26/19 14:07	07/29/19 10:18	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/26/19 14:07	07/29/19 10:18	7440-38-2	
Barium, Dissolved	**41.0**	ug/L	10.0	0.60	1	07/26/19 14:07	07/29/19 10:18	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	07/26/19 14:07	07/29/19 10:18	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/26/19 14:07	07/29/19 10:18	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/26/19 14:07	07/29/19 10:18	7440-47-3	
Cobalt, Dissolved	**1.2J**	ug/L	10.0	0.50	1	07/26/19 14:07	07/29/19 10:18	7440-48-4	
Copper, Dissolved	**1.3J**	ug/L	10.0	1.2	1	07/26/19 14:07	07/29/19 10:18	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/26/19 14:07	07/29/19 10:18	7439-92-1	
Molybdenum, Dissolved	**4.4J**	ug/L	15.0	3.8	1	07/26/19 14:07	07/29/19 10:18	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	07/26/19 14:07	07/29/19 10:18	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/26/19 14:07	07/29/19 10:18	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/26/19 14:07	07/29/19 10:18	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/26/19 14:07	07/29/19 10:18	7440-28-0	
Vanadium, Dissolved	**0.98J**	ug/L	15.0	0.43	1	07/26/19 14:07	07/29/19 10:18	7440-62-2	
Zinc, Dissolved	**12.7J**	ug/L	20.0	6.3	1	07/26/19 14:07	07/29/19 10:18	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	07/26/19 18:16	07/29/19 12:03	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:37	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:37	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:37	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:37	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/27/19 01:37	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:37	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:37	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:37	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/27/19 01:37	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/27/19 01:37	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:37	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:37	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/27/19 01:37	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/27/19 01:37	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:37	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 01:37	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/27/19 01:37	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 01:37	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:37	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:37	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Sample: MW32-GW-072519 **Lab ID: 10484705001** Collected: 07/25/19 10:30 Received: 07/26/19 08:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/27/19 01:37	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:37	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/27/19 01:37	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/27/19 01:37	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/27/19 01:37	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/27/19 01:37	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:37	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/27/19 01:37	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/27/19 01:37	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/27/19 01:37	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/27/19 01:37	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/27/19 01:37	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/27/19 01:37	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 01:37	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/27/19 01:37	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/27/19 01:37	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 01:37	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/27/19 01:37	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/27/19 01:37	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/27/19 01:37	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/27/19 01:37	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/27/19 01:37	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/27/19 01:37	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/27/19 01:37	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 01:37	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:37	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/27/19 01:37	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/27/19 01:37	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/27/19 01:37	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/27/19 01:37	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:37	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:37	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 01:37	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:37	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:37	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/27/19 01:37	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/27/19 01:37	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/27/19 01:37	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:37	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/27/19 01:37	109-99-9	
Toluene	**0.27J**	ug/L	0.50	0.083	1		07/27/19 01:37	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/27/19 01:37	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/27/19 01:37	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/27/19 01:37	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/27/19 01:37	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/27/19 01:37	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Sample: MW32-GW-072519 **Lab ID: 10484705001** Collected: 07/25/19 10:30 Received: 07/26/19 08:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:37	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:37	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 01:37	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/27/19 01:37	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 01:37	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:37	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:37	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:37	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/27/19 01:37	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/27/19 01:37	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:37	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:37	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:37	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/27/19 01:37	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-136		1		07/27/19 01:37	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		07/27/19 01:37	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		07/27/19 01:37	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**166**	mg/L	5.0	2.0	1		07/26/19 12:41		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**222**	mg/L	10.0	5.0	1		07/29/19 15:17		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/30/19 13:35	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.5**	mg/L	1.2	0.12	1		07/26/19 14:43	16887-00-6	
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		07/26/19 14:43	14797-55-8	
Sulfate	**7.1**	mg/L	1.2	0.28	1		07/26/19 14:43	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		07/27/19 17:48		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/30/19 09:03	07/30/19 15:02		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.2**	mg/L	1.0	0.39	1		07/29/19 16:45	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Sample: MW27-GW-072519 **Lab ID: 10484705002** Collected: 07/25/19 13:00 Received: 07/26/19 08:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		07/27/19 19:59	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		07/27/19 19:59	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		07/27/19 19:59	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	07/26/19 14:07	07/29/19 10:26	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	07/26/19 14:07	07/29/19 10:26	7440-38-2	
Barium, Dissolved	**42.3**	ug/L	10.0	0.60	1	07/26/19 14:07	07/29/19 10:26	7440-39-3	
Beryllium, Dissolved	**0.21J**	ug/L	5.0	0.12	1	07/26/19 14:07	07/29/19 10:26	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	07/26/19 14:07	07/29/19 10:26	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	07/26/19 14:07	07/29/19 10:26	7440-47-3	
Cobalt, Dissolved	**1.1J**	ug/L	10.0	0.50	1	07/26/19 14:07	07/29/19 10:26	7440-48-4	
Copper, Dissolved	**1.7J**	ug/L	10.0	1.2	1	07/26/19 14:07	07/29/19 10:26	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	07/26/19 14:07	07/29/19 10:26	7439-92-1	
Molybdenum, Dissolved	**5.8J**	ug/L	15.0	3.8	1	07/26/19 14:07	07/29/19 10:26	7439-98-7	
Nickel, Dissolved	**2.6J**	ug/L	20.0	1.1	1	07/26/19 14:07	07/29/19 10:26	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	07/26/19 14:07	07/29/19 10:26	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	07/26/19 14:07	07/29/19 10:26	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	07/26/19 14:07	07/29/19 10:26	7440-28-0	
Vanadium, Dissolved	**10.8J**	ug/L	15.0	0.43	1	07/26/19 14:07	07/29/19 10:26	7440-62-2	
Zinc, Dissolved	**10.7J**	ug/L	20.0	6.3	1	07/26/19 14:07	07/29/19 10:26	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**0.10J**	ug/L	0.20	0.093	1	07/26/19 18:16	07/29/19 12:05	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:54	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:54	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:54	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:54	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/27/19 01:54	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:54	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:54	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:54	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/27/19 01:54	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/27/19 01:54	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:54	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:54	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/27/19 01:54	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/27/19 01:54	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:54	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 01:54	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/27/19 01:54	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 01:54	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:54	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:54	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Sample: MW27-GW-072519 **Lab ID: 10484705002** Collected: 07/25/19 13:00 Received: 07/26/19 08:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/27/19 01:54	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:54	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/27/19 01:54	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/27/19 01:54	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/27/19 01:54	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/27/19 01:54	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:54	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/27/19 01:54	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/27/19 01:54	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/27/19 01:54	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/27/19 01:54	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/27/19 01:54	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/27/19 01:54	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 01:54	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/27/19 01:54	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/27/19 01:54	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 01:54	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/27/19 01:54	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/27/19 01:54	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/27/19 01:54	75-15-0	
Carbon tetrachloride	**15.6**	ug/L	0.50	0.19	1		07/27/19 01:54	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/27/19 01:54	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/27/19 01:54	75-00-3	
Chloroform	**5.7**	ug/L	1.0	0.45	1		07/27/19 01:54	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 01:54	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:54	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/27/19 01:54	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/27/19 01:54	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/27/19 01:54	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/27/19 01:54	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:54	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 01:54	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 01:54	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:54	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:54	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/27/19 01:54	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/27/19 01:54	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/27/19 01:54	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 01:54	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/27/19 01:54	109-99-9	
Toluene	**0.28J**	ug/L	0.50	0.083	1		07/27/19 01:54	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/27/19 01:54	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/27/19 01:54	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/27/19 01:54	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/27/19 01:54	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/27/19 01:54	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Sample: MW27-GW-072519 **Lab ID: 10484705002** Collected: 07/25/19 13:00 Received: 07/26/19 08:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:54	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 01:54	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 01:54	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/27/19 01:54	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 01:54	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 01:54	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:54	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:54	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/27/19 01:54	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/27/19 01:54	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 01:54	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 01:54	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/27/19 01:54	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/27/19 01:54	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-136		1		07/27/19 01:54	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/27/19 01:54	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		07/27/19 01:54	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**150**	mg/L	5.0	2.0	1		07/26/19 12:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**333**	mg/L	10.0	5.0	1		07/29/19 15:17		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/30/19 13:37	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**4.2**	mg/L	1.2	0.12	1		07/26/19 14:58	16887-00-6	
Nitrate as N	**0.18**	mg/L	0.10	0.012	1		07/26/19 14:58	14797-55-8	
Sulfate	**42.7**	mg/L	1.2	0.28	1		07/26/19 14:58	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		07/27/19 17:49		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**19.8J**	mg/L	50.0	17.0	1	07/30/19 09:03	07/30/19 15:02		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.5**	mg/L	1.0	0.39	1		07/29/19 17:02	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Sample: TB-072519 **Lab ID: 10484705003** Collected: 07/25/19 07:00 Received: 07/26/19 08:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:13	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		07/27/19 00:13	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 00:13	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		07/27/19 00:13	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		07/27/19 00:13	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		07/27/19 00:13	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:13	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:13	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		07/27/19 00:13	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		07/27/19 00:13	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:13	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:13	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		07/27/19 00:13	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		07/27/19 00:13	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 00:13	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 00:13	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		07/27/19 00:13	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 00:13	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 00:13	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:13	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	1.0	0.070	1		07/27/19 00:13	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 00:13	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		07/27/19 00:13	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		07/27/19 00:13	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		07/27/19 00:13	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		07/27/19 00:13	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:13	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		07/27/19 00:13	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		07/27/19 00:13	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		07/27/19 00:13	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		07/27/19 00:13	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		07/27/19 00:13	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		07/27/19 00:13	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 00:13	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		07/27/19 00:13	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		07/27/19 00:13	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		07/27/19 00:13	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		07/27/19 00:13	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		07/27/19 00:13	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		07/27/19 00:13	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		07/27/19 00:13	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		07/27/19 00:13	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		07/27/19 00:13	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		07/27/19 00:13	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		07/27/19 00:13	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		07/27/19 00:13	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Sample: TB-072519 **Lab ID: 10484705003** Collected: 07/25/19 07:00 Received: 07/26/19 08:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		07/27/19 00:13	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		07/27/19 00:13	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		07/27/19 00:13	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		07/27/19 00:13	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		07/27/19 00:13	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		07/27/19 00:13	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 00:13	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		07/27/19 00:13	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:13	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		07/27/19 00:13	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		07/27/19 00:13	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		07/27/19 00:13	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		07/27/19 00:13	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		07/27/19 00:13	109-99-9	
Toluene	**0.31J**	ug/L	0.50	0.083	1		07/27/19 00:13	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		07/27/19 00:13	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		07/27/19 00:13	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		07/27/19 00:13	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		07/27/19 00:13	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		07/27/19 00:13	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 00:13	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		07/27/19 00:13	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		07/27/19 00:13	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		07/27/19 00:13	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		07/27/19 00:13	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		07/27/19 00:13	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 00:13	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 00:13	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	1.0	0.11	1		07/27/19 00:13	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		07/27/19 00:13	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		07/27/19 00:13	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		07/27/19 00:13	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		07/27/19 00:13	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		07/27/19 00:13	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-136		1		07/27/19 00:13	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		07/27/19 00:13	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		07/27/19 00:13	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 622446 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 3360203 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	07/27/19 19:29	
Ethene	ug/L	<2.9	10.0	2.9	07/27/19 19:29	
Methane	ug/L	<4.9	10.0	4.9	07/27/19 19:29	

LABORATORY CONTROL SAMPLE & LCSD: 3360204 3360205

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	120	114	105	100	85-115	5	20	
Ethene	ug/L	106	111	106	104	100	85-115	5	20	
Methane	ug/L	60.7	61.3	58.5	101	96	85-115	5	20	

SAMPLE DUPLICATE: 3360206

Parameter	Units	10484531001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	29.6	33.3	12	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 622272 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 3358822 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	07/29/19 11:58	

LABORATORY CONTROL SAMPLE: 3358823

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.4	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358824 3358825

Parameter	Units	10484657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.4	5.4	108	108	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 622271 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 3358818 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	07/29/19 10:15	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	07/29/19 10:15	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	07/29/19 10:15	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	07/29/19 10:15	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	07/29/19 10:15	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	07/29/19 10:15	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	07/29/19 10:15	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	07/29/19 10:15	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	07/29/19 10:15	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	07/29/19 10:15	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	07/29/19 10:15	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	07/29/19 10:15	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	07/29/19 10:15	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	07/29/19 10:15	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	07/29/19 10:15	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	07/29/19 10:15	

LABORATORY CONTROL SAMPLE: 3358819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	994	99	80-120	
Arsenic, Dissolved	ug/L	1000	1020	102	80-120	
Barium, Dissolved	ug/L	1000	1010	101	80-120	
Beryllium, Dissolved	ug/L	1000	1030	103	80-120	
Cadmium, Dissolved	ug/L	1000	1040	104	80-120	
Chromium, Dissolved	ug/L	1000	1000	100	80-120	
Cobalt, Dissolved	ug/L	1000	1010	101	80-120	
Copper, Dissolved	ug/L	1000	985	98	80-120	
Lead, Dissolved	ug/L	1000	1020	102	80-120	
Molybdenum, Dissolved	ug/L	1000	1020	102	80-120	
Nickel, Dissolved	ug/L	1000	1010	101	80-120	
Selenium, Dissolved	ug/L	1000	1060	106	80-120	
Silver, Dissolved	ug/L	500	502	100	80-120	
Thallium, Dissolved	ug/L	1000	1000	100	80-120	
Vanadium, Dissolved	ug/L	1000	1010	101	80-120	
Zinc, Dissolved	ug/L	1000	1040	104	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358820 3358821

Parameter	Units	10484705001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	952	1010	95	100	75-125	5	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	967	1010	97	101	75-125	5	20	
Barium, Dissolved	ug/L	41.0	1000	1000	988	1050	95	101	75-125	6	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	976	1030	98	103	75-125	6	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	978	1030	98	103	75-125	5	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	944	1000	94	100	75-125	6	20	
Cobalt, Dissolved	ug/L	1.2J	1000	1000	939	994	94	99	75-125	6	20	
Copper, Dissolved	ug/L	1.3J	1000	1000	939	990	94	99	75-125	5	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	958	1010	96	100	75-125	5	20	
Molybdenum, Dissolved	ug/L	4.4J	1000	1000	967	1020	96	102	75-125	6	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	936	990	94	99	75-125	6	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	999	1040	100	104	75-125	4	20	
Silver, Dissolved	ug/L	<0.40	500	500	488	502	98	100	75-125	3	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	961	1000	96	100	75-125	4	20	
Vanadium, Dissolved	ug/L	0.98J	1000	1000	954	1010	95	101	75-125	5	20	
Zinc, Dissolved	ug/L	12.7J	1000	1000	972	1020	96	101	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 622311 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10484705001, 10484705002, 10484705003

METHOD BLANK: 3358959 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002, 10484705003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	07/26/19 23:23	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	07/26/19 23:23	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	07/26/19 23:23	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	07/26/19 23:23	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	07/26/19 23:23	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	07/26/19 23:23	MN
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	07/26/19 23:23	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	07/26/19 23:23	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	07/26/19 23:23	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	07/26/19 23:23	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	07/26/19 23:23	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	07/26/19 23:23	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	07/26/19 23:23	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	07/26/19 23:23	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
1,3-Dichloropropane	ug/L	<0.070	1.0	0.070	07/26/19 23:23	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	07/26/19 23:23	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	07/26/19 23:23	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	07/26/19 23:23	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	07/26/19 23:23	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	07/26/19 23:23	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
2-Hexanone	ug/L	<0.88	5.0	0.88	07/26/19 23:23	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	07/26/19 23:23	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	07/26/19 23:23	
Acetone	ug/L	<9.2	20.0	9.2	07/26/19 23:23	
Acrolein	ug/L	<1.2	10.0	1.2	07/26/19 23:23	
Acrylonitrile	ug/L	<0.91	10.0	0.91	07/26/19 23:23	
Benzene	ug/L	<0.10	0.50	0.10	07/26/19 23:23	
Bromobenzene	ug/L	<0.21	0.50	0.21	07/26/19 23:23	
Bromochloromethane	ug/L	<0.27	1.0	0.27	07/26/19 23:23	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	07/26/19 23:23	
Bromoform	ug/L	<0.80	4.0	0.80	07/26/19 23:23	
Bromomethane	ug/L	<1.8	4.0	1.8	07/26/19 23:23	
Carbon disulfide	ug/L	<0.078	1.0	0.078	07/26/19 23:23	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	07/26/19 23:23	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

METHOD BLANK: 3358959 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002, 10484705003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	1.0	0.17	07/26/19 23:23	
Chloroethane	ug/L	<0.49	1.0	0.49	07/26/19 23:23	
Chloroform	ug/L	<0.45	1.0	0.45	07/26/19 23:23	
Chloromethane	ug/L	<0.16	4.0	0.16	07/26/19 23:23	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	07/26/19 23:23	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	07/26/19 23:23	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	07/26/19 23:23	
Dibromomethane	ug/L	<0.16	1.0	0.16	07/26/19 23:23	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	07/26/19 23:23	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	07/26/19 23:23	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	07/26/19 23:23	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	07/26/19 23:23	
Ethylbenzene	ug/L	<0.14	0.50	0.14	07/26/19 23:23	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	07/26/19 23:23	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	07/26/19 23:23	
m&p-Xylene	ug/L	<0.31	1.0	0.31	07/26/19 23:23	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
Methylene Chloride	ug/L	<0.98	4.0	0.98	07/26/19 23:23	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	07/26/19 23:23	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	07/26/19 23:23	
Naphthalene	ug/L	0.74J	1.0	0.48	07/26/19 23:23	
o-Xylene	ug/L	<0.16	0.50	0.16	07/26/19 23:23	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	07/26/19 23:23	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	07/26/19 23:23	
Styrene	ug/L	<0.19	0.50	0.19	07/26/19 23:23	
tert-Amylmethyl ether	ug/L	<0.11	1.0	0.11	07/26/19 23:23	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	07/26/19 23:23	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	07/26/19 23:23	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	07/26/19 23:23	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	07/26/19 23:23	
Toluene	ug/L	<0.083	0.50	0.083	07/26/19 23:23	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	07/26/19 23:23	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	07/26/19 23:23	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	07/26/19 23:23	
Trichloroethene	ug/L	<0.15	0.40	0.15	07/26/19 23:23	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	07/26/19 23:23	
Vinyl acetate	ug/L	<1.1	10.0	1.1	07/26/19 23:23	
Vinyl chloride	ug/L	<0.092	0.20	0.092	07/26/19 23:23	
Xylene (Total)	ug/L	<0.31	1.5	0.31	07/26/19 23:23	
1,2-Dichloroethane-d4 (S)	%.	104	75-136		07/26/19 23:23	
4-Bromofluorobenzene (S)	%.	98	75-125		07/26/19 23:23	
Toluene-d8 (S)	%.	98	75-125		07/26/19 23:23	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

LABORATORY CONTROL SAMPLE: 3358960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.5	103	68-141	
1,1,1-Trichloroethane	ug/L	20	19.4	97	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.5	108	73-125	
1,1,2-Trichloroethane	ug/L	20	21.8	109	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.2	101	69-132	
1,1-Dichloroethane	ug/L	20	20.4	102	73-125	
1,1-Dichloroethene	ug/L	20	18.6	93	71-126	
1,1-Dichloropropene	ug/L	20	19.3	97	73-126	
1,2,3-Trichlorobenzene	ug/L	20	15.4	77	72-126	
1,2,3-Trichloropropane	ug/L	20	20.3	101	75-126	
1,2,4-Trichlorobenzene	ug/L	20	17.3	87	71-134	
1,2,4-Trimethylbenzene	ug/L	20	21.0	105	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	44.5	89	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	21.5	107	75-129	
1,2-Dichlorobenzene	ug/L	20	19.2	96	75-129	
1,2-Dichloroethane	ug/L	20	20.3	102	75-125	
1,2-Dichloroethene (Total)	ug/L	40	37.3	93	74-125	N2
1,2-Dichloropropane	ug/L	20	20.4	102	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.5	102	75-127	
1,3-Dichlorobenzene	ug/L	20	18.6	93	75-126	
1,3-Dichloropropane	ug/L	20	20.5	102	75-125	
1,4-Dichlorobenzene	ug/L	20	19.8	99	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	383	96	72-129	
2,2,4-Trimethylpentane	ug/L	20	18.3	91	72-128	N2
2,2-Dichloropropane	ug/L	20	20.5	102	65-138	
2-Butanone (MEK)	ug/L	100	110	110	59-144	
2-Chlorotoluene	ug/L	20	20.5	103	75-127	
2-Hexanone	ug/L	100	122	122	73-134	
4-Chlorotoluene	ug/L	20	19.6	98	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	116	116	62-141	
Acetone	ug/L	100	104	104	60-137	
Acrolein	ug/L	200	229	114	60-141	
Acrylonitrile	ug/L	200	217	108	75-129	
Benzene	ug/L	20	19.6	98	73-125	
Bromobenzene	ug/L	20	19.4	97	73-125	
Bromochloromethane	ug/L	20	19.8	99	75-135	
Bromodichloromethane	ug/L	20	18.9	94	75-125	
Bromoform	ug/L	20	17.9	89	67-136	
Bromomethane	ug/L	20	17.8	89	30-150	
Carbon disulfide	ug/L	20	16.5	83	47-137	
Carbon tetrachloride	ug/L	20	19.9	99	75-125	
Chlorobenzene	ug/L	20	20.0	100	75-125	
Chloroethane	ug/L	20	22.1	110	63-136	
Chloroform	ug/L	20	19.6	98	73-128	
Chloromethane	ug/L	20	21.2	106	55-130	
cis-1,2-Dichloroethene	ug/L	20	19.0	95	75-125	
cis-1,3-Dichloropropene	ug/L	20	18.3	92	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

LABORATORY CONTROL SAMPLE: 3358960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.4	102	75-125	
Dibromomethane	ug/L	20	19.8	99	75-125	
Dichlorodifluoromethane	ug/L	20	24.7	124	63-132	
Dichlorofluoromethane	ug/L	20	21.6	108	68-127	N2
Diisopropyl ether	ug/L	20	20.4	102	71-131	
Ethyl-tert-butyl ether	ug/L	20	20.2	101	75-125	
Ethylbenzene	ug/L	20	21.5	107	75-125	
Hexachloro-1,3-butadiene	ug/L	20	16.7	84	72-134	
Isopropylbenzene (Cumene)	ug/L	20	20.2	101	75-125	
m&p-Xylene	ug/L	40	40.9	102	75-126	
Methyl-tert-butyl ether	ug/L	20	19.8	99	75-125	
Methylene Chloride	ug/L	20	19.0	95	70-125	
n-Butylbenzene	ug/L	20	20.6	103	75-126	
n-Propylbenzene	ug/L	20	19.2	96	73-127	
Naphthalene	ug/L	20	15.8	79	63-128	
o-Xylene	ug/L	20	19.9	99	75-128	
p-Isopropyltoluene	ug/L	20	20.8	104	75-125	
sec-Butylbenzene	ug/L	20	20.7	104	75-126	
Styrene	ug/L	20	19.7	99	75-125	
tert-Amylmethyl ether	ug/L	20	20.3	101	75-125	
tert-Butyl Alcohol	ug/L	200	221	110	75-130	
tert-Butylbenzene	ug/L	20	20.6	103	75-131	
Tetrachloroethene	ug/L	20	19.6	98	74-125	
Tetrahydrofuran	ug/L	200	186	93	64-138	
Toluene	ug/L	20	20.1	100	74-125	
trans-1,2-Dichloroethene	ug/L	20	18.3	92	68-128	
trans-1,3-Dichloropropene	ug/L	20	20.5	103	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	46.2	92	60-127	
Trichloroethene	ug/L	20	18.8	94	75-127	
Trichlorofluoromethane	ug/L	20	23.0	115	72-133	
Vinyl acetate	ug/L	20	18.4	92	61-129	
Vinyl chloride	ug/L	20	21.9	110	75-128	
Xylene (Total)	ug/L	60	60.8	101	75-125	
1,2-Dichloroethane-d4 (S)	%.			108	75-136	
4-Bromofluorobenzene (S)	%.			98	75-125	
Toluene-d8 (S)	%.			108	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362288 3362289

Parameter	Units	10485097001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	200	200	218	217	109	109	75-140	1	30	
1,1,1-Trichloroethane	ug/L	ND	200	200	216	199	108	100	74-136	8	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	200	200	225	228	112	114	66-134	1	30	
1,1,2-Trichloroethane	ug/L	ND	200	200	228	212	114	106	75-126	7	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362288 3362289

Parameter	Units	10485097001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	200	200	231	220	116	110	65-146	5	30	
1,1-Dichloroethane	ug/L	ND	200	200	217	205	108	102	68-132	6	30	
1,1-Dichloroethene	ug/L	ND	200	200	205	193	103	97	66-139	6	30	
1,1-Dichloropropene	ug/L	ND	200	200	215	200	107	100	67-134	7	30	
1,2,3-Trichlorobenzene	ug/L	ND	200	200	195	196	98	98	67-129	1	30	
1,2,3-Trichloropropane	ug/L	ND	200	200	210	207	105	104	69-128	1	30	
1,2,4-Trichlorobenzene	ug/L	ND	200	200	208	206	104	103	65-140	1	30	
1,2,4-Trimethylbenzene	ug/L	11.9	200	200	240	231	114	110	71-133	3	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	500	500	482	476	96	95	54-138	1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	200	200	209	193	104	97	68-125	8	30	
1,2-Dichlorobenzene	ug/L	ND	200	200	205	204	103	102	74-136	1	30	
1,2-Dichloroethane	ug/L	ND	200	200	208	201	104	101	68-125	3	30	
1,2-Dichloroethene (Total)	ug/L	ND	400	400	404	384	101	96	71-126	5	30	N2
1,2-Dichloropropane	ug/L	ND	200	200	214	207	107	104	67-125	3	30	
1,3,5-Trimethylbenzene	ug/L	ND	200	200	231	221	114	109	68-137	4	30	
1,3-Dichlorobenzene	ug/L	ND	200	200	204	200	102	100	75-131	2	30	
1,3-Dichloropropane	ug/L	ND	200	200	210	203	105	101	71-125	3	30	
1,4-Dichlorobenzene	ug/L	ND	200	200	218	215	109	107	74-126	2	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	4000	4000	3660	3710	91	93	68-125	1	30	
2,2,4-Trimethylpentane	ug/L	ND	200	200	202	197	101	98	54-129	3	30	N2
2,2-Dichloropropane	ug/L	ND	200	200	228	215	114	107	69-139	6	30	
2-Butanone (MEK)	ug/L	ND	1000	1000	987	1090	99	109	54-144	10	30	
2-Chlorotoluene	ug/L	ND	200	200	231	222	115	111	75-134	4	30	
2-Hexanone	ug/L	ND	1000	1000	1250	1170	125	117	58-137	6	30	
4-Chlorotoluene	ug/L	ND	200	200	217	212	109	106	72-133	2	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	1000	1000	1200	1220	120	122	60-129	2	30	
Acetone	ug/L	ND	1000	1000	903	884	88	86	62-132	2	30	
Acrolein	ug/L	ND	2000	2000	4350	4240	218	212	30-150	3	30	M1
Acrylonitrile	ug/L	ND	2000	2000	2290	2230	114	110	68-125	3	30	
Benzene	ug/L	326	200	200	537	518	106	96	68-125	4	30	
Bromobenzene	ug/L	ND	200	200	209	203	105	102	73-126	3	30	
Bromochloromethane	ug/L	ND	200	200	204	193	102	97	66-143	5	30	
Bromodichloromethane	ug/L	ND	200	200	202	196	101	98	74-125	3	30	
Bromoform	ug/L	ND	200	200	188	190	94	95	64-134	1	30	
Bromomethane	ug/L	ND	200	200	204	211	102	106	30-150	4	30	
Carbon disulfide	ug/L	ND	200	200	184	172	92	86	43-147	7	30	
Carbon tetrachloride	ug/L	ND	200	200	222	212	111	106	71-143	5	30	
Chlorobenzene	ug/L	ND	200	200	213	205	107	102	75-125	4	30	
Chloroethane	ug/L	ND	200	200	222	209	111	104	75-129	6	30	
Chloroform	ug/L	ND	200	200	211	194	106	97	66-132	9	30	
Chloromethane	ug/L	ND	200	200	227	218	114	109	53-137	4	30	
cis-1,2-Dichloroethene	ug/L	ND	200	200	200	196	100	98	67-133	2	30	
cis-1,3-Dichloropropene	ug/L	ND	200	200	187	183	93	91	66-125	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3362288 3362289

Parameter	Units	10485097001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	200	200	208	204	104	102	62-132	2	30	
Dibromomethane	ug/L	ND	200	200	203	199	101	100	67-125	2	30	
Dichlorodifluoromethane	ug/L	ND	200	200	272	254	136	127	71-142	7	30	
Dichlorofluoromethane	ug/L	ND	200	200	229	211	114	106	70-131	8	30	N2
Diisopropyl ether	ug/L	ND	200	200	213	204	107	102	63-131	5	30	
Ethyl-tert-butyl ether	ug/L	ND	200	200	211	199	106	99	66-128	6	30	
Ethylbenzene	ug/L	184	200	200	453	432	135	124	74-126	5	30	M1
Hexachloro-1,3-butadiene	ug/L	ND	200	200	208	210	104	105	68-143	1	30	
Isopropylbenzene (Cumene)	ug/L	11.6	200	200	236	224	112	106	74-130	5	30	
m&p-Xylene	ug/L	56.9	400	400	509	488	113	108	69-132	4	30	
Methyl-tert-butyl ether	ug/L	5.2	200	200	203	198	99	97	65-131	2	30	
Methylene Chloride	ug/L	ND	200	200	195	184	95	89	57-125	6	30	
n-Butylbenzene	ug/L	ND	200	200	241	236	121	118	71-131	2	30	
n-Propylbenzene	ug/L	13.5	200	200	233	226	110	106	67-138	3	30	
Naphthalene	ug/L	ND	200	200	198	202	99	101	60-130	2	30	
o-Xylene	ug/L	ND	200	200	219	211	107	103	69-131	4	30	
p-Isopropyltoluene	ug/L	ND	200	200	236	228	118	114	72-133	4	30	
sec-Butylbenzene	ug/L	ND	200	200	235	228	117	114	73-134	3	30	
Styrene	ug/L	ND	200	200	211	202	106	101	72-125	4	30	
tert-Amylmethyl ether	ug/L	ND	200	200	209	204	104	102	67-125	2	30	
tert-Butyl Alcohol	ug/L	ND	2000	2000	2240	2160	112	108	64-137	4	30	
tert-Butylbenzene	ug/L	ND	200	200	230	220	115	110	70-143	4	30	
Tetrachloroethene	ug/L	ND	200	200	217	214	109	107	72-129	2	30	
Tetrahydrofuran	ug/L	ND	2000	2000	1860	1800	93	90	66-128	3	30	
Toluene	ug/L	11.4	200	200	229	217	109	103	73-125	5	30	
trans-1,2-Dichloroethene	ug/L	ND	200	200	204	188	102	94	62-137	8	30	
trans-1,3-Dichloropropene	ug/L	ND	200	200	210	199	105	99	61-136	6	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	500	500	469	452	94	90	45-128	4	30	
Trichloroethene	ug/L	ND	200	200	205	196	102	98	74-132	4	30	
Trichlorofluoromethane	ug/L	ND	200	200	248	233	124	116	75-139	6	30	
Vinyl acetate	ug/L	ND	200	200	196	193	98	97	51-135	2	30	
Vinyl chloride	ug/L	ND	200	200	232	219	116	109	68-146	6	30	
Xylene (Total)	ug/L	56.9	600	600	728	699	112	107	67-137	4	30	
1,2-Dichloroethane-d4 (S)	%.						107	106	75-136			
4-Bromofluorobenzene (S)	%.						98	99	75-125			
Toluene-d8 (S)	%.						107	107	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 622301 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 3358911 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/26/19 11:44	

LABORATORY CONTROL SAMPLE & LCSD: 3358912 3358913

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.8	42.6	107	106	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358914 3358915

Parameter	Units	10484657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	174	40	40	215	218	102	109	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358916 3358917

Parameter	Units	10483985012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	102000 ug/L	40	40	143	143	103	104	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 622378 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 3359334 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	07/29/19 15:17	

LABORATORY CONTROL SAMPLE: 3359335

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	998	100	80-120	

SAMPLE DUPLICATE: 3359336

Parameter	Units	10484413005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	340	342	1	5	

SAMPLE DUPLICATE: 3359337

Parameter	Units	10484413008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	333	329	1	5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 151411 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 672132 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	07/30/19 11:38	

LABORATORY CONTROL SAMPLE: 672133

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.18	92	90-110	

MATRIX SPIKE SAMPLE: 672135

Parameter	Units	10484705001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.17	86	75-125	

SAMPLE DUPLICATE: 672134

Parameter	Units	10484705001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 621968 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 3357394 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	07/26/19 10:49	
Nitrate as N	mg/L	<0.012	0.10	0.012	07/26/19 10:49	
Sulfate	mg/L	<0.28	1.2	0.28	07/26/19 10:49	

LABORATORY CONTROL SAMPLE: 3357395

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.0	96	90-110	
Nitrate as N	mg/L	1	0.95	95	90-110	
Sulfate	mg/L	12.5	11.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3357396 3357397

Parameter	Units	10484510001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	292	62.5	62.5	330	331	61	62	90-110	0	20	M1
Nitrate as N	mg/L	<0.012	1	1	0.93	0.94	93	94	90-110	1	20	
Sulfate	mg/L	6.9	12.5	12.5	17.8	17.9	87	89	90-110	1	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358530 3358531

Parameter	Units	10484657003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.6	12.5	12.5	17.7	17.8	88	90	90-110	1	20	M1
Nitrate as N	mg/L	0.044J	1	1	0.95	0.95	90	91	90-110	1	20	
Sulfate	mg/L	9.5	12.5	12.5	20.3	20.6	87	89	90-110	1	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 622129 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 3358427 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	07/27/19 17:56	FS

LABORATORY CONTROL SAMPLE: 3358428

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.92	92	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3358429 3358430

Parameter	Units	10483881001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.60	1	1	1.6	1.6	94	102	90-110	5	20	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3360141 3360142

Parameter	Units	10483866001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.16	1	1	1.1	1.1	96	97	90-110	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 622620 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 3360877 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/30/19 14:58	

LABORATORY CONTROL SAMPLE: 3360878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	302	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3360879 3360880

Parameter	Units	10484657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	244	241	98	97	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3360881 3360882

Parameter	Units	10484510001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	44.9J	250	250	295	293	100	99	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

QC Batch: 171438 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10484705001, 10484705002

METHOD BLANK: 678649 Matrix: Water
Associated Lab Samples: 10484705001, 10484705002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	07/29/19 15:21	

LABORATORY CONTROL SAMPLE: 678650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.5	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 678651 678652

Parameter	Units	10484488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.80J	25	25	26.1	26.4	101	102	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 678653 678654

Parameter	Units	10484413021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.7	25	25	28.8	29.2	100	102	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

FS	The sample was filtered in the laboratory prior to analysis.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484705

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10484705001	**MW32-GW-072519**	RSK 175	622446		
10484705002	**MW27-GW-072519**	RSK 175	622446		
10484705001	**MW32-GW-072519**	EPA 3010	622271	EPA 6010D	622552
10484705002	**MW27-GW-072519**	EPA 3010	622271	EPA 6010D	622552
10484705001	**MW32-GW-072519**	EPA 7470A	622272	EPA 7470A	622582
10484705002	**MW27-GW-072519**	EPA 7470A	622272	EPA 7470A	622582
10484705001	**MW32-GW-072519**	EPA 8260B	622311		
10484705002	**MW27-GW-072519**	EPA 8260B	622311		
10484705003	**TB-072519**	EPA 8260B	622311		
10484705001	**MW32-GW-072519**	SM 2320B	622301		
10484705002	**MW27-GW-072519**	SM 2320B	622301		
10484705001	**MW32-GW-072519**	SM 2540C	622378		
10484705002	**MW27-GW-072519**	SM 2540C	622378		
10484705001	**MW32-GW-072519**	SM 4500-S-2 D	151411		
10484705002	**MW27-GW-072519**	SM 4500-S-2 D	151411		
10484705001	**MW32-GW-072519**	EPA 300.0	621968		
10484705002	**MW27-GW-072519**	EPA 300.0	621968		
10484705001	**MW32-GW-072519**	EPA 353.2	622129		
10484705002	**MW27-GW-072519**	EPA 353.2	622129		
10484705001	**MW32-GW-072519**	EPA 410.4	622620	EPA 410.4	622871
10484705002	**MW27-GW-072519**	EPA 410.4	622620	EPA 410.4	622871
10484705001	**MW32-GW-072519**	SM 5310C	171438		
10484705002	**MW27-GW-072519**	SM 5310C	171438		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: CH2M Hill	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh	Regulatory Agency
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Lindsey Baumann	Company: UPRR	
Email:	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	
Phone: Fax:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 758938	
Requested Due Date: ~~10 Day Standard~~	Project Name: Freeman WA-Grain Handling Facility	Pace Project Manager: Jennifer Gross	State / Location
	Project #: 1497	Pace Profile #: 36447 / 4	WA / Freeman

3 day TAT

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	Requested Analysis Filtered (Y/N)
				2019										Y														
1	MW32-GW-072519	WT	G	7/25	1030	~	13	X	X	X	X	X			XX	X	X	X	X	X	X	X					CW1
2	MW27-GW-072519	↓	↓	↓	1300	↓	↓	X	X	X	X	X			X	X	X	X	X	X	X	X					CW2
3	TB-072519	↓	↓	↓	700	↓	3				X				X												CW3
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

WO# : 10484705

10484705

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Short hold analyses are in **bold**	Jacobs	7/25/19	1500	[illegible] ARCA	7/26/19	0945	0.3	Y	N	Y
*Field filtered by client										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Jonathan Espinoza		
SIGNATURE of SAMPLER:		DATE Signed:	7/25/19

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 09May2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.28**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CH2M Hill

Project #: **WO#: 10484705**

PM: JMG **Due Date: 07/31/19**

CLIENT: UPRR_Jacobs

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

See Exception ☐

Tracking Number: 7475 9634 9603

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☒ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☒ Other: PB **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☐ T1(0461) ☒ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.2 °C **Average Corrected Temp (no temp blank only):** °C **See Exceptions** ☐

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 0.3 °C

USDA Regulated Soil: (☒ N/A, water sample/Other:) **Date/Initials of Person Examining Contents:** 07/26/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☒ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☒ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☒ Yes	☐ No		6. 3 day
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☒ Yes	☐ No		
Containers Intact?	☒ Yes	☐ No		9. One TB received broken upon arrival
Field Filtered Volume Received for Dissolved Tests? JLH 7/26/19	☒ Yes	☒ No	☐ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other				
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	12. Sample # 1-2: V/I V/I
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☒ Yes	☐ No	☐ N/A	☐ NaOH ☒ HNO_3 ☒ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS JLH 7/26/19	☒ Yes	☐ No	☒ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# 13640500 **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☒ No	☒ N/A	13. **See Exception** ☐
Trip Blank Present?	☒ Yes	☐ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☒ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 213047

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: [signature] **Date:** 07/26/2019

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: SS (2)

WO# : 20114541

20114541

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: ☐ Yes ☒ No

Workorder: 10484705 **Workorder Name:** 1497 Freeman WA-Grain Handling

Owner Received Date: 7/26/2019 **Results Requested By:** 7/31/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: BP2Z	Requested Analysis: 5636267 / 4500 Sulfide	LAB USE ONLY
1	MW32-GW-072519	PS	7/25/2019 10:30	10484705001	Water	1	X	
2	MW27-GW-072519	PS	7/25/2019 13:00	10484705002	Water	1	X	
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	7/26/19 1505		
2	[signature]	7-27-19 0920	[signature]	7-27-19
3				

Comments: 0920

Cooler Temperature on Receipt 1.1 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO#: 20114541

PM: CMM Due Date: 07/31/19
CLIENT: PASI-MINN

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon F

Proj

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 07-27-19 JM

Temp must be measured from Temperature blank when present

			Comments:
Temperature Blank Present"?	☑Yes ☐No ☐N/A	1	
Chain of Custody Present:	☑Yes ☐No ☐N/A	2	
Chain of Custody Complete:	☑Yes ☐No ☐N/A	3	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	4	
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	5	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	6	
Sufficient Volume:	☑Yes ☐No ☐N/A	7	
Correct Containers Used:	☑Yes ☐No ☐N/A	8	
Filtered vol. Rec. for Diss. tests	☐Yes ☐No ☑N/A	9	
Sample Labels match COC:	☑Yes ☐No ☐N/A	10	
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes ☐No ☐N/A	11	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes ☐No ☐N/A	12	
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	13	If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14	
Trip Blank Present:	☐Yes ☑No	15	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Chain of Custody

WO#: 12132825

PM: RK1 Due Date: 07/31/19

CLIENT: PACE MPLS

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [x] Yes ☐ No

Workorder: 10484705 **Workorder Name:** 1497 Freeman WA-Grain Handling

Owner Received Date: 7/26/2019 Results Requested By: 7/31/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	MW32-GW-072519	PS	7/25/2019 10:30	10484705001	Water	2						X												
2	MW27-GW-072519	PS	7/25/2019 13:00	10484705002	Water	2						X												
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	7/26/19 1710	[signature] 7/26/19	1900
2	[signature] 7/26/19	2330	[signature] 7/29/19	0810
3				

Comments

Cooler Temperature on Receipt 1.5 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: **WO#: 12132825**

PM: RK1 **Due Date: 07/31/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 1.2 Cooler Temp Corrected °C: 1.5 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 7/26/19 DC

Comments: vng 7/29/19

Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
~~Sampler Name and Signature on COC?~~	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☒ Yes	☐ No	☐ N/A	7. Due 7/31/19
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☒ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☒ No	☐ N/A	15.
Trip Blank Present?	☐ Yes	☒ No	☐ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Davena Ferrer **Date:** 7/29/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

August 01, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 27, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10484913001	**MW33-GW-072619**	Water	07/26/19 11:00	07/27/19 09:40

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10484913001	**MW33-GW-072619**	SM 2320B	AR3	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M

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(612)607-1700

SUMMARY OF DETECTION

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10484913001	**MW33-GW-072619**					
SM 2320B	Alkalinity, Total as CaCO3	221	mg/L	5.0	07/30/19 09:26	
SM 2540C	Total Dissolved Solids	318	mg/L	10.0	07/30/19 14:35	
EPA 353.2	Nitrogen, NO2 plus NO3	1.1	mg/L	0.10	08/01/19 13:09	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 622691

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10482800001,10484139002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3361493)
  - Alkalinity, Total as CaCO3

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 622903

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 3362271)
  - Total Dissolved Solids

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 151592

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10484913001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 672997)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: August 01, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Sample: MW33-GW-072619 **Lab ID: 10484913001** Collected: 07/26/19 11:00 Received: 07/27/19 09:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**221**	mg/L	5.0	2.0	1		07/30/19 09:26		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**318**	mg/L	10.0	5.0	1		07/30/19 14:35		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		07/31/19 12:09	18496-25-8	M1
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.1**	mg/L	0.10	0.018	1		08/01/19 13:09		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	07/30/19 09:03	07/30/19 15:03		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

QC Batch: 622691 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10484913001

METHOD BLANK: 3361490 Matrix: Water
Associated Lab Samples: 10484913001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	07/30/19 08:48	

LABORATORY CONTROL SAMPLE & LCSD: 3361491 3361492

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.1	42.9	105	107	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3361493 3361494

Parameter	Units	10482800001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	881	40	40	939	927	145	114	80-120	1	20	H1,M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3361495 3361496

Parameter	Units	10484139002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	215	40	40	250	253	86	95	80-120	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

QC Batch: 622903 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10484913001

METHOD BLANK: 3362268 Matrix: Water
Associated Lab Samples: 10484913001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	07/30/19 14:35	

LABORATORY CONTROL SAMPLE: 3362269

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 3362270

Parameter	Units	10484528002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	118	121	3	5	H1

SAMPLE DUPLICATE: 3362271

Parameter	Units	10484528007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	453	422	7	5	D6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

QC Batch: 151592 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10484913001

METHOD BLANK: 672994 Matrix: Water
Associated Lab Samples: 10484913001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	07/31/19 11:49	

LABORATORY CONTROL SAMPLE: 672995

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.19	97	90-110	

MATRIX SPIKE SAMPLE: 672997

Parameter	Units	10484913001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.092	44	75-125	M1

SAMPLE DUPLICATE: 672996

Parameter	Units	10484913001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

QC Batch: 623534 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10484913001

METHOD BLANK: 3365677 Matrix: Water
Associated Lab Samples: 10484913001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	08/01/19 13:40	FS

LABORATORY CONTROL SAMPLE: 3365678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	100	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365679 3365680

Parameter	Units	10484278004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.0	0.98	103	97	90-110	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365681 3365682

Parameter	Units	10484278005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.1	1.0	106	101	90-110	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

QC Batch: 622620 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10484913001

METHOD BLANK: 3360877 Matrix: Water
Associated Lab Samples: 10484913001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	07/30/19 14:58	

LABORATORY CONTROL SAMPLE: 3360878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	302	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3360879 3360880

Parameter	Units	10484657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	244	241	98	97	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3360881 3360882

Parameter	Units	10484510001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	44.9J	250	250	295	293	100	99	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
FS	The sample was filtered in the laboratory prior to analysis.
H1	Analysis conducted outside the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Grain Handling
Pace Project No.: 10484913

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10484913001	**MW33-GW-072619**	SM 2320B	622691		
10484913001	**MW33-GW-072619**	SM 2540C	622903		
10484913001	**MW33-GW-072619**	SM 4500-S-2 D	151592		
10484913001	**MW33-GW-072619**	EPA 353.2	623534		
10484913001	**MW33-GW-072619**	EPA 410.4	622620	EPA 410.4	622871

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: UPRR_Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh (awalsh@up.com)	
Address: 1400 W. 52nd Ave. Denver, CO 80221	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR	
	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	Regulatory Agency
Email: awalsh@up.com	Purchase Order #: 1497-38-Rev0	Pace Quote: Contract# 9900758938	
Phone: Fax:	Project Name: Freeman,WA-Cenex Harvest Lease	Pace Project Manager: Jennifer Gross	State / Location
Requested Due Date: 24 Hr / 3 Day / 10 Day	Project #:	Pace Profile #: 36447 / 1	WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Low Level VOCs by 8260 Hold	Requested Analysis Filtered (Y/N)	
				2019														Alk, TDS, Sulfide, CO2, N+N	Missing bottles from other MW33 sample / m.
1	MW33-GW-072619	WT	G	7/26	1100	—		—	3	X	X			X				X X	GW
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11	—											—							—
12																			

WO# : 10484913

10484913

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[signature] / Jacobs	7/26/19	1300	[signature] Pace	7-27-19	9:40	1.7 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jonathan Espinoza

SIGNATURE of SAMPLER: [signature] DATE Signed: 7/26/19

Temp in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 09May2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.28	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt **Client Name:** UPRR **Project #:** WO#: 10484913

PM: JMG Due Date: 08/12/19

CLIENT: UPRR_Jacobs

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exception** ☐

Tracking Number: 4638 0148 4983

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other:_____ **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☒ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 1.7 °C **Average Corrected Temp (no temp blank only):** _____ °C **See Exceptions** ☐

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 1.7 °C

USDA Regulated Soil: (☒ N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** _____

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other_____
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☒ Yes ☒ Yes	☐ No ☐ No		8.
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other_____	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	12. Sample # 1/1 1/1 ☐ NaOH ☐ HNO_3 ☒ H_2SO_4 ☒ Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☒ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☒ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	13. **See Exception** ☐
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased):_____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 07/29/2019

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: _____

WO#: 20114703

20114703

Chain of Custody

☐ Samples were sent directly t

State Of Origin: WA

Cert. Needed: ☐ Yes ☒ No

Pace Analytical®
www.pacelabs.com

Workorder: 10484913 Workorde... ...WA-Grain Handling

Owner Received Date: 7/27/2019 Results Requested By: 8/1/2019

Report To

Jennifer Gross
Pace Analytical Seattle
596 Industry Drive,
Suite 602
Tukwila, WA 98188
Phone (206)957-2426

Subcontract To

Pace Analytical New Orleans
1000 Riverbend Blvd
Suite F
St. Rose, LA 70087
Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP27						Requested Analysis: 5636267 / 4500 Sulfide												LAB USE ONLY
1	MW33-GW-072619	PS	7/26/2019 11:00	10484913001	Water	1						X												
2																								
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] PACE	07/29/19 1605	Fedex	
2	Fedex	7/30/19 820	Kurstin / PACE	7/30/19 820
3				

Comments

Cooler Temperature on Receipt 2.9 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upc

WO#: 20114703

PM: CMM Due Date: 08/01/

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 7-30-19 J

Temp must be measured from Temperature blank when present

		Comments:
Temperature Blank Present"?	☐Yes ☐No ☐N/A	1
Chain of Custody Present:	☑Yes ☐No ☐N/A	2
Chain of Custody Complete:	☑Yes ☐No ☐N/A	3
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	4
Sampler Name & Signature on COC:	☐Yes ☑No ☐N/A	5
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	6
Sufficient Volume:	☑Yes ☐No ☐N/A	7
Correct Containers Used:	☑Yes ☐No ☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes ☑No ☐N/A	9
Sample Labels match COC:	☑Yes ☐No ☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes ☐No ☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes ☐No ☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO_3 _____ H_2SO_4 _____
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☐N/A	14
Trip Blank Present:	☐Yes ☐No	15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

August 15, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on August 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10486438001	**MW31-GW-080719**	Water	08/07/19 12:30	08/08/19 08:40
10486438002	**Trip Blank**	Water	08/07/19 07:00	08/08/19 08:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10486438001	**MW31-GW-080719**	RSK 175	MJD	3	PASI-M
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	JER	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10486438002	**Trip Blank**	EPA 8260B	DS2	83	PASI-M

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SUMMARY OF DETECTION

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10486438001	**MW31-GW-080719**					
EPA 6010D	Barium, Dissolved	154	ug/L	10.0	08/12/19 14:03	
EPA 6010D	Beryllium, Dissolved	4.9J	ug/L	5.0	08/12/19 14:03	B
EPA 6010D	Cadmium, Dissolved	1.0J	ug/L	3.0	08/12/19 14:03	B
EPA 6010D	Chromium, Dissolved	38.5	ug/L	10.0	08/12/19 14:03	
EPA 6010D	Cobalt, Dissolved	8.8J	ug/L	10.0	08/12/19 14:03	
EPA 6010D	Copper, Dissolved	13.1	ug/L	10.0	08/12/19 14:03	
EPA 6010D	Lead, Dissolved	56.3	ug/L	10.0	08/12/19 14:03	
EPA 6010D	Molybdenum, Dissolved	5.2J	ug/L	15.0	08/12/19 14:03	
EPA 6010D	Nickel, Dissolved	19.1J	ug/L	20.0	08/12/19 14:03	
EPA 6010D	Vanadium, Dissolved	81.2	ug/L	15.0	08/12/19 14:03	
EPA 6010D	Zinc, Dissolved	49.2	ug/L	20.0	08/12/19 14:03	
SM 2320B	Alkalinity, Total as CaCO3	137	mg/L	5.0	08/09/19 08:54	
SM 2540C	Total Dissolved Solids	390	mg/L	100	08/09/19 11:20	
EPA 300.0	Chloride	2.9	mg/L	1.2	08/08/19 17:16	
EPA 300.0	Nitrate as N	0.15	mg/L	0.10	08/08/19 17:16	
EPA 300.0	Sulfate	20.3	mg/L	1.2	08/08/19 17:16	
EPA 353.2	Nitrogen, NO2 plus NO3	0.12	mg/L	0.10	08/09/19 12:29	FS
EPA 410.4	Chemical Oxygen Demand	89.6	mg/L	50.0	08/09/19 13:24	
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	08/09/19 18:13	
10486438002	**Trip Blank**					
EPA 8260B	Toluene	0.28J	ug/L	0.50	08/12/19 22:01	
EPA 8260B	m&p-Xylene	0.60J	ug/L	1.0	08/12/19 22:01	

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 625324

B: Analyte was detected in the associated method blank.

- BLANK for HBN 625324 [MPRP/957 (Lab ID: 3374646)
  - Beryllium, Dissolved
  - Cadmium, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
2 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 625872

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3377109)
  - Naphthalene

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 625872

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10487103001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3378190)
  - Acrolein
  - Benzene
- MSD (Lab ID: 3378191)
  - Acrolein
  - Benzene

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: August 15, 2019

Additional Comments:

Analyte Comments:

QC Batch: 625872

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3377109)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- LCS (Lab ID: 3377110)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MS (Lab ID: 3378190)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MSD (Lab ID: 3378191)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- MW31-GW-080719 (Lab ID: 10486438001)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane
- Trip Blank (Lab ID: 10486438002)
  - 1,2-Dichloroethene (Total)
  - Dichlorofluoromethane
  - 2,2,4-Trimethylpentane

P8: Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

- BLANK (Lab ID: 3377109)
  - Naphthalene

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 625089

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10485265001,10485265003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3373359)
  - Chloride
- MS (Lab ID: 3373361)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3373360)
  - Chloride
- MSD (Lab ID: 3373362)
  - Chloride
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: August 15, 2019

General Information:
1 sample was analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Sample: MW31-GW-080719 **Lab ID: 10486438001** Collected: 08/07/19 12:30 Received: 08/08/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		08/08/19 16:53	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		08/08/19 16:53	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		08/08/19 16:53	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	08/09/19 08:18	08/12/19 14:03	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	08/09/19 08:18	08/12/19 14:03	7440-38-2	
Barium, Dissolved	**154**	ug/L	10.0	0.60	1	08/09/19 08:18	08/12/19 14:03	7440-39-3	
Beryllium, Dissolved	**4.9J**	ug/L	5.0	0.12	1	08/09/19 08:18	08/12/19 14:03	7440-41-7	B
Cadmium, Dissolved	**1.0J**	ug/L	3.0	0.28	1	08/09/19 08:18	08/12/19 14:03	7440-43-9	B
Chromium, Dissolved	**38.5**	ug/L	10.0	0.66	1	08/09/19 08:18	08/12/19 14:03	7440-47-3	
Cobalt, Dissolved	**8.8J**	ug/L	10.0	0.50	1	08/09/19 08:18	08/12/19 14:03	7440-48-4	
Copper, Dissolved	**13.1**	ug/L	10.0	1.2	1	08/09/19 08:18	08/12/19 14:03	7440-50-8	
Lead, Dissolved	**56.3**	ug/L	10.0	2.0	1	08/09/19 08:18	08/12/19 14:03	7439-92-1	
Molybdenum, Dissolved	**5.2J**	ug/L	15.0	3.8	1	08/09/19 08:18	08/12/19 14:03	7439-98-7	
Nickel, Dissolved	**19.1J**	ug/L	20.0	1.1	1	08/09/19 08:18	08/12/19 14:03	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	08/09/19 08:18	08/12/19 14:03	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	08/09/19 08:18	08/12/19 14:03	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	08/09/19 08:18	08/12/19 14:03	7440-28-0	
Vanadium, Dissolved	**81.2**	ug/L	15.0	0.43	1	08/09/19 08:18	08/12/19 14:03	7440-62-2	
Zinc, Dissolved	**49.2**	ug/L	20.0	6.3	1	08/09/19 08:18	08/12/19 14:03	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	08/13/19 12:50	08/14/19 17:03	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		08/12/19 23:08	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		08/12/19 23:08	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		08/12/19 23:08	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		08/12/19 23:08	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		08/12/19 23:08	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		08/12/19 23:08	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		08/12/19 23:08	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		08/12/19 23:08	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		08/12/19 23:08	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		08/12/19 23:08	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		08/12/19 23:08	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		08/12/19 23:08	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		08/12/19 23:08	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	1.0	0.24	1		08/12/19 23:08	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		08/12/19 23:08	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		08/12/19 23:08	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		08/12/19 23:08	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		08/12/19 23:08	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		08/12/19 23:08	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		08/12/19 23:08	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Sample: MW31-GW-080719 **Lab ID: 10486438001** Collected: 08/07/19 12:30 Received: 08/08/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		08/12/19 23:08	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/12/19 23:08	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		08/12/19 23:08	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		08/12/19 23:08	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		08/12/19 23:08	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		08/12/19 23:08	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		08/12/19 23:08	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		08/12/19 23:08	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		08/12/19 23:08	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		08/12/19 23:08	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		08/12/19 23:08	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		08/12/19 23:08	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		08/12/19 23:08	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		08/12/19 23:08	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		08/12/19 23:08	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		08/12/19 23:08	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		08/12/19 23:08	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		08/12/19 23:08	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		08/12/19 23:08	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		08/12/19 23:08	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		08/12/19 23:08	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/12/19 23:08	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		08/12/19 23:08	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		08/12/19 23:08	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		08/12/19 23:08	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		08/12/19 23:08	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		08/12/19 23:08	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		08/12/19 23:08	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		08/12/19 23:08	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		08/12/19 23:08	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		08/12/19 23:08	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		08/12/19 23:08	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		08/12/19 23:08	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		08/12/19 23:08	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		08/12/19 23:08	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		08/12/19 23:08	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		08/12/19 23:08	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		08/12/19 23:08	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		08/12/19 23:08	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		08/12/19 23:08	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		08/12/19 23:08	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		08/12/19 23:08	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		08/12/19 23:08	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		08/12/19 23:08	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		08/12/19 23:08	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		08/12/19 23:08	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Sample: MW31-GW-080719 **Lab ID: 10486438001** Collected: 08/07/19 12:30 Received: 08/08/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		08/12/19 23:08	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		08/12/19 23:08	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		08/12/19 23:08	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		08/12/19 23:08	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		08/12/19 23:08	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		08/12/19 23:08	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		08/12/19 23:08	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/12/19 23:08	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		08/12/19 23:08	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		08/12/19 23:08	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/12/19 23:08	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		08/12/19 23:08	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		08/12/19 23:08	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		08/12/19 23:08	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		08/12/19 23:08	17060-07-0	
Toluene-d8 (S)	95	%.	75-125		1		08/12/19 23:08	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		08/12/19 23:08	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**137**	mg/L	5.0	2.0	1		08/09/19 08:54		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**390**	mg/L	100	50.0	1		08/09/19 11:20		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.14**	mg/L	0.50	0.14	25		08/10/19 10:00	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.9**	mg/L	1.2	0.12	1		08/08/19 17:16	16887-00-6	
Nitrate as N	**0.15**	mg/L	0.10	0.012	1		08/08/19 17:16	14797-55-8	
Sulfate	**20.3**	mg/L	1.2	0.28	1		08/08/19 17:16	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.12**	mg/L	0.10	0.018	1		08/09/19 12:29		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**89.6**	mg/L	50.0	17.0	1	08/09/19 09:20	08/09/19 13:24		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.1**	mg/L	1.0	0.39	1		08/09/19 18:13	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Sample: Trip Blank **Lab ID: 10486438002** Collected: 08/07/19 07:00 Received: 08/08/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		08/12/19 22:01	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		08/12/19 22:01	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		08/12/19 22:01	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		08/12/19 22:01	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		08/12/19 22:01	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		08/12/19 22:01	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		08/12/19 22:01	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		08/12/19 22:01	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		08/12/19 22:01	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		08/12/19 22:01	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		08/12/19 22:01	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		08/12/19 22:01	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		08/12/19 22:01	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	1.0	0.24	1		08/12/19 22:01	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		08/12/19 22:01	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		08/12/19 22:01	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		08/12/19 22:01	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		08/12/19 22:01	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		08/12/19 22:01	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		08/12/19 22:01	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		08/12/19 22:01	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/12/19 22:01	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		08/12/19 22:01	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		08/12/19 22:01	540-84-1	N2
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		08/12/19 22:01	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		08/12/19 22:01	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		08/12/19 22:01	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		08/12/19 22:01	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		08/12/19 22:01	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		08/12/19 22:01	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		08/12/19 22:01	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		08/12/19 22:01	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		08/12/19 22:01	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		08/12/19 22:01	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		08/12/19 22:01	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		08/12/19 22:01	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		08/12/19 22:01	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		08/12/19 22:01	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		08/12/19 22:01	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		08/12/19 22:01	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		08/12/19 22:01	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/12/19 22:01	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		08/12/19 22:01	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		08/12/19 22:01	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		08/12/19 22:01	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		08/12/19 22:01	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Sample: Trip Blank **Lab ID: 10486438002** Collected: 08/07/19 07:00 Received: 08/08/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		08/12/19 22:01	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		08/12/19 22:01	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		08/12/19 22:01	75-43-4	N2
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		08/12/19 22:01	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		08/12/19 22:01	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		08/12/19 22:01	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		08/12/19 22:01	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		08/12/19 22:01	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		08/12/19 22:01	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		08/12/19 22:01	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		08/12/19 22:01	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		08/12/19 22:01	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		08/12/19 22:01	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		08/12/19 22:01	109-99-9	
Toluene	**0.28J**	ug/L	0.50	0.083	1		08/12/19 22:01	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		08/12/19 22:01	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		08/12/19 22:01	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		08/12/19 22:01	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		08/12/19 22:01	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		08/12/19 22:01	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		08/12/19 22:01	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	1.0	0.20	1		08/12/19 22:01	10061-01-5	
m&p-Xylene	**0.60J**	ug/L	1.0	0.31	1		08/12/19 22:01	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		08/12/19 22:01	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		08/12/19 22:01	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		08/12/19 22:01	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		08/12/19 22:01	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/12/19 22:01	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		08/12/19 22:01	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		08/12/19 22:01	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/12/19 22:01	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		08/12/19 22:01	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		08/12/19 22:01	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		08/12/19 22:01	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		08/12/19 22:01	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		08/12/19 22:01	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		08/12/19 22:01	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 625251
QC Batch Method: RSK 175
Analysis Method: RSK 175
Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10486438001

METHOD BLANK: 3374054 Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	08/08/19 15:52	
Ethene	ug/L	<2.9	10.0	2.9	08/08/19 15:52	
Methane	ug/L	<4.9	10.0	4.9	08/08/19 15:52	

LABORATORY CONTROL SAMPLE & LCSD: 3374055 3374056

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	114	118	100	104	85-115	4	20	
Ethene	ug/L	106	106	109	100	103	85-115	3	20	
Methane	ug/L	60.7	60.2	61.2	99	101	85-115	2	20	

SAMPLE DUPLICATE: 3374057

Parameter	Units	10486438001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	<4.9	<4.9		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 625945 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10486438001

METHOD BLANK: 3377447 Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	08/14/19 16:59	

LABORATORY CONTROL SAMPLE: 3377448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.4	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3377449 3377450

Parameter	Units	10486438001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.2	5.6	103	111	80-120	8	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 625324
QC Batch Method: EPA 3010
Analysis Method: EPA 6010D
Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10486438001

METHOD BLANK: 3374646
Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	08/12/19 14:00	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	08/12/19 14:00	
Barium, Dissolved	ug/L	0.63J	10.0	0.60	08/12/19 14:00	
Beryllium, Dissolved	ug/L	0.60J	5.0	0.12	08/12/19 14:00	
Cadmium, Dissolved	ug/L	0.56J	3.0	0.28	08/12/19 14:00	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	08/12/19 14:00	
Cobalt, Dissolved	ug/L	0.76J	10.0	0.50	08/12/19 14:00	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	08/12/19 14:00	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	08/12/19 14:00	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	08/12/19 14:00	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	08/12/19 14:00	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	08/12/19 14:00	
Silver, Dissolved	ug/L	0.67J	10.0	0.40	08/12/19 14:00	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	08/12/19 14:00	
Vanadium, Dissolved	ug/L	0.69J	15.0	0.43	08/12/19 14:00	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	08/12/19 14:00	

LABORATORY CONTROL SAMPLE: 3374647

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	990	99	80-120	
Arsenic, Dissolved	ug/L	1000	1020	102	80-120	
Barium, Dissolved	ug/L	1000	1010	101	80-120	
Beryllium, Dissolved	ug/L	1000	1020	102	80-120	
Cadmium, Dissolved	ug/L	1000	1040	104	80-120	
Chromium, Dissolved	ug/L	1000	1010	101	80-120	
Cobalt, Dissolved	ug/L	1000	1010	101	80-120	
Copper, Dissolved	ug/L	1000	980	98	80-120	
Lead, Dissolved	ug/L	1000	1070	107	80-120	
Molybdenum, Dissolved	ug/L	1000	1010	101	80-120	
Nickel, Dissolved	ug/L	1000	1010	101	80-120	
Selenium, Dissolved	ug/L	1000	1040	104	80-120	
Silver, Dissolved	ug/L	500	499	100	80-120	
Thallium, Dissolved	ug/L	1000	996	100	80-120	
Vanadium, Dissolved	ug/L	1000	999	100	80-120	
Zinc, Dissolved	ug/L	1000	1040	104	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374648 3374649

Parameter	Units	10486438001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	770	769	77	77	75-125	0	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1010	1030	100	102	75-125	2	20	
Barium, Dissolved	ug/L	154	1000	1000	1180	1210	103	106	75-125	2	20	
Beryllium, Dissolved	ug/L	4.9J	1000	1000	1030	1050	103	105	75-125	2	20	
Cadmium, Dissolved	ug/L	1.0J	1000	1000	1040	1050	103	105	75-125	1	20	
Chromium, Dissolved	ug/L	38.5	1000	1000	1060	1080	102	104	75-125	2	20	
Cobalt, Dissolved	ug/L	8.8J	1000	1000	1010	1030	100	102	75-125	2	20	
Copper, Dissolved	ug/L	13.1	1000	1000	1040	1060	103	105	75-125	2	20	
Lead, Dissolved	ug/L	56.3	1000	1000	1130	1150	108	110	75-125	2	20	
Molybdenum, Dissolved	ug/L	5.2J	1000	1000	961	979	96	97	75-125	2	20	
Nickel, Dissolved	ug/L	19.1J	1000	1000	1020	1040	100	102	75-125	2	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1040	1060	104	106	75-125	2	20	
Silver, Dissolved	ug/L	<0.40	500	500	502	515	100	103	75-125	3	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	988	1010	99	101	75-125	2	20	
Vanadium, Dissolved	ug/L	81.2	1000	1000	1090	1110	101	103	75-125	2	20	
Zinc, Dissolved	ug/L	49.2	1000	1000	1080	1100	103	105	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 625872 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10486438001, 10486438002

METHOD BLANK: 3377109 Matrix: Water
Associated Lab Samples: 10486438001, 10486438002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	1.0	0.20	08/12/19 19:46	MN
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	08/12/19 19:46	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	08/12/19 19:46	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	08/12/19 19:46	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	08/12/19 19:46	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	08/12/19 19:46	
1,1-Dichloroethene	ug/L	<0.16	1.0	0.16	08/12/19 19:46	MN
1,1-Dichloropropene	ug/L	<0.20	1.0	0.20	08/12/19 19:46	MN
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	08/12/19 19:46	MN
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	08/12/19 19:46	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	08/12/19 19:46	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	08/12/19 19:46	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	08/12/19 19:46	
1,2-Dibromoethane (EDB)	ug/L	<0.24	1.0	0.24	08/12/19 19:46	MN
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	08/12/19 19:46	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	08/12/19 19:46	MN
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	08/12/19 19:46	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	08/12/19 19:46	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	08/12/19 19:46	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	08/12/19 19:46	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	08/12/19 19:46	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	08/12/19 19:46	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	08/12/19 19:46	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	08/12/19 19:46	N2
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	08/12/19 19:46	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	08/12/19 19:46	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	08/12/19 19:46	
2-Hexanone	ug/L	<0.88	5.0	0.88	08/12/19 19:46	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	08/12/19 19:46	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	08/12/19 19:46	
Acetone	ug/L	<9.2	20.0	9.2	08/12/19 19:46	
Acrolein	ug/L	<1.2	10.0	1.2	08/12/19 19:46	
Acrylonitrile	ug/L	<0.91	10.0	0.91	08/12/19 19:46	
Benzene	ug/L	<0.10	0.50	0.10	08/12/19 19:46	
Bromobenzene	ug/L	<0.21	0.50	0.21	08/12/19 19:46	
Bromochloromethane	ug/L	<0.27	1.0	0.27	08/12/19 19:46	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	08/12/19 19:46	
Bromoform	ug/L	<0.80	4.0	0.80	08/12/19 19:46	
Bromomethane	ug/L	<1.8	4.0	1.8	08/12/19 19:46	
Carbon disulfide	ug/L	<0.078	1.0	0.078	08/12/19 19:46	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	08/12/19 19:46	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

METHOD BLANK: 3377109 Matrix: Water
Associated Lab Samples: 10486438001, 10486438002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	08/12/19 19:46	
Chloroethane	ug/L	<0.49	1.0	0.49	08/12/19 19:46	
Chloroform	ug/L	<0.45	1.0	0.45	08/12/19 19:46	
Chloromethane	ug/L	<0.16	4.0	0.16	08/12/19 19:46	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	08/12/19 19:46	
cis-1,3-Dichloropropene	ug/L	<0.20	1.0	0.20	08/12/19 19:46	MN
Dibromochloromethane	ug/L	<0.12	1.0	0.12	08/12/19 19:46	MN
Dibromomethane	ug/L	<0.16	1.0	0.16	08/12/19 19:46	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	08/12/19 19:46	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	08/12/19 19:46	N2
Diisopropyl ether	ug/L	<0.13	1.0	0.13	08/12/19 19:46	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	08/12/19 19:46	
Ethylbenzene	ug/L	<0.14	0.50	0.14	08/12/19 19:46	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	08/12/19 19:46	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	08/12/19 19:46	
m&p-Xylene	ug/L	<0.31	1.0	0.31	08/12/19 19:46	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	08/12/19 19:46	
Methylene Chloride	ug/L	<0.98	4.0	0.98	08/12/19 19:46	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	08/12/19 19:46	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	08/12/19 19:46	
Naphthalene	ug/L	1.4	1.0	0.48	08/12/19 19:46	P8
o-Xylene	ug/L	<0.16	0.50	0.16	08/12/19 19:46	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	08/12/19 19:46	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	08/12/19 19:46	
Styrene	ug/L	<0.19	0.50	0.19	08/12/19 19:46	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	08/12/19 19:46	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	08/12/19 19:46	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	08/12/19 19:46	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	08/12/19 19:46	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	08/12/19 19:46	
Toluene	ug/L	<0.083	0.50	0.083	08/12/19 19:46	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	08/12/19 19:46	
trans-1,3-Dichloropropene	ug/L	<0.18	1.0	0.18	08/12/19 19:46	MN
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	08/12/19 19:46	
Trichloroethene	ug/L	<0.15	0.40	0.15	08/12/19 19:46	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	08/12/19 19:46	
Vinyl acetate	ug/L	<1.1	10.0	1.1	08/12/19 19:46	
Vinyl chloride	ug/L	<0.092	0.20	0.092	08/12/19 19:46	
Xylene (Total)	ug/L	<0.31	1.5	0.31	08/12/19 19:46	
1,2-Dichloroethane-d4 (S)	%.	97	75-136		08/12/19 19:46	
4-Bromofluorobenzene (S)	%.	101	75-125		08/12/19 19:46	
Toluene-d8 (S)	%.	97	75-125		08/12/19 19:46	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

LABORATORY CONTROL SAMPLE: 3377110

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	18.7	93	68-141	
1,1,1-Trichloroethane	ug/L	20	19.3	96	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.5	97	73-125	
1,1,2-Trichloroethane	ug/L	20	18.7	93	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.4	102	69-132	
1,1-Dichloroethane	ug/L	20	19.5	98	73-125	
1,1-Dichloroethene	ug/L	20	19.5	97	71-126	
1,1-Dichloropropene	ug/L	20	20.0	100	73-126	
1,2,3-Trichlorobenzene	ug/L	20	19.0	95	72-126	
1,2,3-Trichloropropane	ug/L	20	18.5	93	75-126	
1,2,4-Trichlorobenzene	ug/L	20	18.1	91	71-134	
1,2,4-Trimethylbenzene	ug/L	20	18.0	90	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	48.3	97	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	18.1	90	75-129	
1,2-Dichlorobenzene	ug/L	20	18.0	90	75-129	
1,2-Dichloroethane	ug/L	20	17.9	90	75-125	
1,2-Dichloroethene (Total)	ug/L	40	37.4	94	74-125	N2
1,2-Dichloropropane	ug/L	20	17.7	89	75-125	
1,3,5-Trimethylbenzene	ug/L	20	19.2	96	75-127	
1,3-Dichlorobenzene	ug/L	20	18.3	91	75-126	
1,3-Dichloropropane	ug/L	20	20.2	101	75-125	
1,4-Dichlorobenzene	ug/L	20	17.8	89	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	330	83	72-129	
2,2,4-Trimethylpentane	ug/L	20	19.9	99	72-128	N2
2,2-Dichloropropane	ug/L	20	18.9	95	65-138	
2-Butanone (MEK)	ug/L	100	102	102	59-144	
2-Chlorotoluene	ug/L	20	18.8	94	75-127	
2-Hexanone	ug/L	100	107	107	73-134	
4-Chlorotoluene	ug/L	20	18.7	94	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	100	100	62-141	
Acetone	ug/L	100	103	103	60-137	
Acrolein	ug/L	200	178	89	60-141	
Acrylonitrile	ug/L	200	194	97	75-129	
Benzene	ug/L	20	19.0	95	73-125	
Bromobenzene	ug/L	20	18.9	95	73-125	
Bromochloromethane	ug/L	20	19.7	99	75-135	
Bromodichloromethane	ug/L	20	19.5	97	75-125	
Bromoform	ug/L	20	19.6	98	67-136	
Bromomethane	ug/L	20	22.7	113	30-150	
Carbon disulfide	ug/L	20	18.6	93	47-137	
Carbon tetrachloride	ug/L	20	20.2	101	75-125	
Chlorobenzene	ug/L	20	19.3	97	75-125	
Chloroethane	ug/L	20	19.2	96	63-136	
Chloroform	ug/L	20	17.0	85	73-128	
Chloromethane	ug/L	20	19.4	97	55-130	
cis-1,2-Dichloroethene	ug/L	20	18.5	92	75-125	
cis-1,3-Dichloropropene	ug/L	20	17.0	85	74-125	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

LABORATORY CONTROL SAMPLE: 3377110

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	18.9	95	75-125	
Dibromomethane	ug/L	20	19.0	95	75-125	
Dichlorodifluoromethane	ug/L	20	18.4	92	63-132	
Dichlorofluoromethane	ug/L	20	18.3	91	68-127	N2
Diisopropyl ether	ug/L	20	17.5	87	71-131	
Ethyl-tert-butyl ether	ug/L	20	17.3	87	75-125	
Ethylbenzene	ug/L	20	19.4	97	75-125	
Hexachloro-1,3-butadiene	ug/L	20	18.6	93	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.6	98	75-125	
m&p-Xylene	ug/L	40	39.4	98	75-126	
Methyl-tert-butyl ether	ug/L	20	19.2	96	75-125	
Methylene Chloride	ug/L	20	18.2	91	70-125	
n-Butylbenzene	ug/L	20	18.5	93	75-126	
n-Propylbenzene	ug/L	20	18.6	93	73-127	
Naphthalene	ug/L	20	18.2	91	63-128	
o-Xylene	ug/L	20	19.5	97	75-128	
p-Isopropyltoluene	ug/L	20	19.5	98	75-125	
sec-Butylbenzene	ug/L	20	19.1	96	75-126	
Styrene	ug/L	20	19.3	96	75-125	
tert-Amylmethyl ether	ug/L	20	17.0	85	75-125	
tert-Butyl Alcohol	ug/L	200	182	91	75-130	
tert-Butylbenzene	ug/L	20	19.3	96	75-131	
Tetrachloroethene	ug/L	20	19.1	96	74-125	
Tetrahydrofuran	ug/L	200	187	93	64-138	
Toluene	ug/L	20	18.3	92	74-125	
trans-1,2-Dichloroethene	ug/L	20	18.9	95	68-128	
trans-1,3-Dichloropropene	ug/L	20	18.4	92	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	43.8	88	60-127	
Trichloroethene	ug/L	20	20.5	103	75-127	
Trichlorofluoromethane	ug/L	20	18.5	92	72-133	
Vinyl acetate	ug/L	20	16.3	82	61-129	
Vinyl chloride	ug/L	20	19.7	98	75-128	
Xylene (Total)	ug/L	60	58.9	98	75-125	
1,2-Dichloroethane-d4 (S)	%.			103	75-136	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3378190 3378191

Parameter	Units	10487103001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.98	100	100	99.7	97.5	100	97	75-140	2	30	
1,1,1-Trichloroethane	ug/L	<0.68	100	100	98.8	97.0	99	97	74-136	2	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.85	100	100	102	98.5	102	99	66-134	3	30	
1,1,2-Trichloroethane	ug/L	<0.90	100	100	102	96.6	102	97	75-126	6	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3378190 3378191

Parameter	Units	10487103001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<1.1	100	100	99.3	99.2	99	99	65-146	0	30	
1,1-Dichloroethane	ug/L	<0.85	100	100	98.5	95.3	99	95	68-132	3	30	
1,1-Dichloroethene	ug/L	<0.80	100	100	94.1	91.0	94	91	66-139	3	30	
1,1-Dichloropropene	ug/L	<0.99	100	100	98.9	95.3	99	95	67-134	4	30	
1,2,3-Trichlorobenzene	ug/L	<1.0	100	100	107	101	107	101	67-129	6	30	
1,2,3-Trichloropropane	ug/L	<1.3	100	100	98.3	91.8	98	92	69-128	7	30	
1,2,4-Trichlorobenzene	ug/L	<1.0	100	100	100	93.4	100	93	65-140	7	30	
1,2,4-Trimethylbenzene	ug/L	192	100	100	284	271	92	80	71-133	5	30	
1,2-Dibromo-3-chloropropane	ug/L	<8.3	250	250	270	260	108	104	54-138	4	30	
1,2-Dibromoethane (EDB)	ug/L	<1.2	100	100	91.8	90.8	92	91	68-125	1	30	
1,2-Dichlorobenzene	ug/L	<0.68	100	100	96.9	91.6	97	92	74-136	6	30	
1,2-Dichloroethane	ug/L	26.4	100	100	113	108	87	82	68-125	5	30	
1,2-Dichloroethene (Total)	ug/L	<1.4	200	200	186	179	93	90	71-126	3	30	N2
1,2-Dichloropropane	ug/L	<0.82	100	100	88.7	84.4	89	84	67-125	5	30	
1,3,5-Trimethylbenzene	ug/L	62.6	100	100	159	150	96	88	68-137	5	30	
1,3-Dichlorobenzene	ug/L	<0.80	100	100	99.2	93.5	99	94	75-131	6	30	
1,3-Dichloropropane	ug/L	<0.35	100	100	106	102	106	102	71-125	4	30	
1,4-Dichlorobenzene	ug/L	<0.84	100	100	94.2	89.7	94	90	74-126	5	30	
1,4-Dioxane (p-Dioxane)	ug/L	<81.5	2000	2000	1800	1870	90	93	68-125	4	30	
2,2,4-Trimethylpentane	ug/L	<0.96	100	100	92.7	92.6	93	93	54-129	0	30	N2
2,2-Dichloropropane	ug/L	<0.86	100	100	103	103	103	103	69-139	0	30	
2-Butanone (MEK)	ug/L	<5.0	500	500	398	403	80	81	54-144	1	30	
2-Chlorotoluene	ug/L	<0.82	100	100	117	111	117	111	75-134	6	30	
2-Hexanone	ug/L	<4.4	500	500	492	480	98	96	58-137	2	30	
4-Chlorotoluene	ug/L	<0.67	100	100	93.6	94.8	94	95	72-133	1	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<2.1	500	500	514	504	103	101	60-129	2	30	
Acetone	ug/L	<46.2	500	500	352	345	70	69	62-132	2	30	
Acrolein	ug/L	<6.0	1000	1000	1620	1590	162	159	30-150	2	30	M1
Acrylonitrile	ug/L	<4.5	1000	1000	937	950	94	95	68-125	1	30	
Benzene	ug/L	1000	100	100	1060	1040	57	43	68-125	1	30	M1
Bromobenzene	ug/L	<1.0	100	100	97.8	93.3	98	93	73-126	5	30	
Bromochloromethane	ug/L	<1.4	100	100	98.2	91.4	98	91	66-143	7	30	
Bromodichloromethane	ug/L	<1.1	100	100	100	96.9	100	97	74-125	3	30	
Bromoform	ug/L	<4.0	100	100	104	106	104	106	64-134	2	30	
Bromomethane	ug/L	<9.1	100	100	116	109	116	109	30-150	7	30	
Carbon disulfide	ug/L	<0.39	100	100	74.0	72.1	74	72	43-147	3	30	
Carbon tetrachloride	ug/L	<0.94	100	100	103	98.9	103	99	71-143	4	30	
Chlorobenzene	ug/L	<0.86	100	100	103	97.2	103	97	75-125	5	30	
Chloroethane	ug/L	6.0	100	100	101	97.8	94	92	75-129	3	30	
Chloroform	ug/L	<2.2	100	100	87.7	84.4	88	84	66-132	4	30	
Chloromethane	ug/L	<0.78	100	100	88.0	86.9	88	87	53-137	1	30	
cis-1,2-Dichloroethene	ug/L	<0.77	100	100	93.0	89.5	93	90	67-133	4	30	
cis-1,3-Dichloropropene	ug/L	<1.0	100	100	88.2	81.9	88	82	66-125	7	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3378190 3378191

Parameter	Units	10487103001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.62	100	100	103	101	103	101	62-132	2	30	
Dibromomethane	ug/L	<0.82	100	100	97.3	93.9	97	94	67-125	4	30	
Dichlorodifluoromethane	ug/L	1.4J	100	100	87.9	87.8	87	86	71-142	0	30	
Dichlorofluoromethane	ug/L	1.9J	100	100	93.3	91.5	91	90	70-131	2	30	N2
Diisopropyl ether	ug/L	<0.66	100	100	92.1	93.4	92	93	63-131	1	30	
Ethyl-tert-butyl ether	ug/L	<0.89	100	100	93.9	93.6	94	94	66-128	0	30	
Ethylbenzene	ug/L	71.4	100	100	177	173	105	102	74-126	2	30	
Hexachloro-1,3-butadiene	ug/L	<1.6	100	100	105	96.8	105	97	68-143	8	30	
Isopropylbenzene (Cumene)	ug/L	12.6	100	100	117	114	104	101	74-130	3	30	
m&p-Xylene	ug/L	291	200	200	506	499	107	104	69-132	1	30	
Methyl-tert-butyl ether	ug/L	<0.80	100	100	96.5	91.9	97	92	65-131	5	30	
Methylene Chloride	ug/L	<4.9	100	100	89.3	85.4	89	85	57-125	4	30	
n-Butylbenzene	ug/L	13.3	100	100	109	103	96	89	71-131	6	30	
n-Propylbenzene	ug/L	21.7	100	100	117	114	95	93	67-138	2	30	
Naphthalene	ug/L	171	100	100	259	262	88	90	60-130	1	30	
o-Xylene	ug/L	147	100	100	231	229	84	82	69-131	1	30	
p-Isopropyltoluene	ug/L	7.8	100	100	123	117	115	109	72-133	5	30	
sec-Butylbenzene	ug/L	7.0	100	100	107	101	100	94	73-134	5	30	
Styrene	ug/L	<0.94	100	100	102	100	102	100	72-125	2	30	
tert-Amylmethyl ether	ug/L	<0.54	100	100	89.3	91.4	89	91	67-125	2	30	
tert-Butyl Alcohol	ug/L	<6.2	1000	1000	997	949	100	95	64-137	5	30	
tert-Butylbenzene	ug/L	<0.74	100	100	100	93.1	100	93	70-143	8	30	
Tetrachloroethene	ug/L	<0.85	100	100	95.0	94.3	95	94	72-129	1	30	
Tetrahydrofuran	ug/L	<11.1	1000	1000	961	904	96	90	66-128	6	30	
Toluene	ug/L	445	100	100	567	560	122	115	73-125	1	30	
trans-1,2-Dichloroethene	ug/L	<0.58	100	100	92.7	89.9	93	90	62-137	3	30	
trans-1,3-Dichloropropene	ug/L	<0.91	100	100	96.7	93.4	97	93	61-136	3	30	
trans-1,4-Dichloro-2-butene	ug/L	<10.2	250	250	240	228	96	91	45-128	5	30	
Trichloroethene	ug/L	<0.76	100	100	97.2	93.7	97	94	74-132	4	30	
Trichlorofluoromethane	ug/L	<1.2	100	100	87.4	85.2	87	85	75-139	3	30	
Vinyl acetate	ug/L	<5.5	100	100	91.2	90.0	91	90	51-135	1	30	
Vinyl chloride	ug/L	<0.46	100	100	84.4	82.4	84	82	68-146	2	30	
Xylene (Total)	ug/L	438	300	300	737	728	100	97	67-137	1	30	
1,2-Dichloroethane-d4 (S)	%.						101	101	75-136			
4-Bromofluorobenzene (S)	%.						102	100	75-125			
Toluene-d8 (S)	%.						104	104	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 625330 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10486438001

METHOD BLANK: 3374654 Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	08/09/19 08:42	

LABORATORY CONTROL SAMPLE & LCSD: 3374655 3374656

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.2	42.2	105	106	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374657 3374658

Parameter	Units	10486438001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	137	40	40	175	178	94	103	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3375359 3375360

Parameter	Units	10486379004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	97.7	40	40	137	139	97	102	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 625241 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10486438001

METHOD BLANK: 3374022 Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0J	10.0	5.0	08/09/19 11:20	

LABORATORY CONTROL SAMPLE: 3374023

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1030	103	80-120	

SAMPLE DUPLICATE: 3374024

Parameter	Units	10486462010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	964	980	2	5	

SAMPLE DUPLICATE: 3374025

Parameter	Units	10486462011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	860	864	0	5	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 152825 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10486438001

METHOD BLANK: 680148 Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	08/10/19 10:00	

LABORATORY CONTROL SAMPLE: 680149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.19	93	90-110	

MATRIX SPIKE SAMPLE: 680151

Parameter	Units	20116249007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	3.7	5	7.6	78	75-125	

SAMPLE DUPLICATE: 680150

Parameter	Units	20116249007 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	3.7	3.7	0	20	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 625089
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10486438001

METHOD BLANK: 3373357 Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	08/08/19 16:45	
Nitrate as N	mg/L	<0.012	0.10	0.012	08/08/19 16:45	
Sulfate	mg/L	<0.28	1.2	0.28	08/08/19 16:45	

LABORATORY CONTROL SAMPLE: 3373358

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.2	98	90-110	
Nitrate as N	mg/L	1	0.95	95	90-110	
Sulfate	mg/L	12.5	12.2	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3373359 3373360

Parameter	Units	10485265001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	11.8	12.5	12.5	22.8	22.8	88	88	90-110	0	20	M1
Nitrate as N	mg/L	0.24	1	1	1.1	1.2	91	92	90-110	1	20	
Sulfate	mg/L	6.2	12.5	12.5	19.3	19.4	105	106	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3373361 3373362

Parameter	Units	10485265003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	38.1	12.5	12.5	44.9	44.9	55	54	90-110	0	20	M1
Nitrate as N	mg/L	0.51	1	1	1.4	1.4	92	93	90-110	0	20	
Sulfate	mg/L	41.8	12.5	12.5	49.0	49.1	57	58	90-110	0	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 625365
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10486438001

METHOD BLANK: 3374719 Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	08/09/19 12:56	FS

LABORATORY CONTROL SAMPLE: 3374720

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	1.0	100	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374721 3374722

Parameter	Units	10486438001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.12	1	1	1.0	1.0	93	91	90-110	2	20	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374723 3374724

Parameter	Units	10486328001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	ND	1	1	1.0	1.0	96	96	90-110	0	20	

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 625337 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10486438001

METHOD BLANK: 3374674 Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	08/09/19 13:23	

LABORATORY CONTROL SAMPLE: 3374675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	298	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374676 3374677

Parameter	Units	10486438001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	89.6	250	250	341	338	101	99	90-110	1	20	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

QC Batch: 172365 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10486438001

METHOD BLANK: 682673 Matrix: Water
Associated Lab Samples: 10486438001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	08/09/19 17:47	

LABORATORY CONTROL SAMPLE: 682674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.0	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 682675 682676

Parameter	Units	10486338001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	2.5	25	25	28.0	28.3	102	103	80-120	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
FS	The sample was filtered in the laboratory prior to analysis.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
P8	Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10486438

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10486438001	**MW31-GW-080719**	RSK 175	625251		
10486438001	**MW31-GW-080719**	EPA 3010	625324	EPA 6010D	625501
10486438001	**MW31-GW-080719**	EPA 7470A	625945	EPA 7470A	626262
10486438001	**MW31-GW-080719**	EPA 8260B	625872		
10486438002	**Trip Blank**	EPA 8260B	625872		
10486438001	**MW31-GW-080719**	SM 2320B	625330		
10486438001	**MW31-GW-080719**	SM 2540C	625241		
10486438001	**MW31-GW-080719**	SM 4500-S-2 D	152825		
10486438001	**MW31-GW-080719**	EPA 300.0	625089		
10486438001	**MW31-GW-080719**	EPA 353.2	625365		
10486438001	**MW31-GW-080719**	EPA 410.4	625337	EPA 410.4	625462
10486438001	**MW31-GW-080719**	SM 5310C	172365		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A — Required Client Information:

Company:	UPRR_Jacobs
Address:	1400 W. 52nd Ave. Denver, CO 80221
Email:	awalsh@up.com
Phone:	Fax:
Requested Due Date:	24 Hr / (3 Day) / 10 Day

Section B — Required Project Information:

Report To:	Mark Ochsner, Brad Ostapkowicz
Copy To:	Steve Demus, Jonathan Espinoza
Copy To:	David Hodson, UPRR-Sysdat@ghd.com
Purchase Order #:	1497-38-Rev0
Project Name:	Freeman,WA-Cenex Harvest Lease
Project #:	

Section C — Invoice Information:

Attention:	Anne Walsh (awalsh@up.com)
Company:	UPRR
Address:	1400 W. 52nd Ave, Denver, CO 80221
Pace Quote:	Contract# 9900758938
Pace Project Manager:	Jennifer Gross
Pace Profile #:	36447 / 1

Regulatory Agency

State / Location: WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Low Level VOCs by 8260	Hold	6010/7470 TAL Dissolved Metals	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TDC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK 175	COD 410.4	Nitrate + Nitrite 353.2	Requested Analysis Filtered (Y/N)	
1	MW31-GW-080719	WT	G	8/7/19	1230				13	X	X	X	X	X			X		X	X	X	X	X	X	X	X	X		001
2	Trip Blank	↓	↓	8/7/19	0700			↓	3				X				X												002
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

WO#: 10486438

10486438

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
*Field filtered by client	[signature] / Jacobs	8/7/19	1430	ERZ-PACE	8/8/19	840	1.3	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karla Savage

SIGNATURE of SAMPLER: [signature] DATE Signed: 8/7/19

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 09May2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.28**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR Jacobs

Project #: **WO#: 10486438**

PM: JMG **Due Date: 08/13/19**

CLIENT: UPRR_Jacobs

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Pace [ ] SpeeDee [ ] Commercial **See Exception** [ ]

Tracking Number: 7021-4575-3595

Custody Seal on Cooler/Box Present? [ ] Yes [X] No **Seals Intact?** [ ] Yes [X] No **Biological Tissue Frozen?** [ ] Yes [ ] No [X] N/A

Packing Material: [X] Bubble Wrap [X] Bubble Bags [ ] None [X] Other: PB **Temp Blank?** [X] Yes [ ] No

Thermometer: [ ] T1(0461) [X] T2(1336) [ ] T3(0459) [ ] T4(0254) [ ] T5(0489) **Type of Ice:** [X] Wet [ ] Blue [ ] None [ ] Dry [ ] Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C	**Cooler Temp Read w/temp blank:** 1.2 °C	**Average Corrected Temp (no temp blank only):** °C **See Exceptions** [ ]
Correction Factor: +0.1	**Cooler Temp Corrected w/temp blank:** 1.3 °C	

USDA Regulated Soil: ([X] N/A, water sample/Other:) **Date/Initials of Person Examining Contents:** ERZ-8/8/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? [ ] Yes [ ] No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? [ ] Yes [ ] No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present and Filled Out?	[X] Yes [ ] No	1.
Chain of Custody Relinquished?	[X] Yes [ ] No	2.
Sampler Name and/or Signature on COC?	[X] Yes [ ] No [ ] N/A	3.
Samples Arrived within Hold Time?	[X] Yes [ ] No	4.
Short Hold Time Analysis (<72 hr)?	[X] Yes [ ] No	5. [ ] Fecal Coliform [ ] HPC [ ] Total Coliform/E coli [ ] BOD/cBOD [ ] Hex Chrome [ ] Turbidity [ ] Nitrate [ ] Nitrite [ ] Orthophos [ ] Other
Rush Turn Around Time Requested?	[X] Yes [ ] No	6. 3-day TAT
Sufficient Volume?	[X] Yes [ ] No	7.
Correct Containers Used? -Pace Containers Used?	[X] Yes [ ] No [X] Yes [ ] No	8.
Containers Intact?	[X] Yes [ ] No	9.
Field Filtered Volume Received for Dissolved Tests?	[X] Yes [ ] No [ ] N/A	10. Is sediment visible in the dissolved container? [ ] Yes [ ] No
Is sufficient information available to reconcile the samples to the COC? 080819 JMG	[X] Yes [ ] No	11. **If no, write ID/ Date/Time on Container Below:** **See Exception** [ ]
Matrix: [X] Water [ ] Soil [ ] Oil [ ] Other		
All containers needing acid/base preservation have been checked?	[X] Yes [ ] No [ ] N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	[X] Yes [ ] No [ ] N/A	[ ] NaOH [X] HNO_3 [X] H_2SO_4 [X] Zinc Acetate
JMG 080819 Exceptions: VOA, Coliform, TOC, DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	[X] Yes [ ] No [ ] N/A	Positive for Res. Chlorine? [ ] Yes [X] No **pH Paper Lot#** **See Exception** [ ]
		Res. Chlorine 9080 / 0-6 Roll 13-640-500 / 0-6 Strip / 0-14 Strip 10D4281
Headspace in VOA Vials (greater than 6mm)?	[X] Yes [ ] No [ ] N/A	13. **See Exception** [ ]
Trip Blank Present?	[X] Yes [ ] No [ ] N/A	14.
Trip Blank Custody Seals Present?	[X] Yes [ ] No [ ] N/A	Pace Trip Blank Lot # (if purchased): N/A

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** [ ] Yes [ ] No

Person Contacted: Mark Ochsner Date/Time: 06/27/18

Comments/Resolution: WA certs not required for RSK or sulfide.

Project Manager Review: Jenni Gross **Date:** 08/08/19

Note: Whenever there is a discrepancy affecting compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: GPT (2)

Pace Analytical	Document Name: **Headspace Exception**	Document Revised: 17Dec2018 Page 1 of 1
	Document No.: **F-MN-C-276-Rev.01**	Issuing Authority: Pace Minnesota Quality Office

Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
MW31-GW-080719	4	0	1	5	N
TB	0	0	3	3	N

PRE

Chain of Custody

WO# : 12133522

12133522

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: [X] Yes ☐
Owner Received Date: 8/8/2019 **Results Requested By:** 8/13/2019

Workorder: 10486438 **Workorder Name:** Freeman,WA-Cenex Harvest Lease

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	MW31-GW-080719	PS	8/7/2019 12:30	10486438001	Water	2						X												
2																								
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	8/8/19 1745	[signature]	8/8/19 1945
2	[signature] 8/9/19	0:10	B Matthews	8/9/19 0630
3				

Comments: RUSH

Cooler Temperature on Receipt 1.3 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: **WO#: 12133522**

PM: RK1 **Due Date: 08/13/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 1.6 Cooler Temp Corrected °C: 1.3 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 8/9/19 DE

Comments: BM 8/9/19

Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☒ Yes	☐ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☒ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Davena Ferrer Date: 8/9/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

WO# : 20116289

Chain of Custody

20116289

☐ Samples were sent directly to t

tate Of Origin: WA

ert. Needed: ☐ Yes ☒ No

Pace Analytical®
www.pacelabs.com

Workorder: 10486438 **Workorder Name:** Freeman,WA-Cenex Harvest Lease **Owner Received Date:** 8/8/2019 **Results Requested By:** 8/13/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	5636267 / 4500 Sulfide	Requested Analysis	LAB USE ONLY
1	MW31-GW-080719	PS	8/7/2019 12:30	10486438001	Water	1	X		
2									
3									
4									
5									

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	8/8/19 1645		
2	Fed Ex	8-9-19 0830	multiple	8-9-19
3				

Comments: RUSH 0830

Cooler Temperature on Receipt 1.4 °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Rece

Project

WO#: 20116289

PM: CMM **Due Date: 08/14/19**

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☐Yes ☐No

Therometer Used:	☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☐ Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8-9-19

Temp must be measured from Temperature blank when present

			Comments:
Temperature Blank Present"?	☐Yes	☐No ☐N/A	1
Chain of Custody Present:	☑Yes	☐No ☐N/A	2
Chain of Custody Complete:	☑Yes	☐No ☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No ☐N/A	4
Sampler Name & Signature on COC:	☐Yes	☑No ☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No ☐N/A	6
Sufficient Volume:	☑Yes	☐No ☐N/A	7
Correct Containers Used:	☑Yes	☐No ☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☑No ☐N/A	9
Sample Labels match COC:	☑Yes	☐No ☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No ☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No ☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No ☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO_3 _____ H_2SO_4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☑N/A	14
Trip Blank Present:	☐Yes	☑No	15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

August 22, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on August 17, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Alaska Certification UST-107
Montana Certificate #CERT0103
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10487825001	**MW36-GW-081619**	Water	08/16/19 11:30	08/17/19 08:30
10487825002	**Trip Blank**	Water	08/16/19 07:00	08/17/19 08:30

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10487825001	**MW36-GW-081619**	RSK 175	AMC	3	PASI-M
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10487825002	**Trip Blank**	EPA 8260B	DS2	83	PASI-M

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SUMMARY OF DETECTION

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10487825001	**MW36-GW-081619**					
EPA 6010D	Barium, Dissolved	29.6	ug/L	10.0	08/21/19 14:22	
EPA 6010D	Chromium, Dissolved	1.8J	ug/L	10.0	08/21/19 14:22	
EPA 6010D	Molybdenum, Dissolved	4.7J	ug/L	15.0	08/21/19 14:22	
EPA 6010D	Vanadium, Dissolved	7.8J	ug/L	15.0	08/21/19 14:22	
EPA 8260B	Carbon tetrachloride	116	ug/L	2.5	08/20/19 15:12	
EPA 8260B	Chloroform	8.5	ug/L	1.0	08/20/19 03:56	
EPA 8260B	Toluene	1.5	ug/L	0.50	08/20/19 03:56	
SM 2320B	Alkalinity, Total as CaCO3	168	mg/L	5.0	08/19/19 14:42	
SM 2540C	Total Dissolved Solids	304	mg/L	10.0	08/20/19 10:55	
EPA 300.0	Chloride	14.9	mg/L	1.2	08/17/19 20:28	M1
EPA 300.0	Nitrate as N	3.7	mg/L	0.10	08/17/19 20:28	M1
EPA 300.0	Sulfate	19.1	mg/L	1.2	08/17/19 20:28	
EPA 353.2	Nitrogen, NO2 plus NO3	3.4	mg/L	0.50	08/20/19 12:52	
SM 5310C	Total Organic Carbon	1.3	mg/L	1.0	08/20/19 23:11	
10487825002	**Trip Blank**					
EPA 8260B	Toluene	0.82	ug/L	0.50	08/20/19 03:32	
EPA 8260B	m&p-Xylene	0.53J	ug/L	1.0	08/20/19 03:32	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **RSK 175**
Description: RSK 175 GCV Headspace
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
2 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 627154

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10487965001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3384287)
  - Acrolein
- MSD (Lab ID: 3384288)
  - Acrolein

Additional Comments:

Analyte Comments:

QC Batch: 627154

C0: Result confirmed by second analysis.

- Trip Blank (Lab ID: 10487825002)
  - 1,2-Dichloroethane-d4 (S)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: August 22, 2019

Analyte Comments:

QC Batch: 627154

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3384282)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3384283)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3384287)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3384288)
  - 1,2-Dichloroethene (Total)
- MW36-GW-081619 (Lab ID: 10487825001)
  - 1,2-Dichloroethene (Total)
- Trip Blank (Lab ID: 10487825002)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 627305

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 3384970)
  - Total Dissolved Solids

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 626971

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10487825001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3382819)
  - Chloride
  - Nitrate as N
- MSD (Lab ID: 3382820)
  - Chloride
  - Nitrate as N

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: August 22, 2019

General Information:
1 sample was analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Sample: MW36-GW-081619 **Lab ID: 10487825001** Collected: 08/16/19 11:30 Received: 08/17/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 GCV Headspace	Analytical Method: RSK 175								
Methane	**<4.9**	ug/L	10.0	4.9	1		08/19/19 11:09	74-82-8	
Ethane	**<3.0**	ug/L	10.0	3.0	1		08/19/19 11:09	74-84-0	
Ethene	**<2.9**	ug/L	10.0	2.9	1		08/19/19 11:09	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	08/21/19 06:26	08/21/19 14:22	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	08/21/19 06:26	08/21/19 14:22	7440-38-2	
Barium, Dissolved	**29.6**	ug/L	10.0	0.60	1	08/21/19 06:26	08/21/19 14:22	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	08/21/19 06:26	08/21/19 14:22	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	08/21/19 06:26	08/21/19 14:22	7440-43-9	
Chromium, Dissolved	**1.8J**	ug/L	10.0	0.66	1	08/21/19 06:26	08/21/19 14:22	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	08/21/19 06:26	08/21/19 14:22	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	08/21/19 06:26	08/21/19 14:22	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	08/21/19 06:26	08/21/19 14:22	7439-92-1	
Molybdenum, Dissolved	**4.7J**	ug/L	15.0	3.8	1	08/21/19 06:26	08/21/19 14:22	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	08/21/19 06:26	08/21/19 14:22	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	08/21/19 06:26	08/21/19 14:22	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	08/21/19 06:26	08/21/19 14:22	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	08/21/19 06:26	08/21/19 14:22	7440-28-0	
Vanadium, Dissolved	**7.8J**	ug/L	15.0	0.43	1	08/21/19 06:26	08/21/19 14:22	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	08/21/19 06:26	08/21/19 14:22	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	08/21/19 08:25	08/22/19 12:49	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:56	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		08/20/19 03:56	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		08/20/19 03:56	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		08/20/19 03:56	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		08/20/19 03:56	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		08/20/19 03:56	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		08/20/19 03:56	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:56	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		08/20/19 03:56	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		08/20/19 03:56	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:56	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:56	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		08/20/19 03:56	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		08/20/19 03:56	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		08/20/19 03:56	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		08/20/19 03:56	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		08/20/19 03:56	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		08/20/19 03:56	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		08/20/19 03:56	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		08/20/19 03:56	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Sample: MW36-GW-081619 **Lab ID: 10487825001** Collected: 08/16/19 11:30 Received: 08/17/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		08/20/19 03:56	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/20/19 03:56	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		08/20/19 03:56	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		08/20/19 03:56	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		08/20/19 03:56	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		08/20/19 03:56	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		08/20/19 03:56	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		08/20/19 03:56	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		08/20/19 03:56	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		08/20/19 03:56	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		08/20/19 03:56	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		08/20/19 03:56	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		08/20/19 03:56	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		08/20/19 03:56	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		08/20/19 03:56	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		08/20/19 03:56	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		08/20/19 03:56	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		08/20/19 03:56	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		08/20/19 03:56	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		08/20/19 03:56	75-15-0	
Carbon tetrachloride	**116**	ug/L	2.5	0.94	5		08/20/19 15:12	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		08/20/19 03:56	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		08/20/19 03:56	75-00-3	
Chloroform	**8.5**	ug/L	1.0	0.45	1		08/20/19 03:56	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		08/20/19 03:56	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		08/20/19 03:56	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		08/20/19 03:56	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		08/20/19 03:56	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		08/20/19 03:56	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		08/20/19 03:56	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		08/20/19 03:56	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		08/20/19 03:56	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		08/20/19 03:56	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		08/20/19 03:56	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		08/20/19 03:56	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		08/20/19 03:56	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		08/20/19 03:56	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		08/20/19 03:56	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		08/20/19 03:56	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		08/20/19 03:56	109-99-9	
Toluene	**1.5**	ug/L	0.50	0.083	1		08/20/19 03:56	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		08/20/19 03:56	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		08/20/19 03:56	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		08/20/19 03:56	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		08/20/19 03:56	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		08/20/19 03:56	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Sample: MW36-GW-081619 **Lab ID: 10487825001** Collected: 08/16/19 11:30 Received: 08/17/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		08/20/19 03:56	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:56	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		08/20/19 03:56	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		08/20/19 03:56	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		08/20/19 03:56	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		08/20/19 03:56	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		08/20/19 03:56	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/20/19 03:56	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		08/20/19 03:56	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		08/20/19 03:56	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/20/19 03:56	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		08/20/19 03:56	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		08/20/19 03:56	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		08/20/19 03:56	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		08/20/19 03:56	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		08/20/19 03:56	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		08/20/19 03:56	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**168**	mg/L	5.0	2.0	1		08/19/19 14:42		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**304**	mg/L	10.0	5.0	1		08/20/19 10:55		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		08/21/19 15:29	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**14.9**	mg/L	1.2	0.12	1		08/17/19 20:28	16887-00-6	M1
Nitrate as N	**3.7**	mg/L	0.10	0.012	1		08/17/19 20:28	14797-55-8	M1
Sulfate	**19.1**	mg/L	1.2	0.28	1		08/17/19 20:28	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**3.4**	mg/L	0.50	0.088	5		08/20/19 12:52		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	08/22/19 08:45	08/22/19 14:53		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.3**	mg/L	1.0	0.39	1		08/20/19 23:11	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Sample: Trip Blank **Lab ID: 10487825002** Collected: 08/16/19 07:00 Received: 08/17/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:32	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		08/20/19 03:32	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		08/20/19 03:32	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		08/20/19 03:32	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		08/20/19 03:32	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		08/20/19 03:32	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		08/20/19 03:32	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:32	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		08/20/19 03:32	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		08/20/19 03:32	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:32	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:32	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		08/20/19 03:32	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		08/20/19 03:32	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		08/20/19 03:32	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		08/20/19 03:32	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		08/20/19 03:32	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		08/20/19 03:32	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		08/20/19 03:32	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		08/20/19 03:32	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		08/20/19 03:32	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/20/19 03:32	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		08/20/19 03:32	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		08/20/19 03:32	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		08/20/19 03:32	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		08/20/19 03:32	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		08/20/19 03:32	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		08/20/19 03:32	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		08/20/19 03:32	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		08/20/19 03:32	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		08/20/19 03:32	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		08/20/19 03:32	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		08/20/19 03:32	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		08/20/19 03:32	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		08/20/19 03:32	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		08/20/19 03:32	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		08/20/19 03:32	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		08/20/19 03:32	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		08/20/19 03:32	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		08/20/19 03:32	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		08/20/19 03:32	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		08/20/19 03:32	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		08/20/19 03:32	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		08/20/19 03:32	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		08/20/19 03:32	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		08/20/19 03:32	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Sample: Trip Blank **Lab ID: 10487825002** Collected: 08/16/19 07:00 Received: 08/17/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		08/20/19 03:32	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		08/20/19 03:32	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		08/20/19 03:32	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		08/20/19 03:32	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		08/20/19 03:32	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		08/20/19 03:32	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		08/20/19 03:32	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		08/20/19 03:32	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		08/20/19 03:32	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		08/20/19 03:32	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		08/20/19 03:32	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		08/20/19 03:32	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		08/20/19 03:32	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		08/20/19 03:32	109-99-9	
Toluene	**0.82**	ug/L	0.50	0.083	1		08/20/19 03:32	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		08/20/19 03:32	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		08/20/19 03:32	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		08/20/19 03:32	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		08/20/19 03:32	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		08/20/19 03:32	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		08/20/19 03:32	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/20/19 03:32	10061-01-5	
m&p-Xylene	**0.53J**	ug/L	1.0	0.31	1		08/20/19 03:32	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		08/20/19 03:32	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		08/20/19 03:32	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		08/20/19 03:32	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		08/20/19 03:32	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/20/19 03:32	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		08/20/19 03:32	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		08/20/19 03:32	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/20/19 03:32	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		08/20/19 03:32	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		08/20/19 03:32	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		08/20/19 03:32	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		08/20/19 03:32	17060-07-0	C0
Toluene-d8 (S)	99	%.	75-125		1		08/20/19 03:32	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		08/20/19 03:32	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 627050
QC Batch Method: RSK 175
Analysis Method: RSK 175
Analysis Description: RSK 175 GCV HEADSPACE
Associated Lab Samples: 10487825001

METHOD BLANK: 3383437 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethane	ug/L	<3.0	10.0	3.0	08/19/19 09:24	
Ethene	ug/L	<2.9	10.0	2.9	08/19/19 09:24	
Methane	ug/L	<4.9	10.0	4.9	08/19/19 09:24	

LABORATORY CONTROL SAMPLE & LCSD: 3383438 3383439

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethane	ug/L	114	117	117	103	103	85-115	0	20	
Ethene	ug/L	106	108	109	102	103	85-115	1	20	
Methane	ug/L	60.7	60.2	61.3	99	101	85-115	2	20	

SAMPLE DUPLICATE: 3383440

Parameter	Units	92441692001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	7.8J		20	
Ethene	ug/L	ND	<2.9		20	
Methane	ug/L	ND	<4.9		20	

SAMPLE DUPLICATE: 3385072

Parameter	Units	10487665001 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	<3.0	<3.0		20	
Ethene	ug/L	<2.9	<2.9		20	
Methane	ug/L	21.6	7.6J		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 627293 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10487825001

METHOD BLANK: 3384911 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	08/22/19 12:33	

LABORATORY CONTROL SAMPLE: 3384912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.4	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3384913 3384914

Parameter	Units	10487537011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	5.2	5.2	104	104	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 627282
QC Batch Method: EPA 3010
Analysis Method: EPA 6010D
Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10487825001

METHOD BLANK: 3384867 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	08/21/19 14:16	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	08/21/19 14:16	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	08/21/19 14:16	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	08/21/19 14:16	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	08/21/19 14:16	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	08/21/19 14:16	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	08/21/19 14:16	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	08/21/19 14:16	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	08/21/19 14:16	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	08/21/19 14:16	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	08/21/19 14:16	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	08/21/19 14:16	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	08/21/19 14:16	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	08/21/19 14:16	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	08/21/19 14:16	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	08/21/19 14:16	

LABORATORY CONTROL SAMPLE: 3384868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	962	96	80-120	
Arsenic, Dissolved	ug/L	1000	998	100	80-120	
Barium, Dissolved	ug/L	1000	1020	102	80-120	
Beryllium, Dissolved	ug/L	1000	969	97	80-120	
Cadmium, Dissolved	ug/L	1000	1000	100	80-120	
Chromium, Dissolved	ug/L	1000	976	98	80-120	
Cobalt, Dissolved	ug/L	1000	984	98	80-120	
Copper, Dissolved	ug/L	1000	970	97	80-120	
Lead, Dissolved	ug/L	1000	996	100	80-120	
Molybdenum, Dissolved	ug/L	1000	959	96	80-120	
Nickel, Dissolved	ug/L	1000	988	99	80-120	
Selenium, Dissolved	ug/L	1000	982	98	80-120	
Silver, Dissolved	ug/L	500	493	99	80-120	
Thallium, Dissolved	ug/L	1000	1000	100	80-120	
Vanadium, Dissolved	ug/L	1000	965	96	80-120	
Zinc, Dissolved	ug/L	1000	999	100	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3384869 3384870

Parameter	Units	10487825001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	949	917	95	92	75-125	4	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1020	979	102	98	75-125	4	20	
Barium, Dissolved	ug/L	29.6	1000	1000	1050	1000	102	98	75-125	4	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	987	953	99	95	75-125	3	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1000	971	100	97	75-125	3	20	
Chromium, Dissolved	ug/L	1.8J	1000	1000	986	960	98	96	75-125	3	20	
Cobalt, Dissolved	ug/L	<0.50	1000	1000	981	953	98	95	75-125	3	20	
Copper, Dissolved	ug/L	<1.2	1000	1000	977	948	98	95	75-125	3	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	995	963	100	96	75-125	3	20	
Molybdenum, Dissolved	ug/L	4.7J	1000	1000	943	912	94	91	75-125	3	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	986	953	99	95	75-125	3	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	981	944	98	94	75-125	4	20	
Silver, Dissolved	ug/L	<0.40	500	500	499	483	100	97	75-125	3	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	995	962	99	96	75-125	3	20	
Vanadium, Dissolved	ug/L	7.8J	1000	1000	980	951	97	94	75-125	3	20	
Zinc, Dissolved	ug/L	<6.3	1000	1000	1000	967	100	96	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 627154 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10487825001, 10487825002

METHOD BLANK: 3384282 Matrix: Water
Associated Lab Samples: 10487825001, 10487825002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	08/20/19 01:33	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	08/20/19 01:33	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	08/20/19 01:33	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	08/20/19 01:33	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	08/20/19 01:33	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	08/20/19 01:33	
1,1-Dichloroethene	ug/L	<0.16	1.0	0.16	08/20/19 01:33	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	08/20/19 01:33	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	08/20/19 01:33	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	08/20/19 01:33	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	08/20/19 01:33	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	08/20/19 01:33	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	10.0	1.7	08/20/19 01:33	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	08/20/19 01:33	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	08/20/19 01:33	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	08/20/19 01:33	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	08/20/19 01:33	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	08/20/19 01:33	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	08/20/19 01:33	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	08/20/19 01:33	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	08/20/19 01:33	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	08/20/19 01:33	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	08/20/19 01:33	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	08/20/19 01:33	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	08/20/19 01:33	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	08/20/19 01:33	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	08/20/19 01:33	
2-Hexanone	ug/L	<0.88	5.0	0.88	08/20/19 01:33	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	08/20/19 01:33	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	08/20/19 01:33	
Acetone	ug/L	<9.2	20.0	9.2	08/20/19 01:33	
Acrolein	ug/L	<1.2	10.0	1.2	08/20/19 01:33	
Acrylonitrile	ug/L	<0.91	10.0	0.91	08/20/19 01:33	
Benzene	ug/L	<0.10	0.50	0.10	08/20/19 01:33	
Bromobenzene	ug/L	<0.21	0.50	0.21	08/20/19 01:33	
Bromochloromethane	ug/L	<0.27	1.0	0.27	08/20/19 01:33	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	08/20/19 01:33	
Bromoform	ug/L	<0.80	4.0	0.80	08/20/19 01:33	
Bromomethane	ug/L	<1.8	4.0	1.8	08/20/19 01:33	
Carbon disulfide	ug/L	<0.078	1.0	0.078	08/20/19 01:33	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	08/20/19 01:33	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

METHOD BLANK: 3384282 Matrix: Water
Associated Lab Samples: 10487825001, 10487825002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	1.0	0.17	08/20/19 01:33	
Chloroethane	ug/L	<0.49	1.0	0.49	08/20/19 01:33	
Chloroform	ug/L	<0.45	1.0	0.45	08/20/19 01:33	
Chloromethane	ug/L	<0.16	4.0	0.16	08/20/19 01:33	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	08/20/19 01:33	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	08/20/19 01:33	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	08/20/19 01:33	
Dibromomethane	ug/L	<0.16	1.0	0.16	08/20/19 01:33	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	08/20/19 01:33	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	08/20/19 01:33	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	08/20/19 01:33	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	08/20/19 01:33	
Ethylbenzene	ug/L	<0.14	0.50	0.14	08/20/19 01:33	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	08/20/19 01:33	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	08/20/19 01:33	
m&p-Xylene	ug/L	<0.31	1.0	0.31	08/20/19 01:33	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	08/20/19 01:33	
Methylene Chloride	ug/L	<0.98	4.0	0.98	08/20/19 01:33	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	08/20/19 01:33	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	08/20/19 01:33	
Naphthalene	ug/L	<0.48	1.0	0.48	08/20/19 01:33	
o-Xylene	ug/L	<0.16	0.50	0.16	08/20/19 01:33	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	08/20/19 01:33	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	08/20/19 01:33	
Styrene	ug/L	<0.19	0.50	0.19	08/20/19 01:33	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	08/20/19 01:33	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	08/20/19 01:33	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	08/20/19 01:33	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	08/20/19 01:33	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	08/20/19 01:33	
Toluene	ug/L	<0.083	0.50	0.083	08/20/19 01:33	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	08/20/19 01:33	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	08/20/19 01:33	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	08/20/19 01:33	
Trichloroethene	ug/L	<0.15	0.40	0.15	08/20/19 01:33	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	08/20/19 01:33	
Vinyl acetate	ug/L	<1.1	10.0	1.1	08/20/19 01:33	
Vinyl chloride	ug/L	<0.092	0.20	0.092	08/20/19 01:33	
Xylene (Total)	ug/L	<0.31	1.5	0.31	08/20/19 01:33	
1,2-Dichloroethane-d4 (S)	%.	100	75-136		08/20/19 01:33	
4-Bromofluorobenzene (S)	%.	102	75-125		08/20/19 01:33	
Toluene-d8 (S)	%.	100	75-125		08/20/19 01:33	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

LABORATORY CONTROL SAMPLE: 3384283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	22.7	113	68-141	
1,1,1-Trichloroethane	ug/L	20	22.7	113	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	22.5	112	73-125	
1,1,2-Trichloroethane	ug/L	20	23.1	116	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.3	101	69-132	
1,1-Dichloroethane	ug/L	20	22.6	113	73-125	
1,1-Dichloroethene	ug/L	20	20.7	104	71-126	
1,1-Dichloropropene	ug/L	20	22.0	110	73-126	
1,2,3-Trichlorobenzene	ug/L	20	21.8	109	72-126	
1,2,3-Trichloropropane	ug/L	20	21.5	107	75-126	
1,2,4-Trichlorobenzene	ug/L	20	21.5	108	71-134	
1,2,4-Trimethylbenzene	ug/L	20	22.5	113	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	51.4	103	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	22.7	114	75-129	
1,2-Dichlorobenzene	ug/L	20	22.1	111	75-129	
1,2-Dichloroethane	ug/L	20	20.7	104	75-125	
1,2-Dichloroethene (Total)	ug/L	40	43.7	109	74-125	N2
1,2-Dichloropropane	ug/L	20	21.2	106	75-125	
1,3,5-Trimethylbenzene	ug/L	20	22.3	112	75-127	
1,3-Dichlorobenzene	ug/L	20	22.4	112	75-126	
1,3-Dichloropropane	ug/L	20	22.4	112	75-125	
1,4-Dichlorobenzene	ug/L	20	22.1	111	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	435	109	72-129	
2,2,4-Trimethylpentane	ug/L	20	19.6	98	72-128	
2,2-Dichloropropane	ug/L	20	20.8	104	65-138	
2-Butanone (MEK)	ug/L	100	106	106	59-144	
2-Chlorotoluene	ug/L	20	23.2	116	75-127	
2-Hexanone	ug/L	100	109	109	73-134	
4-Chlorotoluene	ug/L	20	24.5	122	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	124	124	62-141	
Acetone	ug/L	100	90.2	90	60-137	
Acrolein	ug/L	200	214	107	60-141	
Acrylonitrile	ug/L	200	231	115	75-129	
Benzene	ug/L	20	22.4	112	73-125	
Bromobenzene	ug/L	20	21.9	109	73-125	
Bromochloromethane	ug/L	20	21.9	110	75-135	
Bromodichloromethane	ug/L	20	22.6	113	75-125	
Bromoform	ug/L	20	22.2	111	67-136	
Bromomethane	ug/L	20	20.0	100	30-150	
Carbon disulfide	ug/L	20	19.3	96	47-137	
Carbon tetrachloride	ug/L	20	21.9	109	75-125	
Chlorobenzene	ug/L	20	22.3	111	75-125	
Chloroethane	ug/L	20	21.0	105	63-136	
Chloroform	ug/L	20	20.5	102	73-128	
Chloromethane	ug/L	20	19.6	98	55-130	
cis-1,2-Dichloroethene	ug/L	20	22.6	113	75-125	
cis-1,3-Dichloropropene	ug/L	20	22.6	113	74-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

LABORATORY CONTROL SAMPLE: 3384283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	22.8	114	75-125	
Dibromomethane	ug/L	20	20.0	100	75-125	
Dichlorodifluoromethane	ug/L	20	20.3	102	63-132	
Dichlorofluoromethane	ug/L	20	22.0	110	68-127	
Diisopropyl ether	ug/L	20	22.7	114	71-131	
Ethyl-tert-butyl ether	ug/L	20	22.3	111	75-125	
Ethylbenzene	ug/L	20	22.8	114	75-125	
Hexachloro-1,3-butadiene	ug/L	20	20.6	103	72-134	
Isopropylbenzene (Cumene)	ug/L	20	22.6	113	75-125	
m&p-Xylene	ug/L	40	44.8	112	75-126	
Methyl-tert-butyl ether	ug/L	20	22.1	111	75-125	
Methylene Chloride	ug/L	20	21.1	105	70-125	
n-Butylbenzene	ug/L	20	22.3	112	75-126	
n-Propylbenzene	ug/L	20	24.7	124	73-127	
Naphthalene	ug/L	20	21.2	106	63-128	
o-Xylene	ug/L	20	23.1	116	75-128	
p-Isopropyltoluene	ug/L	20	22.0	110	75-125	
sec-Butylbenzene	ug/L	20	21.8	109	75-126	
Styrene	ug/L	20	22.7	114	75-125	
tert-Amylmethyl ether	ug/L	20	21.8	109	75-125	
tert-Butyl Alcohol	ug/L	200	245	123	75-130	
tert-Butylbenzene	ug/L	20	22.2	111	75-131	
Tetrachloroethene	ug/L	20	21.5	107	74-125	
Tetrahydrofuran	ug/L	200	224	112	64-138	
Toluene	ug/L	20	22.4	112	74-125	
trans-1,2-Dichloroethene	ug/L	20	21.1	106	68-128	
trans-1,3-Dichloropropene	ug/L	20	23.3	116	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	54.4	109	60-127	
Trichloroethene	ug/L	20	22.4	112	75-127	
Trichlorofluoromethane	ug/L	20	22.7	113	72-133	
Vinyl acetate	ug/L	20	23.3	116	61-129	
Vinyl chloride	ug/L	20	20.5	103	75-128	
Xylene (Total)	ug/L	60	67.9	113	75-125	
1,2-Dichloroethane-d4 (S)	%.			103	75-136	
4-Bromofluorobenzene (S)	%.			100	75-125	
Toluene-d8 (S)	%.			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3384287 3384288

Parameter	Units	10487965001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	21.5	20.7	107	103	75-140	4	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	20.9	20.2	104	101	74-136	3	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	20.3	20.6	101	103	66-134	1	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	21.8	20.9	109	105	75-126	4	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3384287 3384288

Parameter	Units	10487965001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	20.2	19.4	101	97	65-146	4	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	21.5	21.2	107	106	68-132	1	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	20.0	19.3	100	96	66-139	4	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	21.2	20.8	106	104	67-134	2	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	20.6	20.1	103	100	67-129	2	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	19.2	19.3	96	97	69-128	1	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	20.2	19.9	101	99	65-140	2	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	20.7	20.6	104	103	71-133	1	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	46.7	45.7	93	91	54-138	2	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	20.6	20.4	103	102	68-125	1	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	20.4	20.1	102	101	74-136	1	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	19.6	19.4	98	97	68-125	1	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	40.3	40.1	101	100	71-126	0	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	21.3	21.2	107	106	67-125	1	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	20.7	20.2	103	101	68-137	2	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	20.4	20.1	102	101	75-131	1	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	20.6	19.8	103	99	71-125	4	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	20.1	19.8	101	99	74-126	1	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	421	390	105	98	68-125	8	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	18.3	17.3	91	86	54-129	6	30	
2,2-Dichloropropane	ug/L	<0.17	20	20	19.3	19.2	96	96	69-139	0	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	97.2	97.6	97	98	54-144	0	30	
2-Chlorotoluene	ug/L	<0.16	20	20	21.7	21.6	108	108	75-134	0	30	
2-Hexanone	ug/L	<0.88	100	100	97.4	98.3	97	98	58-137	1	30	
4-Chlorotoluene	ug/L	<0.13	20	20	23.0	22.6	115	113	72-133	2	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	111	109	111	109	60-129	1	30	
Acetone	ug/L	49.6	100	100	130	125	80	75	62-132	4	30	
Acrolein	ug/L	<1.2	200	200	574	596	287	298	30-150	4	30	M1
Acrylonitrile	ug/L	<0.91	200	200	206	200	103	100	68-125	3	30	
Benzene	ug/L	<0.10	20	20	21.1	20.3	105	102	68-125	3	30	
Bromobenzene	ug/L	<0.21	20	20	20.5	20.4	102	102	73-126	0	30	
Bromochloromethane	ug/L	<0.27	20	20	20.5	20.5	102	103	66-143	0	30	
Bromodichloromethane	ug/L	<0.22	20	20	21.3	21.2	107	106	74-125	1	30	
Bromoform	ug/L	<0.80	20	20	19.9	19.8	99	99	64-134	0	30	
Bromomethane	ug/L	<1.8	20	20	21.9	21.1	109	105	30-150	4	30	
Carbon disulfide	ug/L	<0.078	20	20	18.5	17.8	92	89	43-147	4	30	
Carbon tetrachloride	ug/L	<0.19	20	20	21.1	20.5	106	103	71-143	3	30	
Chlorobenzene	ug/L	<0.17	20	20	20.6	19.9	103	99	75-125	3	30	
Chloroethane	ug/L	<0.49	20	20	24.5	24.4	122	122	75-129	0	30	
Chloroform	ug/L	<0.45	20	20	18.9	18.4	94	92	66-132	3	30	
Chloromethane	ug/L	<0.16	20	20	26.2	24.9	131	124	53-137	5	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	20.4	20.6	102	103	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	21.1	20.7	106	103	66-125	2	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3384287 3384288

Parameter	Units	10487965001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	20.3	19.6	101	98	62-132	3	30	
Dibromomethane	ug/L	<0.16	20	20	20.1	19.9	100	99	67-125	1	30	
Dichlorodifluoromethane	ug/L	<0.23	20	20	26.6	25.8	133	129	71-142	3	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	23.0	22.0	115	110	70-131	5	30	
Diisopropyl ether	ug/L	<0.13	20	20	21.3	20.8	106	104	63-131	2	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	20.9	20.4	104	102	66-128	2	30	
Ethylbenzene	ug/L	<0.14	20	20	21.9	21.1	109	106	74-126	4	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	19.6	18.3	98	92	68-143	7	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	21.6	21.0	108	105	74-130	3	30	
m&p-Xylene	ug/L	<0.31	40	40	43.8	42.1	110	105	69-132	4	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	20.6	20.5	103	102	65-131	0	30	
Methylene Chloride	ug/L	<0.98	20	20	20.2	20.2	101	101	57-125	0	30	
n-Butylbenzene	ug/L	<0.24	20	20	21.0	20.5	105	102	71-131	3	30	
n-Propylbenzene	ug/L	<0.10	20	20	23.0	22.6	115	113	67-138	2	30	
Naphthalene	ug/L	<0.48	20	20	19.7	19.4	99	97	60-130	2	30	
o-Xylene	ug/L	<0.16	20	20	21.4	20.9	107	105	69-131	2	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	21.2	20.9	106	104	72-133	1	30	
sec-Butylbenzene	ug/L	<0.15	20	20	20.8	20.7	104	103	73-134	1	30	
Styrene	ug/L	<0.19	20	20	21.2	20.7	106	104	72-125	2	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	20.4	20.5	102	102	67-125	1	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	215	213	108	106	64-137	1	30	
tert-Butylbenzene	ug/L	<0.15	20	20	21.0	20.9	105	105	70-143	1	30	
Tetrachloroethene	ug/L	<0.17	20	20	20.6	19.5	103	98	72-129	6	30	
Tetrahydrofuran	ug/L	<2.2	200	200	217	208	109	104	66-128	4	30	
Toluene	ug/L	<0.083	20	20	21.4	20.6	107	103	73-125	4	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	19.9	19.5	99	97	62-137	2	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	21.5	20.8	108	104	61-136	3	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	50.2	51.2	100	102	45-128	2	30	
Trichloroethene	ug/L	<0.15	20	20	21.2	20.6	106	103	74-132	3	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	24.9	23.4	125	117	75-139	6	30	
Vinyl acetate	ug/L	<1.1	20	20	21.0	21.4	105	107	51-135	2	30	
Vinyl chloride	ug/L	<0.092	20	20	26.5	25.7	132	129	68-146	3	30	
Xylene (Total)	ug/L	<0.31	60	60	65.2	63.0	109	105	67-137	3	30	
1,2-Dichloroethane-d4 (S)	%.						102	100	75-136			
4-Bromofluorobenzene (S)	%.						100	103	75-125			
Toluene-d8 (S)	%.						100	100	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 627139 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10487825001

METHOD BLANK: 3384184 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	08/19/19 14:29	

LABORATORY CONTROL SAMPLE & LCSD: 3384185 3384186

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.6	42.7	107	107	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3384187 3384188

Parameter	Units	10487176005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	127	40	40	162	166	86	98	80-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3384189 3384190

Parameter	Units	10487177003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	92.3	40	40	133	135	101	106	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 627305 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10487825001

METHOD BLANK: 3384967 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	08/20/19 10:55	

LABORATORY CONTROL SAMPLE: 3384968

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1020	102	80-120	

SAMPLE DUPLICATE: 3384969

Parameter	Units	10487387001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1700	1750	3	5	

SAMPLE DUPLICATE: 3384970

Parameter	Units	10487388002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	207	166	22	5	D6

SAMPLE DUPLICATE: 3384971

Parameter	Units	10487389001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	704	692	2	5	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 154305 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10487825001

METHOD BLANK: 687875 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	08/21/19 15:17	

LABORATORY CONTROL SAMPLE: 687876

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.18	91	90-110	

MATRIX SPIKE SAMPLE: 687878

Parameter	Units	20117420001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.16	77	75-125	

SAMPLE DUPLICATE: 687877

Parameter	Units	20117420001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 626971 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10487825001

METHOD BLANK: 3382817 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.30J	1.2	0.12	08/17/19 20:13	
Nitrate as N	mg/L	<0.012	0.10	0.012	08/17/19 20:13	
Sulfate	mg/L	<0.28	1.2	0.28	08/17/19 20:13	

LABORATORY CONTROL SAMPLE: 3382818

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	11.9	95	90-110	
Nitrate as N	mg/L	1	0.92	92	90-110	
Sulfate	mg/L	12.5	12.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3382819 3382820

Parameter	Units	10487825001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	14.9	12.5	12.5	25.2	25.3	82	83	90-110	0	20	M1
Nitrate as N	mg/L	3.7	1	1	4.2	4.2	46	48	90-110	0	20	M1
Sulfate	mg/L	19.1	12.5	12.5	30.9	31.1	94	96	90-110	1	20	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 627347 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10487825001

METHOD BLANK: 3385164 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	08/20/19 12:50	

LABORATORY CONTROL SAMPLE: 3385165

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.99	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3385166 3385167

Parameter	Units	10487825001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	3.4	5	5	8.5	8.5	103	103	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3385168 3385169

Parameter	Units	10486849002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.27	1	1	1.3	1.3	101	100	90-110	1	20	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 627766 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10487825001

METHOD BLANK: 3387575 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	08/22/19 14:53	

LABORATORY CONTROL SAMPLE: 3387576

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	310	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3387577 3387578

Parameter	Units	10487825001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	265	254	102	97	90-110	4	20	

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

QC Batch: 173029 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10487825001

METHOD BLANK: 685198 Matrix: Water
Associated Lab Samples: 10487825001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	08/20/19 20:59	

LABORATORY CONTROL SAMPLE: 685199

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 685200 685201

Parameter	Units	10487602004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	6.7	25	25	31.6	32.0	100	102	80-120	1	20	

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QUALIFIERS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

C0	Result confirmed by second analysis.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10487825

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10487825001	**MW36-GW-081619**	RSK 175	627050		
10487825001	**MW36-GW-081619**	EPA 3010	627282	EPA 6010D	627656
10487825001	**MW36-GW-081619**	EPA 7470A	627293	EPA 7470A	627648
10487825001	**MW36-GW-081619**	EPA 8260B	627154		
10487825002	**Trip Blank**	EPA 8260B	627154		
10487825001	**MW36-GW-081619**	SM 2320B	627139		
10487825001	**MW36-GW-081619**	SM 2540C	627305		
10487825001	**MW36-GW-081619**	SM 4500-S-2 D	154305		
10487825001	**MW36-GW-081619**	EPA 300.0	626971		
10487825001	**MW36-GW-081619**	EPA 353.2	627347		
10487825001	**MW36-GW-081619**	EPA 410.4	627766	EPA 410.4	627844
10487825001	**MW36-GW-081619**	SM 5310C	173029		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A — Required Client Information:

Company:	UPRR_Jacobs
Address:	1400 W. 52nd Ave. Denver, CO 80221
Email:	awalsh@up.com
Phone:	Fax:
Requested Due Date:	24 Hr / 3 Day / 10 Day

Section B — Required Project Information:

Report To:	Mark Ochsner, Brad Ostapkowicz
Copy To:	Steve Demus, Jonathan Espinoza
Copy To:	David Hodson, UPRR-Sysdat@ghd.com
Purchase Order #:	1497-38-Rev0
Project Name:	Freeman,WA-Cenex Harvest Lease
Project #:	

Section C — Invoice Information:

Attention:	Anne Walsh (awalsh@up.com)
Company:	UPRR
Address:	1400 W. 52nd Ave, Denver, CO 80221
Pace Quote:	Contract# 9900758938
Pace Project Manager:	Jennifer Gross
Pace Profile #:	36447 / 1

Regulatory Agency

State / Location: WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test: Y/N	Low Level VOCs by 8260	Hold	6010/7470 TAL Dissolved*	2320 Alkalinity	Chloride, Sulfate, Nitrate, TKN D	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK 175	COD 410.4	Nitrate + Nitrite 353.2	Requested Analysis Filtered (Y/N)	
1	MW36-GW-081619	WT	G	8/16/19	1120			1	13	X	X	X	X	X			X		X	X	X	X	X	X	X	X	X		001
2	Trip Blank	1	1	8/16/19	0700			1	2				X				X		X	X	X	X	X	X	X	X	X		002
3																	X												
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

WO#: 10487825

10487825

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*Field Filtered by client	[signature] / Jacobs	8/16/19	1300	[signature] / Pace	8/17/19	0830	1,2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karla Savage

SIGNATURE of SAMPLER: [signature]

DATE Signed: 8/16/19

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 09May2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.28**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR - Jacobs

Project #: **WO#: 10487825**

PM: JMG **Due Date: 09/03/19**

CLIENT: UPRR_Jacobs

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Pace [ ] SpeeDee [ ] Commercial **See Exception** [ ]

Tracking Number: 4638 0348 5008

Custody Seal on Cooler/Box Present? [X] Yes [ ] No **Seals Intact?** [ ] Yes [ ] No **Biological Tissue Frozen?** [ ] Yes [ ] No [X] N/A

Packing Material: [X] Bubble Wrap [X] Bubble Bags [ ] None [X] Other: PB **Temp Blank?** [X] Yes [ ] No

Thermometer: [X] T1(0461) [ ] T2(1336) [ ] T3(0459) [ ] T4(0254) [ ] T5(0489) **Type of Ice:** [X] Wet [ ] Blue [ ] None [ ] Dry [ ] Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 1.1 °C **Average Corrected Temp (no temp blank only):** °C **See Exceptions** [ ]

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 1.2 °C

USDA Regulated Soil: ([X] N/A, water sample/Other:)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? [ ] Yes [ ] No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? [ ] Yes [ ] No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

Date/Initials of Person Examining Contents: CEG 8/17/19

				COMMENTS:
Chain of Custody Present and Filled Out?	[X] Yes	[ ] No		1.
Chain of Custody Relinquished?	[X] Yes	[ ] No		2.
Sampler Name and/or Signature on COC?	[X] Yes	[ ] No	[ ] N/A	3.
Samples Arrived within Hold Time?	[X] Yes	[ ] No		4.
Short Hold Time Analysis (<72 hr)?	[X] Yes	[ ] No		5. [ ] Fecal Coliform [ ] HPC [ ] Total Coliform/E coli [ ] BOD/cBOD [ ] Hex Chrome [ ] Turbidity [X] Nitrate [ ] Nitrite [ ] Orthophos [ ] Other
Rush Turn Around Time Requested?	[ ] Yes	[X] No		6.
Sufficient Volume?	[X] Yes	[ ] No		7.
Correct Containers Used? -Pace Containers Used?	[X] Yes [X] Yes	[ ] No [ ] No		8.
Containers Intact?	[X] Yes	[ ] No		9. CEG 8/17/19
Field Filtered Volume Received for Dissolved Tests?	[X] Yes	[ ] No	[X] N/A	10. Is sediment visible in the dissolved container? [ ] Yes [X] No
Is sufficient information available to reconcile the samples to the COC? Matrix: [X] Water [ ] Soil [ ] Oil [ ] Other	[X] Yes	[ ] No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** [ ]
All containers needing acid/base preservation have been checked?	[X] Yes	[ ] No	[ ] N/A	12. Sample # [ ] NaOH [X] HNO_3 [X] H_2SO_4 [X] Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	[X] Yes	[ ] No	[ ] N/A	
Exceptions: VOA, Coliform, TOC, DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	[X] Yes	[ ] No	[ ] N/A	Positive for Res. Chlorine? [ ] Yes [ ] No **pH Paper Lot#** **See Exception** [ ]
				Res. Chlorine: 0-6 Roll 203614; 0-6 Strip; 0-14 Strip 100248
Headspace in VOA Vials (greater than 6mm)?	[ ] Yes	[X] No	[ ] N/A	13. **See Exception** [ ]
Trip Blank Present?	[X] Yes	[ ] No	[ ] N/A	14.
Trip Blank Custody Seals Present?	[X] Yes	[ ] No	[ ] N/A	Pace Trip Blank Lot # (if purchased): 216246

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Mark Ochsner Date/Time: 06/27/18 **Field Data Required?** [ ] Yes [ ] No

Comments/Resolution: WA certs not required for RSK or sulfide.

Project Manager Review: Jenni Gross Date: 08/19/19

Note: Whenever there is a discrepancy affecting North Carolina samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: CEG (1)

PRE

Chain of Custody

WO# : 12134013

12134013

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes [ ] ...

Workorder: 10487825 **Workorder Name:** Freeman,WA-Cenex Harvest Lease

Owner Received Date: 8/17/2019 **Results Requested By:** 9/03/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	MW36-GW-081619	PS	8/16/2019 11:30	10487825001	Water	2						X												
2																								
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	8/19/19 1800	[signature] 8/19/19	1830
2	[signature] 8/19/19	2300	B. Mathews	8/20/19 0645
3				

Comments

Cooler Temperature on Receipt 1.4 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace MN

Project #: **WO#: 12134013**

PM: RK1 **Due Date: 08/30/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☑ Yes ☐ No

Thermometer Used: ☑ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temp Read °C: 1.1 Cooler Temp Corrected °C: 1.4 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 8/19/19 DC

Comments: BM 8/20/19

Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☑ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Nikki Jarvis Date: 8/20/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

WO# : 20117842

Chain of Custody

20117842

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting l

Cert. Needed: ☐ Yes ☒ No

Workorder: 10487825 **Workorder Name:** Freeman,WA-Cenex Harvest Lease **Owner Received Date:** 8/17/2019 **Results Requested By:** 8/22/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	Preserved Containers: BP2Z	Requested Analysis: 5636267 / 4500 Sulfide	LAB USE ONLY
1	MW36-GW-081619	PS	8/16/2019 11:30	10487825001	Water	1		X	
2									
3									
4									
5									

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace	8/19/19 1620	FedEx	
2	FedEx 8/20/19 0815		[signature]	8/20/19 0815
3				

Comments

Cooler Temperature on Receipt 2.7 °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO#:20117842

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Rece

PM: CMM Due Date: 08/22/19
CLIENT: PASI-MINN

Project

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☑ Therm Fisher IR 6 ☐ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 5.20.19 CM

Temp must be measured from Temperature blank when present

			Comments:
Temperature Blank Present"?	☑Yes ☐No ☐N/A	1	
Chain of Custody Present:	☑Yes ☐No ☐N/A	2	
Chain of Custody Complete:	☑Yes ☐No ☐N/A	3	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	4	
Sampler Name & Signature on COC:	☐Yes ☐No ☑N/A	5	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	6	
Sufficient Volume:	☑Yes ☐No ☐N/A	7	
Correct Containers Used:	☑Yes ☐No ☐N/A	8	
Filtered vol. Rec. for Diss. tests	☐Yes ☐No ☑N/A	9	
Sample Labels match COC:	☑Yes ☐No ☐N/A	10	
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes ☐No ☐N/A	11	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes ☐No ☐N/A	12	
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	13	If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO_3 _____ H_2SO_4 _____
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14	
Trip Blank Present:	☐Yes ☑No	15	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

September 06, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on August 24, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Pace Analytical National Certification IDs

Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

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SAMPLE SUMMARY

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10488833001	**MW35-Start**	Water	08/22/19 08:15	08/24/19 09:25
10488833002	**MW35-Mid**	Water	08/22/19 11:45	08/24/19 09:25
10488833003	**MW35-GW-082219**	Water	08/22/19 16:15	08/24/19 09:25
10488833004	**Trip Blank**	Water	08/22/19 07:00	08/24/19 09:25

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SAMPLE ANALYTE COUNT

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10488833001	**MW35-Start**	EPA 8260B	DS2	83	PASI-M
10488833002	**MW35-Mid**	EPA 8260B	DS2	83	PASI-M
10488833003	**MW35-GW-082219**	RSK-175	DAH	3	PAN
		EPA 6010D	IP	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10488833004	**Trip Blank**	EPA 8260B	DS2	83	PASI-M

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SUMMARY OF DETECTION

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10488833001	**MW35-Start**					
EPA 8260B	Carbon tetrachloride	34.1	ug/L	0.50	08/25/19 15:40	
EPA 8260B	Chloroform	2.6	ug/L	1.0	08/25/19 15:40	
10488833002	**MW35-Mid**					
EPA 8260B	Carbon tetrachloride	40.0	ug/L	0.50	08/25/19 15:57	
EPA 8260B	Chloroform	2.5	ug/L	1.0	08/25/19 15:57	
10488833003	**MW35-GW-082219**					
EPA 6010D	Barium, Dissolved	25.7	ug/L	10.0	08/27/19 12:52	
EPA 6010D	Copper, Dissolved	1.4J	ug/L	10.0	08/27/19 12:52	
EPA 6010D	Nickel, Dissolved	2.2J	ug/L	20.0	08/27/19 12:52	
EPA 6010D	Vanadium, Dissolved	11.7J	ug/L	15.0	08/27/19 12:52	
EPA 6010D	Zinc, Dissolved	432	ug/L	20.0	08/27/19 12:52	
EPA 8260B	Carbon tetrachloride	38.0	ug/L	0.50	08/25/19 16:14	
EPA 8260B	Chloroform	2.3	ug/L	1.0	08/25/19 16:14	
SM 2320B	Alkalinity, Total as CaCO3	149	mg/L	5.0	08/26/19 08:20	
SM 2540C	Total Dissolved Solids	240	mg/L	10.0	08/26/19 17:16	
EPA 300.0	Chloride	8.6	mg/L	1.2	08/24/19 12:30	M1
EPA 300.0	Nitrate as N	1.7	mg/L	0.10	08/24/19 12:30	M1
EPA 300.0	Sulfate	12.0	mg/L	1.2	08/24/19 12:30	
EPA 353.2	Nitrogen, NO2 plus NO3	1.6	mg/L	0.10	08/24/19 14:17	
SM 5310C	Total Organic Carbon	2.0	mg/L	1.0	08/28/19 19:27	
10488833004	**Trip Blank**					
EPA 8260B	tert-Butyl Alcohol	41.2	ug/L	10.0	08/25/19 15:24	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **RSK-175**
Description: VOA (GC) RSK175
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for RSK-175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
4 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

QC Batch: 628310

SS: This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

- BLANK (Lab ID: 3390331)
  - Carbon disulfide
- LCS (Lab ID: 3390332)
  - Carbon disulfide
- MS (Lab ID: 3390636)
  - Carbon disulfide
- MSD (Lab ID: 3390637)
  - Carbon disulfide
- MW35-GW-082219 (Lab ID: 10488833003)
  - Carbon disulfide
- MW35-Mid (Lab ID: 10488833002)
  - Carbon disulfide
- MW35-Start (Lab ID: 10488833001)
  - Carbon disulfide
- Trip Blank (Lab ID: 10488833004)
  - Carbon disulfide

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 628310

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- LCS (Lab ID: 3390332)
  - 1,4-Dioxane (p-Dioxane)
  - Bromomethane
  - trans-1,4-Dichloro-2-butene
- MS (Lab ID: 3390636)
  - 1,4-Dioxane (p-Dioxane)
  - Bromomethane
  - trans-1,4-Dichloro-2-butene
- MSD (Lab ID: 3390637)
  - 1,4-Dioxane (p-Dioxane)
  - Bromomethane

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: September 06, 2019

QC Batch: 628310

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- trans-1,4-Dichloro-2-butene

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 628310

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
- LCS (Lab ID: 3390332)
  - 1,4-Dioxane (p-Dioxane)
  - trans-1,4-Dichloro-2-butene

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 628310

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10488898001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- MS (Lab ID: 3390636)
  - trans-1,4-Dichloro-2-butene
- MSD (Lab ID: 3390637)
  - trans-1,4-Dichloro-2-butene

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3390636)
  - Bromomethane
- MSD (Lab ID: 3390637)
  - Bromomethane

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: September 06, 2019

Analyte Comments:

QC Batch: 628310

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3390331)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3390332)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3390636)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3390637)
  - 1,2-Dichloroethene (Total)
- MW35-GW-082219 (Lab ID: 10488833003)
  - 1,2-Dichloroethene (Total)
- MW35-Mid (Lab ID: 10488833002)
  - 1,2-Dichloroethene (Total)
- MW35-Start (Lab ID: 10488833001)
  - 1,2-Dichloroethene (Total)
- Trip Blank (Lab ID: 10488833004)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 628340

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10488450002,10488833003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3390430)
  - Alkalinity, Total as CaCO3
- MSD (Lab ID: 3390431)
  - Alkalinity, Total as CaCO3

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 155250

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20118992001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 692600)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 628274

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10488833003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3390102)
  - Chloride
  - Nitrate as N
- MSD (Lab ID: 3390103)
  - Nitrate as N

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: September 06, 2019

General Information:
1 sample was analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Sample: MW35-Start **Lab ID: 10488833001** Collected: 08/22/19 08:15 Received: 08/24/19 09:25 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:40	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		08/25/19 15:40	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	1.0	0.17	1		08/25/19 15:40	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:40	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		08/25/19 15:40	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:40	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:40	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:40	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		08/25/19 15:40	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		08/25/19 15:40	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		08/25/19 15:40	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:40	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		08/25/19 15:40	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		08/25/19 15:40	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		08/25/19 15:40	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		08/25/19 15:40	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		08/25/19 15:40	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		08/25/19 15:40	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		08/25/19 15:40	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:40	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		08/25/19 15:40	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:40	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		08/25/19 15:40	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		08/25/19 15:40	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		08/25/19 15:40	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		08/25/19 15:40	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:40	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		08/25/19 15:40	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		08/25/19 15:40	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		08/25/19 15:40	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		08/25/19 15:40	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		08/25/19 15:40	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		08/25/19 15:40	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		08/25/19 15:40	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		08/25/19 15:40	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		08/25/19 15:40	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		08/25/19 15:40	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		08/25/19 15:40	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		08/25/19 15:40	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		08/25/19 15:40	75-15-0	SS
Carbon tetrachloride	**34.1**	ug/L	0.50	0.19	1		08/25/19 15:40	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:40	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		08/25/19 15:40	75-00-3	
Chloroform	**2.6**	ug/L	1.0	0.45	1		08/25/19 15:40	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		08/25/19 15:40	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		08/25/19 15:40	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Sample: MW35-Start **Lab ID: 10488833001** Collected: 08/22/19 08:15 Received: 08/24/19 09:25 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		08/25/19 15:40	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		08/25/19 15:40	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		08/25/19 15:40	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		08/25/19 15:40	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:40	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		08/25/19 15:40	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		08/25/19 15:40	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:40	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:40	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		08/25/19 15:40	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		08/25/19 15:40	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		08/25/19 15:40	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:40	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		08/25/19 15:40	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		08/25/19 15:40	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		08/25/19 15:40	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		08/25/19 15:40	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		08/25/19 15:40	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		08/25/19 15:40	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		08/25/19 15:40	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:40	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:40	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		08/25/19 15:40	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		08/25/19 15:40	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		08/25/19 15:40	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:40	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:40	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:40	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		08/25/19 15:40	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		08/25/19 15:40	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:40	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		08/25/19 15:40	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:40	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		08/25/19 15:40	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%.	75-136		1		08/25/19 15:40	17060-07-0	
Toluene-d8 (S)	96	%.	75-125		1		08/25/19 15:40	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		08/25/19 15:40	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Sample: MW35-Mid **Lab ID: 10488833002** Collected: 08/22/19 11:45 Received: 08/24/19 09:25 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:57	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		08/25/19 15:57	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	1.0	0.17	1		08/25/19 15:57	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:57	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		08/25/19 15:57	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:57	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:57	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:57	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		08/25/19 15:57	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		08/25/19 15:57	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		08/25/19 15:57	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:57	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		08/25/19 15:57	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		08/25/19 15:57	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		08/25/19 15:57	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		08/25/19 15:57	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		08/25/19 15:57	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		08/25/19 15:57	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		08/25/19 15:57	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:57	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		08/25/19 15:57	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:57	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		08/25/19 15:57	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		08/25/19 15:57	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		08/25/19 15:57	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		08/25/19 15:57	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:57	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		08/25/19 15:57	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		08/25/19 15:57	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		08/25/19 15:57	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		08/25/19 15:57	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		08/25/19 15:57	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		08/25/19 15:57	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		08/25/19 15:57	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		08/25/19 15:57	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		08/25/19 15:57	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		08/25/19 15:57	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		08/25/19 15:57	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		08/25/19 15:57	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		08/25/19 15:57	75-15-0	SS
Carbon tetrachloride	**40.0**	ug/L	0.50	0.19	1		08/25/19 15:57	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:57	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		08/25/19 15:57	75-00-3	
Chloroform	**2.5**	ug/L	1.0	0.45	1		08/25/19 15:57	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		08/25/19 15:57	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		08/25/19 15:57	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Sample: MW35-Mid **Lab ID: 10488833002** Collected: 08/22/19 11:45 Received: 08/24/19 09:25 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		08/25/19 15:57	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		08/25/19 15:57	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		08/25/19 15:57	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		08/25/19 15:57	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:57	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		08/25/19 15:57	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		08/25/19 15:57	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:57	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:57	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		08/25/19 15:57	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		08/25/19 15:57	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		08/25/19 15:57	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:57	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		08/25/19 15:57	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		08/25/19 15:57	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		08/25/19 15:57	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		08/25/19 15:57	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		08/25/19 15:57	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		08/25/19 15:57	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		08/25/19 15:57	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:57	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:57	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		08/25/19 15:57	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		08/25/19 15:57	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		08/25/19 15:57	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:57	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:57	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:57	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		08/25/19 15:57	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		08/25/19 15:57	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:57	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		08/25/19 15:57	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:57	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		08/25/19 15:57	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%.	75-136		1		08/25/19 15:57	17060-07-0	
Toluene-d8 (S)	96	%.	75-125		1		08/25/19 15:57	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1		08/25/19 15:57	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Sample: MW35-GW-082219 **Lab ID: 10488833003** Collected: 08/22/19 16:15 Received: 08/24/19 09:25 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/05/19 13:25	09/05/19 13:25	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/05/19 13:25	09/05/19 13:25	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/05/19 13:25	09/05/19 13:25	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	08/27/19 05:27	08/27/19 12:52	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	08/27/19 05:27	08/27/19 12:52	7440-38-2	
Barium, Dissolved	**25.7**	ug/L	10.0	0.60	1	08/27/19 05:27	08/27/19 12:52	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	08/27/19 05:27	08/27/19 12:52	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	08/27/19 05:27	08/27/19 12:52	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	08/27/19 05:27	08/27/19 12:52	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	08/27/19 05:27	08/27/19 12:52	7440-48-4	
Copper, Dissolved	**1.4J**	ug/L	10.0	1.2	1	08/27/19 05:27	08/27/19 12:52	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	08/27/19 05:27	08/27/19 12:52	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	08/27/19 05:27	08/27/19 12:52	7439-98-7	
Nickel, Dissolved	**2.2J**	ug/L	20.0	1.1	1	08/27/19 05:27	08/27/19 12:52	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	08/27/19 05:27	08/27/19 12:52	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	08/27/19 05:27	08/27/19 12:52	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	08/27/19 05:27	08/27/19 12:52	7440-28-0	
Vanadium, Dissolved	**11.7J**	ug/L	15.0	0.43	1	08/27/19 05:27	08/27/19 12:52	7440-62-2	
Zinc, Dissolved	**432**	ug/L	20.0	6.3	1	08/27/19 05:27	08/27/19 12:52	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	08/27/19 08:13	08/27/19 11:22	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		08/25/19 16:14	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		08/25/19 16:14	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	1.0	0.17	1		08/25/19 16:14	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		08/25/19 16:14	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		08/25/19 16:14	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		08/25/19 16:14	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 16:14	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 16:14	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		08/25/19 16:14	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		08/25/19 16:14	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		08/25/19 16:14	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 16:14	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		08/25/19 16:14	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		08/25/19 16:14	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		08/25/19 16:14	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		08/25/19 16:14	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		08/25/19 16:14	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		08/25/19 16:14	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		08/25/19 16:14	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 16:14	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Sample: MW35-GW-082219 **Lab ID: 10488833003** Collected: 08/22/19 16:15 Received: 08/24/19 09:25 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		08/25/19 16:14	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 16:14	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		08/25/19 16:14	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		08/25/19 16:14	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		08/25/19 16:14	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		08/25/19 16:14	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 16:14	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		08/25/19 16:14	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		08/25/19 16:14	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		08/25/19 16:14	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		08/25/19 16:14	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		08/25/19 16:14	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		08/25/19 16:14	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		08/25/19 16:14	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		08/25/19 16:14	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		08/25/19 16:14	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		08/25/19 16:14	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		08/25/19 16:14	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		08/25/19 16:14	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		08/25/19 16:14	75-15-0	SS
Carbon tetrachloride	**38.0**	ug/L	0.50	0.19	1		08/25/19 16:14	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 16:14	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		08/25/19 16:14	75-00-3	
Chloroform	**2.3**	ug/L	1.0	0.45	1		08/25/19 16:14	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		08/25/19 16:14	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		08/25/19 16:14	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		08/25/19 16:14	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		08/25/19 16:14	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		08/25/19 16:14	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		08/25/19 16:14	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		08/25/19 16:14	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		08/25/19 16:14	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		08/25/19 16:14	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		08/25/19 16:14	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		08/25/19 16:14	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		08/25/19 16:14	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		08/25/19 16:14	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		08/25/19 16:14	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 16:14	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		08/25/19 16:14	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		08/25/19 16:14	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		08/25/19 16:14	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		08/25/19 16:14	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		08/25/19 16:14	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		08/25/19 16:14	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		08/25/19 16:14	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Sample: MW35-GW-082219 **Lab ID: 10488833003** Collected: 08/22/19 16:15 Received: 08/24/19 09:25 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 16:14	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 16:14	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		08/25/19 16:14	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		08/25/19 16:14	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		08/25/19 16:14	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 16:14	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 16:14	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 16:14	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		08/25/19 16:14	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		08/25/19 16:14	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 16:14	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		08/25/19 16:14	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		08/25/19 16:14	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		08/25/19 16:14	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%.	75-136		1		08/25/19 16:14	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		08/25/19 16:14	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		08/25/19 16:14	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**149**	mg/L	5.0	2.0	1		08/26/19 08:20		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**240**	mg/L	10.0	5.0	1		08/26/19 17:16		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		08/28/19 16:42	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**8.6**	mg/L	1.2	0.12	1		08/24/19 12:30	16887-00-6	M1
Nitrate as N	**1.7**	mg/L	0.10	0.012	1		08/24/19 12:30	14797-55-8	M1
Sulfate	**12.0**	mg/L	1.2	0.28	1		08/24/19 12:30	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.6**	mg/L	0.10	0.018	1		08/24/19 14:17		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	08/27/19 09:45	08/27/19 13:01		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.0**	mg/L	1.0	0.39	1		08/28/19 19:27	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Sample: Trip Blank **Lab ID: 10488833004** Collected: 08/22/19 07:00 Received: 08/24/19 09:25 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:24	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		08/25/19 15:24	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	1.0	0.17	1		08/25/19 15:24	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:24	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		08/25/19 15:24	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:24	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:24	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:24	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		08/25/19 15:24	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		08/25/19 15:24	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		08/25/19 15:24	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:24	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		08/25/19 15:24	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		08/25/19 15:24	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		08/25/19 15:24	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		08/25/19 15:24	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		08/25/19 15:24	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		08/25/19 15:24	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		08/25/19 15:24	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:24	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		08/25/19 15:24	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:24	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		08/25/19 15:24	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		08/25/19 15:24	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		08/25/19 15:24	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		08/25/19 15:24	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:24	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		08/25/19 15:24	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		08/25/19 15:24	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		08/25/19 15:24	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		08/25/19 15:24	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		08/25/19 15:24	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		08/25/19 15:24	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		08/25/19 15:24	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		08/25/19 15:24	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		08/25/19 15:24	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		08/25/19 15:24	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		08/25/19 15:24	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		08/25/19 15:24	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		08/25/19 15:24	75-15-0	SS
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		08/25/19 15:24	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:24	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		08/25/19 15:24	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		08/25/19 15:24	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		08/25/19 15:24	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		08/25/19 15:24	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Sample: Trip Blank **Lab ID: 10488833004** Collected: 08/22/19 07:00 Received: 08/24/19 09:25 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		08/25/19 15:24	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		08/25/19 15:24	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		08/25/19 15:24	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		08/25/19 15:24	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:24	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		08/25/19 15:24	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		08/25/19 15:24	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:24	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:24	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		08/25/19 15:24	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		08/25/19 15:24	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		08/25/19 15:24	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		08/25/19 15:24	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		08/25/19 15:24	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		08/25/19 15:24	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		08/25/19 15:24	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		08/25/19 15:24	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		08/25/19 15:24	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		08/25/19 15:24	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		08/25/19 15:24	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:24	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		08/25/19 15:24	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		08/25/19 15:24	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		08/25/19 15:24	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		08/25/19 15:24	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		08/25/19 15:24	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:24	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:24	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		08/25/19 15:24	994-05-8	
tert-Butyl Alcohol	**41.2**	ug/L	10.0	1.2	1		08/25/19 15:24	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		08/25/19 15:24	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	1.0	0.12	1		08/25/19 15:24	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		08/25/19 15:24	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		08/25/19 15:24	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%.	75-136		1		08/25/19 15:24	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		08/25/19 15:24	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		08/25/19 15:24	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 1340208 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10488833003

METHOD BLANK: R3447564-1 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/05/19 13:00	
Ethane	ug/L	<4.07	13.0	4.07	09/05/19 13:00	
Ethene	ug/L	<4.26	13.0	4.26	09/05/19 13:00	

LABORATORY CONTROL SAMPLE & LCSD: R3447564-4 R3447564-5

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	74.4	78.0	110	115	85.0-115	4.78	20	
Ethane	ug/L	129	123	125	95.4	96.8	85.0-115	1.48	20	
Ethene	ug/L	127	122	124	96.4	97.7	85.0-115	1.36	20	

SAMPLE DUPLICATE: R3447564-2

Parameter	Units	L1135438-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	155	156	0.433	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

SAMPLE DUPLICATE: R3447564-3

Parameter	Units	L1134253-03 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	1760	1820	3.60	20	
Ethane	ug/L	176	182	3.64	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 628570 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10488833003

METHOD BLANK: 3391223 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	08/27/19 11:17	

LABORATORY CONTROL SAMPLE: 3391224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.9	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3391225 3391226

Parameter	Units	10488833003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	4.8	5.2	97	103	80-120	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 628327 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10488833003

METHOD BLANK: 3390387 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	08/27/19 12:46	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	08/27/19 12:46	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	08/27/19 12:46	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	08/27/19 12:46	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	08/27/19 12:46	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	08/27/19 12:46	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	08/27/19 12:46	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	08/27/19 12:46	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	08/27/19 12:46	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	08/27/19 12:46	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	08/27/19 12:46	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	08/27/19 12:46	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	08/27/19 12:46	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	08/27/19 12:46	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	08/27/19 12:46	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	08/27/19 12:46	

LABORATORY CONTROL SAMPLE: 3390388

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	940	94	80-120	
Arsenic, Dissolved	ug/L	1000	971	97	80-120	
Barium, Dissolved	ug/L	1000	1010	101	80-120	
Beryllium, Dissolved	ug/L	1000	969	97	80-120	
Cadmium, Dissolved	ug/L	1000	979	98	80-120	
Chromium, Dissolved	ug/L	1000	978	98	80-120	
Cobalt, Dissolved	ug/L	1000	976	98	80-120	
Copper, Dissolved	ug/L	1000	956	96	80-120	
Lead, Dissolved	ug/L	1000	971	97	80-120	
Molybdenum, Dissolved	ug/L	1000	929	93	80-120	
Nickel, Dissolved	ug/L	1000	981	98	80-120	
Selenium, Dissolved	ug/L	1000	961	96	80-120	
Silver, Dissolved	ug/L	500	479	96	80-120	
Thallium, Dissolved	ug/L	1000	992	99	80-120	
Vanadium, Dissolved	ug/L	1000	952	95	80-120	
Zinc, Dissolved	ug/L	1000	972	97	80-120	

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Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3390389 3390390

Parameter	Units	10488833003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	966	976	97	98	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1010	1010	101	101	75-125	0	20	
Barium, Dissolved	ug/L	25.7	1000	1000	1040	1060	102	104	75-125	2	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	999	1010	100	101	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	999	1010	100	101	75-125	1	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1000	1010	100	101	75-125	0	20	
Cobalt, Dissolved	ug/L	<0.50	1000	1000	986	997	99	100	75-125	1	20	
Copper, Dissolved	ug/L	1.4J	1000	1000	977	991	98	99	75-125	1	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	984	994	98	99	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	952	959	95	96	75-125	1	20	
Nickel, Dissolved	ug/L	2.2J	1000	1000	997	1000	100	100	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	986	990	99	99	75-125	0	20	
Silver, Dissolved	ug/L	<0.40	500	500	490	497	98	99	75-125	1	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	996	1000	99	100	75-125	1	20	
Vanadium, Dissolved	ug/L	11.7J	1000	1000	985	1000	97	99	75-125	2	20	
Zinc, Dissolved	ug/L	432	1000	1000	1420	1420	99	99	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 628310 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10488833001, 10488833002, 10488833003, 10488833004

METHOD BLANK: 3390331 Matrix: Water
Associated Lab Samples: 10488833001, 10488833002, 10488833003, 10488833004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	08/25/19 14:22	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	08/25/19 14:22	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	1.0	0.17	08/25/19 14:22	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	08/25/19 14:22	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	08/25/19 14:22	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	08/25/19 14:22	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	08/25/19 14:22	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	08/25/19 14:22	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	08/25/19 14:22	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	08/25/19 14:22	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	08/25/19 14:22	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	08/25/19 14:22	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	10.0	1.7	08/25/19 14:22	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	08/25/19 14:22	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	08/25/19 14:22	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	08/25/19 14:22	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	08/25/19 14:22	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	08/25/19 14:22	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	08/25/19 14:22	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	08/25/19 14:22	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	08/25/19 14:22	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	08/25/19 14:22	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	08/25/19 14:22	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	08/25/19 14:22	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	08/25/19 14:22	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	08/25/19 14:22	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	08/25/19 14:22	
2-Hexanone	ug/L	<0.88	5.0	0.88	08/25/19 14:22	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	08/25/19 14:22	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	08/25/19 14:22	
Acetone	ug/L	<9.2	20.0	9.2	08/25/19 14:22	
Acrolein	ug/L	<1.2	10.0	1.2	08/25/19 14:22	
Acrylonitrile	ug/L	<0.91	10.0	0.91	08/25/19 14:22	
Benzene	ug/L	<0.10	0.50	0.10	08/25/19 14:22	
Bromobenzene	ug/L	<0.21	0.50	0.21	08/25/19 14:22	
Bromochloromethane	ug/L	<0.27	1.0	0.27	08/25/19 14:22	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	08/25/19 14:22	
Bromoform	ug/L	<0.80	4.0	0.80	08/25/19 14:22	
Bromomethane	ug/L	<1.8	4.0	1.8	08/25/19 14:22	
Carbon disulfide	ug/L	<0.078	1.0	0.078	08/25/19 14:22	SS
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	08/25/19 14:22	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

METHOD BLANK: 3390331 Matrix: Water
Associated Lab Samples: 10488833001, 10488833002, 10488833003, 10488833004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	08/25/19 14:22	
Chloroethane	ug/L	<0.49	1.0	0.49	08/25/19 14:22	
Chloroform	ug/L	<0.45	1.0	0.45	08/25/19 14:22	
Chloromethane	ug/L	<0.16	4.0	0.16	08/25/19 14:22	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	08/25/19 14:22	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	08/25/19 14:22	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	08/25/19 14:22	
Dibromomethane	ug/L	<0.16	1.0	0.16	08/25/19 14:22	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	08/25/19 14:22	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	08/25/19 14:22	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	08/25/19 14:22	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	08/25/19 14:22	
Ethylbenzene	ug/L	<0.14	0.50	0.14	08/25/19 14:22	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	08/25/19 14:22	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	08/25/19 14:22	
m&p-Xylene	ug/L	<0.31	1.0	0.31	08/25/19 14:22	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	08/25/19 14:22	
Methylene Chloride	ug/L	<0.98	4.0	0.98	08/25/19 14:22	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	08/25/19 14:22	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	08/25/19 14:22	
Naphthalene	ug/L	<0.48	1.0	0.48	08/25/19 14:22	
o-Xylene	ug/L	<0.16	0.50	0.16	08/25/19 14:22	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	08/25/19 14:22	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	08/25/19 14:22	
Styrene	ug/L	<0.19	1.0	0.19	08/25/19 14:22	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	08/25/19 14:22	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	08/25/19 14:22	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	08/25/19 14:22	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	08/25/19 14:22	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	08/25/19 14:22	
Toluene	ug/L	<0.083	0.50	0.083	08/25/19 14:22	
trans-1,2-Dichloroethene	ug/L	<0.12	1.0	0.12	08/25/19 14:22	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	08/25/19 14:22	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	08/25/19 14:22	
Trichloroethene	ug/L	<0.15	0.40	0.15	08/25/19 14:22	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	08/25/19 14:22	
Vinyl acetate	ug/L	<1.1	10.0	1.1	08/25/19 14:22	
Vinyl chloride	ug/L	<0.092	0.20	0.092	08/25/19 14:22	
Xylene (Total)	ug/L	<0.31	1.5	0.31	08/25/19 14:22	
1,2-Dichloroethane-d4 (S)	%.	93	75-136		08/25/19 14:22	
4-Bromofluorobenzene (S)	%.	97	75-125		08/25/19 14:22	
Toluene-d8 (S)	%.	94	75-125		08/25/19 14:22	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

LABORATORY CONTROL SAMPLE: 3390332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.0	95	68-141	
1,1,1-Trichloroethane	ug/L	20	18.3	91	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	18.3	91	73-125	
1,1,2-Trichloroethane	ug/L	20	19.7	99	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.5	98	69-132	
1,1-Dichloroethane	ug/L	20	19.6	98	73-125	
1,1-Dichloroethene	ug/L	20	20.2	101	71-126	
1,1-Dichloropropene	ug/L	20	18.7	93	73-126	
1,2,3-Trichlorobenzene	ug/L	20	17.2	86	72-126	
1,2,3-Trichloropropane	ug/L	20	17.3	87	75-126	
1,2,4-Trichlorobenzene	ug/L	20	18.6	93	71-134	
1,2,4-Trimethylbenzene	ug/L	20	18.6	93	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	42.3	85	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	20.5	103	75-129	
1,2-Dichlorobenzene	ug/L	20	19.0	95	75-129	
1,2-Dichloroethane	ug/L	20	17.0	85	75-125	
1,2-Dichloroethene (Total)	ug/L	40	37.1	93	74-125	N2
1,2-Dichloropropane	ug/L	20	19.2	96	75-125	
1,3,5-Trimethylbenzene	ug/L	20	18.2	91	75-127	
1,3-Dichlorobenzene	ug/L	20	19.7	98	75-126	
1,3-Dichloropropane	ug/L	20	19.6	98	75-125	
1,4-Dichlorobenzene	ug/L	20	19.4	97	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	641	160	72-129	CH,L3
2,2,4-Trimethylpentane	ug/L	20	19.9	100	72-128	
2,2-Dichloropropane	ug/L	20	18.9	95	65-138	
2-Butanone (MEK)	ug/L	100	114	114	59-144	
2-Chlorotoluene	ug/L	20	19.0	95	75-127	
2-Hexanone	ug/L	100	113	113	73-134	
4-Chlorotoluene	ug/L	20	20.8	104	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.9	97	62-141	
Acetone	ug/L	100	137	137	60-137	
Acrolein	ug/L	200	159	80	60-141	
Acrylonitrile	ug/L	200	200	100	75-129	
Benzene	ug/L	20	20.3	101	73-125	
Bromobenzene	ug/L	20	19.6	98	73-125	
Bromochloromethane	ug/L	20	19.7	98	75-135	
Bromodichloromethane	ug/L	20	20.0	100	75-125	
Bromoform	ug/L	20	18.8	94	67-136	
Bromomethane	ug/L	20	29.8	149	30-150	CH
Carbon disulfide	ug/L	20	16.8	84	47-137	SS
Carbon tetrachloride	ug/L	20	18.3	91	75-125	
Chlorobenzene	ug/L	20	19.4	97	75-125	
Chloroethane	ug/L	20	18.5	92	63-136	
Chloroform	ug/L	20	17.5	87	73-128	
Chloromethane	ug/L	20	16.1	81	55-130	
cis-1,2-Dichloroethene	ug/L	20	18.5	93	75-125	
cis-1,3-Dichloropropene	ug/L	20	23.7	119	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

LABORATORY CONTROL SAMPLE: 3390332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	18.5	92	75-125	
Dibromomethane	ug/L	20	20.5	102	75-125	
Dichlorodifluoromethane	ug/L	20	17.8	89	63-132	
Dichlorofluoromethane	ug/L	20	21.3	107	68-127	
Diisopropyl ether	ug/L	20	20.3	101	71-131	
Ethyl-tert-butyl ether	ug/L	20	20.5	103	75-125	
Ethylbenzene	ug/L	20	18.9	95	75-125	
Hexachloro-1,3-butadiene	ug/L	20	18.7	94	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.1	96	75-125	
m&p-Xylene	ug/L	40	37.4	94	75-126	
Methyl-tert-butyl ether	ug/L	20	20.0	100	75-125	
Methylene Chloride	ug/L	20	17.2	86	70-125	
n-Butylbenzene	ug/L	20	19.8	99	75-126	
n-Propylbenzene	ug/L	20	19.4	97	73-127	
Naphthalene	ug/L	20	18.3	92	63-128	
o-Xylene	ug/L	20	18.9	94	75-128	
p-Isopropyltoluene	ug/L	20	19.5	98	75-125	
sec-Butylbenzene	ug/L	20	18.9	94	75-126	
Styrene	ug/L	20	19.1	96	75-125	
tert-Amylmethyl ether	ug/L	20	19.1	96	75-125	
tert-Butyl Alcohol	ug/L	200	192	96	75-130	
tert-Butylbenzene	ug/L	20	18.2	91	75-131	
Tetrachloroethene	ug/L	20	19.5	97	74-125	
Tetrahydrofuran	ug/L	200	194	97	64-138	
Toluene	ug/L	20	17.3	87	74-125	
trans-1,2-Dichloroethene	ug/L	20	18.6	93	68-128	
trans-1,3-Dichloropropene	ug/L	20	22.7	113	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	72.8	146	60-127	CH,L3
Trichloroethene	ug/L	20	19.4	97	75-127	
Trichlorofluoromethane	ug/L	20	20.5	102	72-133	
Vinyl acetate	ug/L	20	19.4	97	61-129	
Vinyl chloride	ug/L	20	20.4	102	75-128	
Xylene (Total)	ug/L	60	56.3	94	75-125	
1,2-Dichloroethane-d4 (S)	%.			94	75-136	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			99	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3390636 3390637

Parameter	Units	10488898001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	19.4	19.1	97	96	75-140	1	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	18.6	17.8	93	89	74-136	4	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	18.8	19.1	94	95	66-134	1	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	19.4	19.7	97	99	75-126	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3390636 3390637

Parameter	Units	10488898001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	20.1	19.6	100	98	65-146	2	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	19.8	19.5	99	97	68-132	1	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	20.4	19.8	102	99	66-139	3	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	19.2	19.0	96	95	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	18.7	19.4	94	97	67-129	3	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	18.0	18.6	90	93	69-128	3	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	19.0	19.4	95	97	65-140	2	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	19.1	18.7	95	93	71-133	2	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	44.2	45.7	88	91	54-138	3	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	20.6	20.9	103	104	68-125	1	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	19.2	19.2	96	96	74-136	0	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	16.4	16.9	82	85	68-125	3	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	37.0	36.5	92	91	71-126	1	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	19.3	19.2	96	96	67-125	0	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	18.7	18.3	93	92	68-137	2	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	19.9	19.7	99	99	75-131	1	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	18.9	19.1	95	95	71-125	1	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	19.6	19.3	98	97	74-126	2	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	362	351	90	88	68-125	3	30	CH
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	18.7	19.1	94	96	54-129	2	30	
2,2-Dichloropropane	ug/L	<0.17	20	20	19.2	18.7	96	94	69-139	2	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	89.5	89.6	89	90	54-144	0	30	
2-Chlorotoluene	ug/L	<0.16	20	20	19.3	19.0	97	95	75-134	2	30	
2-Hexanone	ug/L	<0.88	100	100	93.8	96.5	94	97	58-137	3	30	
4-Chlorotoluene	ug/L	<0.13	20	20	20.5	20.2	103	101	72-133	2	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	99.0	102	99	102	60-129	3	30	
Acetone	ug/L	259	100	100	338	340	78	81	62-132	1	30	
Acrolein	ug/L	<1.2	200	200	175	181	87	91	30-150	4	30	
Acrylonitrile	ug/L	<0.91	200	200	198	203	99	102	68-125	3	30	
Benzene	ug/L	<0.10	20	20	20.4	20.2	102	101	68-125	1	30	
Bromobenzene	ug/L	<0.21	20	20	19.6	19.8	98	99	73-126	1	30	
Bromochloromethane	ug/L	<0.27	20	20	19.3	19.2	97	96	66-143	1	30	
Bromodichloromethane	ug/L	<0.22	20	20	20.3	20.3	102	102	74-125	0	30	
Bromoform	ug/L	<0.80	20	20	18.9	19.7	94	98	64-134	4	30	
Bromomethane	ug/L	<1.8	20	20	31.1	30.1	155	151	30-150	3	30	CH,M1
Carbon disulfide	ug/L	<0.078	20	20	16.8	16.6	84	83	43-147	1	30	SS
Carbon tetrachloride	ug/L	<0.19	20	20	18.6	18.0	93	90	71-143	3	30	
Chlorobenzene	ug/L	<0.17	20	20	19.6	19.8	98	99	75-125	1	30	
Chloroethane	ug/L	<0.49	20	20	17.7	17.5	88	87	75-129	1	30	
Chloroform	ug/L	<0.45	20	20	17.3	16.6	87	83	66-132	4	30	
Chloromethane	ug/L	<0.16	20	20	15.4	14.9	77	74	53-137	3	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	18.4	18.0	92	90	67-133	2	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	23.5	24.0	117	120	66-125	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3390636 3390637

Parameter	Units	10488898001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	18.6	19.1	93	96	62-132	3	30	
Dibromomethane	ug/L	<0.16	20	20	20.1	20.6	100	103	67-125	3	30	
Dichlorodifluoromethane	ug/L	<0.23	20	20	17.0	16.6	85	83	71-142	2	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	20.5	20.0	103	100	70-131	3	30	
Diisopropyl ether	ug/L	<0.13	20	20	19.8	19.7	99	99	63-131	0	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	20.1	20.2	101	101	66-128	0	30	
Ethylbenzene	ug/L	<0.14	20	20	19.2	19.1	96	96	74-126	0	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	20.1	19.6	100	98	68-143	2	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	19.5	19.7	97	99	74-130	1	30	
m&p-Xylene	ug/L	<0.31	40	40	37.8	37.9	94	95	69-132	0	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	19.6	19.8	98	99	65-131	1	30	
Methylene Chloride	ug/L	<0.98	20	20	17.5	16.9	87	85	57-125	3	30	
n-Butylbenzene	ug/L	<0.24	20	20	20.4	20.1	102	100	71-131	2	30	
n-Propylbenzene	ug/L	<0.10	20	20	20.1	19.9	100	99	67-138	1	30	
Naphthalene	ug/L	<0.48	20	20	19.6	20.3	98	101	60-130	3	30	
o-Xylene	ug/L	<0.16	20	20	19.6	19.3	98	96	69-131	2	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	20.3	19.9	102	100	72-133	2	30	
sec-Butylbenzene	ug/L	<0.15	20	20	19.5	19.5	97	97	73-134	0	30	
Styrene	ug/L	<0.19	20	20	19.1	19.6	96	98	72-125	3	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	18.9	19.2	94	96	67-125	2	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	200	199	100	99	64-137	0	30	
tert-Butylbenzene	ug/L	<0.15	20	20	18.9	18.6	95	93	70-143	1	30	
Tetrachloroethene	ug/L	<0.17	20	20	19.7	19.7	99	98	72-129	0	30	
Tetrahydrofuran	ug/L	<2.2	200	200	190	192	95	96	66-128	1	30	
Toluene	ug/L	<0.083	20	20	17.7	17.4	88	87	73-125	2	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	18.5	18.5	93	93	62-137	0	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	22.6	23.1	113	115	61-136	2	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	75.2	76.7	150	153	45-128	2	30	CH,M0
Trichloroethene	ug/L	<0.15	20	20	19.9	19.3	100	97	74-132	3	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	19.8	19.2	99	96	75-139	3	30	
Vinyl acetate	ug/L	<1.1	20	20	19.0	18.9	95	95	51-135	1	30	
Vinyl chloride	ug/L	<0.092	20	20	19.8	19.6	99	98	68-146	1	30	
Xylene (Total)	ug/L	<0.31	60	60	57.4	57.2	96	95	67-137	0	30	
1,2-Dichloroethane-d4 (S)	%.						93	92	75-136			
4-Bromofluorobenzene (S)	%.						98	98	75-125			
Toluene-d8 (S)	%.						99	100	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 628340 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10488833003

METHOD BLANK: 3390425 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	08/26/19 08:00	

LABORATORY CONTROL SAMPLE & LCSD: 3390426 3390427

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	40.5	41.4	101	103	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3390428 3390429

Parameter	Units	10488833003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	149	40	40	190	190	102	103	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3390430 3390431

Parameter	Units	10488450002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	26.2	40	40	55.7	55.2	74	73	80-120	1	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 628356 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10488833003

METHOD BLANK: 3390468 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	08/26/19 17:16	

LABORATORY CONTROL SAMPLE: 3390469

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	978	98	80-120	

SAMPLE DUPLICATE: 3390470

Parameter	Units	10488669001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3780	3750	1	5	

SAMPLE DUPLICATE: 3390471

Parameter	Units	10488669002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3220	3220	0	5	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 155250 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10488833003

METHOD BLANK: 692597 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	08/28/19 16:32	

LABORATORY CONTROL SAMPLE: 692598

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.21	107	90-110	

MATRIX SPIKE SAMPLE: 692600

Parameter	Units	20118992001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	ND	0.2	0.086	43	75-125	M1

SAMPLE DUPLICATE: 692599

Parameter	Units	20118992001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.0054		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 628274 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10488833003

METHOD BLANK: 3390100 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	08/24/19 12:00	
Nitrate as N	mg/L	<0.012	0.10	0.012	08/24/19 12:00	
Sulfate	mg/L	<0.28	1.2	0.28	08/24/19 12:00	

LABORATORY CONTROL SAMPLE: 3390101

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.6	101	90-110	
Nitrate as N	mg/L	1	0.98	98	90-110	
Sulfate	mg/L	12.5	12.3	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3390102 3390103

Parameter	Units	10488833003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.6	12.5	12.5	19.8	19.9	89	91	90-110	1	20	M1
Nitrate as N	mg/L	1.7	1	1	2.4	2.4	70	72	90-110	1	20	M1
Sulfate	mg/L	12.0	12.5	12.5	24.4	24.6	99	101	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 628282
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10488833003

METHOD BLANK: 3390160 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	08/24/19 14:42	FS

LABORATORY CONTROL SAMPLE: 3390161

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.98	98	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3390164 3390165

Parameter	Units	10488658001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.21	1	1	1.2	1.2	102	102	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3390183 3390184

Parameter	Units	10488832003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.11	1	1	1.1	1.1	98	101	90-110	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 628648 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10488833003

METHOD BLANK: 3391511 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	08/27/19 13:01	

LABORATORY CONTROL SAMPLE: 3391512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	307	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3391513 3391514

Parameter	Units	10488833003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	250	247	100	99	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3391515 3391516

Parameter	Units	10488562001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	422	250	250	652	659	92	95	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

QC Batch: 173645 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10488833003

METHOD BLANK: 687692 Matrix: Water
Associated Lab Samples: 10488833003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	08/28/19 19:01	

LABORATORY CONTROL SAMPLE: 687693

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 687694 687695

Parameter	Units	10488658001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.55J	25	25	26.3	26.5	103	104	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 687696 687697

Parameter	Units	10488990004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.60J	25	25	26.3	26.2	103	102	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
FS	The sample was filtered in the laboratory prior to analysis.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
SS	This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10488833

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10488833003	**MW35-GW-082219**	RSK175	1340208	RSK-175	1340208
10488833003	**MW35-GW-082219**	EPA 3010	628327	EPA 6010D	628811
10488833003	**MW35-GW-082219**	EPA 7470A	628570	EPA 7470A	628763
10488833001	**MW35-Start**	EPA 8260B	628310		
10488833002	**MW35-Mid**	EPA 8260B	628310		
10488833003	**MW35-GW-082219**	EPA 8260B	628310		
10488833004	**Trip Blank**	EPA 8260B	628310		
10488833003	**MW35-GW-082219**	SM 2320B	628340		
10488833003	**MW35-GW-082219**	SM 2540C	628356		
10488833003	**MW35-GW-082219**	SM 4500-S-2 D	155250		
10488833003	**MW35-GW-082219**	EPA 300.0	628274		
10488833003	**MW35-GW-082219**	EPA 353.2	628282		
10488833003	**MW35-GW-082219**	EPA 410.4	628648	EPA 410.4	628802
10488833003	**MW35-GW-082219**	SM 5310C	173645		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Reques

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant field

WO# : 10488833

10488833

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: UPRR_Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh (awalsh@up.com)
Address: 1400 W. 52nd Ave	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR
Denver, CO 80221	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Email: awalsh@up.com	Purchase Order #: 1497-38-Rev0	Pace Quote: Contract# 9900758938
Phone: Fax:	Project Name: Freeman,WA-Cenex Harvest Lease	Pace Project Manager: Jennifer Gross
Requested Due Date: 24 Hr / 3 Day / 10 Day	Project #:	Pace Profile #: 36447 / 1

Regulatory Agency

State / Location: WA / Freeman

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Low Level VOCs by 8260	Hold	6010/7470 Diss Metals *	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK 175	COD 410.4	Nitrate + Nitrite 353.2	
1	MW35-start	WT	G	8/22/19	815				3				X				X											
2	MW35-mid	WT	G	8/22/19	1145				3				X				X											
3	MW35-GW-082219	WT	G	8/22/19	1615				13	X	X	X	X	X			X		X	X	X	X	X	X	X	X	X	
4	Trip Blank	WT	G	8/22/19	0700				2				X				X											
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

24 hr Rush TAT

1 w1
2 w2
3 w3
4 w4

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Field filtered by client	K Ost / Jacobs	8/23/19	1300	M PACE	8.24.19	0925	0.4	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karla Savage

SIGNATURE of SAMPLER: K Ost

DATE Signed: 8/23/19

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 09May2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.28**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR Jacobs

Project #: **WO#: 10488833**

PM: JMG **Due Date: 08/27/19**

CLIENT: UPRR_Jacobs

Courier: ☑Fed Ex ☐UPS ☐USPS ☐Client ☐Pace ☐SpeeDee ☐Commercial **See Exception** ☐

Tracking Number: 463801984944

Custody Seal on Cooler/Box Present? ☐Yes ☑No **Seals Intact?** ☐Yes ☑No **Biological Tissue Frozen?** ☐Yes ☐No ☑N/A

Packing Material: ☐Bubble Wrap ☑Bubble Bags ☐None ☐Other:_____ **Temp Blank?** ☑Yes ☐No

Thermometer: ☐T1(0461) ☑T2(1336) ☐T3(0459) ☐T4(0254) ☐T5(0489) **Type of Ice:** ☑Wet ☐Blue ☐None ☐Dry ☐Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.4 °C **Average Corrected Temp (no temp blank only):** _____ °C **See Exceptions** ☐

Correction Factor: true **Cooler Temp Corrected w/temp blank:** 0.4 °C

USDA Regulated Soil: (☑N/A, water sample/Other:_____)
Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐Yes ☐No
Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐Yes ☐No

Date/Initials of Person Examining Contents: RMe 8.24.19

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑Yes	☐No		1.
Chain of Custody Relinquished?	☑Yes	☐No		2.
Sampler Name and/or Signature on COC?	☑Yes	☐No	☐N/A	3.
Samples Arrived within Hold Time?	☑Yes	☐No		4.
Short Hold Time Analysis (<72 hr)?	☑Yes	☐No		5. ☐Fecal Coliform ☑HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☑Nitrate ☐Nitrite ☐Orthophos ☐Other_____
Rush Turn Around Time Requested?	☑Yes	☐No		6.
Sufficient Volume?	☑Yes	☐No		7.
Correct Containers Used? -Pace Containers Used?	☑Yes ☑Yes	☐No ☐No		8.
Containers Intact?	☑Yes	☐No		9.
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☑N/A	10. Is sediment visible in the dissolved container? ☐Yes ☐No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☑Water ☐Soil ☐Oil ☐Other_____	☑Yes	☐No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☑Yes	☐No	☐N/A	12. Sample # 3: Y/1 Y/1 Y/1 ☐NaOH ☑HNO_3 ☑H_2SO_4 ☑Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑Yes	☐No	☐N/A	
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☑Yes	☐No	☐N/A	Positive for Res. Chlorine? ☐Yes ☐No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine: 0-6 Roll 203619; 0-6 Strip; 0-14 Strip 10D4781
Headspace in VOA Vials (greater than 6mm)?	☑Yes	☐No	☐N/A	13. **See Exception** ☑
Trip Blank Present?	☑Yes	☐No	☐N/A	
Trip Blank Custody Seals Present?	☑Yes	☐No	☐N/A	14. Pace Trip Blank Lot # (if purchased): 0-335007

CLIENT NOTIFICATION/RESOLUTION
Person Contacted: Brad, Mark Date/Time: 08/27/19 **Field Data Required?** ☐Yes ☐No
Comments/Resolution: Notified client of headspace.

Project Manager Review: _____ JENNI GROSS Date: 08/26/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: _____

Pace Analytical	Document Name: **Headspace Exception**	Document Revised: 17Dec2018 Page 1 of 1
	Document No.: **F-MN-C-276-Rev.01**	Issuing Authority: Pace Minnesota Quality Office

Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
MW35-start	0	1	2	3	N
MW 35 - Mid	0	0	3	3	N
MW 35-GW-082219	0	0	5	5	N
TB	2	0	0	2	N

WO#: 20119001

. Custody

20119001

nles were sent directly to the Subcontract

WA

☐ Yes ☒ No

Pace Analytical®
www.pacelabs.com

38833 **Workorder Name:** Freeman,WA-Cenex Harvest Lease **Owner Received Date:** 8/24/2019 **Results Requested By:** 8/29/2019

Subcontract To

oss
Pace Analytical Seattle
596 Industry Drive,
Suite 602
Tukwila, WA 98188
Phone (206)957-2426

Pace Analytical New Orleans
1000 Riverbend Blvd
Suite F
St. Rose, LA 70087
Phone (504)469-0333

Requested Analysis

Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Other BP2Z	5636267 / 4500 Sulfide	LAB USE ONLY
1	MW35-GW-082219	PS	8/22/2019 16:15	10488833003	Water	1	X	
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	8/27/19 1610	FedEx	
2	FedEx		[signature]	8/28 830
3				

Comments

RUSH

Temp 2.1

Cooler Temperature on Receipt 2.1 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon

WO#: 20119001

PM: CMM Due Date: 08/29/19

Pr CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8-28-19

Temp must be measured from Temperature blank when present

			Comments:
Temperature Blank Present"?	☑Yes	☐No ☐N/A	1
Chain of Custody Present:	☑Yes	☐No ☐N/A	2
Chain of Custody Complete:	☑Yes	☐No ☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No ☐N/A	4
Sampler Name & Signature on COC:	☑Yes	☐No ☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☑No ☐N/A	6
Sufficient Volume:	☑Yes	☐No ☐N/A	7
Correct Containers Used:	☑Yes	☐No ☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☑No ☐N/A	9
Sample Labels match COC:	☑Yes	☐No ☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No ☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No ☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No ☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No ☑N/A	14
Trip Blank Present:	☐Yes	☑No	15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PRE

WO# : 12134458

12134458

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: ☒ Yes ☐ No

Workorder: 10488833 **Workorder Name:** Freeman,WA-Cenex Harvest Lease **Owner Received Date:** 8/24/2019 **Results Requested By:** 8/29/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S					5632354 / 5310 TOC											LAB USE ONLY
1	MW35-GW-082219	PS	8/22/2019 16:15	10488833003	Water	2					X											
2																						
3																						
4																						
5																						

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] 8/27/19	8/27/19 1730	[signature] 8/27/19	1845
2	[signature] 8/27/19	2315	B Matthews	8/28/19 0430
3				

Comments: RUSH

Cooler Temperature on Receipt 0.8 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace MN

Project #: WO#: 12134458

PM: RK1 Due Date: 08/29/19

CLIENT: PACE MPLS

Courier: ☐Fed Ex ☐UPS ☐USPS ☐Client ☐Commercial ☒Pace ☐Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒Yes ☐No **Seals Intact?** ☒Yes ☐No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒Bubble Wrap ☒Bubble Bags ☐None ☐Other: **Temp Blank?** ☒Yes ☐No

Thermometer Used: ☒140792808 **Type of Ice:** ☐Wet ☐Blue ☐None ☒Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.5 **Cooler Temp Corrected °C:** 0.8 **Biological Tissue Frozen?** ☐Yes ☐No ☒NA

Temp should be above freezing to 6°C Correction Factor: 0.3 **Date and Initials of Person Examining Contents:** 8/27/19 DC

Comments: BM 8/28/19

Chain of Custody Present?	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out?	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished?	☑Yes	☐No	☐N/A	3.
Sampler Name and Signature on COC?	☐Yes	☑No	☐N/A	4.
Samples Arrived within Hold Time?	☑Yes	☐No	☐N/A	5. If Fecal: ☐<8 hours ☐>8, <24 hours ☐>24 hours
Short Hold Time Analysis (<72 hr)?	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested?	☑Yes	☐No	☐N/A	7. 1-Day
Sufficient Volume?	☑Yes	☐No	☐N/A	8.
Correct Containers Used?	☑Yes	☐No	☐N/A	9.
-Pace Containers Used?	☑Yes	☐No	☐N/A	
Containers Intact?	☑Yes	☐No	☐N/A	10.
Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☑Yes	☐No	☐N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☑Yes	☐No	☐N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm)?	☐Yes	☐No	☑N/A	15.
Trip Blank Present?	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present?	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Nikki Jarve **Date:** 8/28/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

Pace Analytical®
www.pacelabs.com

State Of Origin: WA
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 8/24/2019 **Results Requested By:** 8/29/2019

Workorder: 10488833 **Workorder Name:** Freeman,WA-Cenex Harvest Lease

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical 12065 Lebanon Road Mt. Juliet, TN 37122 615-773-9710

G029

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	5644436 / Headspace Analysis	Methane	Ethane	Ethene	LAB USE ONLY
1	MW35-GW-082219	PS	8/22/2019 16:15	10488833003	Water	3 Comer VG9H	X	X	X	X	-01
2											
3											
4											
5											

1134236

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace	8/23/19 1645	Carol Kemp	8/24/19 8:45
2				
3				

Comments
UPRR EQuIS EDD required
Method RSK-175

Cooler Temperature on Receipt 0.3 °C | **Custody Seal** X or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.1H2=03
AZ/m

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACETWK	SDG#:	1134226
Cooler Received/Opened On: 8/29/19	Temperature:	0.3
Received By: Carol Kemp		
Signature: Carol Kemp		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?		✓	
Preservation Correct / Checked?			

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

September 09, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on August 31, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Pace Analytical National Certification IDs

Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

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SAMPLE SUMMARY

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10489767001	**MW27-GW-083019**	Water	08/30/19 12:30	08/31/19 09:35
10489767002	**MW33-GW-083019**	Water	08/30/19 14:45	08/31/19 09:35
10489767003	**Trip Blank**	Water	08/30/19 07:00	08/31/19 09:35

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SAMPLE ANALYTE COUNT

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10489767001	**MW27-GW-083019**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	JFP	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10489767002	**MW33-GW-083019**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	BTS	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	JFP	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	JFP	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10489767003	**Trip Blank**	EPA 8260B	DS2	83	PASI-M

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SUMMARY OF DETECTION

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10489767001	**MW27-GW-083019**					
EPA 6010D	Barium, Dissolved	32.8	ug/L	10.0	09/04/19 13:12	
EPA 6010D	Beryllium, Dissolved	0.17J	ug/L	5.0	09/04/19 13:12	
EPA 6010D	Cobalt, Dissolved	0.54J	ug/L	10.0	09/04/19 13:12	
EPA 6010D	Copper, Dissolved	1.3J	ug/L	10.0	09/04/19 13:12	B
EPA 6010D	Vanadium, Dissolved	9.7J	ug/L	15.0	09/04/19 13:12	
EPA 6010D	Zinc, Dissolved	8.8J	ug/L	20.0	09/04/19 13:12	
EPA 8260B	Acetone	12.1J	ug/L	20.0	09/03/19 10:53	
EPA 8260B	Carbon tetrachloride	11.7	ug/L	0.50	09/03/19 10:53	
EPA 8260B	Chloroform	5.6	ug/L	1.0	09/03/19 10:53	
EPA 8260B	Toluene	0.19J	ug/L	0.50	09/03/19 10:53	
SM 2320B	Alkalinity, Total as CaCO3	152	mg/L	5.0	09/03/19 08:48	
SM 2540C	Total Dissolved Solids	345	mg/L	10.0	08/31/19 14:49	
EPA 300.0	Chloride	3.6	mg/L	1.2	08/31/19 15:03	
EPA 300.0	Nitrate as N	0.48	mg/L	0.10	08/31/19 15:03	
EPA 300.0	Sulfate	28.7	mg/L	1.2	08/31/19 15:03	
EPA 353.2	Nitrogen, NO2 plus NO3	0.57	mg/L	0.10	08/31/19 13:40	FS
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	09/05/19 13:44	
10489767002	**MW33-GW-083019**					
EPA 6010D	Barium, Dissolved	40.6	ug/L	10.0	09/04/19 13:20	
EPA 6010D	Cobalt, Dissolved	1.8J	ug/L	10.0	09/04/19 13:20	
EPA 6010D	Lead, Dissolved	2.4J	ug/L	10.0	09/04/19 13:20	
EPA 6010D	Vanadium, Dissolved	0.64J	ug/L	15.0	09/04/19 13:20	
EPA 8260B	Carbon tetrachloride	1.1	ug/L	0.50	09/03/19 11:17	
SM 2320B	Alkalinity, Total as CaCO3	164	mg/L	5.0	09/03/19 09:08	
SM 2540C	Total Dissolved Solids	229	mg/L	10.0	08/31/19 14:49	
EPA 300.0	Chloride	2.3	mg/L	1.2	08/31/19 15:34	
EPA 300.0	Sulfate	5.7	mg/L	1.2	08/31/19 15:34	
SM 5310C	Total Organic Carbon	0.65J	mg/L	1.0	09/05/19 13:58	
10489767003	**Trip Blank**					
EPA 8260B	Toluene	0.15J	ug/L	0.50	09/03/19 12:04	
EPA 8260B	tert-Butyl Alcohol	3.8J	ug/L	10.0	09/03/19 12:04	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **RSK-175**
Description: VOA (GC) RSK175
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for RSK-175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 629792

B: Analyte was detected in the associated method blank.
- BLANK for HBN 629792 [MPRP/963 (Lab ID: 3397034)
  - Copper, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
3 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 629850

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- LCS (Lab ID: 3397216)
  - Acrolein
- MS (Lab ID: 3397217)
  - Acrolein
- MSD (Lab ID: 3397218)
  - Acrolein

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 629850

L3: Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.

- LCS (Lab ID: 3397216)
  - Acrolein

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: September 09, 2019

QC Batch: 629850

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10489238001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 3397217)
  - Acrolein
- MSD (Lab ID: 3397218)
  - Acrolein

Additional Comments:

Analyte Comments:

QC Batch: 629850

C0: Result confirmed by second analysis.

- Trip Blank (Lab ID: 10489767003)
  - 1,2-Dichloroethane-d4 (S)

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3397215)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3397216)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3397217)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3397218)
  - 1,2-Dichloroethene (Total)
- MW27-GW-083019 (Lab ID: 10489767001)
  - 1,2-Dichloroethene (Total)
- MW33-GW-083019 (Lab ID: 10489767002)
  - 1,2-Dichloroethene (Total)
- Trip Blank (Lab ID: 10489767003)
  - 1,2-Dichloroethene (Total)

- Trip Blank (Lab ID: 10489767003)
  - Dichlorofluoromethane

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Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 629821

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10488659001,10489767001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3397124)
  - Alkalinity, Total as CaCO3
- MSD (Lab ID: 3397125)
  - Alkalinity, Total as CaCO3

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 155932

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20119543001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 696141)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 629724

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10489613003,10489613015

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3396731)
  - Nitrogen, NO2 plus NO3
- MSD (Lab ID: 3396732)
  - Nitrogen, NO2 plus NO3

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: September 09, 2019

General Information:
2 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Sample: MW27-GW-083019 **Lab ID: 10489767001** Collected: 08/30/19 12:30 Received: 08/31/19 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/06/19 14:11	09/06/19 14:11	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/06/19 14:11	09/06/19 14:11	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/06/19 14:11	09/06/19 14:11	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/04/19 06:25	09/04/19 13:12	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/04/19 06:25	09/04/19 13:12	7440-38-2	
Barium, Dissolved	**32.8**	ug/L	10.0	0.60	1	09/04/19 06:25	09/04/19 13:12	7440-39-3	
Beryllium, Dissolved	**0.17J**	ug/L	5.0	0.12	1	09/04/19 06:25	09/04/19 13:12	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/04/19 06:25	09/04/19 13:12	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/04/19 06:25	09/04/19 13:12	7440-47-3	
Cobalt, Dissolved	**0.54J**	ug/L	10.0	0.50	1	09/04/19 06:25	09/04/19 13:12	7440-48-4	
Copper, Dissolved	**1.3J**	ug/L	10.0	1.2	1	09/04/19 06:25	09/04/19 13:12	7440-50-8	B
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/04/19 06:25	09/04/19 13:12	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/04/19 06:25	09/04/19 13:12	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/04/19 06:25	09/04/19 13:12	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/04/19 06:25	09/04/19 13:12	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/04/19 06:25	09/04/19 13:12	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/04/19 06:25	09/04/19 13:12	7440-28-0	
Vanadium, Dissolved	**9.7J**	ug/L	15.0	0.43	1	09/04/19 06:25	09/04/19 13:12	7440-62-2	
Zinc, Dissolved	**8.8J**	ug/L	20.0	6.3	1	09/04/19 06:25	09/04/19 13:12	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/04/19 03:45	09/04/19 11:53	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/03/19 10:53	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/03/19 10:53	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/03/19 10:53	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/03/19 10:53	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/03/19 10:53	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/03/19 10:53	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		09/03/19 10:53	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 10:53	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/03/19 10:53	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/03/19 10:53	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 10:53	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 10:53	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		09/03/19 10:53	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/03/19 10:53	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/03/19 10:53	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		09/03/19 10:53	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/03/19 10:53	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/03/19 10:53	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/03/19 10:53	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/03/19 10:53	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Sample: MW27-GW-083019 **Lab ID: 10489767001** Collected: 08/30/19 12:30 Received: 08/31/19 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/03/19 10:53	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/03/19 10:53	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/03/19 10:53	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/03/19 10:53	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/03/19 10:53	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/03/19 10:53	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/03/19 10:53	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/03/19 10:53	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/03/19 10:53	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/03/19 10:53	108-10-1	
Acetone	**12.1J**	ug/L	20.0	9.2	1		09/03/19 10:53	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/03/19 10:53	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/03/19 10:53	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/03/19 10:53	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/03/19 10:53	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/03/19 10:53	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/03/19 10:53	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/03/19 10:53	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/03/19 10:53	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/03/19 10:53	75-15-0	
Carbon tetrachloride	**11.7**	ug/L	0.50	0.19	1		09/03/19 10:53	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		09/03/19 10:53	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/03/19 10:53	75-00-3	
Chloroform	**5.6**	ug/L	1.0	0.45	1		09/03/19 10:53	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/03/19 10:53	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/03/19 10:53	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/03/19 10:53	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/03/19 10:53	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/03/19 10:53	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/03/19 10:53	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/03/19 10:53	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/03/19 10:53	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/03/19 10:53	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		09/03/19 10:53	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/03/19 10:53	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/03/19 10:53	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/03/19 10:53	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		09/03/19 10:53	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/03/19 10:53	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/03/19 10:53	109-99-9	
Toluene	**0.19J**	ug/L	0.50	0.083	1		09/03/19 10:53	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/03/19 10:53	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/03/19 10:53	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/03/19 10:53	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/03/19 10:53	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/03/19 10:53	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Sample: MW27-GW-083019 **Lab ID: 10489767001** Collected: 08/30/19 12:30 Received: 08/31/19 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 10:53	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 10:53	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/03/19 10:53	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/03/19 10:53	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/03/19 10:53	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/03/19 10:53	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 10:53	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 10:53	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/03/19 10:53	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/03/19 10:53	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 10:53	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/03/19 10:53	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/03/19 10:53	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/03/19 10:53	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%.	75-136		1		09/03/19 10:53	17060-07-0	
Toluene-d8 (S)	90	%.	75-125		1		09/03/19 10:53	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		09/03/19 10:53	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**152**	mg/L	5.0	2.0	1		09/03/19 08:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**345**	mg/L	10.0	5.0	1		08/31/19 14:49		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.14**	mg/L	0.50	0.14	25		09/04/19 15:44	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**3.6**	mg/L	1.2	0.12	1		08/31/19 15:03	16887-00-6	
Nitrate as N	**0.48**	mg/L	0.10	0.012	1		08/31/19 15:03	14797-55-8	
Sulfate	**28.7**	mg/L	1.2	0.28	1		08/31/19 15:03	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.57**	mg/L	0.10	0.018	1		08/31/19 13:40		FS
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/04/19 09:35	09/04/19 14:13		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.1**	mg/L	1.0	0.39	1		09/05/19 13:44	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Sample: MW33-GW-083019 **Lab ID: 10489767002** Collected: 08/30/19 14:45 Received: 08/31/19 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/06/19 14:17	09/06/19 14:17	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/06/19 14:17	09/06/19 14:17	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/06/19 14:17	09/06/19 14:17	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/04/19 06:25	09/04/19 13:20	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/04/19 06:25	09/04/19 13:20	7440-38-2	
Barium, Dissolved	**40.6**	ug/L	10.0	0.60	1	09/04/19 06:25	09/04/19 13:20	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/04/19 06:25	09/04/19 13:20	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/04/19 06:25	09/04/19 13:20	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/04/19 06:25	09/04/19 13:20	7440-47-3	
Cobalt, Dissolved	**1.8J**	ug/L	10.0	0.50	1	09/04/19 06:25	09/04/19 13:20	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/04/19 06:25	09/04/19 13:20	7440-50-8	
Lead, Dissolved	**2.4J**	ug/L	10.0	2.0	1	09/04/19 06:25	09/04/19 13:20	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/04/19 06:25	09/04/19 13:20	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/04/19 06:25	09/04/19 13:20	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/04/19 06:25	09/04/19 13:20	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/04/19 06:25	09/04/19 13:20	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/04/19 06:25	09/04/19 13:20	7440-28-0	
Vanadium, Dissolved	**0.64J**	ug/L	15.0	0.43	1	09/04/19 06:25	09/04/19 13:20	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	09/04/19 06:25	09/04/19 13:20	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/04/19 03:45	09/04/19 11:55	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/03/19 11:17	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/03/19 11:17	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/03/19 11:17	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/03/19 11:17	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/03/19 11:17	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/03/19 11:17	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		09/03/19 11:17	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 11:17	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/03/19 11:17	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/03/19 11:17	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 11:17	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 11:17	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		09/03/19 11:17	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/03/19 11:17	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/03/19 11:17	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		09/03/19 11:17	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/03/19 11:17	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/03/19 11:17	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/03/19 11:17	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/03/19 11:17	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Sample: MW33-GW-083019 **Lab ID: 10489767002** Collected: 08/30/19 14:45 Received: 08/31/19 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/03/19 11:17	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/03/19 11:17	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/03/19 11:17	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/03/19 11:17	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/03/19 11:17	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/03/19 11:17	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/03/19 11:17	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/03/19 11:17	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/03/19 11:17	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/03/19 11:17	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/03/19 11:17	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/03/19 11:17	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/03/19 11:17	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/03/19 11:17	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/03/19 11:17	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/03/19 11:17	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/03/19 11:17	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/03/19 11:17	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/03/19 11:17	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/03/19 11:17	75-15-0	
Carbon tetrachloride	**1.1**	ug/L	0.50	0.19	1		09/03/19 11:17	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		09/03/19 11:17	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/03/19 11:17	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/03/19 11:17	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/03/19 11:17	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/03/19 11:17	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/03/19 11:17	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/03/19 11:17	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/03/19 11:17	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/03/19 11:17	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/03/19 11:17	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/03/19 11:17	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/03/19 11:17	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		09/03/19 11:17	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/03/19 11:17	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/03/19 11:17	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/03/19 11:17	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		09/03/19 11:17	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/03/19 11:17	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/03/19 11:17	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/03/19 11:17	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/03/19 11:17	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/03/19 11:17	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/03/19 11:17	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/03/19 11:17	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/03/19 11:17	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Sample: MW33-GW-083019 **Lab ID: 10489767002** Collected: 08/30/19 14:45 Received: 08/31/19 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 11:17	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 11:17	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/03/19 11:17	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/03/19 11:17	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/03/19 11:17	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/03/19 11:17	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 11:17	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 11:17	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/03/19 11:17	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/03/19 11:17	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 11:17	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/03/19 11:17	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/03/19 11:17	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/03/19 11:17	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%.	75-136		1		09/03/19 11:17	17060-07-0	
Toluene-d8 (S)	91	%.	75-125		1		09/03/19 11:17	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		09/03/19 11:17	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**164**	mg/L	5.0	2.0	1		09/03/19 09:08		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**229**	mg/L	10.0	5.0	1		08/31/19 14:49		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/04/19 15:45	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.3**	mg/L	1.2	0.12	1		08/31/19 15:34	16887-00-6	
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		08/31/19 15:34	14797-55-8	
Sulfate	**5.7**	mg/L	1.2	0.28	1		08/31/19 15:34	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		08/31/19 13:41		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/04/19 09:35	09/04/19 14:13		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.65J**	mg/L	1.0	0.39	1		09/05/19 13:58	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Sample: Trip Blank **Lab ID: 10489767003** Collected: 08/30/19 07:00 Received: 08/31/19 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/03/19 12:04	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/03/19 12:04	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/03/19 12:04	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/03/19 12:04	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/03/19 12:04	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/03/19 12:04	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	1.0	0.16	1		09/03/19 12:04	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 12:04	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/03/19 12:04	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/03/19 12:04	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 12:04	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 12:04	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	10.0	1.7	1		09/03/19 12:04	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/03/19 12:04	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/03/19 12:04	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	0.50	0.22	1		09/03/19 12:04	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/03/19 12:04	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/03/19 12:04	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/03/19 12:04	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/03/19 12:04	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/03/19 12:04	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/03/19 12:04	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/03/19 12:04	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/03/19 12:04	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/03/19 12:04	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/03/19 12:04	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/03/19 12:04	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/03/19 12:04	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/03/19 12:04	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/03/19 12:04	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/03/19 12:04	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/03/19 12:04	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/03/19 12:04	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/03/19 12:04	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/03/19 12:04	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/03/19 12:04	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/03/19 12:04	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/03/19 12:04	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/03/19 12:04	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/03/19 12:04	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/03/19 12:04	56-23-5	
Chlorobenzene	**<0.17**	ug/L	1.0	0.17	1		09/03/19 12:04	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/03/19 12:04	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/03/19 12:04	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/03/19 12:04	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/03/19 12:04	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Sample: Trip Blank **Lab ID: 10489767003** Collected: 08/30/19 07:00 Received: 08/31/19 09:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/03/19 12:04	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/03/19 12:04	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/03/19 12:04	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/03/19 12:04	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/03/19 12:04	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/03/19 12:04	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/03/19 12:04	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		09/03/19 12:04	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/03/19 12:04	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/03/19 12:04	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/03/19 12:04	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		09/03/19 12:04	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/03/19 12:04	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/03/19 12:04	109-99-9	
Toluene	**0.15J**	ug/L	0.50	0.083	1		09/03/19 12:04	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/03/19 12:04	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/03/19 12:04	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/03/19 12:04	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/03/19 12:04	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/03/19 12:04	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 12:04	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/03/19 12:04	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/03/19 12:04	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/03/19 12:04	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/03/19 12:04	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/03/19 12:04	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 12:04	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 12:04	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/03/19 12:04	994-05-8	
tert-Butyl Alcohol	**3.8J**	ug/L	10.0	1.2	1		09/03/19 12:04	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/03/19 12:04	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/03/19 12:04	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/03/19 12:04	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/03/19 12:04	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%.	75-136		1		09/03/19 12:04	17060-07-0	C0
Toluene-d8 (S)	90	%.	75-125		1		09/03/19 12:04	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		09/03/19 12:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 1340933 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: R3447939-1 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/06/19 11:44	
Ethane	ug/L	<4.07	13.0	4.07	09/06/19 11:44	
Ethene	ug/L	<4.26	13.0	4.26	09/06/19 11:44	

LABORATORY CONTROL SAMPLE & LCSD: R3447939-4 R3447939-5

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	76.8	75.5	113	111	85.0-115	1.62	20	
Ethane	ug/L	129	125	124	96.9	96.1	85.0-115	0.864	20	
Ethene	ug/L	127	125	123	98.6	97.1	85.0-115	1.47	20	

SAMPLE DUPLICATE: R3447939-2

Parameter	Units	L1134637-05 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

SAMPLE DUPLICATE: R3447939-3

Parameter	Units	L1134778-18 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	22.6	22.1	2.35	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 629794 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: 3397042 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	09/04/19 11:48	

LABORATORY CONTROL SAMPLE: 3397043

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.3	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3397044 3397045

Parameter	Units	10489767002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.2	5.2	105	105	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 629792
QC Batch Method: EPA 3010
Analysis Method: EPA 6010D
Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: 3397034 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	09/04/19 13:09	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	09/04/19 13:09	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	09/04/19 13:09	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	09/04/19 13:09	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	09/04/19 13:09	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	09/04/19 13:09	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	09/04/19 13:09	
Copper, Dissolved	ug/L	4.6J	10.0	1.2	09/04/19 13:09	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	09/04/19 13:09	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	09/04/19 13:09	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	09/04/19 13:09	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	09/04/19 13:09	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	09/04/19 13:09	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	09/04/19 13:09	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	09/04/19 13:09	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	09/04/19 13:09	

LABORATORY CONTROL SAMPLE: 3397035

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	939	94	80-120	
Arsenic, Dissolved	ug/L	1000	998	100	80-120	
Barium, Dissolved	ug/L	1000	996	100	80-120	
Beryllium, Dissolved	ug/L	1000	1010	101	80-120	
Cadmium, Dissolved	ug/L	1000	1030	103	80-120	
Chromium, Dissolved	ug/L	1000	992	99	80-120	
Cobalt, Dissolved	ug/L	1000	1010	101	80-120	
Copper, Dissolved	ug/L	1000	965	97	80-120	
Lead, Dissolved	ug/L	1000	1010	101	80-120	
Molybdenum, Dissolved	ug/L	1000	948	95	80-120	
Nickel, Dissolved	ug/L	1000	998	100	80-120	
Selenium, Dissolved	ug/L	1000	1030	103	80-120	
Silver, Dissolved	ug/L	500	496	99	80-120	
Thallium, Dissolved	ug/L	1000	972	97	80-120	
Vanadium, Dissolved	ug/L	1000	991	99	80-120	
Zinc, Dissolved	ug/L	1000	1030	103	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3397036 3397037

Parameter	Units	10489767001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	972	958	97	96	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1020	1030	102	103	75-125	1	20	
Barium, Dissolved	ug/L	32.8	1000	1000	1040	1050	101	102	75-125	1	20	
Beryllium, Dissolved	ug/L	0.17J	1000	1000	1030	1040	103	104	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1030	1040	103	104	75-125	1	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1010	1020	101	101	75-125	1	20	
Cobalt, Dissolved	ug/L	0.54J	1000	1000	1010	1020	101	102	75-125	1	20	
Copper, Dissolved	ug/L	1.3J	1000	1000	988	998	99	100	75-125	1	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1020	1030	102	103	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	979	971	98	97	75-125	1	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	997	1010	100	101	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1040	1060	104	106	75-125	2	20	
Silver, Dissolved	ug/L	<0.40	500	500	506	512	101	102	75-125	1	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	985	1000	98	100	75-125	2	20	
Vanadium, Dissolved	ug/L	9.7J	1000	1000	1020	1030	101	102	75-125	1	20	
Zinc, Dissolved	ug/L	8.8J	1000	1000	1040	1050	103	104	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 629850 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10489767001, 10489767002, 10489767003

METHOD BLANK: 3397215 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002, 10489767003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	09/03/19 10:05	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/03/19 10:05	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/03/19 10:05	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/03/19 10:05	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/03/19 10:05	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/03/19 10:05	
1,1-Dichloroethene	ug/L	<0.16	1.0	0.16	09/03/19 10:05	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/03/19 10:05	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	09/03/19 10:05	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/03/19 10:05	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	09/03/19 10:05	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/03/19 10:05	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	10.0	1.7	09/03/19 10:05	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/03/19 10:05	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/03/19 10:05	
1,2-Dichloroethane	ug/L	<0.22	0.50	0.22	09/03/19 10:05	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/03/19 10:05	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/03/19 10:05	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/03/19 10:05	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/03/19 10:05	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/03/19 10:05	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/03/19 10:05	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/03/19 10:05	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/03/19 10:05	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/03/19 10:05	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/03/19 10:05	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/03/19 10:05	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/03/19 10:05	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/03/19 10:05	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/03/19 10:05	
Acetone	ug/L	<9.2	20.0	9.2	09/03/19 10:05	
Acrolein	ug/L	<1.2	10.0	1.2	09/03/19 10:05	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/03/19 10:05	
Benzene	ug/L	<0.10	0.50	0.10	09/03/19 10:05	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/03/19 10:05	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/03/19 10:05	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/03/19 10:05	
Bromoform	ug/L	<0.80	4.0	0.80	09/03/19 10:05	
Bromomethane	ug/L	<1.8	4.0	1.8	09/03/19 10:05	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/03/19 10:05	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/03/19 10:05	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

METHOD BLANK: 3397215 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002, 10489767003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	1.0	0.17	09/03/19 10:05	
Chloroethane	ug/L	<0.49	1.0	0.49	09/03/19 10:05	
Chloroform	ug/L	<0.45	1.0	0.45	09/03/19 10:05	
Chloromethane	ug/L	<0.16	4.0	0.16	09/03/19 10:05	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/03/19 10:05	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/03/19 10:05	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	09/03/19 10:05	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/03/19 10:05	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/03/19 10:05	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/03/19 10:05	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/03/19 10:05	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/03/19 10:05	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/03/19 10:05	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/03/19 10:05	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	09/03/19 10:05	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/03/19 10:05	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/03/19 10:05	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/03/19 10:05	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/03/19 10:05	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/03/19 10:05	
Naphthalene	ug/L	<0.48	1.0	0.48	09/03/19 10:05	
o-Xylene	ug/L	<0.16	0.50	0.16	09/03/19 10:05	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/03/19 10:05	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/03/19 10:05	
Styrene	ug/L	<0.19	0.50	0.19	09/03/19 10:05	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/03/19 10:05	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/03/19 10:05	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/03/19 10:05	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/03/19 10:05	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/03/19 10:05	
Toluene	ug/L	<0.083	0.50	0.083	09/03/19 10:05	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/03/19 10:05	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	09/03/19 10:05	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/03/19 10:05	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/03/19 10:05	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/03/19 10:05	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/03/19 10:05	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/03/19 10:05	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/03/19 10:05	
1,2-Dichloroethane-d4 (S)	%.	93	75-136		09/03/19 10:05	
4-Bromofluorobenzene (S)	%.	101	75-125		09/03/19 10:05	
Toluene-d8 (S)	%.	90	75-125		09/03/19 10:05	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

LABORATORY CONTROL SAMPLE: 3397216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.0	100	68-141	
1,1,1-Trichloroethane	ug/L	20	21.9	109	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	17.1	85	73-125	
1,1,2-Trichloroethane	ug/L	20	20.2	101	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.2	96	69-132	
1,1-Dichloroethane	ug/L	20	21.7	109	73-125	
1,1-Dichloroethene	ug/L	20	19.8	99	71-126	
1,1-Dichloropropene	ug/L	20	20.8	104	73-126	
1,2,3-Trichlorobenzene	ug/L	20	15.5	77	72-126	
1,2,3-Trichloropropane	ug/L	20	16.4	82	75-126	
1,2,4-Trichlorobenzene	ug/L	20	17.4	87	71-134	
1,2,4-Trimethylbenzene	ug/L	20	18.4	92	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	35.0	70	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	19.5	97	75-129	
1,2-Dichlorobenzene	ug/L	20	17.8	89	75-129	
1,2-Dichloroethane	ug/L	20	20.9	104	75-125	
1,2-Dichloroethene (Total)	ug/L	40	41.1	103	74-125	N2
1,2-Dichloropropane	ug/L	20	17.6	88	75-125	
1,3,5-Trimethylbenzene	ug/L	20	18.2	91	75-127	
1,3-Dichlorobenzene	ug/L	20	18.2	91	75-126	
1,3-Dichloropropane	ug/L	20	19.6	98	75-125	
1,4-Dichlorobenzene	ug/L	20	17.5	87	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	402	101	72-129	
2,2,4-Trimethylpentane	ug/L	20	18.7	94	72-128	
2,2-Dichloropropane	ug/L	20	23.3	116	65-138	
2-Butanone (MEK)	ug/L	100	107	107	59-144	
2-Chlorotoluene	ug/L	20	18.4	92	75-127	
2-Hexanone	ug/L	100	98.2	98	73-134	
4-Chlorotoluene	ug/L	20	19.4	97	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.1	96	62-141	
Acetone	ug/L	100	122	122	60-137	
Acrolein	ug/L	200	405	202	60-141	CH,L3
Acrylonitrile	ug/L	200	212	106	75-129	
Benzene	ug/L	20	20.7	104	73-125	
Bromobenzene	ug/L	20	17.1	86	73-125	
Bromochloromethane	ug/L	20	22.4	112	75-135	
Bromodichloromethane	ug/L	20	18.3	92	75-125	
Bromoform	ug/L	20	15.4	77	67-136	
Bromomethane	ug/L	20	13.1	66	30-150	
Carbon disulfide	ug/L	20	17.8	89	47-137	
Carbon tetrachloride	ug/L	20	20.8	104	75-125	
Chlorobenzene	ug/L	20	18.7	93	75-125	
Chloroethane	ug/L	20	19.6	98	63-136	
Chloroform	ug/L	20	20.1	101	73-128	
Chloromethane	ug/L	20	22.7	113	55-130	
cis-1,2-Dichloroethene	ug/L	20	20.8	104	75-125	
cis-1,3-Dichloropropene	ug/L	20	19.0	95	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

LABORATORY CONTROL SAMPLE: 3397216

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	18.1	90	75-125	
Dibromomethane	ug/L	20	17.9	89	75-125	
Dichlorodifluoromethane	ug/L	20	20.1	100	63-132	
Dichlorofluoromethane	ug/L	20	21.9	109	68-127	
Diisopropyl ether	ug/L	20	20.3	102	71-131	
Ethyl-tert-butyl ether	ug/L	20	21.3	106	75-125	
Ethylbenzene	ug/L	20	19.4	97	75-125	
Hexachloro-1,3-butadiene	ug/L	20	16.9	85	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.9	99	75-125	
m&p-Xylene	ug/L	40	38.6	97	75-126	
Methyl-tert-butyl ether	ug/L	20	21.0	105	75-125	
Methylene Chloride	ug/L	20	19.8	99	70-125	
n-Butylbenzene	ug/L	20	18.6	93	75-126	
n-Propylbenzene	ug/L	20	19.5	97	73-127	
Naphthalene	ug/L	20	15.4	77	63-128	
o-Xylene	ug/L	20	20.0	100	75-128	
p-Isopropyltoluene	ug/L	20	18.1	91	75-125	
sec-Butylbenzene	ug/L	20	17.6	88	75-126	
Styrene	ug/L	20	19.7	99	75-125	
tert-Amylmethyl ether	ug/L	20	21.7	109	75-125	
tert-Butyl Alcohol	ug/L	200	195	97	75-130	
tert-Butylbenzene	ug/L	20	18.1	90	75-131	
Tetrachloroethene	ug/L	20	17.9	90	74-125	
Tetrahydrofuran	ug/L	200	223	112	64-138	
Toluene	ug/L	20	18.5	93	74-125	
trans-1,2-Dichloroethene	ug/L	20	20.3	102	68-128	
trans-1,3-Dichloropropene	ug/L	20	20.1	100	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	30.6	61	60-127	
Trichloroethene	ug/L	20	21.2	106	75-127	
Trichlorofluoromethane	ug/L	20	20.1	100	72-133	
Vinyl acetate	ug/L	20	22.7	113	61-129	
Vinyl chloride	ug/L	20	22.0	110	75-128	
Xylene (Total)	ug/L	60	58.6	98	75-125	
1,2-Dichloroethane-d4 (S)	%.			96	75-136	
4-Bromofluorobenzene (S)	%.			99	75-125	
Toluene-d8 (S)	%.			90	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3397217 3397218

Parameter	Units	10489238001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	200	200	209	199	104	100	75-140	5	30	
1,1,1-Trichloroethane	ug/L	ND	200	200	226	216	113	108	74-136	4	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	200	200	194	183	97	92	66-134	5	30	
1,1,2-Trichloroethane	ug/L	ND	200	200	208	198	104	99	75-126	5	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3397217 3397218

Parameter	Units	10489238001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	ND	200	200	201	195	101	98	65-146	3	30	
1,1-Dichloroethane	ug/L	ND	200	200	225	210	112	105	68-132	7	30	
1,1-Dichloroethene	ug/L	ND	200	200	204	195	102	97	66-139	4	30	
1,1-Dichloropropene	ug/L	ND	200	200	218	207	109	104	67-134	5	30	
1,2,3-Trichlorobenzene	ug/L	ND	200	200	178	168	89	84	67-129	6	30	
1,2,3-Trichloropropane	ug/L	ND	200	200	181	174	90	87	69-128	4	30	
1,2,4-Trichlorobenzene	ug/L	ND	200	200	193	180	96	90	65-140	7	30	
1,2,4-Trimethylbenzene	ug/L	ND	200	200	196	184	98	92	71-133	7	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	500	500	441	406	88	81	54-138	8	30	
1,2-Dibromoethane (EDB)	ug/L	ND	200	200	206	192	103	96	68-125	7	30	
1,2-Dichlorobenzene	ug/L	ND	200	200	192	182	96	91	74-136	6	30	
1,2-Dichloroethane	ug/L	ND	200	200	213	199	107	100	68-125	7	30	
1,2-Dichloroethene (Total)	ug/L	ND	400	400	432	412	108	103	71-126	5	30	N2
1,2-Dichloropropane	ug/L	ND	200	200	228	215	114	107	67-125	6	30	
1,3,5-Trimethylbenzene	ug/L	ND	200	200	188	183	94	91	68-137	3	30	
1,3-Dichlorobenzene	ug/L	ND	200	200	192	185	96	93	75-131	4	30	
1,3-Dichloropropane	ug/L	ND	200	200	207	192	103	96	71-125	7	30	
1,4-Dichlorobenzene	ug/L	ND	200	200	188	179	94	90	74-126	5	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	4000	4000	3690	4040	92	101	68-125	9	30	
2,2,4-Trimethylpentane	ug/L	ND	200	200	204	196	102	98	54-129	4	30	
2,2-Dichloropropane	ug/L	ND	200	200	247	244	123	122	69-139	1	30	
2-Butanone (MEK)	ug/L	ND	1000	1000	1000	942	100	94	54-144	6	30	
2-Chlorotoluene	ug/L	ND	200	200	199	185	100	93	75-134	7	30	
2-Hexanone	ug/L	ND	1000	1000	981	938	98	94	58-137	4	30	
4-Chlorotoluene	ug/L	ND	200	200	210	199	105	100	72-133	5	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	1000	1000	1100	1010	110	101	60-129	8	30	
Acetone	ug/L	ND	1000	1000	813	816	81	82	62-132	0	30	
Acrolein	ug/L	ND	2000	2000	7150	6940	357	347	30-150	3	30	CH,M0
Acrylonitrile	ug/L	ND	2000	2000	2110	1950	106	97	68-125	8	30	
Benzene	ug/L	ND	200	200	217	205	109	103	68-125	6	30	
Bromobenzene	ug/L	ND	200	200	185	179	93	90	73-126	3	30	
Bromochloromethane	ug/L	ND	200	200	230	211	115	105	66-143	8	30	
Bromodichloromethane	ug/L	ND	200	200	241	224	120	112	74-125	7	30	
Bromoform	ug/L	ND	200	200	197	191	99	96	64-134	3	30	
Bromomethane	ug/L	ND	200	200	136	134	68	67	30-150	1	30	
Carbon disulfide	ug/L	ND	200	200	185	173	93	86	43-147	7	30	
Carbon tetrachloride	ug/L	ND	200	200	223	211	111	106	71-143	5	30	
Chlorobenzene	ug/L	ND	200	200	202	189	101	94	75-125	7	30	
Chloroethane	ug/L	ND	200	200	217	198	109	99	75-129	9	30	
Chloroform	ug/L	ND	200	200	199	194	99	97	66-132	2	30	
Chloromethane	ug/L	ND	200	200	211	204	106	102	53-137	3	30	
cis-1,2-Dichloroethene	ug/L	ND	200	200	224	210	112	105	67-133	6	30	
cis-1,3-Dichloropropene	ug/L	ND	200	200	242	228	121	114	66-125	6	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3397217 3397218

Parameter	Units	10489238001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	ND	200	200	203	193	101	97	62-132	5	30	
Dibromomethane	ug/L	ND	200	200	225	217	113	109	67-125	3	30	
Dichlorodifluoromethane	ug/L	ND	200	200	211	204	105	102	71-142	3	30	
Dichlorofluoromethane	ug/L	ND	200	200	212	196	106	98	70-131	8	30	
Diisopropyl ether	ug/L	ND	200	200	217	202	108	101	63-131	7	30	
Ethyl-tert-butyl ether	ug/L	ND	200	200	228	214	114	107	66-128	6	30	
Ethylbenzene	ug/L	ND	200	200	207	193	103	96	74-126	7	30	
Hexachloro-1,3-butadiene	ug/L	ND	200	200	189	179	95	90	68-143	5	30	
Isopropylbenzene (Cumene)	ug/L	ND	200	200	207	196	103	98	74-130	5	30	
m&p-Xylene	ug/L	ND	400	400	407	382	102	95	69-132	6	30	
Methyl-tert-butyl ether	ug/L	ND	200	200	226	211	113	105	65-131	7	30	
Methylene Chloride	ug/L	ND	200	200	195	188	97	94	57-125	4	30	
n-Butylbenzene	ug/L	ND	200	200	197	186	99	93	71-131	6	30	
n-Propylbenzene	ug/L	ND	200	200	210	198	105	99	67-138	6	30	
Naphthalene	ug/L	ND	200	200	176	166	88	83	60-130	6	30	
o-Xylene	ug/L	ND	200	200	206	195	103	97	69-131	5	30	
p-Isopropyltoluene	ug/L	ND	200	200	190	182	95	91	72-133	4	30	
sec-Butylbenzene	ug/L	ND	200	200	191	181	96	90	73-134	6	30	
Styrene	ug/L	ND	200	200	204	196	102	98	72-125	4	30	
tert-Amylmethyl ether	ug/L	ND	200	200	237	222	118	111	67-125	6	30	
tert-Butyl Alcohol	ug/L	ND	2000	2000	2100	1920	105	96	64-137	9	30	
tert-Butylbenzene	ug/L	ND	200	200	195	182	97	91	70-143	7	30	
Tetrachloroethene	ug/L	ND	200	200	195	184	98	92	72-129	6	30	
Tetrahydrofuran	ug/L	ND	2000	2000	2280	2250	114	112	66-128	1	30	
Toluene	ug/L	ND	200	200	201	187	100	93	73-125	7	30	
trans-1,2-Dichloroethene	ug/L	ND	200	200	207	202	104	101	62-137	3	30	
trans-1,3-Dichloropropene	ug/L	ND	200	200	216	202	108	101	61-136	7	30	
trans-1,4-Dichloro-2-butene	ug/L	ND	500	500	521	497	104	99	45-128	5	30	
Trichloroethene	ug/L	ND	200	200	231	215	115	107	74-132	7	30	
Trichlorofluoromethane	ug/L	ND	200	200	212	205	106	102	75-139	3	30	
Vinyl acetate	ug/L	ND	200	200	239	225	119	113	51-135	6	30	
Vinyl chloride	ug/L	ND	200	200	218	210	109	105	68-146	4	30	
Xylene (Total)	ug/L	ND	600	600	612	576	102	96	67-137	6	30	
1,2-Dichloroethane-d4 (S)	%.						95	96	75-136			
4-Bromofluorobenzene (S)	%.						99	100	75-125			
Toluene-d8 (S)	%.						89	89	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 629821 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: 3397119 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/03/19 08:26	

LABORATORY CONTROL SAMPLE & LCSD: 3397120 3397121

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.0	41.4	105	103	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3397122 3397123

Parameter	Units	10489767001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	152	40	40	192	190	100	94	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3397124 3397125

Parameter	Units	10488659001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	247	40	40	278	277	77	75	80-120	0	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 629711 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: 3396578 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	08/31/19 14:49	

LABORATORY CONTROL SAMPLE: 3396579

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	982	98	80-120	

SAMPLE DUPLICATE: 3396580

Parameter	Units	10489438004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3480	3370	3	5	

SAMPLE DUPLICATE: 3396581

Parameter	Units	10489438005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	9900	9880	0	5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 155932 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: 696138 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	09/04/19 14:06	

LABORATORY CONTROL SAMPLE: 696139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.18	92	90-110	

MATRIX SPIKE SAMPLE: 696141

Parameter	Units	20119543001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	ND	0.2	0.070	35	75-125	M1

SAMPLE DUPLICATE: 696140

Parameter	Units	20119543001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.0054		20	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 629712 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: 3396635 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	08/31/19 14:48	
Nitrate as N	mg/L	<0.012	0.10	0.012	08/31/19 14:48	
Sulfate	mg/L	<0.28	1.2	0.28	08/31/19 14:48	

LABORATORY CONTROL SAMPLE: 3396636

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	12.3	98	90-110	
Nitrate as N	mg/L	1	0.97	97	90-110	
Sulfate	mg/L	12.5	13.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3396637 3396638

Parameter	Units	10489767002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.3	12.5	12.5	13.7	13.7	92	91	90-110	0	20	
Nitrate as N	mg/L	<0.012	1	1	0.93	0.92	93	92	90-110	1	20	
Sulfate	mg/L	5.7	12.5	12.5	17.1	17.0	91	90	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 629724 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: 3396727 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	08/31/19 14:11	FS

LABORATORY CONTROL SAMPLE: 3396728

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.91	91	90-110	FS

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3396729 3396730

Parameter	Units	10489613003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.28	1	1	1.4	1.4	110	110	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3396731 3396732

Parameter	Units	10489613015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	1.9	5	5	7.4	7.4	111	111	90-110	0	20	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 630075 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: 3398081 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	09/04/19 14:12	

LABORATORY CONTROL SAMPLE: 3398082

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	298	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3398083 3398084

Parameter	Units	10489767001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	259	253	100	98	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3398085 3398086

Parameter	Units	10489767002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	248	242	99	97	90-110	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

QC Batch: 174134 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10489767001, 10489767002

METHOD BLANK: 689671 Matrix: Water
Associated Lab Samples: 10489767001, 10489767002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	09/05/19 12:35	

LABORATORY CONTROL SAMPLE: 689672

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.5	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 689673 689674

Parameter	Units	10489213001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	ND	25	25	26.3	26.5	104	105	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 689675 689676

Parameter	Units	10489646002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.6	25	25	29.6	29.4	104	103	80-120	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
C0	Result confirmed by second analysis.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
FS	The sample was filtered in the laboratory prior to analysis.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman,WA-Cenex Harvest Lease
Pace Project No.: 10489767

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10489767001	**MW27-GW-083019**	RSK175	1340933	RSK-175	1340933
10489767002	**MW33-GW-083019**	RSK175	1340933	RSK-175	1340933
10489767001	**MW27-GW-083019**	EPA 3010	629792	EPA 6010D	630235
10489767002	**MW33-GW-083019**	EPA 3010	629792	EPA 6010D	630235
10489767001	**MW27-GW-083019**	EPA 7470A	629794	EPA 7470A	630154
10489767002	**MW33-GW-083019**	EPA 7470A	629794	EPA 7470A	630154
10489767001	**MW27-GW-083019**	EPA 8260B	629850		
10489767002	**MW33-GW-083019**	EPA 8260B	629850		
10489767003	**Trip Blank**	EPA 8260B	629850		
10489767001	**MW27-GW-083019**	SM 2320B	629821		
10489767002	**MW33-GW-083019**	SM 2320B	629821		
10489767001	**MW27-GW-083019**	SM 2540C	629711		
10489767002	**MW33-GW-083019**	SM 2540C	629711		
10489767001	**MW27-GW-083019**	SM 4500-S-2 D	155932		
10489767002	**MW33-GW-083019**	SM 4500-S-2 D	155932		
10489767001	**MW27-GW-083019**	EPA 300.0	629712		
10489767002	**MW33-GW-083019**	EPA 300.0	629712		
10489767001	**MW27-GW-083019**	EPA 353.2	629724		
10489767002	**MW33-GW-083019**	EPA 353.2	629724		
10489767001	**MW27-GW-083019**	EPA 410.4	630075	EPA 410.4	630280
10489767002	**MW33-GW-083019**	EPA 410.4	630075	EPA 410.4	630280
10489767001	**MW27-GW-083019**	SM 5310C	174134		
10489767002	**MW33-GW-083019**	SM 5310C	174134		

Pace Analytical

CHAIN-OF-CUSTODY / Analyti

The Chain-of-Custody is a LEGAL DOCUMENT

WO#: 10489767

10489767

Page 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: UPRR Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh (awalsh@up.com)	
Address: 1400 W. 52nd Ave. Denver, CO 80221	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR	
Email: awalsh@up.com	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	Regulatory Agency
Phone: Fax:	Purchase Order #: 1497-38-Rev0	Pace Quote: Contract# 9900758938	
Requested Due Date: (24 Hr) / 3 Day / 10 Day	Project Name: Freeman,WA-Cenex Harvest Lease	Pace Project Manager: Jennifer Gross	State / Location: WA / Freeman
	Project #:	Pace Profile #: 36447 / 1	

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): Low Level VOCs by 8260	Hold	6010/7470 TAL Dissolved	2320 Alkalinity	Chloride, sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK 175	COD 410.4	Nitrate + Nitrite 353.2	
1	MW27-GW-083019	WT	G	8/30	1230				13	X	X	X	X	X			X		X	X	X	X	X	X	X	X	X	ea 1
2	MW33-GW-083019	"	"	"	1445				13	X	X	X	X	X			"		X	X	X	X	X	X	X	X	X	" 2
3	Trip Blank	"	"	"	0700				2				X				"												" 3
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													-
12																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Field Filtered by client	K Esl / Jacobs	8/30/19	1630	PACE	8/31/19	935	0.7	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karla Savage

SIGNATURE of SAMPLER: K Esl

DATE Signed: 8/30/19

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.29**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR / JACOBS

Project #: WO#: 10489767
PM: JMG Due Date: 09/04/19
CLIENT: UPRR_Jacobs

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Pace [ ] SpeeDee [ ] Commercial **See Exceptions** [ ]

Tracking Number: 4638 0198 4972

Custody Seal on Cooler/Box Present? [ ] Yes [X] No **Seals Intact?** [ ] Yes [X] No **Biological Tissue Frozen?** [ ] Yes [ ] No [X] N/A

JMG 083119

Packing Material: [X] Bubble Wrap [X] Bubble Bags [ ] None [ ] Other:_____ **Temp Blank?** [ ] Yes [X] No

Thermometer: [X] T1(0461) [ ] T2(1336) [ ] T3(0459) [ ] T4(0254) [ ] T5(0489) **Type of Ice:** [X] Wet [ ] Blue [ ] None [ ] Dry [ ] Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:**_____ °C

Correction Factor: -0.1 **Cooler Temp Corrected w/temp blank :**_____ °C

Average Corrected Temp (no temp blank only): [X] See Exceptions 0.1 °C [ ] 1 Container

USDA Regulated Soil: ([X] N/A, water sample/Other:_____)
Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? [ ] Yes [ ] No
Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? [ ] Yes [ ] No
If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

Date/Initials of Person Examining Contents: 8/31/19 CMY

				COMMENTS:
Chain of Custody Present and Filled Out?	[X] Yes	[ ] No		1.
Chain of Custody Relinquished?	[X] Yes	[ ] No		2.
Sampler Name and/or Signature on COC?	[X] Yes	[ ] No	[ ] N/A	3.
Samples Arrived within Hold Time?	[X] Yes	[ ] No		4.
Short Hold Time Analysis (<72 hr)?	[X] Yes	[ ] No		5. [ ] Fecal Coliform [ ] HPC [ ] Total Coliform/E coli [ ] BOD/cBOD [ ] Hex Chrome [ ] Turbidity [X] Nitrate [X] ~~Nitrite~~ [ ] Orthophos [ ] Other_____
Rush Turn Around Time Requested?	[X] Yes	[ ] No		6. JMG 083119
Sufficient Volume?	[X] Yes	[ ] No		7.
Correct Containers Used? -Pace Containers Used?	[X] Yes [X] Yes	[ ] No [ ] No		8.
Containers Intact?	[X] Yes	[ ] No		9.
Field Filtered Volume Received for Dissolved Tests?	[ ] Yes	[ ] No	[X] N/A	10. Is sediment visible in the dissolved container? [ ] Yes [ ] No
Is sufficient information available to reconcile the samples to the COC? Matrix: [X] Water [ ] Soil [ ] Oil [ ] Other_____	[X] Yes	[ ] No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** [ ]
All containers needing acid/base preservation have been checked?	[X] Yes	[ ] No	[ ] N/A	12. Sample # 1-2: 1/1 1-2: 1/1 12: 1/1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	[X] Yes	[ ] No	[ ] N/A	[ ] NaOH [X] HNO_3 [X] H_2SO_4 [X] Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (Water) and Dioxin/PFAS	[X] Yes	[ ] No	[ ] N/A	Positive for Res. Chlorine? [ ] Yes [ ] No **pH Paper Lot#** **See Exception** [ ]
				Res. Chlorine: 0-6 Roll 203619; 0-6 Strip; 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	[X] Yes	[ ] No	[ ] N/A	13. **See Exception** [ ]
Trip Blank Present?	[X] Yes	[ ] No	[ ] N/A	14.
Trip Blank Custody Seals Present?	[X] Yes	[ ] No	[ ] N/A	Pace Trip Blank Lot # (if purchased): 204792

CLIENT NOTIFICATION/RESOLUTION
Person Contacted: Mark / Brad Date/Time: 09/03/19
Comments/Resolution: Notified client of head space.

Field Data Required? [ ] Yes [ ] No

Project Manager Review: _____ (Jenni Gross) Date: 08/31/19

Note: Whenever there is a discrepancy affecting Nc ompliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: _____

Pace Analytical	Document Name: SCUR Exception Form – Coolers Above 6°C	Document Revised: 08Apr2019 Page 1 of 1
	Document No.: F-MN-C-298-Rev.02	Issuing Authority: Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions: **Workorder #:** 10489767

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp
0.6	0.5	0.7
0.8	0.7	
0.7	0.6	
1.2	1.1	

Other Issues

Issue Type: Sample ID	Container Type	# of Containers

Tracking Number/Temperature	

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Pace Analytical®	Document Name: **Headspace Exception**	Document Revised: 09Jul2019 Page 1 of 1
	Document No.: **F-MT-C-334-Rev.00**	Issuing Authority: Pace Montana Quality Office

Sample ID	Headspace greater than 6mm	Headspace less than 6mm	No Headspace	Total Vials	Sediment Present?
MW 27	0	1	4	5	Y
TRIP BLANK	2	0	0	2	N

PRE

WO# : 20119783

Chain of Custody

20119783

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting La

Cert. Needed: ☐ Yes ☒ No

Workorder: 10489767 **Workorder Name:** Freeman,WA-Cenex Harvest Lease **Owner Received Date:** 8/31/2019 **Results Requested By:** 9/5/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	BP2Z					Requested Analysis: 5636267 / 4500 Sulfide												LAB USE ONLY
1	MW27-GW-083019	PS	8/30/2019 12:30	10489767001	Water	1						X												
2	MW33-GW-083019	PS	8/30/2019 14:45	10489767002	Water	1						X												
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	Pace Fed Ex	9/3/19 1700		
2		9-4-19 0920	Pace	9-4-19 0920
3				

Comments: RUSH

Cooler Temperature on Receipt 1.1 °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon R

Proje

WO#: 20119783

PM: CMM **Due Date: 09/05/19**

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑ Yes ☐ No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9-4-19

Temp must be measured from Temperature blank when present

		Comments:
Temperature Blank Present"?	☑ Yes ☐ No ☐ N/A	1
Chain of Custody Present:	☑ Yes ☐ No ☐ N/A	2
Chain of Custody Complete:	☑ Yes ☐ No ☐ N/A	3
Chain of Custody Relinquished:	☑ Yes ☐ No ☐ N/A	4
Sampler Name & Signature on COC:	☑ Yes ☐ No ☐ N/A	5
Samples Arrived within Hold Time:	☑ Yes ☐ No ☐ N/A	6
Sufficient Volume:	☑ Yes ☐ No ☐ N/A	7
Correct Containers Used:	☑ Yes ☐ No ☐ N/A	8
Filtered vol. Rec. for Diss. tests	☐ Yes ☑ No ☐ N/A	9
Sample Labels match COC:	☐ Yes ☐ No ☐ N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑ Yes ☐ No ☐ N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑ Yes ☐ No ☐ N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑ Yes ☐ No ☐ N/A	13 If No, was preserative added? ☐ Yes ☐ No If added record lot no.: HNO_3 _____ H_2SO_4 _____
Headspace in VOA Vials (>6mm):	☐ Yes ☐ No ☑ N/A	14
Trip Blank Present:	☐ Yes ☑ No	15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PRE

WO#: 12134765

12134765

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes ☐

Workorder: 10489767 **Workorder Name:** Freeman,WA-Cenex Harvest Lease **Owner Received Date:** 8/31/2019 **Results Requested By:** 9/5/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S					Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	MW27-GW-083019	PS	8/30/2019 12:30	10489767001	Water	2					X												
2	MW33-GW-083019	PS	8/30/2019 14:45	10489767002	Water	2					X												
3																							
4																							
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	9/3/19 1810	[signature] 9/3/19	1820
2	[signature] 9/3/19	2245	B. Mathews	9/4/19 0630
3				

Comments: RUSH

Cooler Temperature on Receipt 1.6 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: WO#: 12134765

PM: RK1 Due Date: 09/05/19

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 1.3 Cooler Temp Corrected °C: 1.6 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 9/3/19 DC BM 9/4/19

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☑ Yes	☐ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☑ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution: 3- day TAT - RSK

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Davena Ferrer Date: 9/4/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

C063

Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 8/31/2019 Results Requested By: 9/5/2019

Workorder: 10489767 **Workorder Name:** Freeman,WA-Cenex Harvest Lease

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical 12065 Lebanon Road Mt. Juliet, TN 37122 615-773-9710

L1135574

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other VSG	Requested Analysis: 5644436 / RSK-175 Methane, Ethane, Ethene	LAB USE ONLY
1	MW27-GW-083019	PS	8/30/2019 12:30	10489767001	Water	3	X	-01
2	MW33-GW-083019	PS	8/30/2019 14:45	10489767002	Water	3	X	-02
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace	9/3/19 1700	[signature]	9/4/19 8:45
2				
3				

Comments: ok

Cooler Temperature on Receipt 1.5 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

1.7-.2=1.5 AS ck

FedEx 4638 0499 6461

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACETWA	L1355714	
Cooler Received/Opened On: 9/4/19 Temperature:	1.5	
Received By: Adam Burns		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 01, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on September 17, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Pace Analytical National Certification IDs

Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10491643001	**TB-02-190916**	Water	09/16/19 07:00	09/17/19 08:40
10491643002	**W26-GW-091619**	Water	09/16/19 09:25	09/17/19 08:40
10491643003	**W26-GW-091619B**	Water	09/16/19 09:25	09/17/19 08:40
10491643004	**EB-01-091619**	Water	09/16/19 09:30	09/17/19 08:40
10491643005	**MW13S-GW-091619**	Water	09/16/19 11:35	09/17/19 08:40
10491643006	**W20-GW-091619**	Water	09/16/19 13:00	09/17/19 08:40

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10491643001	**TB-02-190916**	EPA 8260B	DS2	83	PASI-M
10491643002	**W26-GW-091619**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491643003	**W26-GW-091619B**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491643004	**EB-01-091619**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491643005	**MW13S-GW-091619**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491643006	**W20-GW-091619**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10491643002	**W26-GW-091619**					
EPA 6010D	Barium, Dissolved	6.6J	ug/L	10.0	09/27/19 14:17	
EPA 6010D	Cadmium, Dissolved	0.38J	ug/L	3.0	09/27/19 14:17	
EPA 6010D	Cobalt, Dissolved	0.89J	ug/L	10.0	09/27/19 14:17	
EPA 6010D	Thallium, Dissolved	7.9J	ug/L	20.0	09/27/19 14:17	
EPA 6010D	Vanadium, Dissolved	6.7J	ug/L	15.0	09/27/19 14:17	
EPA 6010D	Zinc, Dissolved	94.6	ug/L	20.0	09/27/19 14:17	
EPA 8260B	Carbon tetrachloride	23.4	ug/L	0.50	09/18/19 19:50	
EPA 8260B	Chloroform	1.9	ug/L	1.0	09/18/19 19:50	
SM 2320B	Alkalinity, Total as CaCO3	151	mg/L	5.0	09/24/19 10:23	
SM 2540C	Total Dissolved Solids	272	mg/L	10.0	09/20/19 15:39	
EPA 300.0	Chloride	2.9	mg/L	1.2	09/17/19 20:48	
EPA 300.0	Nitrate as N	2.2	mg/L	0.10	09/17/19 20:48	
EPA 300.0	Sulfate	5.2	mg/L	1.2	09/17/19 20:48	
EPA 353.2	Nitrogen, NO2 plus NO3	2.4	mg/L	0.50	09/26/19 08:49	
SM 5310C	Total Organic Carbon	0.65J	mg/L	1.0	09/23/19 11:15	
10491643003	**W26-GW-091619B**					
EPA 6010D	Barium, Dissolved	6.4J	ug/L	10.0	09/27/19 14:19	
EPA 6010D	Cobalt, Dissolved	0.76J	ug/L	10.0	09/27/19 14:19	
EPA 6010D	Vanadium, Dissolved	6.5J	ug/L	15.0	09/27/19 14:19	
EPA 6010D	Zinc, Dissolved	91.5	ug/L	20.0	09/27/19 14:19	
EPA 8260B	Carbon tetrachloride	24.3	ug/L	0.50	09/18/19 20:14	
EPA 8260B	Chloroform	2.0	ug/L	1.0	09/18/19 20:14	
SM 2320B	Alkalinity, Total as CaCO3	166	mg/L	5.0	09/24/19 10:27	
SM 2540C	Total Dissolved Solids	263	mg/L	10.0	09/20/19 15:39	
EPA 300.0	Chloride	2.9	mg/L	1.2	09/17/19 21:04	
EPA 300.0	Nitrate as N	2.2	mg/L	0.10	09/17/19 21:04	
EPA 300.0	Sulfate	5.1	mg/L	1.2	09/17/19 21:04	
EPA 353.2	Nitrogen, NO2 plus NO3	2.4	mg/L	0.50	09/26/19 08:52	
SM 5310C	Total Organic Carbon	0.72J	mg/L	1.0	09/23/19 11:55	
10491643004	**EB-01-091619**					
EPA 6010D	Copper, Dissolved	3.2J	ug/L	10.0	09/27/19 14:24	
EPA 6010D	Nickel, Dissolved	1.7J	ug/L	20.0	09/27/19 14:24	
EPA 6010D	Zinc, Dissolved	11.1J	ug/L	20.0	09/27/19 14:24	
SM 2320B	Alkalinity, Total as CaCO3	2.7J	mg/L	5.0	09/24/19 10:31	
SM 2540C	Total Dissolved Solids	20.0	mg/L	10.0	09/20/19 15:39	B
EPA 300.0	Chloride	0.41J	mg/L	1.2	09/17/19 20:31	
EPA 300.0	Nitrate as N	0.12	mg/L	0.10	09/17/19 20:31	
EPA 353.2	Nitrogen, NO2 plus NO3	0.13	mg/L	0.10	09/26/19 08:53	
10491643005	**MW13S-GW-091619**					
EPA 6010D	Barium, Dissolved	57.7	ug/L	10.0	09/27/19 14:26	
EPA 6010D	Beryllium, Dissolved	0.14J	ug/L	5.0	09/27/19 14:26	
EPA 6010D	Chromium, Dissolved	1.0J	ug/L	10.0	09/27/19 14:26	
EPA 6010D	Cobalt, Dissolved	0.65J	ug/L	10.0	09/27/19 14:26	
EPA 6010D	Vanadium, Dissolved	11.2J	ug/L	15.0	09/27/19 14:26	
EPA 6010D	Zinc, Dissolved	10.0J	ug/L	20.0	09/27/19 14:26	
SM 2320B	Alkalinity, Total as CaCO3	158	mg/L	5.0	09/24/19 10:47	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10491643005	**MW13S-GW-091619**					
SM 2540C	Total Dissolved Solids	230	mg/L	10.0	09/20/19 15:39	
SM 4500-S-2 D	Sulfide, Total	0.011J	mg/L	0.020	09/21/19 10:53	
EPA 300.0	Chloride	1.1J	mg/L	1.2	09/17/19 21:21	
EPA 300.0	Nitrate as N	0.34	mg/L	0.10	09/17/19 21:21	
EPA 300.0	Sulfate	4.2	mg/L	1.2	09/17/19 21:21	
EPA 353.2	Nitrogen, NO2 plus NO3	0.42	mg/L	0.10	09/26/19 08:55	
SM 5310C	Total Organic Carbon	0.50J	mg/L	1.0	09/23/19 12:20	
10491643006	**W20-GW-091619**					
RSK-175	Methane	4320	ug/L	10.0	09/20/19 10:46	
EPA 6010D	Barium, Dissolved	21.2	ug/L	10.0	09/27/19 14:27	
EPA 6010D	Cobalt, Dissolved	0.51J	ug/L	10.0	09/27/19 14:27	
EPA 6010D	Zinc, Dissolved	20.2	ug/L	20.0	09/27/19 14:27	
SM 2320B	Alkalinity, Total as CaCO3	56.4	mg/L	5.0	09/24/19 10:52	
SM 2540C	Total Dissolved Solids	70.0	mg/L	10.0	09/20/19 15:39	
EPA 300.0	Chloride	1.7	mg/L	1.2	09/17/19 21:38	
SM 5310C	Total Organic Carbon	2.9	mg/L	1.0	09/23/19 12:33	

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **RSK-175**
Description: VOA (GC) RSK175
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for RSK-175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
6 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 632980

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3412678)
  - 2,2,4-Trimethylpentane
  - Dibromomethane
- MSD (Lab ID: 3412679)
  - Dibromomethane

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 01, 2019

Analyte Comments:

QC Batch: 632980

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3412676)
  - 1,2-Dichloroethene (Total)
- EB-01-091619 (Lab ID: 10491643004)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3412677)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3412678)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3412679)
  - 1,2-Dichloroethene (Total)
- MW13S-GW-091619 (Lab ID: 10491643005)
  - 1,2-Dichloroethene (Total)
- TB-02-190916 (Lab ID: 10491643001)
  - 1,2-Dichloroethene (Total)
- W20-GW-091619 (Lab ID: 10491643006)
  - 1,2-Dichloroethene (Total)
- W26-GW-091619 (Lab ID: 10491643002)
  - 1,2-Dichloroethene (Total)
- W26-GW-091619B (Lab ID: 10491643003)
  - 1,2-Dichloroethene (Total)

- BLANK (Lab ID: 3412676)
  - Dichlorofluoromethane
- EB-01-091619 (Lab ID: 10491643004)
  - Dichlorofluoromethane
- LCS (Lab ID: 3412677)
  - Dichlorofluoromethane
- MS (Lab ID: 3412678)
  - Dichlorofluoromethane
- MSD (Lab ID: 3412679)
  - Dichlorofluoromethane
- MW13S-GW-091619 (Lab ID: 10491643005)
  - Dichlorofluoromethane
- TB-02-190916 (Lab ID: 10491643001)
  - Dichlorofluoromethane
- W20-GW-091619 (Lab ID: 10491643006)
  - Dichlorofluoromethane
- W26-GW-091619 (Lab ID: 10491643002)
  - Dichlorofluoromethane
- W26-GW-091619B (Lab ID: 10491643003)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 633400

B: Analyte was detected in the associated method blank.

- BLANK for HBN 633400 [WET/6627 (Lab ID: 3414733)
  - Total Dissolved Solids

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 158273

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20122026001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 709165)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 632757

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491503001,10491655005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3411369)
  - Chloride
- MS (Lab ID: 3411371)
  - Chloride
  - Nitrate as N
- MSD (Lab ID: 3411370)
  - Chloride
- MSD (Lab ID: 3411372)
  - Chloride
  - Nitrate as N

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 3411369)
  - Sulfate
- MSD (Lab ID: 3411370)
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
5 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: TB-02-190916 **Lab ID: 10491643001** Collected: 09/16/19 07:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:28	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 15:28	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:28	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 15:28	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 15:28	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:28	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:28	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:28	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 15:28	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 15:28	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:28	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:28	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 15:28	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 15:28	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 15:28	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 15:28	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 15:28	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 15:28	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 15:28	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:28	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 15:28	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:28	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 15:28	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 15:28	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 15:28	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 15:28	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:28	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 15:28	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 15:28	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 15:28	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 15:28	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 15:28	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 15:28	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 15:28	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 15:28	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 15:28	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 15:28	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 15:28	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 15:28	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 15:28	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 15:28	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:28	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 15:28	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 15:28	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 15:28	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 15:28	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: TB-02-190916 **Lab ID: 10491643001** Collected: 09/16/19 07:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 15:28	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 15:28	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 15:28	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 15:28	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 15:28	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 15:28	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 15:28	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 15:28	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:28	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 15:28	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 15:28	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 15:28	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:28	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 15:28	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 15:28	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 15:28	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 15:28	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 15:28	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 15:28	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 15:28	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:28	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:28	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 15:28	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 15:28	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 15:28	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:28	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:28	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:28	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 15:28	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 15:28	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:28	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 15:28	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 15:28	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 15:28	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-136		1		09/18/19 15:28	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/18/19 15:28	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		09/18/19 15:28	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: W26-GW-091619 **Lab ID: 10491643002** Collected: 09/16/19 09:25 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 10:09	09/20/19 10:09	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 10:09	09/20/19 10:09	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 10:09	09/20/19 10:09	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:17	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:17	7440-38-2	
Barium, Dissolved	**6.6J**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:17	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:17	7440-41-7	
Cadmium, Dissolved	**0.38J**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:17	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:17	7440-47-3	
Cobalt, Dissolved	**0.89J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:17	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:17	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:17	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:17	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:17	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:17	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:17	7440-22-4	
Thallium, Dissolved	**7.9J**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:17	7440-28-0	
Vanadium, Dissolved	**6.7J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:17	7440-62-2	
Zinc, Dissolved	**94.6**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:17	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 16:30	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:50	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 19:50	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:50	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 19:50	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 19:50	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:50	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:50	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:50	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 19:50	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 19:50	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:50	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:50	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 19:50	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 19:50	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 19:50	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 19:50	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 19:50	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 19:50	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 19:50	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:50	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: W26-GW-091619 **Lab ID: 10491643002** Collected: 09/16/19 09:25 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 19:50	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:50	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 19:50	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 19:50	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 19:50	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 19:50	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:50	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 19:50	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 19:50	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 19:50	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 19:50	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 19:50	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 19:50	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 19:50	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 19:50	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 19:50	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 19:50	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 19:50	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 19:50	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 19:50	75-15-0	
Carbon tetrachloride	**23.4**	ug/L	0.50	0.19	1		09/18/19 19:50	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:50	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 19:50	75-00-3	
Chloroform	**1.9**	ug/L	1.0	0.45	1		09/18/19 19:50	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 19:50	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 19:50	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 19:50	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 19:50	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 19:50	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 19:50	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 19:50	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 19:50	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 19:50	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 19:50	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:50	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 19:50	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 19:50	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 19:50	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:50	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 19:50	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 19:50	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 19:50	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 19:50	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 19:50	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 19:50	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 19:50	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: W26-GW-091619 **Lab ID: 10491643002** Collected: 09/16/19 09:25 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:50	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:50	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 19:50	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 19:50	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 19:50	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:50	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:50	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:50	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 19:50	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 19:50	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:50	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 19:50	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 19:50	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 19:50	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		09/18/19 19:50	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/18/19 19:50	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1		09/18/19 19:50	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**151**	mg/L	5.0	2.0	1		09/24/19 10:23		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**272**	mg/L	10.0	5.0	1		09/20/19 15:39		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/21/19 10:49	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.9**	mg/L	1.2	0.12	1		09/17/19 20:48	16887-00-6	
Nitrate as N	**2.2**	mg/L	0.10	0.012	1		09/17/19 20:48	14797-55-8	
Sulfate	**5.2**	mg/L	1.2	0.28	1		09/17/19 20:48	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**2.4**	mg/L	0.50	0.088	5		09/26/19 08:49		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:52		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.65J**	mg/L	1.0	0.39	1		09/23/19 11:15	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: W26-GW-091619B **Lab ID: 10491643003** Collected: 09/16/19 09:25 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 10:13	09/20/19 10:13	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 10:13	09/20/19 10:13	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 10:13	09/20/19 10:13	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:19	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:19	7440-38-2	
Barium, Dissolved	**6.4J**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:19	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:19	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:19	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:19	7440-47-3	
Cobalt, Dissolved	**0.76J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:19	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:19	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:19	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:19	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:19	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:19	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:19	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:19	7440-28-0	
Vanadium, Dissolved	**6.5J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:19	7440-62-2	
Zinc, Dissolved	**91.5**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:19	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 16:32	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:14	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 20:14	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:14	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 20:14	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 20:14	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:14	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:14	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:14	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 20:14	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 20:14	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:14	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:14	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 20:14	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 20:14	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 20:14	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 20:14	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 20:14	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 20:14	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 20:14	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:14	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: W26-GW-091619B **Lab ID: 10491643003** Collected: 09/16/19 09:25 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 20:14	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:14	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 20:14	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 20:14	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 20:14	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 20:14	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:14	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 20:14	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 20:14	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 20:14	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 20:14	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 20:14	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 20:14	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 20:14	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 20:14	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 20:14	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 20:14	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 20:14	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 20:14	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 20:14	75-15-0	
Carbon tetrachloride	**24.3**	ug/L	0.50	0.19	1		09/18/19 20:14	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:14	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 20:14	75-00-3	
Chloroform	**2.0**	ug/L	1.0	0.45	1		09/18/19 20:14	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 20:14	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 20:14	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 20:14	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 20:14	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 20:14	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 20:14	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 20:14	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 20:14	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 20:14	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 20:14	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:14	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 20:14	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 20:14	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 20:14	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:14	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 20:14	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 20:14	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 20:14	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 20:14	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 20:14	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 20:14	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 20:14	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: W26-GW-091619B **Lab ID: 10491643003** Collected: 09/16/19 09:25 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 20:14	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:14	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 20:14	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 20:14	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 20:14	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:14	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 20:14	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 20:14	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 20:14	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 20:14	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 20:14	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 20:14	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 20:14	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 20:14	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%.	75-136		1		09/18/19 20:14	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/18/19 20:14	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1		09/18/19 20:14	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**166**	mg/L	5.0	2.0	1		09/24/19 10:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**263**	mg/L	10.0	5.0	1		09/20/19 15:39		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/21/19 10:51	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.9**	mg/L	1.2	0.12	1		09/17/19 21:04	16887-00-6	
Nitrate as N	**2.2**	mg/L	0.10	0.012	1		09/17/19 21:04	14797-55-8	
Sulfate	**5.1**	mg/L	1.2	0.28	1		09/17/19 21:04	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**2.4**	mg/L	0.50	0.088	5		09/26/19 08:52		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:53		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.72J**	mg/L	1.0	0.39	1		09/23/19 11:55	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: EB-01-091619 **Lab ID: 10491643004** Collected: 09/16/19 09:30 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 10:35	09/20/19 10:35	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 10:35	09/20/19 10:35	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 10:35	09/20/19 10:35	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:24	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:24	7440-38-2	
Barium, Dissolved	**<0.60**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:24	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:24	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:24	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:24	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:24	7440-48-4	
Copper, Dissolved	**3.2J**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:24	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:24	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:24	7439-98-7	
Nickel, Dissolved	**1.7J**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:24	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:24	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:24	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:24	7440-28-0	
Vanadium, Dissolved	**<0.43**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:24	7440-62-2	
Zinc, Dissolved	**11.1J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:24	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 16:34	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:52	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 15:52	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:52	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 15:52	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 15:52	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:52	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:52	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:52	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 15:52	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 15:52	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:52	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:52	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 15:52	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 15:52	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 15:52	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 15:52	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 15:52	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 15:52	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 15:52	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:52	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: EB-01-091619 **Lab ID: 10491643004** Collected: 09/16/19 09:30 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 15:52	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:52	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 15:52	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 15:52	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 15:52	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 15:52	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:52	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 15:52	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 15:52	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 15:52	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 15:52	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 15:52	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 15:52	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 15:52	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 15:52	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 15:52	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 15:52	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 15:52	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 15:52	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 15:52	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 15:52	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:52	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 15:52	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 15:52	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 15:52	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 15:52	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 15:52	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 15:52	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 15:52	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 15:52	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 15:52	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 15:52	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 15:52	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 15:52	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:52	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 15:52	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 15:52	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 15:52	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:52	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 15:52	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 15:52	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 15:52	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 15:52	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 15:52	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 15:52	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 15:52	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: EB-01-091619 **Lab ID: 10491643004** Collected: 09/16/19 09:30 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:52	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:52	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 15:52	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 15:52	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 15:52	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:52	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:52	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:52	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 15:52	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 15:52	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:52	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 15:52	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 15:52	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 15:52	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		09/18/19 15:52	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/18/19 15:52	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		09/18/19 15:52	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**2.7J**	mg/L	5.0	2.0	1		09/24/19 10:31		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**20.0**	mg/L	10.0	5.0	1		09/20/19 15:39		B
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/21/19 10:52	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**0.41J**	mg/L	1.2	0.12	1		09/17/19 20:31	16887-00-6	
Nitrate as N	**0.12**	mg/L	0.10	0.012	1		09/17/19 20:31	14797-55-8	
Sulfate	**<0.28**	mg/L	1.2	0.28	1		09/17/19 20:31	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.13**	mg/L	0.10	0.018	1		09/26/19 08:53		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:53		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**<0.39**	mg/L	1.0	0.39	1		09/23/19 12:07	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: MW13S-GW-091619 **Lab ID: 10491643005** Collected: 09/16/19 11:35 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 10:38	09/20/19 10:38	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 10:38	09/20/19 10:38	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 10:38	09/20/19 10:38	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:26	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:26	7440-38-2	
Barium, Dissolved	**57.7**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:26	7440-39-3	
Beryllium, Dissolved	**0.14J**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:26	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:26	7440-43-9	
Chromium, Dissolved	**1.0J**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:26	7440-47-3	
Cobalt, Dissolved	**0.65J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:26	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:26	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:26	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:26	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:26	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:26	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:26	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:26	7440-28-0	
Vanadium, Dissolved	**11.2J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:26	7440-62-2	
Zinc, Dissolved	**10.0J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:26	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 16:37	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:38	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 20:38	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:38	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 20:38	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 20:38	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:38	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:38	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:38	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 20:38	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 20:38	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:38	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:38	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 20:38	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 20:38	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 20:38	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 20:38	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 20:38	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 20:38	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 20:38	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:38	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: MW13S-GW-091619 **Lab ID: 10491643005** Collected: 09/16/19 11:35 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 20:38	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:38	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 20:38	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 20:38	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 20:38	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 20:38	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:38	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 20:38	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 20:38	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 20:38	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 20:38	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 20:38	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 20:38	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 20:38	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 20:38	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 20:38	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 20:38	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 20:38	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 20:38	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 20:38	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 20:38	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:38	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 20:38	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 20:38	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 20:38	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 20:38	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 20:38	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 20:38	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 20:38	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 20:38	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 20:38	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 20:38	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 20:38	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 20:38	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:38	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 20:38	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 20:38	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 20:38	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 20:38	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 20:38	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 20:38	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 20:38	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 20:38	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 20:38	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 20:38	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 20:38	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: MW13S-GW-091619 **Lab ID: 10491643005** Collected: 09/16/19 11:35 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 20:38	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 20:38	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 20:38	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 20:38	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 20:38	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 20:38	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 20:38	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 20:38	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 20:38	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 20:38	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 20:38	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 20:38	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 20:38	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 20:38	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%.	75-136		1		09/18/19 20:38	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/18/19 20:38	2037-26-5	
4-Bromofluorobenzene (S)	94	%.	75-125		1		09/18/19 20:38	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**158**	mg/L	5.0	2.0	1		09/24/19 10:47		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**230**	mg/L	10.0	5.0	1		09/20/19 15:39		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.011J**	mg/L	0.020	0.0054	1		09/21/19 10:53	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.1J**	mg/L	1.2	0.12	1		09/17/19 21:21	16887-00-6	
Nitrate as N	**0.34**	mg/L	0.10	0.012	1		09/17/19 21:21	14797-55-8	
Sulfate	**4.2**	mg/L	1.2	0.28	1		09/17/19 21:21	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.42**	mg/L	0.10	0.018	1		09/26/19 08:55		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:53		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.50J**	mg/L	1.0	0.39	1		09/23/19 12:20	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: W20-GW-091619 **Lab ID: 10491643006** Collected: 09/16/19 13:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**4320**	ug/L	10.0	2.91	1	09/20/19 10:46	09/20/19 10:46	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 10:46	09/20/19 10:46	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 10:46	09/20/19 10:46	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:27	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:27	7440-38-2	
Barium, Dissolved	**21.2**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:27	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:27	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:27	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:27	7440-47-3	
Cobalt, Dissolved	**0.51J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:27	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:27	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:27	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:27	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:27	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:27	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:27	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:27	7440-28-0	
Vanadium, Dissolved	**<0.43**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:27	7440-62-2	
Zinc, Dissolved	**20.2**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:27	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 16:39	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:01	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 21:01	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:01	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 21:01	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 21:01	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:01	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:01	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:01	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 21:01	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 21:01	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:01	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:01	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 21:01	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 21:01	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 21:01	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 21:01	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 21:01	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 21:01	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 21:01	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:01	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: W20-GW-091619 **Lab ID: 10491643006** Collected: 09/16/19 13:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 21:01	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:01	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 21:01	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 21:01	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 21:01	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 21:01	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:01	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 21:01	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 21:01	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 21:01	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 21:01	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 21:01	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 21:01	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 21:01	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 21:01	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 21:01	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 21:01	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 21:01	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 21:01	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 21:01	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 21:01	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:01	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 21:01	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 21:01	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 21:01	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 21:01	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 21:01	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 21:01	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 21:01	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 21:01	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 21:01	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 21:01	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 21:01	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 21:01	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:01	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 21:01	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 21:01	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 21:01	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:01	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 21:01	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 21:01	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 21:01	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 21:01	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 21:01	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 21:01	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 21:01	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Sample: W20-GW-091619 **Lab ID: 10491643006** Collected: 09/16/19 13:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:01	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:01	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 21:01	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 21:01	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 21:01	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:01	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:01	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:01	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 21:01	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 21:01	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:01	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 21:01	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 21:01	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 21:01	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-136		1		09/18/19 21:01	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/18/19 21:01	2037-26-5	
4-Bromofluorobenzene (S)	95	%.	75-125		1		09/18/19 21:01	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**56.4**	mg/L	5.0	2.0	1		09/24/19 10:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**70.0**	mg/L	10.0	5.0	1		09/20/19 15:39		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/21/19 10:53	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.7**	mg/L	1.2	0.12	1		09/17/19 21:38	16887-00-6	
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		09/17/19 21:38	14797-55-8	
Sulfate	**<0.28**	mg/L	1.2	0.28	1		09/17/19 21:38	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		09/26/19 08:56		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:53		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.9**	mg/L	1.0	0.39	1		09/23/19 12:33	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 1349234 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: R3452890-1 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/20/19 09:25	
Ethane	ug/L	<4.07	13.0	4.07	09/20/19 09:25	
Ethene	ug/L	<4.26	13.0	4.26	09/20/19 09:25	

LABORATORY CONTROL SAMPLE & LCSD: R3452890-3 R3452890-4

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	76.3	75.3	113	111	85.0-115	1.34	20	
Ethane	ug/L	129	118	118	91.2	91.4	85.0-115	0.306	20	
Ethene	ug/L	127	117	116	91.8	91.7	85.0-115	0.136	20	

SAMPLE DUPLICATE: R3452890-2

Parameter	Units	10491643002 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 633324 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 3414327 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	09/27/19 16:25	

LABORATORY CONTROL SAMPLE: 3414328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.7	114	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414329 3414330

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.4	5.4	108	108	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 633134 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 3413585 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	09/27/19 14:14	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	09/27/19 14:14	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	09/27/19 14:14	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	09/27/19 14:14	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	09/27/19 14:14	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	09/27/19 14:14	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	09/27/19 14:14	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	09/27/19 14:14	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	09/27/19 14:14	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	09/27/19 14:14	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	09/27/19 14:14	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	09/27/19 14:14	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	09/27/19 14:14	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	09/27/19 14:14	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	09/27/19 14:14	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	09/27/19 14:14	

LABORATORY CONTROL SAMPLE: 3413586

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	985	98	80-120	
Arsenic, Dissolved	ug/L	1000	999	100	80-120	
Barium, Dissolved	ug/L	1000	997	100	80-120	
Beryllium, Dissolved	ug/L	1000	1000	100	80-120	
Cadmium, Dissolved	ug/L	1000	1020	102	80-120	
Chromium, Dissolved	ug/L	1000	1000	100	80-120	
Cobalt, Dissolved	ug/L	1000	1000	100	80-120	
Copper, Dissolved	ug/L	1000	984	98	80-120	
Lead, Dissolved	ug/L	1000	1010	101	80-120	
Molybdenum, Dissolved	ug/L	1000	968	97	80-120	
Nickel, Dissolved	ug/L	1000	993	99	80-120	
Selenium, Dissolved	ug/L	1000	1040	104	80-120	
Silver, Dissolved	ug/L	500	501	100	80-120	
Thallium, Dissolved	ug/L	1000	982	98	80-120	
Vanadium, Dissolved	ug/L	1000	991	99	80-120	
Zinc, Dissolved	ug/L	1000	1030	103	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3413587 3413588

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	1030	991	103	99	75-125	4	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1060	1020	106	102	75-125	4	20	
Barium, Dissolved	ug/L	47.5	1000	1000	1090	1050	104	101	75-125	3	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	1060	1020	106	102	75-125	4	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1060	1020	106	102	75-125	4	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1050	1020	105	102	75-125	3	20	
Cobalt, Dissolved	ug/L	0.79J	1000	1000	1040	1000	104	100	75-125	3	20	
Copper, Dissolved	ug/L	<1.2	1000	1000	1040	1010	104	101	75-125	3	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1050	1010	104	101	75-125	3	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	1000	975	100	97	75-125	3	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	1020	985	102	99	75-125	3	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1080	1040	108	104	75-125	3	20	
Silver, Dissolved	ug/L	<0.40	500	500	529	512	106	102	75-125	3	20	
Thallium, Dissolved	ug/L	6.4J	1000	1000	1030	995	102	99	75-125	3	20	
Vanadium, Dissolved	ug/L	7.6J	1000	1000	1050	1020	105	101	75-125	3	20	
Zinc, Dissolved	ug/L	12.0J	1000	1000	1070	1030	106	102	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 632980 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10491643001, 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 3412676 Matrix: Water
Associated Lab Samples: 10491643001, 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/18/19 14:16	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/18/19 14:16	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/18/19 14:16	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	09/18/19 14:16	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/18/19 14:16	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	09/18/19 14:16	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/18/19 14:16	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/18/19 14:16	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	09/18/19 14:16	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/18/19 14:16	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/18/19 14:16	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/18/19 14:16	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/18/19 14:16	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/18/19 14:16	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/18/19 14:16	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/18/19 14:16	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/18/19 14:16	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/18/19 14:16	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/18/19 14:16	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/18/19 14:16	
Acetone	ug/L	<9.2	20.0	9.2	09/18/19 14:16	
Acrolein	ug/L	<1.2	10.0	1.2	09/18/19 14:16	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/18/19 14:16	
Benzene	ug/L	<0.10	0.50	0.10	09/18/19 14:16	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/18/19 14:16	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/18/19 14:16	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/18/19 14:16	
Bromoform	ug/L	<0.80	4.0	0.80	09/18/19 14:16	
Bromomethane	ug/L	<1.8	4.0	1.8	09/18/19 14:16	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/18/19 14:16	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/18/19 14:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

METHOD BLANK: 3412676 Matrix: Water
Associated Lab Samples: 10491643001, 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
Chloroethane	ug/L	<0.49	1.0	0.49	09/18/19 14:16	
Chloroform	ug/L	<0.45	1.0	0.45	09/18/19 14:16	
Chloromethane	ug/L	<0.16	4.0	0.16	09/18/19 14:16	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	09/18/19 14:16	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/18/19 14:16	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/18/19 14:16	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/18/19 14:16	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/18/19 14:16	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/18/19 14:16	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/18/19 14:16	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/18/19 14:16	
Isopropylbenzene (Cumene)	ug/L	<0.18	1.0	0.18	09/18/19 14:16	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/18/19 14:16	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/18/19 14:16	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/18/19 14:16	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/18/19 14:16	
Naphthalene	ug/L	<0.48	1.0	0.48	09/18/19 14:16	
o-Xylene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
Styrene	ug/L	<0.19	1.0	0.19	09/18/19 14:16	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/18/19 14:16	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/18/19 14:16	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/18/19 14:16	
Toluene	ug/L	<0.083	0.50	0.083	09/18/19 14:16	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/18/19 14:16	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	09/18/19 14:16	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/18/19 14:16	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/18/19 14:16	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/18/19 14:16	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/18/19 14:16	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/18/19 14:16	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/18/19 14:16	
1,2-Dichloroethane-d4 (S)	%.	102	75-136		09/18/19 14:16	
4-Bromofluorobenzene (S)	%.	98	75-125		09/18/19 14:16	
Toluene-d8 (S)	%.	99	75-125		09/18/19 14:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

LABORATORY CONTROL SAMPLE: 3412677

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.5	98	68-141	
1,1,1-Trichloroethane	ug/L	20	20.3	101	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	20.4	102	73-125	
1,1,2-Trichloroethane	ug/L	20	20.7	104	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.0	100	69-132	
1,1-Dichloroethane	ug/L	20	20.1	100	73-125	
1,1-Dichloroethene	ug/L	20	19.0	95	71-126	
1,1-Dichloropropene	ug/L	20	20.6	103	73-126	
1,2,3-Trichlorobenzene	ug/L	20	18.2	91	72-126	
1,2,3-Trichloropropane	ug/L	20	19.4	97	75-126	
1,2,4-Trichlorobenzene	ug/L	20	16.6	83	71-134	
1,2,4-Trimethylbenzene	ug/L	20	19.2	96	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	49.9	100	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	20.1	101	75-129	
1,2-Dichlorobenzene	ug/L	20	18.7	94	75-129	
1,2-Dichloroethane	ug/L	20	20.4	102	75-125	
1,2-Dichloroethene (Total)	ug/L	40	38.9	97	74-125	N2
1,2-Dichloropropane	ug/L	20	20.2	101	75-125	
1,3,5-Trimethylbenzene	ug/L	20	19.4	97	75-127	
1,3-Dichlorobenzene	ug/L	20	19.5	98	75-126	
1,3-Dichloropropane	ug/L	20	19.7	98	75-125	
1,4-Dichlorobenzene	ug/L	20	18.4	92	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	392	98	72-129	
2,2,4-Trimethylpentane	ug/L	20	21.2	106	72-128	
2,2-Dichloropropane	ug/L	20	18.9	95	65-138	
2-Butanone (MEK)	ug/L	100	108	108	59-144	
2-Chlorotoluene	ug/L	20	18.9	94	75-127	
2-Hexanone	ug/L	100	104	104	73-134	
4-Chlorotoluene	ug/L	20	19.2	96	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	62-141	
Acetone	ug/L	100	94.8	95	60-137	
Acrolein	ug/L	200	231	116	60-141	
Acrylonitrile	ug/L	200	201	101	75-129	
Benzene	ug/L	20	20.1	101	73-125	
Bromobenzene	ug/L	20	18.8	94	73-125	
Bromochloromethane	ug/L	20	21.1	106	75-135	
Bromodichloromethane	ug/L	20	19.7	99	75-125	
Bromoform	ug/L	20	18.9	94	67-136	
Bromomethane	ug/L	20	16.6	83	30-150	
Carbon disulfide	ug/L	20	19.7	99	47-137	
Carbon tetrachloride	ug/L	20	20.3	101	75-125	
Chlorobenzene	ug/L	20	18.4	92	75-125	
Chloroethane	ug/L	20	18.4	92	63-136	
Chloroform	ug/L	20	19.4	97	73-128	
Chloromethane	ug/L	20	18.1	90	55-130	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	75-125	
cis-1,3-Dichloropropene	ug/L	20	20.6	103	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

LABORATORY CONTROL SAMPLE: 3412677

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.3	102	75-125	
Dibromomethane	ug/L	20	21.0	105	75-125	
Dichlorodifluoromethane	ug/L	20	19.8	99	63-132	
Dichlorofluoromethane	ug/L	20	19.6	98	68-127	
Diisopropyl ether	ug/L	20	19.7	99	71-131	
Ethyl-tert-butyl ether	ug/L	20	18.0	90	75-125	
Ethylbenzene	ug/L	20	18.9	94	75-125	
Hexachloro-1,3-butadiene	ug/L	20	17.7	88	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.3	96	75-125	
m&p-Xylene	ug/L	40	38.8	97	75-126	
Methyl-tert-butyl ether	ug/L	20	19.1	96	75-125	
Methylene Chloride	ug/L	20	21.1	105	70-125	
n-Butylbenzene	ug/L	20	19.5	98	75-126	
n-Propylbenzene	ug/L	20	19.3	97	73-127	
Naphthalene	ug/L	20	16.7	84	63-128	
o-Xylene	ug/L	20	20.0	100	75-128	
p-Isopropyltoluene	ug/L	20	19.5	98	75-125	
sec-Butylbenzene	ug/L	20	20.4	102	75-126	
Styrene	ug/L	20	19.9	100	75-125	
tert-Amylmethyl ether	ug/L	20	18.6	93	75-125	
tert-Butyl Alcohol	ug/L	200	178	89	75-130	
tert-Butylbenzene	ug/L	20	19.5	98	75-131	
Tetrachloroethene	ug/L	20	19.8	99	74-125	
Tetrahydrofuran	ug/L	200	195	98	64-138	
Toluene	ug/L	20	18.9	94	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.1	96	68-128	
trans-1,3-Dichloropropene	ug/L	20	21.4	107	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	41.5	83	60-127	
Trichloroethene	ug/L	20	19.8	99	75-127	
Trichlorofluoromethane	ug/L	20	19.2	96	72-133	
Vinyl acetate	ug/L	20	20.7	104	61-129	
Vinyl chloride	ug/L	20	20.8	104	75-128	
Xylene (Total)	ug/L	60	58.8	98	75-125	
1,2-Dichloroethane-d4 (S)	%.			103	75-136	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412678 3412679

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	22.2	21.1	111	106	75-140	5	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	25.3	23.3	126	116	74-136	8	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	22.8	21.5	114	108	66-134	6	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	24.1	21.8	121	109	75-126	10	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412678 3412679

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	26.7	24.7	134	124	65-146	8	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	23.8	21.2	119	106	68-132	12	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	25.1	22.2	126	111	66-139	12	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	25.9	23.3	130	117	67-134	11	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	23.1	21.9	116	110	67-129	5	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	22.2	20.3	111	101	69-128	9	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	21.6	20.3	108	101	65-140	6	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	23.0	22.7	115	113	71-133	1	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	54.2	53.0	108	106	54-138	2	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	22.4	20.5	112	102	68-125	9	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	22.1	21.9	110	110	74-136	1	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	23.3	21.4	117	107	68-125	8	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	47.8	42.3	120	106	71-126	12	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	23.2	21.3	116	107	67-125	9	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	23.6	23.2	118	116	68-137	2	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	23.0	22.6	115	113	75-131	2	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	22.3	21.0	111	105	71-125	6	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	21.9	21.3	110	106	74-126	3	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	459	407	115	102	68-125	12	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	28.7	22.7	143	113	54-129	23	30	M1
2,2-Dichloropropane	ug/L	<0.17	20	20	25.1	21.6	126	108	69-139	15	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	110	106	110	106	54-144	4	30	
2-Chlorotoluene	ug/L	<0.16	20	20	22.5	22.3	112	111	75-134	1	30	
2-Hexanone	ug/L	<0.88	100	100	109	106	109	106	58-137	2	30	
4-Chlorotoluene	ug/L	<0.13	20	20	22.7	22.7	114	113	72-133	0	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	114	110	114	110	60-129	4	30	
Acetone	ug/L	<9.2	100	100	95.7	86.1	96	86	62-132	11	30	
Acrolein	ug/L	<1.2	200	200	299	279	149	140	30-150	7	30	
Acrylonitrile	ug/L	<0.91	200	200	223	209	111	104	68-125	7	30	
Benzene	ug/L	<0.10	20	20	23.6	21.3	118	107	68-125	10	30	
Bromobenzene	ug/L	<0.21	20	20	21.6	21.2	108	106	73-126	2	30	
Bromochloromethane	ug/L	<0.27	20	20	24.0	22.1	120	110	66-143	8	30	
Bromodichloromethane	ug/L	<0.22	20	20	23.4	21.2	117	106	74-125	10	30	
Bromoform	ug/L	<0.80	20	20	21.9	20.7	109	103	64-134	6	30	
Bromomethane	ug/L	<1.8	20	20	19.7	21.6	99	108	30-150	9	30	
Carbon disulfide	ug/L	<0.078	20	20	26.8	21.9	134	109	43-147	20	30	
Carbon tetrachloride	ug/L	<0.19	20	20	25.9	23.3	129	117	71-143	10	30	
Chlorobenzene	ug/L	<0.17	20	20	21.3	20.0	107	100	75-125	6	30	
Chloroethane	ug/L	<0.49	20	20	24.8	25.2	124	126	75-129	2	30	
Chloroform	ug/L	<0.45	20	20	21.9	20.4	110	102	66-132	7	30	
Chloromethane	ug/L	<0.16	20	20	24.0	24.2	120	121	53-137	1	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	23.6	21.2	118	106	67-133	11	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	23.4	21.2	117	106	66-125	10	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412678 3412679

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	23.2	22.5	116	113	62-132	3	30	
Dibromomethane	ug/L	<0.16	20	20	25.7	26.4	129	132	67-125	3	30	M1
Dichlorodifluoromethane	ug/L	<0.23	20	20	26.1	27.1	130	136	71-142	4	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	23.4	24.2	117	121	70-131	4	30	
Diisopropyl ether	ug/L	<0.13	20	20	22.8	21.0	114	105	63-131	8	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	20.8	19.3	104	97	66-128	8	30	
Ethylbenzene	ug/L	<0.14	20	20	22.7	22.0	114	110	74-126	3	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	25.7	20.1	128	101	68-143	24	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	23.3	22.9	116	114	74-130	2	30	
m&p-Xylene	ug/L	<0.31	40	40	45.7	44.5	114	111	69-132	3	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	21.5	20.4	108	102	65-131	5	30	
Methylene Chloride	ug/L	<0.98	20	20	24.0	21.1	120	105	57-125	13	30	
n-Butylbenzene	ug/L	<0.24	20	20	26.1	23.2	130	116	71-131	12	30	
n-Propylbenzene	ug/L	<0.10	20	20	24.1	23.5	120	118	67-138	2	30	
Naphthalene	ug/L	<0.48	20	20	19.7	19.7	98	99	60-130	0	30	
o-Xylene	ug/L	<0.16	20	20	23.2	22.7	116	114	69-131	2	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	24.7	23.0	124	115	72-133	7	30	
sec-Butylbenzene	ug/L	<0.15	20	20	26.2	24.5	131	123	73-134	7	30	
Styrene	ug/L	<0.19	20	20	22.9	21.7	115	109	72-125	5	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	21.4	20.1	107	100	67-125	6	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	216	202	108	101	64-137	6	30	
tert-Butylbenzene	ug/L	<0.15	20	20	24.8	24.0	124	120	70-143	3	30	
Tetrachloroethene	ug/L	<0.17	20	20	24.5	23.4	123	117	72-129	5	30	
Tetrahydrofuran	ug/L	<2.2	200	200	218	206	109	103	66-128	6	30	
Toluene	ug/L	<0.083	20	20	22.3	20.7	112	103	73-125	8	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	24.2	21.1	121	105	62-137	14	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	25.7	23.1	128	115	61-136	11	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	46.7	44.0	93	88	45-128	6	30	
Trichloroethene	ug/L	<0.15	20	20	24.4	21.6	122	108	74-132	12	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	24.4	25.4	122	127	75-139	4	30	
Vinyl acetate	ug/L	<1.1	20	20	24.8	22.8	124	114	51-135	8	30	
Vinyl chloride	ug/L	<0.092	20	20	27.2	27.1	136	136	68-146	0	30	
Xylene (Total)	ug/L	<0.31	60	60	68.9	67.2	115	112	67-137	2	30	
1,2-Dichloroethane-d4 (S)	%.						106	102	75-136			
4-Bromofluorobenzene (S)	%.						98	98	75-125			
Toluene-d8 (S)	%.						97	95	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 633987 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 3417585 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/24/19 08:52	

LABORATORY CONTROL SAMPLE & LCSD: 3417586 3417587

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.7	41.6	107	104	90-110	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417588 3417589

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	220	40	40	258	258	95	96	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417590 3417591

Parameter	Units	10491745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	45.9	40	40	87.0	87.3	103	104	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 633400 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 3414733 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0J	10.0	5.0	09/20/19 15:39	

LABORATORY CONTROL SAMPLE: 3414734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1020	102	80-120	

SAMPLE DUPLICATE: 3414735

Parameter	Units	10491659002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	334	334	0	5	

SAMPLE DUPLICATE: 3414736

Parameter	Units	10491659003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	350	334	5	5	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 158273 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 709162 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	09/21/19 10:19	

LABORATORY CONTROL SAMPLE: 709163

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.21	106	90-110	

MATRIX SPIKE SAMPLE: 709165

Parameter	Units	20122026001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	ND	0.2	0.13	66	75-125	M1

SAMPLE DUPLICATE: 709164

Parameter	Units	20122026001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.0054		20	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 632757 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 3411367 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	09/18/19 03:13	
Nitrate as N	mg/L	<0.012	0.10	0.012	09/18/19 03:13	
Sulfate	mg/L	<0.28	1.2	0.28	09/18/19 03:13	

LABORATORY CONTROL SAMPLE: 3411368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	11.5	92	90-110	
Nitrate as N	mg/L	1	0.90	90	90-110	
Sulfate	mg/L	12.5	11.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3411369 3411370

Parameter	Units	10491503001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	55.9	12.5	12.5	58.6	59.0	22	25	90-110	1	20	M1
Nitrate as N	mg/L	ND	1	1	0.90	0.90	90	90	90-110	0	20	
Sulfate	mg/L	324	125	125	433	433	87	87	90-110	0	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3411371 3411372

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	0.96J	12.5	12.5	11.8	11.8	87	87	90-110	0	20	M1
Nitrate as N	mg/L	0.093J	1	1	0.92	0.93	83	84	90-110	1	20	M1
Sulfate	mg/L	2.4	12.5	12.5	14.0	13.9	92	92	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 634557 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 3420081 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	09/26/19 08:29	

LABORATORY CONTROL SAMPLE: 3420082

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.96	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420083 3420084

Parameter	Units	10491643002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	2.4	1	1	3.5	3.5	108	106	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420085 3420086

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.065J	1	1	1.1	1.1	99	99	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 632844 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 3412147 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	09/19/19 08:51	

LABORATORY CONTROL SAMPLE: 3412148

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	301	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412149 3412150

Parameter	Units	10491643002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	246	241	98	97	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412151 3412152

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	250	252	98	98	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

QC Batch: 175395 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

METHOD BLANK: 694778 Matrix: Water
Associated Lab Samples: 10491643002, 10491643003, 10491643004, 10491643005, 10491643006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	09/23/19 10:49	

LABORATORY CONTROL SAMPLE: 694779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 694780 694781

Parameter	Units	10491643002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.65J	25	25	26.1	26.0	102	101	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 694782 694783

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<0.39	25	25	25.5	25.8	101	102	80-120	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10491643002	**W26-GW-091619**	RSK175	1349234	RSK-175	1349234
10491643003	**W26-GW-091619B**	RSK175	1349234	RSK-175	1349234
10491643004	**EB-01-091619**	RSK175	1349234	RSK-175	1349234
10491643005	**MW13S-GW-091619**	RSK175	1349234	RSK-175	1349234
10491643006	**W20-GW-091619**	RSK175	1349234	RSK-175	1349234
10491643002	**W26-GW-091619**	EPA 3010	633134	EPA 6010D	635107
10491643003	**W26-GW-091619B**	EPA 3010	633134	EPA 6010D	635107
10491643004	**EB-01-091619**	EPA 3010	633134	EPA 6010D	635107
10491643005	**MW13S-GW-091619**	EPA 3010	633134	EPA 6010D	635107
10491643006	**W20-GW-091619**	EPA 3010	633134	EPA 6010D	635107
10491643002	**W26-GW-091619**	EPA 7470A	633324	EPA 7470A	635113
10491643003	**W26-GW-091619B**	EPA 7470A	633324	EPA 7470A	635113
10491643004	**EB-01-091619**	EPA 7470A	633324	EPA 7470A	635113
10491643005	**MW13S-GW-091619**	EPA 7470A	633324	EPA 7470A	635113
10491643006	**W20-GW-091619**	EPA 7470A	633324	EPA 7470A	635113
10491643001	**TB-02-190916**	EPA 8260B	632980		
10491643002	**W26-GW-091619**	EPA 8260B	632980		
10491643003	**W26-GW-091619B**	EPA 8260B	632980		
10491643004	**EB-01-091619**	EPA 8260B	632980		
10491643005	**MW13S-GW-091619**	EPA 8260B	632980		
10491643006	**W20-GW-091619**	EPA 8260B	632980		
10491643002	**W26-GW-091619**	SM 2320B	633987		
10491643003	**W26-GW-091619B**	SM 2320B	633987		
10491643004	**EB-01-091619**	SM 2320B	633987		
10491643005	**MW13S-GW-091619**	SM 2320B	633987		
10491643006	**W20-GW-091619**	SM 2320B	633987		
10491643002	**W26-GW-091619**	SM 2540C	633400		
10491643003	**W26-GW-091619B**	SM 2540C	633400		
10491643004	**EB-01-091619**	SM 2540C	633400		
10491643005	**MW13S-GW-091619**	SM 2540C	633400		
10491643006	**W20-GW-091619**	SM 2540C	633400		
10491643002	**W26-GW-091619**	SM 4500-S-2 D	158273		
10491643003	**W26-GW-091619B**	SM 4500-S-2 D	158273		
10491643004	**EB-01-091619**	SM 4500-S-2 D	158273		
10491643005	**MW13S-GW-091619**	SM 4500-S-2 D	158273		
10491643006	**W20-GW-091619**	SM 4500-S-2 D	158273		
10491643002	**W26-GW-091619**	EPA 300.0	632757		
10491643003	**W26-GW-091619B**	EPA 300.0	632757		
10491643004	**EB-01-091619**	EPA 300.0	632757		
10491643005	**MW13S-GW-091619**	EPA 300.0	632757		
10491643006	**W20-GW-091619**	EPA 300.0	632757		
10491643002	**W26-GW-091619**	EPA 353.2	634557		
10491643003	**W26-GW-091619B**	EPA 353.2	634557		
10491643004	**EB-01-091619**	EPA 353.2	634557		
10491643005	**MW13S-GW-091619**	EPA 353.2	634557		

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491643

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10491643006	**W20-GW-091619**	EPA 353.2	634557		
10491643002	**W26-GW-091619**	EPA 410.4	632844	EPA 410.4	633009
10491643003	**W26-GW-091619B**	EPA 410.4	632844	EPA 410.4	633009
10491643004	**EB-01-091619**	EPA 410.4	632844	EPA 410.4	633009
10491643005	**MW13S-GW-091619**	EPA 410.4	632844	EPA 410.4	633009
10491643006	**W20-GW-091619**	EPA 410.4	632844	EPA 410.4	633009
10491643002	**W26-GW-091619**	SM 5310C	175395		
10491643003	**W26-GW-091619B**	SM 5310C	175395		
10491643004	**EB-01-091619**	SM 5310C	175395		
10491643005	**MW13S-GW-091619**	SM 5310C	175395		
10491643006	**W20-GW-091619**	SM 5310C	175395		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields r

WO# : 10491643

10491643

Section A – Required Client Information:	Section B – Required Project Information:	Section C – Invoice Information:
Company: UPRR Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR
Email:	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Phone: Fax:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 9900758938
Requested Due Date: 10 Day Standard	Project Name: Freeman WA-Cenex Harvest Lease S	Pace Project Manager: Jennifer Gross
	Project #: 1497	Pace Profile #: 36447 / 4

Regulatory Agency

State / Location: WA / Freeman

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Y/N	Analyses Test: Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	
1	TB-02-190916	WT	G	9/16/2019	0700	–	3				X				X												001
2	W26-GW-091619	WT	G	9/16/2019	0925	–	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			002
3	W26-GW-091619B	WT	G	9/16/2019	0925	–	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			003
4	EB-01-091619	WT	G	9/16/2019	0930	–	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			004
5	MW135-GW-091619	WT	G	9/16/2019	1135	–	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			005
6	W20-GW-091619	WT	G	9/16/2019	1300	–	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			006
7																											
8																											
9																											
10																											
11																											
12																											

MATRIX CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Short hold analyses are in bold	K Os Jacobs	9/16/2019	1500	Pace	9-17-19	840	3.2 Y Y Y
*Field filtered by client							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karla Savage

SIGNATURE of SAMPLER:

DATE Signed: 9/16/2019

Temp in C | Received on Ice (Y/N) | Custody Seals Intact (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.29**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR Jacobs

Project #: **WO#: 10491643**

PM: JMG **Due Date: 10/01/19**

CLIENT: UPRR_Jacobs

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exceptions** ☐

Tracking Number: 4934 3733 2250

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☒ Other: PB **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☒ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 3.3 °C

Correction Factor: -0.1 **Cooler Temp Corrected w/temp blank:** 3.2 °C

Average Corrected Temp (no temp blank only): ☐ See Exceptions ☐ 1 Container °C

USDA Regulated Soil: (☒ N/A, water sample/Other:) **Date/Initials of Person Examining Contents:** AUM 9.17.19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☒ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☒ Nitrate ☒ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☒ Yes ☒ Yes	☐ No ☐ No		8.
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☒ Yes	☐ No	☐ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☒ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	12. Sample # 1-5:1, 1-5:1, 1-5:1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☒ Yes	☐ No	☐ N/A	☐ NaOH ☒ HNO_3 ☒ H_2SO_4 ☒ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☒ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
				Res. Chlorine: 0-6 Roli: 0-6 Strip 203619: 0-14 Strip 10D4281
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☒ No	☐ N/A	13. **See Exception** ☐
Trip Blank Present?	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Jenni Gross **Date:** 09/17/19

Note: Whenever there is a discrepancy affecting hold, incorrect preservative, out of temp, incorrect containers). npliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of

Labeled by: AUM (1)

PRE

Chain of Custody

WO#: 20121986

20121986

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes
Owner Received Date: 9/17/2019 **Results Requested By:** 10/1/2019

Workorder: 10491643 **Workorder Name:** 1497 Freeman WA-Cenex Harvest

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	Requested Analysis: 5636267 / 4500 Sulfide	LAB USE ONLY
1	W26-GW-091619	PS	9/16/2019 09:25	10491643002	Water	1	X	
2	W26-GW-091619B	PS	9/16/2019 09:25	10491643003	Water	1	X	
3	EB-01-091619	PS	9/16/2019 09:30	10491643004	Water	1	X	
4	MW13S-GW-091619	PS	9/16/2019 11:35	10491643005	Water	1	X	
5	W20-GW-091619	PS	9/16/2019 13:00	10491643006	Water	1	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] PACE	9.17.19 1214	FX	
2	FX		[illegible] 9/17 903	
3				

Comments

Cooler Temperature on Receipt 1.3 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO#: 20121986

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon R

PM: CMM Due Date: 10/01/19
CLIENT: PASI-MINN

Proj

Courier: ☐ Pace Courier ☐ Hired Courier ☒ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☒Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☒ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC] Temp should be above freezing to 6°C

Date and Initials of person examining contents: 09-18-19 AM

Temp must be measured from Temperature blank when present

				Comments:
Temperature Blank Present"?	☐Yes	☐No	☒N/A	1
Chain of Custody Present:	☒Yes	☐No	☐N/A	2
Chain of Custody Complete:	☒Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☒Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	5
Samples Arrived within Hold Time:	☒Yes	☐No	☐N/A	6
Sufficient Volume:	☒Yes	☐No	☐N/A	7
Correct Containers Used:	☒Yes	☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☐No	☒N/A	9
Sample Labels match COC:	☒Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☒Yes	☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☒Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☒Yes	☐No	☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☒N/A	14
Trip Blank Present:	☐Yes	☒No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PRE

WO#: 12135688

12135688

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes ☐ No

Workorder: 10491643 **Workorder Name:** 1497 Freeman WA-Cenex Harvest **Owner Received Date:** 9/17/2019 **Results Requested By:** 10/1/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers H2SO4 DG9S	5632354 / 5310 TOC	LAB USE ONLY
1	W26-GW-091619	PS	9/16/2019 09:25	10491643002	Water	2	X	
2	W26-GW-091619B	PS	9/16/2019 09:25	10491643003	Water	2	X	
3	EB-01-091619	PS	9/16/2019 09:30	10491643004	Water	2	X	
4	MW13S-GW-091619	PS	9/16/2019 11:35	10491643005	Water	2	X	
5	W20-GW-091619	PS	9/16/2019 13:00	10491643006	Water	2	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Pace	9/17/19 1800	[illegible] PACE	9/18 12:40
2	[illegible] PACE	9/18/19	[illegible] Pace	9/18/19 1930
3			B. Mathews	9/19/19 0630

Comments

Cooler Temperature on Receipt 0.4 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: **WO#: 12135688**

PM: RK1 **Due Date: 10/02/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.3 Cooler Temp Corrected °C: 0.6 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 9/18/19 DC BM 9/19/19

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☑ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased): _____				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Lauren Kerr Date: 9/19/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Chain of Custody

G155

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 9/17/2019 Results Requested By: 10/1/2019

Workorder: 10491643 **Workorder Name:** 1497 Freeman WA-Cenex Harvest

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace National 12065 Lebanon Road Mt. Juliet, TN 37122 615-773-9710

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	Preserved Containers: VSG	Requested Analysis: 5644436 / Headspace Analysis: Methane, Ethane, Ethene	LAB USE ONLY: 1140622
1	W26-GW-091619	PS	9/16/2019 09:25	10491643002	Water		3	X	-01
2	W26-GW-091619B	PS	9/16/2019 09:25	10491643003	Water		3	X	02
3	EB-01-091619	PS	9/16/2019 09:30	10491643004	Water		3	X	03
4	MW13S-GW-091619	PS	9/16/2019 11:35	10491643005	Water		3	X	04
5	W20-GW-091619	PS	9/16/2019 13:00	10491643006	Water		3	X	05

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	9/17/19 1600	Carol Kemp	9/18/19 8:45
2				
3				

Comments: Short hold

Cooler Temperature on Receipt 1.4 1.3 1.7 °C 4.2 3C | **Custody Seal** (Y) or N | **Received on Ice** Y or N | **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACETWA	1140622	
Cooler Received/Opened On: 9/18/19 Temperature:	1.7	
Received By: Carol Kemp		
Signature: Carol Kemp		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	~~NP~~	X	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 01, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on September 17, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

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CERTIFICATIONS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Pace Analytical National Certification IDs

Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

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SAMPLE SUMMARY

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10491655001	**TB-01-190914**	Water	09/14/19 08:00	09/17/19 08:40
10491655002	**MW-10S-GW-190914**	Water	09/14/19 10:10	09/17/19 08:40
10491655003	**MW-12S-GW-190914**	Water	09/14/19 11:25	09/17/19 08:40
10491655004	**MW-6S-GW-190914**	Water	09/14/19 12:10	09/17/19 08:40
10491655005	**MW-11S-GW-190914**	Water	09/14/19 12:55	09/17/19 08:40
10491655006	**MW-1S-GW-190914**	Water	09/14/19 15:00	09/17/19 08:40
10491655007	**MW-7S-GW-190914**	Water	09/14/19 15:50	09/17/19 08:40
10491655008	**MW-8S-GW-190914**	Water	09/14/19 16:45	09/17/19 08:40
10491655009	**MW-9S-GW-190914**	Water	09/14/19 17:40	09/17/19 08:40
10491655010	**MW-9S-GW-190914B**	Water	09/14/19 17:40	09/17/19 08:40

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SAMPLE ANALYTE COUNT

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10491655001	**TB-01-190914**	EPA 8260B	DS2	83	PASI-M
10491655002	**MW-10S-GW-190914**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491655003	**MW-12S-GW-190914**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491655004	**MW-6S-GW-190914**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491655005	**MW-11S-GW-190914**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M

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SAMPLE ANALYTE COUNT

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491655006	**MW-1S-GW-190914**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491655007	**MW-7S-GW-190914**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491655008	**MW-8S-GW-190914**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N

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SAMPLE ANALYTE COUNT

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491655009	**MW-9S-GW-190914**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491655010	**MW-9S-GW-190914B**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

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SUMMARY OF DETECTION

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10491655002	**MW-10S-GW-190914**					
EPA 6010D	Barium, Dissolved	36.7	ug/L	10.0	09/27/19 14:29	
EPA 6010D	Cobalt, Dissolved	0.79J	ug/L	10.0	09/27/19 14:29	
EPA 6010D	Copper, Dissolved	4.0J	ug/L	10.0	09/27/19 14:29	
EPA 6010D	Thallium, Dissolved	5.6J	ug/L	20.0	09/27/19 14:29	
EPA 6010D	Vanadium, Dissolved	4.0J	ug/L	15.0	09/27/19 14:29	
EPA 6010D	Zinc, Dissolved	9.8J	ug/L	20.0	09/27/19 14:29	
EPA 8260B	Carbon tetrachloride	0.31J	ug/L	0.50	09/18/19 16:40	
SM 2320B	Alkalinity, Total as CaCO3	306	mg/L	5.0	09/24/19 10:45	
SM 2540C	Total Dissolved Solids	355	mg/L	10.0	09/20/19 11:31	
EPA 300.0	Chloride	0.71J	mg/L	1.2	09/18/19 05:14	
EPA 300.0	Nitrate as N	0.18	mg/L	0.10	09/18/19 05:14	H3
EPA 300.0	Sulfate	1.4	mg/L	1.2	09/18/19 05:14	
EPA 353.2	Nitrogen, NO2 plus NO3	0.22	mg/L	0.10	09/26/19 08:57	
SM 5310C	Total Organic Carbon	0.49J	mg/L	1.0	09/23/19 12:46	
10491655003	**MW-12S-GW-190914**					
EPA 6010D	Barium, Dissolved	183	ug/L	10.0	09/27/19 14:31	
EPA 6010D	Cobalt, Dissolved	1.3J	ug/L	10.0	09/27/19 14:31	
EPA 6010D	Copper, Dissolved	1.3J	ug/L	10.0	09/27/19 14:31	
EPA 6010D	Nickel, Dissolved	3.1J	ug/L	20.0	09/27/19 14:31	
EPA 6010D	Thallium, Dissolved	6.4J	ug/L	20.0	09/27/19 14:31	
EPA 6010D	Vanadium, Dissolved	4.6J	ug/L	15.0	09/27/19 14:31	
EPA 6010D	Zinc, Dissolved	9.2J	ug/L	20.0	09/27/19 14:31	
SM 2320B	Alkalinity, Total as CaCO3	228	mg/L	5.0	09/24/19 10:49	
SM 2540C	Total Dissolved Solids	469	mg/L	10.0	09/20/19 11:31	
EPA 300.0	Chloride	40.6	mg/L	1.2	09/18/19 05:31	
EPA 300.0	Nitrate as N	7.1	mg/L	0.10	09/18/19 05:31	H3
EPA 300.0	Sulfate	40.5	mg/L	1.2	09/18/19 05:31	
EPA 353.2	Nitrogen, NO2 plus NO3	8.2	mg/L	1.0	09/26/19 09:20	
SM 5310C	Total Organic Carbon	2.8	mg/L	1.0	09/23/19 13:25	
10491655004	**MW-6S-GW-190914**					
EPA 6010D	Barium, Dissolved	42.6	ug/L	10.0	09/27/19 14:32	
EPA 6010D	Chromium, Dissolved	0.70J	ug/L	10.0	09/27/19 14:32	
EPA 6010D	Vanadium, Dissolved	5.5J	ug/L	15.0	09/27/19 14:32	
EPA 6010D	Zinc, Dissolved	11.4J	ug/L	20.0	09/27/19 14:32	
SM 2320B	Alkalinity, Total as CaCO3	231	mg/L	5.0	09/24/19 10:52	
SM 2540C	Total Dissolved Solids	279	mg/L	10.0	09/20/19 11:31	D6
EPA 300.0	Chloride	1.5	mg/L	1.2	09/18/19 08:05	
EPA 300.0	Nitrate as N	0.30	mg/L	0.10	09/18/19 08:05	H3
EPA 300.0	Sulfate	1.9	mg/L	1.2	09/18/19 08:05	
EPA 353.2	Nitrogen, NO2 plus NO3	0.32	mg/L	0.10	09/26/19 08:59	
SM 5310C	Total Organic Carbon	0.79J	mg/L	1.0	09/23/19 13:38	
10491655005	**MW-11S-GW-190914**					
EPA 6010D	Barium, Dissolved	47.5	ug/L	10.0	09/27/19 14:34	
EPA 6010D	Cobalt, Dissolved	0.79J	ug/L	10.0	09/27/19 14:34	
EPA 6010D	Thallium, Dissolved	6.4J	ug/L	20.0	09/27/19 14:34	
EPA 6010D	Vanadium, Dissolved	7.6J	ug/L	15.0	09/27/19 14:34	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10491655005	**MW-11S-GW-190914**					
EPA 6010D	Zinc, Dissolved	12.0J	ug/L	20.0	09/27/19 14:34	
SM 2320B	Alkalinity, Total as CaCO3	220	mg/L	5.0	09/24/19 09:11	
SM 2540C	Total Dissolved Solids	278	mg/L	10.0	09/20/19 11:31	
EPA 300.0	Chloride	0.96J	mg/L	1.2	09/18/19 08:21	M1
EPA 300.0	Nitrate as N	0.093J	mg/L	0.10	09/18/19 08:21	H3,M1
EPA 300.0	Sulfate	2.4	mg/L	1.2	09/18/19 08:21	
EPA 353.2	Nitrogen, NO2 plus NO3	0.065J	mg/L	0.10	09/26/19 09:02	
10491655006	**MW-1S-GW-190914**					
EPA 6010D	Barium, Dissolved	229	ug/L	10.0	09/27/19 14:46	
EPA 6010D	Beryllium, Dissolved	0.16J	ug/L	5.0	09/27/19 14:46	
EPA 6010D	Cobalt, Dissolved	0.80J	ug/L	10.0	09/27/19 14:46	
EPA 6010D	Copper, Dissolved	1.9J	ug/L	10.0	09/27/19 14:46	
EPA 6010D	Vanadium, Dissolved	8.8J	ug/L	15.0	09/27/19 14:46	
EPA 6010D	Zinc, Dissolved	14.1J	ug/L	20.0	09/27/19 14:46	
SM 2320B	Alkalinity, Total as CaCO3	149	mg/L	5.0	09/24/19 10:55	
SM 2540C	Total Dissolved Solids	545	mg/L	10.0	09/20/19 11:31	
EPA 300.0	Chloride	7.8	mg/L	1.2	09/18/19 10:21	
EPA 300.0	Nitrate as N	0.21	mg/L	0.10	09/18/19 10:21	H3
EPA 300.0	Sulfate	34.5	mg/L	1.2	09/18/19 10:21	
EPA 353.2	Nitrogen, NO2 plus NO3	0.26	mg/L	0.10	09/26/19 09:06	
SM 5310C	Total Organic Carbon	3.1	mg/L	1.0	09/23/19 14:31	
10491655007	**MW-7S-GW-190914**					
RSK-175	Methane	26.3	ug/L	10.0	09/19/19 14:09	
EPA 6010D	Arsenic, Dissolved	6.6J	ug/L	20.0	09/27/19 14:48	
EPA 6010D	Barium, Dissolved	76.0	ug/L	10.0	09/27/19 14:48	
EPA 6010D	Cadmium, Dissolved	0.47J	ug/L	3.0	09/27/19 14:48	
EPA 6010D	Cobalt, Dissolved	1.5J	ug/L	10.0	09/27/19 14:48	
EPA 6010D	Lead, Dissolved	2.5J	ug/L	10.0	09/27/19 14:48	
EPA 6010D	Nickel, Dissolved	2.8J	ug/L	20.0	09/27/19 14:48	
EPA 6010D	Vanadium, Dissolved	2.5J	ug/L	15.0	09/27/19 14:48	
EPA 6010D	Zinc, Dissolved	69.0	ug/L	20.0	09/27/19 14:48	
EPA 8260B	Carbon tetrachloride	2.1	ug/L	0.50	09/18/19 18:15	
EPA 8260B	Toluene	0.58	ug/L	0.50	09/18/19 18:15	
SM 2320B	Alkalinity, Total as CaCO3	102	mg/L	5.0	09/24/19 09:27	
SM 2540C	Total Dissolved Solids	261	mg/L	10.0	09/20/19 11:31	
EPA 300.0	Chloride	15.8	mg/L	1.2	09/18/19 10:38	
EPA 300.0	Nitrate as N	6.6	mg/L	0.10	09/18/19 10:38	H3
EPA 300.0	Sulfate	23.4	mg/L	1.2	09/18/19 10:38	
EPA 353.2	Nitrogen, NO2 plus NO3	7.7	mg/L	1.0	09/26/19 09:21	
SM 5310C	Total Organic Carbon	1.9	mg/L	1.0	09/23/19 14:44	
10491655008	**MW-8S-GW-190914**					
RSK-175	Methane	66.3	ug/L	10.0	09/19/19 14:14	
EPA 6010D	Barium, Dissolved	31.3	ug/L	10.0	09/27/19 14:49	
EPA 6010D	Beryllium, Dissolved	0.14J	ug/L	5.0	09/27/19 14:49	
EPA 6010D	Cobalt, Dissolved	0.57J	ug/L	10.0	09/27/19 14:49	
EPA 6010D	Copper, Dissolved	1.3J	ug/L	10.0	09/27/19 14:49	

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SUMMARY OF DETECTION

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10491655008	**MW-8S-GW-190914**					
EPA 6010D	Vanadium, Dissolved	1.4J	ug/L	15.0	09/27/19 14:49	
EPA 6010D	Zinc, Dissolved	9.1J	ug/L	20.0	09/27/19 14:49	
EPA 8260B	Carbon tetrachloride	193	ug/L	0.50	09/18/19 18:38	
EPA 8260B	Chloroform	43.4	ug/L	1.0	09/18/19 18:38	
SM 2320B	Alkalinity, Total as CaCO3	128	mg/L	5.0	09/24/19 09:31	
SM 2540C	Total Dissolved Solids	301	mg/L	10.0	09/20/19 11:31	
EPA 300.0	Chloride	2.5	mg/L	1.2	09/18/19 10:54	
EPA 300.0	Nitrate as N	7.9	mg/L	0.10	09/18/19 10:54	H3
EPA 300.0	Sulfate	19.3	mg/L	1.2	09/18/19 10:54	
EPA 353.2	Nitrogen, NO2 plus NO3	9.1	mg/L	1.0	09/26/19 09:23	
SM 5310C	Total Organic Carbon	1.0J	mg/L	2.0	09/24/19 09:48	
10491655009	**MW-9S-GW-190914**					
EPA 6010D	Barium, Dissolved	69.0	ug/L	10.0	09/27/19 14:51	
EPA 6010D	Cobalt, Dissolved	2.1J	ug/L	10.0	09/27/19 14:51	
EPA 6010D	Thallium, Dissolved	5.8J	ug/L	20.0	09/27/19 14:51	
EPA 6010D	Vanadium, Dissolved	2.3J	ug/L	15.0	09/27/19 14:51	
EPA 6010D	Zinc, Dissolved	8.5J	ug/L	20.0	09/27/19 14:51	
EPA 8260B	Carbon disulfide	0.97J	ug/L	1.0	09/18/19 19:02	
EPA 8260B	Carbon tetrachloride	347	ug/L	1.0	09/19/19 19:08	
EPA 8260B	Chloroform	54.5	ug/L	1.0	09/18/19 19:02	
SM 2320B	Alkalinity, Total as CaCO3	83.0	mg/L	5.0	09/24/19 09:35	
SM 2540C	Total Dissolved Solids	453	mg/L	10.0	09/20/19 11:31	MW
SM 4500-S-2 D	Sulfide, Total	0.027	mg/L	0.020	09/19/19 16:16	
EPA 300.0	Chloride	67.6	mg/L	1.2	09/18/19 11:11	
EPA 300.0	Nitrate as N	12.5	mg/L	1.0	09/20/19 14:39	H3
EPA 300.0	Sulfate	72.9	mg/L	1.2	09/18/19 11:11	
EPA 353.2	Nitrogen, NO2 plus NO3	15.4	mg/L	1.0	09/26/19 09:24	
EPA 410.4	Chemical Oxygen Demand	25.1J	mg/L	50.0	09/19/19 08:56	
SM 5310C	Total Organic Carbon	2.1	mg/L	1.0	09/23/19 15:11	
10491655010	**MW-9S-GW-190914B**					
EPA 6010D	Barium, Dissolved	69.9	ug/L	10.0	09/27/19 14:53	
EPA 6010D	Cobalt, Dissolved	1.2J	ug/L	10.0	09/27/19 14:53	
EPA 6010D	Copper, Dissolved	1.6J	ug/L	10.0	09/27/19 14:53	
EPA 6010D	Nickel, Dissolved	2.5J	ug/L	20.0	09/27/19 14:53	
EPA 6010D	Thallium, Dissolved	5.5J	ug/L	20.0	09/27/19 14:53	
EPA 6010D	Vanadium, Dissolved	2.6J	ug/L	15.0	09/27/19 14:53	
EPA 6010D	Zinc, Dissolved	11.4J	ug/L	20.0	09/27/19 14:53	
EPA 8260B	Carbon disulfide	0.88J	ug/L	1.0	09/18/19 19:26	
EPA 8260B	Carbon tetrachloride	331	ug/L	1.0	09/19/19 19:32	
EPA 8260B	Chloroform	55.1	ug/L	1.0	09/18/19 19:26	
SM 2320B	Alkalinity, Total as CaCO3	83.6	mg/L	5.0	09/24/19 09:39	
SM 2540C	Total Dissolved Solids	417	mg/L	10.0	09/20/19 11:31	MW
EPA 300.0	Chloride	67.4	mg/L	1.2	09/18/19 11:28	
EPA 300.0	Nitrate as N	12.5	mg/L	1.0	09/20/19 14:56	H3
EPA 300.0	Sulfate	72.5	mg/L	1.2	09/18/19 11:28	
EPA 353.2	Nitrogen, NO2 plus NO3	16.3	mg/L	1.0	09/26/19 10:57	M6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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SUMMARY OF DETECTION

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10491655010	**MW-9S-GW-190914B**					
EPA 410.4	Chemical Oxygen Demand	27.2J	mg/L	50.0	09/19/19 08:57	
SM 5310C	Total Organic Carbon	2.2	mg/L	1.0	09/23/19 15:24	

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **RSK-175**
Description: VOA (GC) RSK175
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for RSK-175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
10 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 632980

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3412678)
  - 2,2,4-Trimethylpentane
  - Dibromomethane
- MSD (Lab ID: 3412679)
  - Dibromomethane

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 01, 2019

Analyte Comments:

QC Batch: 632980

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3412676)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3412677)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3412678)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3412679)
  - 1,2-Dichloroethene (Total)
- MW-10S-GW-190914 (Lab ID: 10491655002)
  - 1,2-Dichloroethene (Total)
- MW-11S-GW-190914 (Lab ID: 10491655005)
  - 1,2-Dichloroethene (Total)
- MW-12S-GW-190914 (Lab ID: 10491655003)
  - 1,2-Dichloroethene (Total)
- MW-1S-GW-190914 (Lab ID: 10491655006)
  - 1,2-Dichloroethene (Total)
- MW-6S-GW-190914 (Lab ID: 10491655004)
  - 1,2-Dichloroethene (Total)
- MW-7S-GW-190914 (Lab ID: 10491655007)
  - 1,2-Dichloroethene (Total)
- MW-8S-GW-190914 (Lab ID: 10491655008)
  - 1,2-Dichloroethene (Total)
- MW-9S-GW-190914 (Lab ID: 10491655009)
  - 1,2-Dichloroethene (Total)
- MW-9S-GW-190914B (Lab ID: 10491655010)
  - 1,2-Dichloroethene (Total)
- TB-01-190914 (Lab ID: 10491655001)
  - 1,2-Dichloroethene (Total)

- BLANK (Lab ID: 3412676)
  - Dichlorofluoromethane
- LCS (Lab ID: 3412677)
  - Dichlorofluoromethane
- MS (Lab ID: 3412678)
  - Dichlorofluoromethane
- MSD (Lab ID: 3412679)
  - Dichlorofluoromethane
- MW-10S-GW-190914 (Lab ID: 10491655002)
  - Dichlorofluoromethane
- MW-11S-GW-190914 (Lab ID: 10491655005)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 01, 2019

Analyte Comments:

QC Batch: 632980

- MW-12S-GW-190914 (Lab ID: 10491655003)
  - Dichlorofluoromethane
- MW-1S-GW-190914 (Lab ID: 10491655006)
  - Dichlorofluoromethane
- MW-6S-GW-190914 (Lab ID: 10491655004)
  - Dichlorofluoromethane
- MW-7S-GW-190914 (Lab ID: 10491655007)
  - Dichlorofluoromethane
- MW-8S-GW-190914 (Lab ID: 10491655008)
  - Dichlorofluoromethane
- MW-9S-GW-190914 (Lab ID: 10491655009)
  - Dichlorofluoromethane
- MW-9S-GW-190914B (Lab ID: 10491655010)
  - Dichlorofluoromethane
- TB-01-190914 (Lab ID: 10491655001)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 633396

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 3414714)
  - Total Dissolved Solids

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 157986

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 707867)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.
- MW-10S-GW-190914 (Lab ID: 10491655002)
- MW-11S-GW-190914 (Lab ID: 10491655005)
- MW-12S-GW-190914 (Lab ID: 10491655003)
- MW-1S-GW-190914 (Lab ID: 10491655006)
- MW-6S-GW-190914 (Lab ID: 10491655004)
- MW-7S-GW-190914 (Lab ID: 10491655007)
- MW-8S-GW-190914 (Lab ID: 10491655008)
- MW-9S-GW-190914 (Lab ID: 10491655009)
- MW-9S-GW-190914B (Lab ID: 10491655010)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 632757

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491503001,10491655005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3411369)
  - Chloride
- MS (Lab ID: 3411371)
  - Chloride
  - Nitrate as N
- MSD (Lab ID: 3411370)
  - Chloride
- MSD (Lab ID: 3411372)
  - Chloride
  - Nitrate as N

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
- MS (Lab ID: 3411369)
  - Sulfate
- MSD (Lab ID: 3411370)
  - Sulfate

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: October 01, 2019

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 634559

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655010,10491870001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 3420090)
  - Nitrogen, NO2 plus NO3

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: October 01, 2019

General Information:
9 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: TB-01-190914 **Lab ID: 10491655001** Collected: 09/14/19 08:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:04	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 15:04	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:04	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 15:04	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 15:04	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:04	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:04	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:04	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 15:04	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 15:04	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:04	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:04	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 15:04	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 15:04	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 15:04	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 15:04	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 15:04	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 15:04	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 15:04	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:04	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 15:04	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:04	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 15:04	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 15:04	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 15:04	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 15:04	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:04	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 15:04	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 15:04	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 15:04	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 15:04	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 15:04	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 15:04	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 15:04	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 15:04	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 15:04	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 15:04	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 15:04	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 15:04	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 15:04	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 15:04	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:04	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 15:04	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 15:04	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 15:04	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 15:04	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: TB-01-190914 **Lab ID: 10491655001** Collected: 09/14/19 08:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 15:04	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 15:04	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 15:04	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 15:04	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 15:04	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 15:04	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 15:04	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 15:04	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:04	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 15:04	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 15:04	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 15:04	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 15:04	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 15:04	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 15:04	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 15:04	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 15:04	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 15:04	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 15:04	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 15:04	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:04	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 15:04	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 15:04	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 15:04	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 15:04	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 15:04	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:04	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:04	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 15:04	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 15:04	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 15:04	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 15:04	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 15:04	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 15:04	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-136		1		09/18/19 15:04	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/18/19 15:04	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		09/18/19 15:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-10S-GW-190914 **Lab ID: 10491655002** Collected: 09/14/19 10:10 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/19/19 14:23	09/19/19 14:23	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/19/19 14:23	09/19/19 14:23	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/19/19 14:23	09/19/19 14:23	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:29	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:29	7440-38-2	
Barium, Dissolved	**36.7**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:29	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:29	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:29	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:29	7440-47-3	
Cobalt, Dissolved	**0.79J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:29	7440-48-4	
Copper, Dissolved	**4.0J**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:29	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:29	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:29	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:29	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:29	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:29	7440-22-4	
Thallium, Dissolved	**5.6J**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:29	7440-28-0	
Vanadium, Dissolved	**4.0J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:29	7440-62-2	
Zinc, Dissolved	**9.8J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:29	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 16:41	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:40	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 16:40	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:40	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 16:40	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 16:40	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:40	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:40	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:40	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 16:40	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 16:40	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:40	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:40	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 16:40	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 16:40	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 16:40	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 16:40	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 16:40	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 16:40	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 16:40	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:40	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-10S-GW-190914 **Lab ID: 10491655002** Collected: 09/14/19 10:10 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 16:40	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:40	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 16:40	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 16:40	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 16:40	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 16:40	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:40	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 16:40	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 16:40	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 16:40	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 16:40	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 16:40	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 16:40	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 16:40	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 16:40	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 16:40	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 16:40	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 16:40	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 16:40	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 16:40	75-15-0	
Carbon tetrachloride	**0.31J**	ug/L	0.50	0.19	1		09/18/19 16:40	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:40	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 16:40	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 16:40	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 16:40	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 16:40	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 16:40	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 16:40	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 16:40	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 16:40	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 16:40	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 16:40	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 16:40	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 16:40	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:40	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 16:40	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 16:40	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 16:40	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:40	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 16:40	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 16:40	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 16:40	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 16:40	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 16:40	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 16:40	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 16:40	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-10S-GW-190914 **Lab ID: 10491655002** Collected: 09/14/19 10:10 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 16:40	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:40	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 16:40	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 16:40	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 16:40	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:40	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 16:40	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 16:40	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 16:40	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 16:40	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 16:40	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 16:40	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 16:40	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 16:40	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		09/18/19 16:40	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/18/19 16:40	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		09/18/19 16:40	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**306**	mg/L	5.0	2.0	1		09/24/19 10:45		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**355**	mg/L	10.0	5.0	1		09/20/19 11:31		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/19/19 15:50	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**0.71J**	mg/L	1.2	0.12	1		09/18/19 05:14	16887-00-6	
Nitrate as N	**0.18**	mg/L	0.10	0.012	1		09/18/19 05:14	14797-55-8	H3
Sulfate	**1.4**	mg/L	1.2	0.28	1		09/18/19 05:14	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.22**	mg/L	0.10	0.018	1		09/26/19 08:57		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:54		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.49J**	mg/L	1.0	0.39	1		09/23/19 12:46	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-12S-GW-190914 **Lab ID: 10491655003** Collected: 09/14/19 11:25 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/19/19 14:27	09/19/19 14:27	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/19/19 14:27	09/19/19 14:27	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/19/19 14:27	09/19/19 14:27	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:31	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:31	7440-38-2	
Barium, Dissolved	**183**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:31	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:31	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:31	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:31	7440-47-3	
Cobalt, Dissolved	**1.3J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:31	7440-48-4	
Copper, Dissolved	**1.3J**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:31	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:31	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:31	7439-98-7	
Nickel, Dissolved	**3.1J**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:31	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:31	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:31	7440-22-4	
Thallium, Dissolved	**6.4J**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:31	7440-28-0	
Vanadium, Dissolved	**4.6J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:31	7440-62-2	
Zinc, Dissolved	**9.2J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:31	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 16:48	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:03	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 17:03	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:03	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 17:03	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 17:03	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:03	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:03	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:03	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 17:03	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 17:03	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:03	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:03	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 17:03	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 17:03	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 17:03	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 17:03	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 17:03	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 17:03	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 17:03	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:03	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-12S-GW-190914 **Lab ID: 10491655003** Collected: 09/14/19 11:25 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 17:03	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:03	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 17:03	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 17:03	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 17:03	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 17:03	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:03	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 17:03	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 17:03	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 17:03	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 17:03	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 17:03	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 17:03	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 17:03	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 17:03	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 17:03	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 17:03	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 17:03	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 17:03	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 17:03	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 17:03	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:03	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 17:03	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 17:03	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 17:03	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 17:03	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 17:03	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 17:03	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 17:03	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 17:03	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 17:03	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 17:03	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 17:03	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 17:03	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:03	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 17:03	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 17:03	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 17:03	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:03	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 17:03	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 17:03	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 17:03	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 17:03	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 17:03	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 17:03	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 17:03	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-12S-GW-190914 **Lab ID: 10491655003** Collected: 09/14/19 11:25 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:03	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:03	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 17:03	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 17:03	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 17:03	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:03	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:03	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:03	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 17:03	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 17:03	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:03	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 17:03	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 17:03	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 17:03	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		09/18/19 17:03	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/18/19 17:03	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		09/18/19 17:03	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**228**	mg/L	5.0	2.0	1		09/24/19 10:49		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**469**	mg/L	10.0	5.0	1		09/20/19 11:31		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/19/19 15:51	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**40.6**	mg/L	1.2	0.12	1		09/18/19 05:31	16887-00-6	
Nitrate as N	**7.1**	mg/L	0.10	0.012	1		09/18/19 05:31	14797-55-8	H3
Sulfate	**40.5**	mg/L	1.2	0.28	1		09/18/19 05:31	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**8.2**	mg/L	1.0	0.18	10		09/26/19 09:20		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:54		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.8**	mg/L	1.0	0.39	1		09/23/19 13:25	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-6S-GW-190914 **Lab ID: 10491655004** Collected: 09/14/19 12:10 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/19/19 14:29	09/19/19 14:29	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/19/19 14:29	09/19/19 14:29	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/19/19 14:29	09/19/19 14:29	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:32	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:32	7440-38-2	
Barium, Dissolved	**42.6**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:32	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:32	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:32	7440-43-9	
Chromium, Dissolved	**0.70J**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:32	7440-47-3	
Cobalt, Dissolved	**<0.50**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:32	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:32	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:32	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:32	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:32	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:32	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:32	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:32	7440-28-0	
Vanadium, Dissolved	**5.5J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:32	7440-62-2	
Zinc, Dissolved	**11.4J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:32	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 16:50	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:27	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 17:27	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:27	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 17:27	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 17:27	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:27	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:27	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:27	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 17:27	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 17:27	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:27	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:27	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 17:27	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 17:27	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 17:27	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 17:27	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 17:27	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 17:27	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 17:27	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:27	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-6S-GW-190914 **Lab ID: 10491655004** Collected: 09/14/19 12:10 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 17:27	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:27	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 17:27	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 17:27	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 17:27	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 17:27	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:27	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 17:27	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 17:27	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 17:27	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 17:27	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 17:27	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 17:27	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 17:27	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 17:27	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 17:27	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 17:27	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 17:27	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 17:27	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 17:27	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 17:27	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:27	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 17:27	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 17:27	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 17:27	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 17:27	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 17:27	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 17:27	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 17:27	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 17:27	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 17:27	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 17:27	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 17:27	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 17:27	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:27	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 17:27	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 17:27	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 17:27	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:27	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 17:27	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 17:27	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 17:27	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 17:27	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 17:27	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 17:27	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 17:27	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-6S-GW-190914 **Lab ID: 10491655004** Collected: 09/14/19 12:10 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:27	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:27	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 17:27	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 17:27	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 17:27	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:27	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:27	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:27	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 17:27	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 17:27	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:27	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 17:27	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 17:27	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 17:27	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%.	75-136		1		09/18/19 17:27	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/18/19 17:27	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		09/18/19 17:27	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**231**	mg/L	5.0	2.0	1		09/24/19 10:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**279**	mg/L	10.0	5.0	1		09/20/19 11:31		D6
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/19/19 15:51	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.5**	mg/L	1.2	0.12	1		09/18/19 08:05	16887-00-6	
Nitrate as N	**0.30**	mg/L	0.10	0.012	1		09/18/19 08:05	14797-55-8	H3
Sulfate	**1.9**	mg/L	1.2	0.28	1		09/18/19 08:05	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.32**	mg/L	0.10	0.018	1		09/26/19 08:59		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:55		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.79J**	mg/L	1.0	0.39	1		09/23/19 13:38	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-11S-GW-190914 **Lab ID: 10491655005** Collected: 09/14/19 12:55 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/19/19 13:59	09/19/19 13:59	74-82-8	MH
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/19/19 13:59	09/19/19 13:59	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/19/19 13:59	09/19/19 13:59	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:34	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:34	7440-38-2	
Barium, Dissolved	**47.5**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:34	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:34	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:34	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:34	7440-47-3	
Cobalt, Dissolved	**0.79J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:34	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:34	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:34	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:34	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:34	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:34	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:34	7440-22-4	
Thallium, Dissolved	**6.4J**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:34	7440-28-0	
Vanadium, Dissolved	**7.6J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:34	7440-62-2	
Zinc, Dissolved	**12.0J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:34	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 16:53	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:16	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 16:16	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:16	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 16:16	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 16:16	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:16	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:16	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:16	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 16:16	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 16:16	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:16	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:16	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 16:16	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 16:16	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 16:16	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 16:16	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 16:16	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 16:16	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 16:16	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:16	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-11S-GW-190914 **Lab ID: 10491655005** Collected: 09/14/19 12:55 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 16:16	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:16	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 16:16	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 16:16	540-84-1	M1
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 16:16	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 16:16	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:16	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 16:16	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 16:16	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 16:16	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 16:16	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 16:16	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 16:16	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 16:16	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 16:16	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 16:16	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 16:16	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 16:16	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 16:16	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 16:16	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 16:16	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:16	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 16:16	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 16:16	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 16:16	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 16:16	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 16:16	74-95-3	M1
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 16:16	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 16:16	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 16:16	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 16:16	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 16:16	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 16:16	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 16:16	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:16	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 16:16	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 16:16	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 16:16	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 16:16	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 16:16	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 16:16	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 16:16	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 16:16	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 16:16	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 16:16	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 16:16	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-11S-GW-190914 **Lab ID: 10491655005** Collected: 09/14/19 12:55 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 16:16	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 16:16	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 16:16	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 16:16	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 16:16	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 16:16	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 16:16	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 16:16	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 16:16	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 16:16	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 16:16	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 16:16	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 16:16	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 16:16	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		09/18/19 16:16	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/18/19 16:16	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		09/18/19 16:16	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**220**	mg/L	5.0	2.0	1		09/24/19 09:11		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**278**	mg/L	10.0	5.0	1		09/20/19 11:31		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/19/19 15:52	18496-25-8	M1
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**0.96J**	mg/L	1.2	0.12	1		09/18/19 08:21	16887-00-6	M1
Nitrate as N	**0.093J**	mg/L	0.10	0.012	1		09/18/19 08:21	14797-55-8	H3,M1
Sulfate	**2.4**	mg/L	1.2	0.28	1		09/18/19 08:21	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.065J**	mg/L	0.10	0.018	1		09/26/19 09:02		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:55		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**<0.39**	mg/L	1.0	0.39	1		09/23/19 13:51	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-1S-GW-190914 **Lab ID: 10491655006** Collected: 09/14/19 15:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/19/19 14:01	09/19/19 14:01	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/19/19 14:01	09/19/19 14:01	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/19/19 14:01	09/19/19 14:01	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:46	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:46	7440-38-2	
Barium, Dissolved	**229**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:46	7440-39-3	
Beryllium, Dissolved	**0.16J**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:46	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:46	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:46	7440-47-3	
Cobalt, Dissolved	**0.80J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:46	7440-48-4	
Copper, Dissolved	**1.9J**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:46	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:46	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:46	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:46	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:46	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:46	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:46	7440-28-0	
Vanadium, Dissolved	**8.8J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:46	7440-62-2	
Zinc, Dissolved	**14.1J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:46	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 17:00	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:51	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 17:51	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:51	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 17:51	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 17:51	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:51	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:51	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:51	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 17:51	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 17:51	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:51	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:51	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 17:51	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 17:51	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 17:51	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 17:51	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 17:51	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 17:51	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 17:51	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:51	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-1S-GW-190914 **Lab ID: 10491655006** Collected: 09/14/19 15:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 17:51	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:51	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 17:51	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 17:51	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 17:51	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 17:51	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:51	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 17:51	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 17:51	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 17:51	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 17:51	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 17:51	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 17:51	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 17:51	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 17:51	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 17:51	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 17:51	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 17:51	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 17:51	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 17:51	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 17:51	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:51	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 17:51	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 17:51	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 17:51	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 17:51	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 17:51	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 17:51	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 17:51	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 17:51	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 17:51	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 17:51	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 17:51	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 17:51	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:51	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 17:51	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 17:51	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 17:51	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 17:51	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 17:51	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 17:51	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 17:51	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 17:51	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 17:51	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 17:51	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 17:51	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-1S-GW-190914 **Lab ID: 10491655006** Collected: 09/14/19 15:00 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:51	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 17:51	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 17:51	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 17:51	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 17:51	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 17:51	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:51	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:51	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 17:51	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 17:51	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 17:51	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 17:51	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 17:51	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 17:51	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-136		1		09/18/19 17:51	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/18/19 17:51	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		09/18/19 17:51	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**149**	mg/L	5.0	2.0	1		09/24/19 10:55		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**545**	mg/L	10.0	5.0	1		09/20/19 11:31		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/19/19 15:54	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**7.8**	mg/L	1.2	0.12	1		09/18/19 10:21	16887-00-6	
Nitrate as N	**0.21**	mg/L	0.10	0.012	1		09/18/19 10:21	14797-55-8	H3
Sulfate	**34.5**	mg/L	1.2	0.28	1		09/18/19 10:21	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.26**	mg/L	0.10	0.018	1		09/26/19 09:06		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:55		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.1**	mg/L	1.0	0.39	1		09/23/19 14:31	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-7S-GW-190914 **Lab ID: 10491655007** Collected: 09/14/19 15:50 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**26.3**	ug/L	10.0	2.91	1	09/19/19 14:09	09/19/19 14:09	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/19/19 14:09	09/19/19 14:09	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/19/19 14:09	09/19/19 14:09	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:48	7440-36-0	
Arsenic, Dissolved	**6.6J**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:48	7440-38-2	
Barium, Dissolved	**76.0**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:48	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:48	7440-41-7	
Cadmium, Dissolved	**0.47J**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:48	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:48	7440-47-3	
Cobalt, Dissolved	**1.5J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:48	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:48	7440-50-8	
Lead, Dissolved	**2.5J**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:48	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:48	7439-98-7	
Nickel, Dissolved	**2.8J**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:48	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:48	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:48	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:48	7440-28-0	
Vanadium, Dissolved	**2.5J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:48	7440-62-2	
Zinc, Dissolved	**69.0**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:48	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 17:02	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:15	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 18:15	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:15	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 18:15	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 18:15	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:15	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:15	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:15	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 18:15	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 18:15	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:15	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:15	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 18:15	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 18:15	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 18:15	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 18:15	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 18:15	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 18:15	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 18:15	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:15	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-7S-GW-190914 **Lab ID: 10491655007** Collected: 09/14/19 15:50 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 18:15	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:15	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 18:15	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 18:15	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 18:15	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 18:15	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:15	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 18:15	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 18:15	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 18:15	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 18:15	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 18:15	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 18:15	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 18:15	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 18:15	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 18:15	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 18:15	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 18:15	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 18:15	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 18:15	75-15-0	
Carbon tetrachloride	**2.1**	ug/L	0.50	0.19	1		09/18/19 18:15	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:15	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 18:15	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 18:15	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 18:15	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 18:15	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 18:15	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 18:15	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 18:15	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 18:15	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 18:15	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 18:15	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 18:15	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 18:15	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:15	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 18:15	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 18:15	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 18:15	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:15	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 18:15	109-99-9	
Toluene	**0.58**	ug/L	0.50	0.083	1		09/18/19 18:15	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 18:15	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 18:15	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 18:15	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 18:15	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 18:15	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-7S-GW-190914 **Lab ID: 10491655007** Collected: 09/14/19 15:50 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 18:15	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:15	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 18:15	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 18:15	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 18:15	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:15	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 18:15	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 18:15	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 18:15	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 18:15	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 18:15	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 18:15	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 18:15	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 18:15	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		09/18/19 18:15	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		09/18/19 18:15	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		09/18/19 18:15	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**102**	mg/L	5.0	2.0	1		09/24/19 09:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**261**	mg/L	10.0	5.0	1		09/20/19 11:31		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/19/19 15:54	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**15.8**	mg/L	1.2	0.12	1		09/18/19 10:38	16887-00-6	
Nitrate as N	**6.6**	mg/L	0.10	0.012	1		09/18/19 10:38	14797-55-8	H3
Sulfate	**23.4**	mg/L	1.2	0.28	1		09/18/19 10:38	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**7.7**	mg/L	1.0	0.18	10		09/26/19 09:21		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:56		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.9**	mg/L	1.0	0.39	1		09/23/19 14:44	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-8S-GW-190914 **Lab ID: 10491655008** Collected: 09/14/19 16:45 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**66.3**	ug/L	10.0	2.91	1	09/19/19 14:14	09/19/19 14:14	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/19/19 14:14	09/19/19 14:14	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/19/19 14:14	09/19/19 14:14	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:49	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:49	7440-38-2	
Barium, Dissolved	**31.3**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:49	7440-39-3	
Beryllium, Dissolved	**0.14J**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:49	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:49	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:49	7440-47-3	
Cobalt, Dissolved	**0.57J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:49	7440-48-4	
Copper, Dissolved	**1.3J**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:49	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:49	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:49	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:49	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:49	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:49	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:49	7440-28-0	
Vanadium, Dissolved	**1.4J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:49	7440-62-2	
Zinc, Dissolved	**9.1J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:49	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 17:04	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:38	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 18:38	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:38	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 18:38	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 18:38	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:38	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:38	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:38	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 18:38	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 18:38	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:38	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:38	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 18:38	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 18:38	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 18:38	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 18:38	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 18:38	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 18:38	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 18:38	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:38	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-8S-GW-190914 **Lab ID: 10491655008** Collected: 09/14/19 16:45 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 18:38	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:38	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 18:38	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 18:38	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 18:38	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 18:38	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:38	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 18:38	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 18:38	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 18:38	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 18:38	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 18:38	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 18:38	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 18:38	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 18:38	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 18:38	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 18:38	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 18:38	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 18:38	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 18:38	75-15-0	
Carbon tetrachloride	**193**	ug/L	0.50	0.19	1		09/18/19 18:38	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:38	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 18:38	75-00-3	
Chloroform	**43.4**	ug/L	1.0	0.45	1		09/18/19 18:38	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 18:38	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 18:38	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 18:38	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 18:38	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 18:38	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 18:38	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 18:38	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 18:38	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 18:38	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 18:38	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:38	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 18:38	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 18:38	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 18:38	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 18:38	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 18:38	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 18:38	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 18:38	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 18:38	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 18:38	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 18:38	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 18:38	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-8S-GW-190914 **Lab ID: 10491655008** Collected: 09/14/19 16:45 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 18:38	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 18:38	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 18:38	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 18:38	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 18:38	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 18:38	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 18:38	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 18:38	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 18:38	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 18:38	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 18:38	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 18:38	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 18:38	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 18:38	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		09/18/19 18:38	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		09/18/19 18:38	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		09/18/19 18:38	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**128**	mg/L	5.0	2.0	1		09/24/19 09:31		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**301**	mg/L	10.0	5.0	1		09/20/19 11:31		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/19/19 16:16	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.5**	mg/L	1.2	0.12	1		09/18/19 10:54	16887-00-6	
Nitrate as N	**7.9**	mg/L	0.10	0.012	1		09/18/19 10:54	14797-55-8	H3
Sulfate	**19.3**	mg/L	1.2	0.28	1		09/18/19 10:54	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**9.1**	mg/L	1.0	0.18	10		09/26/19 09:23		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:57		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**1.0J**	mg/L	2.0	0.79	2		09/24/19 09:48	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-9S-GW-190914 **Lab ID: 10491655009** Collected: 09/14/19 17:40 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/19/19 14:17	09/19/19 14:17	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/19/19 14:17	09/19/19 14:17	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/19/19 14:17	09/19/19 14:17	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:51	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:51	7440-38-2	
Barium, Dissolved	**69.0**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:51	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:51	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:51	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:51	7440-47-3	
Cobalt, Dissolved	**2.1J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:51	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:51	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:51	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:51	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:51	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:51	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:51	7440-22-4	
Thallium, Dissolved	**5.8J**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:51	7440-28-0	
Vanadium, Dissolved	**2.3J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:51	7440-62-2	
Zinc, Dissolved	**8.5J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:51	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 17:06	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:02	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 19:02	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:02	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 19:02	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 19:02	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:02	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:02	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:02	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 19:02	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 19:02	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:02	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:02	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 19:02	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 19:02	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 19:02	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 19:02	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 19:02	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 19:02	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 19:02	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:02	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-9S-GW-190914 **Lab ID: 10491655009** Collected: 09/14/19 17:40 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 19:02	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:02	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 19:02	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 19:02	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 19:02	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 19:02	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:02	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 19:02	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 19:02	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 19:02	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 19:02	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 19:02	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 19:02	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 19:02	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 19:02	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 19:02	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 19:02	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 19:02	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 19:02	74-83-9	
Carbon disulfide	**0.97J**	ug/L	1.0	0.078	1		09/18/19 19:02	75-15-0	
Carbon tetrachloride	**347**	ug/L	1.0	0.38	2		09/19/19 19:08	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:02	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 19:02	75-00-3	
Chloroform	**54.5**	ug/L	1.0	0.45	1		09/18/19 19:02	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 19:02	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 19:02	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 19:02	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 19:02	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 19:02	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 19:02	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 19:02	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 19:02	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 19:02	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 19:02	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:02	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 19:02	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 19:02	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 19:02	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:02	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 19:02	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 19:02	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 19:02	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 19:02	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 19:02	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 19:02	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 19:02	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-9S-GW-190914 **Lab ID: 10491655009** Collected: 09/14/19 17:40 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:02	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:02	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 19:02	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 19:02	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 19:02	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:02	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:02	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:02	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 19:02	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 19:02	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:02	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 19:02	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 19:02	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 19:02	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		09/18/19 19:02	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/18/19 19:02	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		09/18/19 19:02	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**83.0**	mg/L	5.0	2.0	1		09/24/19 09:35		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**453**	mg/L	10.0	5.0	1		09/20/19 11:31		MW
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.027**	mg/L	0.020	0.0054	1		09/19/19 16:16	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**67.6**	mg/L	1.2	0.12	1		09/18/19 11:11	16887-00-6	
Nitrate as N	**12.5**	mg/L	1.0	0.12	10		09/20/19 14:39	14797-55-8	H3
Sulfate	**72.9**	mg/L	1.2	0.28	1		09/18/19 11:11	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**15.4**	mg/L	1.0	0.18	10		09/26/19 09:24		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**25.1J**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:56		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.1**	mg/L	1.0	0.39	1		09/23/19 15:11	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-9S-GW-190914B **Lab ID: 10491655010** Collected: 09/14/19 17:40 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/19/19 14:19	09/19/19 14:19	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/19/19 14:19	09/19/19 14:19	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/19/19 14:19	09/19/19 14:19	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/27/19 03:00	09/27/19 14:53	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/27/19 03:00	09/27/19 14:53	7440-38-2	
Barium, Dissolved	**69.9**	ug/L	10.0	0.60	1	09/27/19 03:00	09/27/19 14:53	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/27/19 03:00	09/27/19 14:53	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/27/19 03:00	09/27/19 14:53	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/27/19 03:00	09/27/19 14:53	7440-47-3	
Cobalt, Dissolved	**1.2J**	ug/L	10.0	0.50	1	09/27/19 03:00	09/27/19 14:53	7440-48-4	
Copper, Dissolved	**1.6J**	ug/L	10.0	1.2	1	09/27/19 03:00	09/27/19 14:53	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/27/19 03:00	09/27/19 14:53	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/27/19 03:00	09/27/19 14:53	7439-98-7	
Nickel, Dissolved	**2.5J**	ug/L	20.0	1.1	1	09/27/19 03:00	09/27/19 14:53	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/27/19 03:00	09/27/19 14:53	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/27/19 03:00	09/27/19 14:53	7440-22-4	
Thallium, Dissolved	**5.5J**	ug/L	20.0	5.5	1	09/27/19 03:00	09/27/19 14:53	7440-28-0	
Vanadium, Dissolved	**2.6J**	ug/L	15.0	0.43	1	09/27/19 03:00	09/27/19 14:53	7440-62-2	
Zinc, Dissolved	**11.4J**	ug/L	20.0	6.3	1	09/27/19 03:00	09/27/19 14:53	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 05:13	09/27/19 17:09	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:26	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 19:26	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:26	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 19:26	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 19:26	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:26	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:26	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:26	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 19:26	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 19:26	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:26	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:26	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 19:26	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 19:26	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 19:26	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 19:26	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 19:26	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 19:26	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 19:26	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:26	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-9S-GW-190914B **Lab ID: 10491655010** Collected: 09/14/19 17:40 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 19:26	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:26	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 19:26	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 19:26	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 19:26	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 19:26	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:26	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 19:26	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 19:26	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 19:26	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 19:26	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 19:26	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 19:26	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 19:26	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 19:26	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 19:26	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 19:26	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 19:26	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 19:26	74-83-9	
Carbon disulfide	**0.88J**	ug/L	1.0	0.078	1		09/18/19 19:26	75-15-0	
Carbon tetrachloride	**331**	ug/L	1.0	0.38	2		09/19/19 19:32	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:26	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 19:26	75-00-3	
Chloroform	**55.1**	ug/L	1.0	0.45	1		09/18/19 19:26	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 19:26	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 19:26	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 19:26	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 19:26	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 19:26	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 19:26	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 19:26	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 19:26	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 19:26	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 19:26	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:26	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 19:26	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 19:26	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 19:26	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 19:26	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 19:26	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 19:26	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 19:26	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 19:26	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 19:26	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 19:26	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 19:26	1330-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Sample: MW-9S-GW-190914B **Lab ID: 10491655010** Collected: 09/14/19 17:40 Received: 09/17/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:26	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 19:26	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 19:26	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 19:26	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 19:26	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 19:26	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:26	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:26	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 19:26	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 19:26	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 19:26	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 19:26	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 19:26	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 19:26	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-136		1		09/18/19 19:26	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		09/18/19 19:26	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1		09/18/19 19:26	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**83.6**	mg/L	5.0	2.0	1		09/24/19 09:39		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**417**	mg/L	10.0	5.0	1		09/20/19 11:31		MW
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/19/19 16:17	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**67.4**	mg/L	1.2	0.12	1		09/18/19 11:28	16887-00-6	
Nitrate as N	**12.5**	mg/L	1.0	0.12	10		09/20/19 14:56	14797-55-8	H3
Sulfate	**72.5**	mg/L	1.2	0.28	1		09/18/19 11:28	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**16.3**	mg/L	1.0	0.18	10		09/26/19 10:57		M6
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**27.2J**	mg/L	50.0	17.0	1	09/18/19 13:55	09/19/19 08:57		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**2.2**	mg/L	1.0	0.39	1		09/23/19 15:24	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 1348489 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: R3452515-1 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/19/19 13:27	
Ethane	ug/L	<4.07	13.0	4.07	09/19/19 13:27	
Ethene	ug/L	<4.26	13.0	4.26	09/19/19 13:27	

LABORATORY CONTROL SAMPLE & LCSD: R3452515-5 R3452515-6

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	74.3	76.2	110	112	85.0-115	2.56	20	
Ethane	ug/L	129	117	119	90.4	92.2	85.0-115	2.08	20	
Ethene	ug/L	127	116	117	91.6	92.4	85.0-115	0.850	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3452515-3 R3452515-4

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methane	ug/L	ND	67.8	67.8	80.9	67.7	119	99.9	85.0-115	17.7	20	MH
Ethane	ug/L	ND	129	129	145	122	113	94.2	85.0-115	17.7	20	
Ethene	ug/L	ND	127	127	143	119	113	93.9	85.0-115	18.1	20	

SAMPLE DUPLICATE: R3452515-2

Parameter	Units	L1140441-18 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	1970	1980	0.379	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 633324 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: 3414327 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	09/27/19 16:25	

LABORATORY CONTROL SAMPLE: 3414328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.7	114	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414329 3414330

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.4	5.4	108	108	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 633134 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: 3413585 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	09/27/19 14:14	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	09/27/19 14:14	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	09/27/19 14:14	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	09/27/19 14:14	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	09/27/19 14:14	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	09/27/19 14:14	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	09/27/19 14:14	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	09/27/19 14:14	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	09/27/19 14:14	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	09/27/19 14:14	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	09/27/19 14:14	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	09/27/19 14:14	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	09/27/19 14:14	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	09/27/19 14:14	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	09/27/19 14:14	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	09/27/19 14:14	

LABORATORY CONTROL SAMPLE: 3413586

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	985	98	80-120	
Arsenic, Dissolved	ug/L	1000	999	100	80-120	
Barium, Dissolved	ug/L	1000	997	100	80-120	
Beryllium, Dissolved	ug/L	1000	1000	100	80-120	
Cadmium, Dissolved	ug/L	1000	1020	102	80-120	
Chromium, Dissolved	ug/L	1000	1000	100	80-120	
Cobalt, Dissolved	ug/L	1000	1000	100	80-120	
Copper, Dissolved	ug/L	1000	984	98	80-120	
Lead, Dissolved	ug/L	1000	1010	101	80-120	
Molybdenum, Dissolved	ug/L	1000	968	97	80-120	
Nickel, Dissolved	ug/L	1000	993	99	80-120	
Selenium, Dissolved	ug/L	1000	1040	104	80-120	
Silver, Dissolved	ug/L	500	501	100	80-120	
Thallium, Dissolved	ug/L	1000	982	98	80-120	
Vanadium, Dissolved	ug/L	1000	991	99	80-120	
Zinc, Dissolved	ug/L	1000	1030	103	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3413587 3413588

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	1030	991	103	99	75-125	4	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1060	1020	106	102	75-125	4	20	
Barium, Dissolved	ug/L	47.5	1000	1000	1090	1050	104	101	75-125	3	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	1060	1020	106	102	75-125	4	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1060	1020	106	102	75-125	4	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1050	1020	105	102	75-125	3	20	
Cobalt, Dissolved	ug/L	0.79J	1000	1000	1040	1000	104	100	75-125	3	20	
Copper, Dissolved	ug/L	<1.2	1000	1000	1040	1010	104	101	75-125	3	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1050	1010	104	101	75-125	3	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	1000	975	100	97	75-125	3	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	1020	985	102	99	75-125	3	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1080	1040	108	104	75-125	3	20	
Silver, Dissolved	ug/L	<0.40	500	500	529	512	106	102	75-125	3	20	
Thallium, Dissolved	ug/L	6.4J	1000	1000	1030	995	102	99	75-125	3	20	
Vanadium, Dissolved	ug/L	7.6J	1000	1000	1050	1020	105	101	75-125	3	20	
Zinc, Dissolved	ug/L	12.0J	1000	1000	1070	1030	106	102	75-125	4	20	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 632980 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10491655001, 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: 3412676 Matrix: Water
Associated Lab Samples: 10491655001, 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/18/19 14:16	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/18/19 14:16	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/18/19 14:16	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	09/18/19 14:16	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/18/19 14:16	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	09/18/19 14:16	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/18/19 14:16	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/18/19 14:16	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	09/18/19 14:16	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/18/19 14:16	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/18/19 14:16	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/18/19 14:16	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/18/19 14:16	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/18/19 14:16	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/18/19 14:16	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/18/19 14:16	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/18/19 14:16	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/18/19 14:16	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/18/19 14:16	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/18/19 14:16	
Acetone	ug/L	<9.2	20.0	9.2	09/18/19 14:16	
Acrolein	ug/L	<1.2	10.0	1.2	09/18/19 14:16	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/18/19 14:16	
Benzene	ug/L	<0.10	0.50	0.10	09/18/19 14:16	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/18/19 14:16	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/18/19 14:16	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/18/19 14:16	
Bromoform	ug/L	<0.80	4.0	0.80	09/18/19 14:16	
Bromomethane	ug/L	<1.8	4.0	1.8	09/18/19 14:16	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/18/19 14:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

METHOD BLANK: 3412676 Matrix: Water

Associated Lab Samples: 10491655001, 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/18/19 14:16	
Chlorobenzene	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
Chloroethane	ug/L	<0.49	1.0	0.49	09/18/19 14:16	
Chloroform	ug/L	<0.45	1.0	0.45	09/18/19 14:16	
Chloromethane	ug/L	<0.16	4.0	0.16	09/18/19 14:16	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	09/18/19 14:16	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/18/19 14:16	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/18/19 14:16	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/18/19 14:16	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/18/19 14:16	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/18/19 14:16	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/18/19 14:16	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/18/19 14:16	
Isopropylbenzene (Cumene)	ug/L	<0.18	1.0	0.18	09/18/19 14:16	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/18/19 14:16	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/18/19 14:16	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/18/19 14:16	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/18/19 14:16	
Naphthalene	ug/L	<0.48	1.0	0.48	09/18/19 14:16	
o-Xylene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
Styrene	ug/L	<0.19	1.0	0.19	09/18/19 14:16	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/18/19 14:16	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/18/19 14:16	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/18/19 14:16	
Toluene	ug/L	<0.083	0.50	0.083	09/18/19 14:16	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/18/19 14:16	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	09/18/19 14:16	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/18/19 14:16	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/18/19 14:16	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/18/19 14:16	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/18/19 14:16	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/18/19 14:16	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/18/19 14:16	
1,2-Dichloroethane-d4 (S)	%.	102	75-136		09/18/19 14:16	
4-Bromofluorobenzene (S)	%.	98	75-125		09/18/19 14:16	
Toluene-d8 (S)	%.	99	75-125		09/18/19 14:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

LABORATORY CONTROL SAMPLE: 3412677

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.5	98	68-141	
1,1,1-Trichloroethane	ug/L	20	20.3	101	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	20.4	102	73-125	
1,1,2-Trichloroethane	ug/L	20	20.7	104	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.0	100	69-132	
1,1-Dichloroethane	ug/L	20	20.1	100	73-125	
1,1-Dichloroethene	ug/L	20	19.0	95	71-126	
1,1-Dichloropropene	ug/L	20	20.6	103	73-126	
1,2,3-Trichlorobenzene	ug/L	20	18.2	91	72-126	
1,2,3-Trichloropropane	ug/L	20	19.4	97	75-126	
1,2,4-Trichlorobenzene	ug/L	20	16.6	83	71-134	
1,2,4-Trimethylbenzene	ug/L	20	19.2	96	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	49.9	100	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	20.1	101	75-129	
1,2-Dichlorobenzene	ug/L	20	18.7	94	75-129	
1,2-Dichloroethane	ug/L	20	20.4	102	75-125	
1,2-Dichloroethene (Total)	ug/L	40	38.9	97	74-125	N2
1,2-Dichloropropane	ug/L	20	20.2	101	75-125	
1,3,5-Trimethylbenzene	ug/L	20	19.4	97	75-127	
1,3-Dichlorobenzene	ug/L	20	19.5	98	75-126	
1,3-Dichloropropane	ug/L	20	19.7	98	75-125	
1,4-Dichlorobenzene	ug/L	20	18.4	92	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	392	98	72-129	
2,2,4-Trimethylpentane	ug/L	20	21.2	106	72-128	
2,2-Dichloropropane	ug/L	20	18.9	95	65-138	
2-Butanone (MEK)	ug/L	100	108	108	59-144	
2-Chlorotoluene	ug/L	20	18.9	94	75-127	
2-Hexanone	ug/L	100	104	104	73-134	
4-Chlorotoluene	ug/L	20	19.2	96	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	62-141	
Acetone	ug/L	100	94.8	95	60-137	
Acrolein	ug/L	200	231	116	60-141	
Acrylonitrile	ug/L	200	201	101	75-129	
Benzene	ug/L	20	20.1	101	73-125	
Bromobenzene	ug/L	20	18.8	94	73-125	
Bromochloromethane	ug/L	20	21.1	106	75-135	
Bromodichloromethane	ug/L	20	19.7	99	75-125	
Bromoform	ug/L	20	18.9	94	67-136	
Bromomethane	ug/L	20	16.6	83	30-150	
Carbon disulfide	ug/L	20	19.7	99	47-137	
Carbon tetrachloride	ug/L	20	20.3	101	75-125	
Chlorobenzene	ug/L	20	18.4	92	75-125	
Chloroethane	ug/L	20	18.4	92	63-136	
Chloroform	ug/L	20	19.4	97	73-128	
Chloromethane	ug/L	20	18.1	90	55-130	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	75-125	
cis-1,3-Dichloropropene	ug/L	20	20.6	103	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

LABORATORY CONTROL SAMPLE: 3412677

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.3	102	75-125	
Dibromomethane	ug/L	20	21.0	105	75-125	
Dichlorodifluoromethane	ug/L	20	19.8	99	63-132	
Dichlorofluoromethane	ug/L	20	19.6	98	68-127	
Diisopropyl ether	ug/L	20	19.7	99	71-131	
Ethyl-tert-butyl ether	ug/L	20	18.0	90	75-125	
Ethylbenzene	ug/L	20	18.9	94	75-125	
Hexachloro-1,3-butadiene	ug/L	20	17.7	88	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.3	96	75-125	
m&p-Xylene	ug/L	40	38.8	97	75-126	
Methyl-tert-butyl ether	ug/L	20	19.1	96	75-125	
Methylene Chloride	ug/L	20	21.1	105	70-125	
n-Butylbenzene	ug/L	20	19.5	98	75-126	
n-Propylbenzene	ug/L	20	19.3	97	73-127	
Naphthalene	ug/L	20	16.7	84	63-128	
o-Xylene	ug/L	20	20.0	100	75-128	
p-Isopropyltoluene	ug/L	20	19.5	98	75-125	
sec-Butylbenzene	ug/L	20	20.4	102	75-126	
Styrene	ug/L	20	19.9	100	75-125	
tert-Amylmethyl ether	ug/L	20	18.6	93	75-125	
tert-Butyl Alcohol	ug/L	200	178	89	75-130	
tert-Butylbenzene	ug/L	20	19.5	98	75-131	
Tetrachloroethene	ug/L	20	19.8	99	74-125	
Tetrahydrofuran	ug/L	200	195	98	64-138	
Toluene	ug/L	20	18.9	94	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.1	96	68-128	
trans-1,3-Dichloropropene	ug/L	20	21.4	107	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	41.5	83	60-127	
Trichloroethene	ug/L	20	19.8	99	75-127	
Trichlorofluoromethane	ug/L	20	19.2	96	72-133	
Vinyl acetate	ug/L	20	20.7	104	61-129	
Vinyl chloride	ug/L	20	20.8	104	75-128	
Xylene (Total)	ug/L	60	58.8	98	75-125	
1,2-Dichloroethane-d4 (S)	%.			103	75-136	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412678 3412679

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	22.2	21.1	111	106	75-140	5	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	25.3	23.3	126	116	74-136	8	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	22.8	21.5	114	108	66-134	6	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	24.1	21.8	121	109	75-126	10	30	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412678 3412679

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	26.7	24.7	134	124	65-146	8	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	23.8	21.2	119	106	68-132	12	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	25.1	22.2	126	111	66-139	12	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	25.9	23.3	130	117	67-134	11	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	23.1	21.9	116	110	67-129	5	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	22.2	20.3	111	101	69-128	9	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	21.6	20.3	108	101	65-140	6	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	23.0	22.7	115	113	71-133	1	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	54.2	53.0	108	106	54-138	2	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	22.4	20.5	112	102	68-125	9	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	22.1	21.9	110	110	74-136	1	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	23.3	21.4	117	107	68-125	8	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	47.8	42.3	120	106	71-126	12	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	23.2	21.3	116	107	67-125	9	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	23.6	23.2	118	116	68-137	2	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	23.0	22.6	115	113	75-131	2	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	22.3	21.0	111	105	71-125	6	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	21.9	21.3	110	106	74-126	3	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	459	407	115	102	68-125	12	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	28.7	22.7	143	113	54-129	23	30	M1
2,2-Dichloropropane	ug/L	<0.17	20	20	25.1	21.6	126	108	69-139	15	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	110	106	110	106	54-144	4	30	
2-Chlorotoluene	ug/L	<0.16	20	20	22.5	22.3	112	111	75-134	1	30	
2-Hexanone	ug/L	<0.88	100	100	109	106	109	106	58-137	2	30	
4-Chlorotoluene	ug/L	<0.13	20	20	22.7	22.7	114	113	72-133	0	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	114	110	114	110	60-129	4	30	
Acetone	ug/L	<9.2	100	100	95.7	86.1	96	86	62-132	11	30	
Acrolein	ug/L	<1.2	200	200	299	279	149	140	30-150	7	30	
Acrylonitrile	ug/L	<0.91	200	200	223	209	111	104	68-125	7	30	
Benzene	ug/L	<0.10	20	20	23.6	21.3	118	107	68-125	10	30	
Bromobenzene	ug/L	<0.21	20	20	21.6	21.2	108	106	73-126	2	30	
Bromochloromethane	ug/L	<0.27	20	20	24.0	22.1	120	110	66-143	8	30	
Bromodichloromethane	ug/L	<0.22	20	20	23.4	21.2	117	106	74-125	10	30	
Bromoform	ug/L	<0.80	20	20	21.9	20.7	109	103	64-134	6	30	
Bromomethane	ug/L	<1.8	20	20	19.7	21.6	99	108	30-150	9	30	
Carbon disulfide	ug/L	<0.078	20	20	26.8	21.9	134	109	43-147	20	30	
Carbon tetrachloride	ug/L	<0.19	20	20	25.9	23.3	129	117	71-143	10	30	
Chlorobenzene	ug/L	<0.17	20	20	21.3	20.0	107	100	75-125	6	30	
Chloroethane	ug/L	<0.49	20	20	24.8	25.2	124	126	75-129	2	30	
Chloroform	ug/L	<0.45	20	20	21.9	20.4	110	102	66-132	7	30	
Chloromethane	ug/L	<0.16	20	20	24.0	24.2	120	121	53-137	1	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	23.6	21.2	118	106	67-133	11	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	23.4	21.2	117	106	66-125	10	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412678 3412679

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	23.2	22.5	116	113	62-132	3	30	
Dibromomethane	ug/L	<0.16	20	20	25.7	26.4	129	132	67-125	3	30	M1
Dichlorodifluoromethane	ug/L	<0.23	20	20	26.1	27.1	130	136	71-142	4	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	23.4	24.2	117	121	70-131	4	30	
Diisopropyl ether	ug/L	<0.13	20	20	22.8	21.0	114	105	63-131	8	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	20.8	19.3	104	97	66-128	8	30	
Ethylbenzene	ug/L	<0.14	20	20	22.7	22.0	114	110	74-126	3	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	25.7	20.1	128	101	68-143	24	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	23.3	22.9	116	114	74-130	2	30	
m&p-Xylene	ug/L	<0.31	40	40	45.7	44.5	114	111	69-132	3	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	21.5	20.4	108	102	65-131	5	30	
Methylene Chloride	ug/L	<0.98	20	20	24.0	21.1	120	105	57-125	13	30	
n-Butylbenzene	ug/L	<0.24	20	20	26.1	23.2	130	116	71-131	12	30	
n-Propylbenzene	ug/L	<0.10	20	20	24.1	23.5	120	118	67-138	2	30	
Naphthalene	ug/L	<0.48	20	20	19.7	19.7	98	99	60-130	0	30	
o-Xylene	ug/L	<0.16	20	20	23.2	22.7	116	114	69-131	2	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	24.7	23.0	124	115	72-133	7	30	
sec-Butylbenzene	ug/L	<0.15	20	20	26.2	24.5	131	123	73-134	7	30	
Styrene	ug/L	<0.19	20	20	22.9	21.7	115	109	72-125	5	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	21.4	20.1	107	100	67-125	6	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	216	202	108	101	64-137	6	30	
tert-Butylbenzene	ug/L	<0.15	20	20	24.8	24.0	124	120	70-143	3	30	
Tetrachloroethene	ug/L	<0.17	20	20	24.5	23.4	123	117	72-129	5	30	
Tetrahydrofuran	ug/L	<2.2	200	200	218	206	109	103	66-128	6	30	
Toluene	ug/L	<0.083	20	20	22.3	20.7	112	103	73-125	8	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	24.2	21.1	121	105	62-137	14	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	25.7	23.1	128	115	61-136	11	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	46.7	44.0	93	88	45-128	6	30	
Trichloroethene	ug/L	<0.15	20	20	24.4	21.6	122	108	74-132	12	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	24.4	25.4	122	127	75-139	4	30	
Vinyl acetate	ug/L	<1.1	20	20	24.8	22.8	124	114	51-135	8	30	
Vinyl chloride	ug/L	<0.092	20	20	27.2	27.1	136	136	68-146	0	30	
Xylene (Total)	ug/L	<0.31	60	60	68.9	67.2	115	112	67-137	2	30	
1,2-Dichloroethane-d4 (S)	%.						106	102	75-136			
4-Bromofluorobenzene (S)	%.						98	98	75-125			
Toluene-d8 (S)	%.						97	95	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 633986 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655006

METHOD BLANK: 3417578 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/24/19 08:18	

LABORATORY CONTROL SAMPLE & LCSD: 3417579 3417580

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	41.1	43.2	103	108	90-110	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417581 3417582

Parameter	Units	10491732006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	ND	40	40	44.5	43.2	107	104	80-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417583 3417584

Parameter	Units	10492119002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	161	40	40	198	203	92	105	80-120	3	20	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 633987 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10491655005, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: 3417585 Matrix: Water
Associated Lab Samples: 10491655005, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/24/19 08:52	

LABORATORY CONTROL SAMPLE & LCSD: 3417586 3417587

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.7	41.6	107	104	90-110	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417588 3417589

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	220	40	40	258	258	95	96	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417590 3417591

Parameter	Units	10491745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	45.9	40	40	87.0	87.3	103	104	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 633396 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: 3414712 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	09/20/19 11:31	

LABORATORY CONTROL SAMPLE: 3414713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1040	104	80-120	

SAMPLE DUPLICATE: 3414714

Parameter	Units	10491655004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	279	257	8	5	D6

SAMPLE DUPLICATE: 3414715

Parameter	Units	10491655005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	278	269	3	5	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 157986 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: 707619 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	09/19/19 15:38	

LABORATORY CONTROL SAMPLE: 707620

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.20	100	90-110	

MATRIX SPIKE SAMPLE: 707867

Parameter	Units	10491655005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.2	0.047	23	75-125	M1

SAMPLE DUPLICATE: 707866

Parameter	Units	10491655005 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.0054	<0.0054		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 632757 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: 3411367 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	09/18/19 03:13	
Nitrate as N	mg/L	<0.012	0.10	0.012	09/18/19 03:13	
Sulfate	mg/L	<0.28	1.2	0.28	09/18/19 03:13	

LABORATORY CONTROL SAMPLE: 3411368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	11.5	92	90-110	
Nitrate as N	mg/L	1	0.90	90	90-110	
Sulfate	mg/L	12.5	11.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3411369 3411370

Parameter	Units	10491503001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	55.9	12.5	12.5	58.6	59.0	22	25	90-110	1	20	M1
Nitrate as N	mg/L	ND	1	1	0.90	0.90	90	90	90-110	0	20	
Sulfate	mg/L	324	125	125	433	433	87	87	90-110	0	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3411371 3411372

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	0.96J	12.5	12.5	11.8	11.8	87	87	90-110	0	20	M1
Nitrate as N	mg/L	0.093J	1	1	0.92	0.93	83	84	90-110	1	20	M1
Sulfate	mg/L	2.4	12.5	12.5	14.0	13.9	92	92	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 634557 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009

METHOD BLANK: 3420081 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	09/26/19 08:29	

LABORATORY CONTROL SAMPLE: 3420082

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.96	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420083 3420084

Parameter	Units	10491643002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	2.4	1	1	3.5	3.5	108	106	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420085 3420086

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.065J	1	1	1.1	1.1	99	99	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 634559
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10491655010

METHOD BLANK: 3420088 Matrix: Water
Associated Lab Samples: 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	09/26/19 09:25	

LABORATORY CONTROL SAMPLE: 3420089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.96	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420090 3420091

Parameter	Units	10491655010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	16.3	1	1	17.1	17.3	80	100	90-110	1	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420092 3420093

Parameter	Units	10491870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	1.0	1.0	100	100	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 632844 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: 3412147 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	09/19/19 08:51	

LABORATORY CONTROL SAMPLE: 3412148

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	301	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412149 3412150

Parameter	Units	10491643002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	246	241	98	97	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412151 3412152

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	250	252	98	98	90-110	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

QC Batch: 175395 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

METHOD BLANK: 694778 Matrix: Water
Associated Lab Samples: 10491655002, 10491655003, 10491655004, 10491655005, 10491655006, 10491655007, 10491655008, 10491655009, 10491655010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	09/23/19 10:49	

LABORATORY CONTROL SAMPLE: 694779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 694780 694781

Parameter	Units	10491643002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.65J	25	25	26.1	26.0	102	101	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 694782 694783

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<0.39	25	25	25.5	25.8	101	102	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
MH	Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.
MW	Due to matrix interference, achieving a constant weight is not possible.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10491655002	MW-10S-GW-190914	RSK175	1348489	RSK-175	1348489
10491655003	MW-12S-GW-190914	RSK175	1348489	RSK-175	1348489
10491655004	MW-6S-GW-190914	RSK175	1348489	RSK-175	1348489
10491655005	MW-11S-GW-190914	RSK175	1348489	RSK-175	1348489
10491655006	MW-1S-GW-190914	RSK175	1348489	RSK-175	1348489
10491655007	MW-7S-GW-190914	RSK175	1348489	RSK-175	1348489
10491655008	MW-8S-GW-190914	RSK175	1348489	RSK-175	1348489
10491655009	MW-9S-GW-190914	RSK175	1348489	RSK-175	1348489
10491655010	MW-9S-GW-190914B	RSK175	1348489	RSK-175	1348489
10491655002	MW-10S-GW-190914	EPA 3010	633134	EPA 6010D	635107
10491655003	MW-12S-GW-190914	EPA 3010	633134	EPA 6010D	635107
10491655004	MW-6S-GW-190914	EPA 3010	633134	EPA 6010D	635107
10491655005	MW-11S-GW-190914	EPA 3010	633134	EPA 6010D	635107
10491655006	MW-1S-GW-190914	EPA 3010	633134	EPA 6010D	635107
10491655007	MW-7S-GW-190914	EPA 3010	633134	EPA 6010D	635107
10491655008	MW-8S-GW-190914	EPA 3010	633134	EPA 6010D	635107
10491655009	MW-9S-GW-190914	EPA 3010	633134	EPA 6010D	635107
10491655010	MW-9S-GW-190914B	EPA 3010	633134	EPA 6010D	635107
10491655002	MW-10S-GW-190914	EPA 7470A	633324	EPA 7470A	635113
10491655003	MW-12S-GW-190914	EPA 7470A	633324	EPA 7470A	635113
10491655004	MW-6S-GW-190914	EPA 7470A	633324	EPA 7470A	635113
10491655005	MW-11S-GW-190914	EPA 7470A	633324	EPA 7470A	635113
10491655006	MW-1S-GW-190914	EPA 7470A	633324	EPA 7470A	635113
10491655007	MW-7S-GW-190914	EPA 7470A	633324	EPA 7470A	635113
10491655008	MW-8S-GW-190914	EPA 7470A	633324	EPA 7470A	635113
10491655009	MW-9S-GW-190914	EPA 7470A	633324	EPA 7470A	635113
10491655010	MW-9S-GW-190914B	EPA 7470A	633324	EPA 7470A	635113
10491655001	TB-01-190914	EPA 8260B	632980		
10491655002	MW-10S-GW-190914	EPA 8260B	632980		
10491655003	MW-12S-GW-190914	EPA 8260B	632980		
10491655004	MW-6S-GW-190914	EPA 8260B	632980		
10491655005	MW-11S-GW-190914	EPA 8260B	632980		
10491655006	MW-1S-GW-190914	EPA 8260B	632980		
10491655007	MW-7S-GW-190914	EPA 8260B	632980		
10491655008	MW-8S-GW-190914	EPA 8260B	632980		
10491655009	MW-9S-GW-190914	EPA 8260B	632980		
10491655010	MW-9S-GW-190914B	EPA 8260B	632980		
10491655002	MW-10S-GW-190914	SM 2320B	633986		
10491655003	MW-12S-GW-190914	SM 2320B	633986		
10491655004	MW-6S-GW-190914	SM 2320B	633986		
10491655005	MW-11S-GW-190914	SM 2320B	633987		
10491655006	MW-1S-GW-190914	SM 2320B	633986		
10491655007	MW-7S-GW-190914	SM 2320B	633987		
10491655008	MW-8S-GW-190914	SM 2320B	633987		
10491655009	MW-9S-GW-190914	SM 2320B	633987		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10491655010	**MW-9S-GW-190914B**	SM 2320B	633987		
10491655002	**MW-10S-GW-190914**	SM 2540C	633396		
10491655003	**MW-12S-GW-190914**	SM 2540C	633396		
10491655004	**MW-6S-GW-190914**	SM 2540C	633396		
10491655005	**MW-11S-GW-190914**	SM 2540C	633396		
10491655006	**MW-1S-GW-190914**	SM 2540C	633396		
10491655007	**MW-7S-GW-190914**	SM 2540C	633396		
10491655008	**MW-8S-GW-190914**	SM 2540C	633396		
10491655009	**MW-9S-GW-190914**	SM 2540C	633396		
10491655010	**MW-9S-GW-190914B**	SM 2540C	633396		
10491655002	**MW-10S-GW-190914**	SM 4500-S-2 D	157986		
10491655003	**MW-12S-GW-190914**	SM 4500-S-2 D	157986		
10491655004	**MW-6S-GW-190914**	SM 4500-S-2 D	157986		
10491655005	**MW-11S-GW-190914**	SM 4500-S-2 D	157986		
10491655006	**MW-1S-GW-190914**	SM 4500-S-2 D	157986		
10491655007	**MW-7S-GW-190914**	SM 4500-S-2 D	157986		
10491655008	**MW-8S-GW-190914**	SM 4500-S-2 D	157986		
10491655009	**MW-9S-GW-190914**	SM 4500-S-2 D	157986		
10491655010	**MW-9S-GW-190914B**	SM 4500-S-2 D	157986		
10491655002	**MW-10S-GW-190914**	EPA 300.0	632757		
10491655003	**MW-12S-GW-190914**	EPA 300.0	632757		
10491655004	**MW-6S-GW-190914**	EPA 300.0	632757		
10491655005	**MW-11S-GW-190914**	EPA 300.0	632757		
10491655006	**MW-1S-GW-190914**	EPA 300.0	632757		
10491655007	**MW-7S-GW-190914**	EPA 300.0	632757		
10491655008	**MW-8S-GW-190914**	EPA 300.0	632757		
10491655009	**MW-9S-GW-190914**	EPA 300.0	632757		
10491655010	**MW-9S-GW-190914B**	EPA 300.0	632757		
10491655002	**MW-10S-GW-190914**	EPA 353.2	634557		
10491655003	**MW-12S-GW-190914**	EPA 353.2	634557		
10491655004	**MW-6S-GW-190914**	EPA 353.2	634557		
10491655005	**MW-11S-GW-190914**	EPA 353.2	634557		
10491655006	**MW-1S-GW-190914**	EPA 353.2	634557		
10491655007	**MW-7S-GW-190914**	EPA 353.2	634557		
10491655008	**MW-8S-GW-190914**	EPA 353.2	634557		
10491655009	**MW-9S-GW-190914**	EPA 353.2	634557		
10491655010	**MW-9S-GW-190914B**	EPA 353.2	634559		
10491655002	**MW-10S-GW-190914**	EPA 410.4	632844	EPA 410.4	633009
10491655003	**MW-12S-GW-190914**	EPA 410.4	632844	EPA 410.4	633009
10491655004	**MW-6S-GW-190914**	EPA 410.4	632844	EPA 410.4	633009
10491655005	**MW-11S-GW-190914**	EPA 410.4	632844	EPA 410.4	633009
10491655006	**MW-1S-GW-190914**	EPA 410.4	632844	EPA 410.4	633009
10491655007	**MW-7S-GW-190914**	EPA 410.4	632844	EPA 410.4	633009
10491655008	**MW-8S-GW-190914**	EPA 410.4	632844	EPA 410.4	633009
10491655009	**MW-9S-GW-190914**	EPA 410.4	632844	EPA 410.4	633009
10491655010	**MW-9S-GW-190914B**	EPA 410.4	632844	EPA 410.4	633009

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491655

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10491655002	**MW-10S-GW-190914**	SM 5310C	175395		
10491655003	**MW-12S-GW-190914**	SM 5310C	175395		
10491655004	**MW-6S-GW-190914**	SM 5310C	175395		
10491655005	**MW-11S-GW-190914**	SM 5310C	175395		
10491655006	**MW-1S-GW-190914**	SM 5310C	175395		
10491655007	**MW-7S-GW-190914**	SM 5310C	175395		
10491655008	**MW-8S-GW-190914**	SM 5310C	175395		
10491655009	**MW-9S-GW-190914**	SM 5310C	175395		
10491655010	**MW-9S-GW-190914B**	SM 5310C	175395		

Pace Analytical

CHAIN-OF-CUSTODY / Analy

The Chain-of-Custody is a LEGAL DOCUMEN

WO# : 10491655

10491655

Of 1

Section A Required Client Information:		Section B Required Project Information:	Section C Invoice Information:
Company: UPRR_Jacobs		Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500		Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR
Spokane, WA 99201		Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Email:		Purchase Order # PEDD# 1497	Pace Quote: Contract# 9900758938
Phone:	Fax:	Project Name: Freeman WA-Cenex Harvest Lease	Pace Project Manager: Jennifer Gross
Requested Due Date: 10 Day Standard		Project #: 1497	Pace Profile #: 36447 / 4

Regulatory Agency:

State / Location: WA / Freeman

SAMPLE ID: One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

Requested Analysis Filtered (Y/N): Y (6010/7470 TAL Dissolved Metals*)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, **Nitrate 300.0**	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate-Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	
1	TB-01-190914	[illegible]	G	9/14/19	0800	NA	3				X				X													001
2	MW-105-GW-190914	[illegible]	G	9/14/19	1010	12	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X					002
3	MW-125-GW-190914	[illegible]	G	9/14/19	1125	12	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X					003
4	MW-05-GW-190914	[illegible]	G	9/14/19	1210	12	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X					004
5	MW-115-GW-190914	[illegible]	G	9/14/19	1255	12	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X					005
6	MW-115-GW-190914MS	[illegible]	G	9/14/19	1255	12	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X				X	005
7	MW-115-GW-190914SD	[illegible]	G	9/14/19	1255	12	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X				X	005
8	MW-15-GW-190914	[illegible]	G	9/14/19	1500	12	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X					006
9	MW-75-GW-190914	[illegible]	G	9/14/19	1550	12	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X					007
10	MW-85-GW-190914	[illegible]	G	9/14/19	1645	13	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X					008
11	MW-95-GW-190914	[illegible]	G	9/14/19	1740	14	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X				–	009
12	MW-95-GW-190914B	[illegible]	G	9/14/19	1740	14	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X					010

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Short hold analyses are in **bold**	[signature]	9/14/19	2000	[signature] PACE	9/17/19	840	2.0, 0.2, 2.6	Y	Y	Y
* Field filtered by client										

NOTE: Nitrate samples outside Hold time. Ok, sample Anyway

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK GREEN

SIGNATURE of SAMPLER: [signature] DATE Signed: 9/14/19

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.29	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR - Jacobs

Project #:

WO#: 10491655

PM: JMG **Due Date: 10/01/19**

CLIENT: UPRR_Jacobs

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: 4934 3733 3141 SJ 9/17/19 ☑ See Exceptions

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No SJ 9/17/19 Seals Intact? ☑ Yes ☐ No SJ 9/17/19

Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Temp Blank? ☑ Yes ☐ No

Thermometer: ☐ T1(0461) ☑ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489)

Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C

Cooler Temp Read w/temp blank: 0.2, 2.0, 2.6 °C

Correction Factor: TBW

Cooler Temp Corrected w/temp blank: 0.2, 2.0, 2.6 °C

Average Corrected Temp (no temp blank only): ☐ See Exceptions ☐ 1 Container °C

USDA Regulated Soil: (☑ N/A, water sample/Other:)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: SJ 9/17/19

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes ☐ No	1.
Chain of Custody Relinquished?	☑ Yes ☐ No	2.
Sampler Name and/or Signature on COC?	☑ Yes ☐ No ☐ N/A	3.
Samples Arrived within Hold Time?	☐ Yes ☑ No	4.
Short Hold Time Analysis (<72 hr)?	☑ Yes ☐ No	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☒ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes ☑ No	6.
Sufficient Volume?	☑ Yes ☐ No	7.
Correct Containers Used? -Pace Containers Used?	☑ Yes ☐ No ☑ Yes ☐ No	8.
Containers Intact?	☑ Yes ☐ No	9.
Field Filtered Volume Received for Dissolved Tests? SJ 9/17/19	☑ Yes ☐ No ☐ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other	☑ Yes ☐ No	11. If no, write ID/ Date/Time on Container Below: ☐ See Exception
All containers needing acid/base preservation have been checked?	☑ Yes ☐ No ☐ N/A	12. Sample # 2-12: Y/1 Y/1 Y/1 ☐ NaOH ☑ HNO_3 ☑ H_2SO_4 ☑ Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes ☐ No ☐ N/A	
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS JMG 091719	☑ Yes ☐ No ☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# ☐ See Exception
		Res. Chlorine: 0-6 Roll 203614 / 0-6 Strip / 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	☐ Yes ☑ No ☐ N/A	13 ☐ See Exception
Trip Blank Present?	☑ Yes ☐ No ☐ N/A	14.
Trip Blank Custody Seals Present?	☑ Yes ☐ No ☐ N/A	Pace Trip Blank Lot # (if purchased): 225458

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Date/Time: Field Data Required? ☐ Yes ☐ No

Comments/Resolution:

Project Manager Review: Jenni Gross Date: 09/17/19

Note: Whenever there is a discrepancy affecting NC compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

SJ 9/17/19

Pace Analytical	Document Name: SCUR Exception Form – Coolers Above 6°C	Document Revised: 08Apr2019 Page 1 of 1
	Document No.: F-MN-C-298-Rev.02	Issuing Authority: Pace Minnesota Quality Office

During sample triage, this form is to be placed in each cooler that arrives above 6.0 degrees Celsius

SCUR Exceptions: **Workorder #:** 10491655

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp

Tracking Number/Temperature	
4934 3733 2191	2.0
" " 2180	0.2
" " 2170	2.0

Other Issues

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Chain of Custody

WO# : 20122004

20122004

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: ☐ Yes

Workorder: 10491655 **Workorder Name:** Freeman WA-Cenex Harvest Lease

Owner Received Date: 9/17/2019 Results Requested By: 10/1/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z						Requested Analysis: 5636267 / 4500 Sulfide														LAB USE ONLY
1	MW-10S-GW-190914	PS	9/14/2019 10:10	10491655002	Water	1						X														
2	MW-12S-GW-190914	PS	9/14/2019 11:25	10491655003	Water	1						X														
3	MW-6S-GW-190914	PS	9/14/2019 12:10	10491655004	Water	1						X														
4	MW-11S-GW-190914	RQS	9/14/2019 12:55	10491655005	Water	3						X														
5	MW-1S-GW-190914	PS	9/14/2019 15:00	10491655006	Water	1						X														MS/MSD
6	MW-7S-GW-190914	PS	9/14/2019 15:50	10491655007	Water	1						X														
7	MW-8S-GW-190914	PS	9/14/2019 16:45	10491655008	Water	1						X														
8	MW-9S-GW-190914	PS	9/14/2019 17:40	10491655009	Water	1						X														
9	MW-9S-GW-190914B	PS	9/14/2019 17:40	10491655010	Water	1						X														

Transfers	Released By	Date/Time	Received By	Date/Time
1	PACE	9/17/19 17:19	FX	
2	FX		[illegible]	9/18 900
3				

Comments

Cooler Temperature on Receipt 1.3 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Pro

WO#: 20122004

PM: CMM **Due Date: 10/01/19**

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☒ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☒Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☒ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 09-18-19 MB

Temp must be measured from Temperature blank when present

			Comments:
Temperature Blank Present"?	☐Yes ☐No	☒N/A	1
Chain of Custody Present:	☒Yes ☐No	☐N/A	2
Chain of Custody Complete:	☒Yes ☐No	☐N/A	3
Chain of Custody Relinquished:	☒Yes ☐No	☐N/A	4
Sampler Name & Signature on COC:	☒Yes ☐No	☐N/A	5
Samples Arrived within Hold Time:	☒Yes ☐No	☐N/A	6
Sufficient Volume:	☒Yes ☐No	☐N/A	7
Correct Containers Used:	☒Yes ☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes ☐No	☒N/A	9
Sample Labels match COC:	☒Yes ☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☒Yes ☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☒Yes ☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☒Yes ☐No	☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes ☐No	☒N/A	14
Trip Blank Present:	☐Yes ☒No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Chain of Custody

WO# : 12135689

12135689

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: [X] Yes

Workorder: 10491655 **Workorder Name:** Freeman WA-Cenex Harvest Lease **Owner Received Date:** 9/17/2019 **Results Requested By:** 10/1/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S	5632354 / 5310 TOC	LAB USE ONLY
1	MW-10S-GW-190914	PS	9/14/2019 10:10	10491655002	Water	2	X	
2	MW-12S-GW-190914	PS	9/14/2019 11:25	10491655003	Water	2	X	
3	MW-6S-GW-190914	PS	9/14/2019 12:10	10491655004	Water	2	X	
4	MW-11S-GW-190914	RQS	9/14/2019 12:55	10491655005	Water	6	X	MS/MSD
5	MW-1S-GW-190914	PS	9/14/2019 15:00	10491655006	Water	2	X	
6	MW-7S-GW-190914	PS	9/14/2019 15:50	10491655007	Water	2	X	
7	MW-8S-GW-190914	PS	9/14/2019 16:45	10491655008	Water	2	X	
8	MW-9S-GW-190914	PS	9/14/2019 17:40	10491655009	Water	2	X	
9	MW-9S-GW-190914B	PS	9/14/2019 17:40	10491655010	Water	2	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] 9/18/19	9/18/19 845	[signature] PACE	9/18 12:40
2	[signature] 9/18/19	1930	B. Matthews	9/19/19 0630
3				

Comments

Cooler Temperature on Receipt 0.4 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #:

WO#: 12135689

PM: RK1 **Due Date: 10/02/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☑ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.3 Cooler Temp Corrected °C: 0.6 Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 9/18/19 DC

Comments: BM 9/19/19

Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation properly preserved?	☑ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Davena Ferver Date: 9/19/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Chain of Custody

G156 Pace Analytical® www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☒ No

Workorder: 10491655 **Workorder Name:** Freeman WA-Cenex Harvest Lease **Owner Received Date:** 9/17/2019 **Results Requested By:** 10/1/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace National 12065 Lebanon Road Mt. Juliet, TN 37122 615-773-9710

Requested Analysis: 5644436 / Headspace Analysis Methane, Ethane, Ethene

1140619

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other VSG	Methane, Ethane, Ethene	LAB USE ONLY
1	MW-10S-GW-190914	PS	9/14/2019 10:10	10491655002	Water	3	X	-01
2	MW-12S-GW-190914	PS	9/14/2019 11:25	10491655003	Water	3	X	02
3	MW-6S-GW-190914	PS	9/14/2019 12:10	10491655004	Water	3	X	03
4	MW-11S-GW-190914	RQS	9/14/2019 12:55	10491655005	Water	9	X	MS/MSD 04
5	MW-1S-GW-190914	PS	9/14/2019 15:00	10491655006	Water	3	X	05
6	MW-7S-GW-190914	PS	9/14/2019 15:50	10491655007	Water	3	X	06
7	MW-8S-GW-190914	PS	9/14/2019 16:45	10491655008	Water	3	X	07
8	MW-9S-GW-190914	PS	9/14/2019 17:40	10491655009	Water	3	X	08
9	MW-9S-GW-190914B	PS	9/14/2019 17:40	10491655010	Water	3	X	09

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] / Pace	9/17/19 1640	Carol Kemp	9/18/19 8:45
2				
3				

Comments: Short hold

Cooler Temperature on Receipt 1.4+.3=1.7 °C Custody Seal (Y) or N Received on Ice Y or N Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACETWA	1140619	
Cooler Received/Opened On: 9/18/19 Temperature:	1.7	
Received By: Carol Kemp		
Signature: Carol Kemp		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 02, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on September 18, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

CERTIFICATIONS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Pace Analytical National Certification IDs

Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10491870001	**MW21D-GW-091719**	Water	09/17/19 09:00	09/18/19 08:30
10491870002	**MW19D-GW-091719**	Water	09/17/19 10:00	09/18/19 08:30
10491870003	**MW16D-GW-091719**	Water	09/17/19 11:15	09/18/19 08:30
10491870004	**MW18D-GW-091719**	Water	09/17/19 12:00	09/18/19 08:30
10491870005	**MW15D-GW-091719**	Water	09/17/19 13:25	09/18/19 08:30
10491870006	**MW4D-GW-091719**	Water	09/17/19 14:35	09/18/19 08:30
10491870007	**MW5D-GW-091719**	Water	09/17/19 15:45	09/18/19 08:30
10491870008	**TB-03-091719**	Water	09/17/19 07:00	09/18/19 08:30

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10491870001	**MW21D-GW-091719**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491870002	**MW19D-GW-091719**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491870003	**MW16D-GW-091719**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491870004	**MW18D-GW-091719**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

SAMPLE ANALYTE COUNT

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491870005	**MW15D-GW-091719**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491870006	**MW4D-GW-091719**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491870007	**MW5D-GW-091719**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

SAMPLE ANALYTE COUNT

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10491870008	**TB-03-091719**	EPA 8260B	AEZ	83	PASI-M

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10491870001	**MW21D-GW-091719**					
EPA 6010D	Barium, Dissolved	80.5	ug/L	10.0	10/01/19 11:57	
EPA 6010D	Cobalt, Dissolved	1.1J	ug/L	10.0	10/01/19 11:57	
EPA 6010D	Thallium, Dissolved	6.9J	ug/L	20.0	10/01/19 11:57	
EPA 6010D	Vanadium, Dissolved	0.52J	ug/L	15.0	10/01/19 11:57	
SM 2320B	Alkalinity, Total as CaCO3	200	mg/L	5.0	09/25/19 13:18	
SM 2540C	Total Dissolved Solids	260	mg/L	20.0	09/24/19 10:25	
SM 4500-S-2 D	Sulfide, Total	0.0078J	mg/L	0.020	09/24/19 12:23	
EPA 300.0	Chloride	2.8	mg/L	1.2	09/18/19 23:19	
EPA 300.0	Sulfate	8.7	mg/L	1.2	09/18/19 23:19	
SM 5310C	Total Organic Carbon	0.51J	mg/L	1.0	09/23/19 19:57	
10491870002	**MW19D-GW-091719**					
EPA 6010D	Barium, Dissolved	10.3	ug/L	10.0	10/01/19 12:02	
EPA 6010D	Cobalt, Dissolved	0.87J	ug/L	10.0	10/01/19 12:02	
EPA 6010D	Vanadium, Dissolved	6.8J	ug/L	15.0	10/01/19 12:02	
EPA 8260B	Carbon disulfide	1.4	ug/L	1.0	09/18/19 21:49	
EPA 8260B	Carbon tetrachloride	455	ug/L	2.5	09/19/19 19:56	
EPA 8260B	Chloroform	24.2	ug/L	1.0	09/18/19 21:49	
SM 2320B	Alkalinity, Total as CaCO3	174	mg/L	5.0	09/25/19 15:59	
SM 2540C	Total Dissolved Solids	330	mg/L	20.0	09/24/19 10:25	
EPA 300.0	Chloride	8.6	mg/L	1.2	09/18/19 23:36	
EPA 300.0	Nitrate as N	4.1	mg/L	0.10	09/18/19 23:36	
EPA 300.0	Sulfate	33.8	mg/L	1.2	09/18/19 23:36	
EPA 353.2	Nitrogen, NO2 plus NO3	5.0	mg/L	0.50	09/26/19 11:02	
SM 5310C	Total Organic Carbon	0.78J	mg/L	1.0	09/23/19 20:11	
10491870003	**MW16D-GW-091719**					
EPA 6010D	Barium, Dissolved	67.1	ug/L	10.0	10/01/19 12:04	
EPA 6010D	Beryllium, Dissolved	0.18J	ug/L	5.0	10/01/19 12:04	B
EPA 6010D	Chromium, Dissolved	0.83J	ug/L	10.0	10/01/19 12:04	
EPA 6010D	Cobalt, Dissolved	1.6J	ug/L	10.0	10/01/19 12:04	
EPA 6010D	Lead, Dissolved	2.5J	ug/L	10.0	10/01/19 12:04	
EPA 6010D	Vanadium, Dissolved	10.5J	ug/L	15.0	10/01/19 12:04	
SM 2320B	Alkalinity, Total as CaCO3	221	mg/L	5.0	09/25/19 16:04	
SM 2540C	Total Dissolved Solids	369	mg/L	10.0	09/24/19 10:25	
EPA 300.0	Chloride	7.6	mg/L	1.2	09/18/19 23:53	
EPA 300.0	Nitrate as N	6.2	mg/L	0.10	09/18/19 23:53	
EPA 300.0	Sulfate	26.5	mg/L	1.2	09/18/19 23:53	
EPA 353.2	Nitrogen, NO2 plus NO3	7.2	mg/L	0.50	09/26/19 11:04	
10491870004	**MW18D-GW-091719**					
EPA 6010D	Barium, Dissolved	54.1	ug/L	10.0	10/01/19 12:05	
EPA 6010D	Beryllium, Dissolved	0.14J	ug/L	5.0	10/01/19 12:05	B
EPA 6010D	Cobalt, Dissolved	0.86J	ug/L	10.0	10/01/19 12:05	
EPA 6010D	Zinc, Dissolved	6.8J	ug/L	20.0	10/01/19 12:05	
SM 2320B	Alkalinity, Total as CaCO3	155	mg/L	5.0	09/25/19 16:08	
SM 2540C	Total Dissolved Solids	203	mg/L	10.0	09/24/19 10:25	
EPA 300.0	Chloride	2.1	mg/L	1.2	09/19/19 00:09	
EPA 300.0	Sulfate	6.5	mg/L	1.2	09/19/19 00:09	

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SUMMARY OF DETECTION

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10491870004	**MW18D-GW-091719**					
SM 5310C	Total Organic Carbon	0.42J	mg/L	1.0	09/23/19 20:37	
10491870005	**MW15D-GW-091719**					
EPA 6010D	Barium, Dissolved	11.4	ug/L	10.0	10/01/19 12:07	
EPA 6010D	Cobalt, Dissolved	0.94J	ug/L	10.0	10/01/19 12:07	
EPA 6010D	Copper, Dissolved	1.5J	ug/L	10.0	10/01/19 12:07	
EPA 6010D	Vanadium, Dissolved	10.8J	ug/L	15.0	10/01/19 12:07	
EPA 6010D	Zinc, Dissolved	18.7J	ug/L	20.0	10/01/19 12:07	
EPA 8260B	Carbon tetrachloride	7.5	ug/L	0.50	09/19/19 19:30	
SM 2320B	Alkalinity, Total as CaCO3	175	mg/L	5.0	09/25/19 16:12	
SM 2540C	Total Dissolved Solids	242	mg/L	10.0	09/24/19 10:25	
EPA 300.0	Chloride	2.9	mg/L	1.2	09/19/19 00:26	
EPA 300.0	Nitrate as N	2.0	mg/L	0.10	09/19/19 00:26	
EPA 300.0	Sulfate	6.0	mg/L	1.2	09/19/19 00:26	
EPA 353.2	Nitrogen, NO2 plus NO3	2.4	mg/L	0.50	09/26/19 11:05	
SM 5310C	Total Organic Carbon	0.48J	mg/L	1.0	09/23/19 21:16	
10491870006	**MW4D-GW-091719**					
RSK-175	Methane	60.4	ug/L	10.0	09/20/19 15:42	
EPA 6010D	Barium, Dissolved	83.8	ug/L	10.0	10/01/19 12:09	
EPA 6010D	Chromium, Dissolved	1.5J	ug/L	10.0	10/01/19 12:09	
EPA 6010D	Cobalt, Dissolved	3.3J	ug/L	10.0	10/01/19 12:09	
EPA 6010D	Copper, Dissolved	2.8J	ug/L	10.0	10/01/19 12:09	
EPA 6010D	Nickel, Dissolved	3.3J	ug/L	20.0	10/01/19 12:09	
EPA 6010D	Vanadium, Dissolved	7.0J	ug/L	15.0	10/01/19 12:09	
EPA 6010D	Zinc, Dissolved	11.2J	ug/L	20.0	10/01/19 12:09	
EPA 8260B	Carbon tetrachloride	2.8	ug/L	0.50	09/19/19 19:47	
EPA 8260B	Chloroform	1.0	ug/L	1.0	09/19/19 19:47	
SM 2320B	Alkalinity, Total as CaCO3	129	mg/L	5.0	09/25/19 16:16	
SM 2540C	Total Dissolved Solids	247	mg/L	10.0	09/24/19 10:25	
SM 4500-S-2 D	Sulfide, Total	0.051	mg/L	0.020	09/24/19 12:27	
EPA 300.0	Chloride	6.6	mg/L	1.2	09/19/19 00:43	
EPA 300.0	Nitrate as N	0.64	mg/L	0.10	09/19/19 00:43	
EPA 300.0	Sulfate	4.6	mg/L	1.2	09/19/19 00:43	
EPA 353.2	Nitrogen, NO2 plus NO3	0.58	mg/L	0.10	09/26/19 10:36	
EPA 410.4	Chemical Oxygen Demand	53.3	mg/L	50.0	09/25/19 07:43	
SM 5310C	Total Organic Carbon	7.3	mg/L	1.0	09/23/19 21:30	
10491870007	**MW5D-GW-091719**					
EPA 6010D	Barium, Dissolved	95.0	ug/L	10.0	10/01/19 12:10	
EPA 6010D	Cobalt, Dissolved	0.72J	ug/L	10.0	10/01/19 12:10	
EPA 6010D	Vanadium, Dissolved	8.3J	ug/L	15.0	10/01/19 12:10	
SM 2320B	Alkalinity, Total as CaCO3	212	mg/L	5.0	09/25/19 16:20	
SM 2540C	Total Dissolved Solids	279	mg/L	10.0	09/24/19 10:25	
EPA 300.0	Chloride	1.0J	mg/L	1.2	09/19/19 00:59	M1
EPA 300.0	Nitrate as N	0.17	mg/L	0.10	09/19/19 00:59	M1
EPA 300.0	Sulfate	2.8	mg/L	1.2	09/19/19 00:59	
EPA 353.2	Nitrogen, NO2 plus NO3	0.22	mg/L	0.10	09/26/19 10:38	
SM 5310C	Total Organic Carbon	0.47J	mg/L	1.0	09/23/19 21:43	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **RSK-175**
Description: VOA (GC) RSK175
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for RSK-175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 633710

B: Analyte was detected in the associated method blank.
- BLANK for HBN 633710 [MPRP/970 (Lab ID: 3416481)
  - Beryllium, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
8 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 632980

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3412678)
  - 2,2,4-Trimethylpentane
  - Dibromomethane
- MSD (Lab ID: 3412679)
  - Dibromomethane

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 02, 2019

Analyte Comments:

QC Batch: 632980

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3412676)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3412677)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3412678)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3412679)
  - 1,2-Dichloroethene (Total)
- MW16D-GW-091719 (Lab ID: 10491870003)
  - 1,2-Dichloroethene (Total)
- MW19D-GW-091719 (Lab ID: 10491870002)
  - 1,2-Dichloroethene (Total)
- MW21D-GW-091719 (Lab ID: 10491870001)
  - 1,2-Dichloroethene (Total)

- BLANK (Lab ID: 3412676)
  - Dichlorofluoromethane
- LCS (Lab ID: 3412677)
  - Dichlorofluoromethane
- MS (Lab ID: 3412678)
  - Dichlorofluoromethane
- MSD (Lab ID: 3412679)
  - Dichlorofluoromethane
- MW16D-GW-091719 (Lab ID: 10491870003)
  - Dichlorofluoromethane
- MW19D-GW-091719 (Lab ID: 10491870002)
  - Dichlorofluoromethane
- MW21D-GW-091719 (Lab ID: 10491870001)
  - Dichlorofluoromethane

QC Batch: 633421

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3414816)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3414817)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3418376)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3418377)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 02, 2019

Analyte Comments:

QC Batch: 633421

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- MW15D-GW-091719 (Lab ID: 10491870005)
  - 1,2-Dichloroethene (Total)
- MW4D-GW-091719 (Lab ID: 10491870006)
  - 1,2-Dichloroethene (Total)
- MW5D-GW-091719 (Lab ID: 10491870007)
  - 1,2-Dichloroethene (Total)
- TB-03-091719 (Lab ID: 10491870008)
  - 1,2-Dichloroethene (Total)

- BLANK (Lab ID: 3414816)
  - Dichlorofluoromethane
- LCS (Lab ID: 3414817)
  - Dichlorofluoromethane
- MS (Lab ID: 3418376)
  - Dichlorofluoromethane
- MSD (Lab ID: 3418377)
  - Dichlorofluoromethane
- MW15D-GW-091719 (Lab ID: 10491870005)
  - Dichlorofluoromethane
- MW4D-GW-091719 (Lab ID: 10491870006)
  - Dichlorofluoromethane
- MW5D-GW-091719 (Lab ID: 10491870007)
  - Dichlorofluoromethane
- TB-03-091719 (Lab ID: 10491870008)
  - Dichlorofluoromethane

QC Batch: 634015

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3417682)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3417683)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3417684)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3417685)
  - 1,2-Dichloroethene (Total)
- MW18D-GW-091719 (Lab ID: 10491870004)
  - 1,2-Dichloroethene (Total)

- BLANK (Lab ID: 3417682)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 02, 2019

Analyte Comments:

QC Batch: 634015

- LCS (Lab ID: 3417683)
  - Dichlorofluoromethane
- MS (Lab ID: 3417684)
  - Dichlorofluoromethane
- MSD (Lab ID: 3417685)
  - Dichlorofluoromethane
- MW18D-GW-091719 (Lab ID: 10491870004)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 634533

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10492424005,10492679001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3419944)
  - Alkalinity, Total as CaCO3
- MSD (Lab ID: 3419945)
  - Alkalinity, Total as CaCO3

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 633082

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491870007,10491887005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3413254)
  - Chloride
  - Sulfate
- MS (Lab ID: 3413256)
  - Chloride
  - Nitrate as N
- MSD (Lab ID: 3413255)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3413257)
  - Chloride
  - Nitrate as N

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 634559

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655010,10491870001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 3420090)
  - Nitrogen, NO2 plus NO3

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: October 02, 2019

General Information:
7 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 175392

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MW16D-GW-091719 (Lab ID: 10491870003)
  - Total Organic Carbon

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW21D-GW-091719 **Lab ID: 10491870001** Collected: 09/17/19 09:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 14:58	09/20/19 14:58	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 14:58	09/20/19 14:58	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 14:58	09/20/19 14:58	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 11:57	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 11:57	7440-38-2	
Barium, Dissolved	**80.5**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 11:57	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 11:57	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 11:57	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 11:57	7440-47-3	
Cobalt, Dissolved	**1.1J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 11:57	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 11:57	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 11:57	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 11:57	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 11:57	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 11:57	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 11:57	7440-22-4	
Thallium, Dissolved	**6.9J**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 11:57	7440-28-0	
Vanadium, Dissolved	**0.52J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 11:57	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 11:57	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:17	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:25	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 21:25	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:25	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 21:25	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 21:25	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:25	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:25	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:25	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 21:25	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 21:25	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:25	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:25	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 21:25	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 21:25	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 21:25	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 21:25	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 21:25	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 21:25	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 21:25	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:25	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW21D-GW-091719 **Lab ID: 10491870001** Collected: 09/17/19 09:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 21:25	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:25	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 21:25	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 21:25	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 21:25	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 21:25	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:25	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 21:25	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 21:25	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 21:25	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 21:25	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 21:25	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 21:25	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 21:25	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 21:25	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 21:25	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 21:25	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 21:25	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 21:25	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 21:25	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 21:25	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:25	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 21:25	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 21:25	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 21:25	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 21:25	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 21:25	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 21:25	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 21:25	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 21:25	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 21:25	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 21:25	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 21:25	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 21:25	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:25	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 21:25	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 21:25	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 21:25	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:25	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 21:25	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 21:25	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 21:25	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 21:25	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 21:25	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 21:25	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 21:25	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW21D-GW-091719 **Lab ID: 10491870001** Collected: 09/17/19 09:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:25	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:25	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 21:25	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 21:25	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 21:25	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:25	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:25	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:25	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 21:25	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 21:25	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:25	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 21:25	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 21:25	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 21:25	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		09/18/19 21:25	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		09/18/19 21:25	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		09/18/19 21:25	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**200**	mg/L	5.0	2.0	1		09/25/19 13:18		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**260**	mg/L	20.0	10.0	1		09/24/19 10:25		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.0078J**	mg/L	0.020	0.0054	1		09/24/19 12:23	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.8**	mg/L	1.2	0.12	1		09/18/19 23:19	16887-00-6	
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		09/18/19 23:19	14797-55-8	
Sulfate	**8.7**	mg/L	1.2	0.28	1		09/18/19 23:19	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		09/26/19 09:33		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:42		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.51J**	mg/L	1.0	0.39	1		09/23/19 19:57	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW19D-GW-091719 **Lab ID: 10491870002** Collected: 09/17/19 10:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 15:01	09/20/19 15:01	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 15:01	09/20/19 15:01	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 15:01	09/20/19 15:01	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:02	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:02	7440-38-2	
Barium, Dissolved	**10.3**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:02	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:02	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:02	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:02	7440-47-3	
Cobalt, Dissolved	**0.87J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:02	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:02	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:02	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:02	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:02	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:02	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:02	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:02	7440-28-0	
Vanadium, Dissolved	**6.8J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:02	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:02	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:20	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:49	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 21:49	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:49	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 21:49	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 21:49	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:49	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:49	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:49	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 21:49	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 21:49	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:49	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:49	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 21:49	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 21:49	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 21:49	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 21:49	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 21:49	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 21:49	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 21:49	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:49	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW19D-GW-091719 **Lab ID: 10491870002** Collected: 09/17/19 10:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 21:49	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:49	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 21:49	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 21:49	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 21:49	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 21:49	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:49	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 21:49	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 21:49	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 21:49	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 21:49	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 21:49	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 21:49	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 21:49	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 21:49	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 21:49	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 21:49	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 21:49	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 21:49	74-83-9	
Carbon disulfide	**1.4**	ug/L	1.0	0.078	1		09/18/19 21:49	75-15-0	
Carbon tetrachloride	**455**	ug/L	2.5	0.94	5		09/19/19 19:56	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:49	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 21:49	75-00-3	
Chloroform	**24.2**	ug/L	1.0	0.45	1		09/18/19 21:49	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 21:49	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 21:49	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 21:49	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 21:49	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 21:49	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 21:49	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 21:49	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 21:49	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 21:49	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 21:49	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:49	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 21:49	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 21:49	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 21:49	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 21:49	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 21:49	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 21:49	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 21:49	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 21:49	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 21:49	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 21:49	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 21:49	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW19D-GW-091719 **Lab ID: 10491870002** Collected: 09/17/19 10:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:49	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 21:49	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 21:49	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 21:49	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 21:49	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 21:49	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:49	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:49	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 21:49	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 21:49	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 21:49	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 21:49	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 21:49	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 21:49	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		09/18/19 21:49	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/18/19 21:49	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		09/18/19 21:49	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**174**	mg/L	5.0	2.0	1		09/25/19 15:59		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**330**	mg/L	20.0	10.0	1		09/24/19 10:25		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/24/19 12:24	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**8.6**	mg/L	1.2	0.12	1		09/18/19 23:36	16887-00-6	
Nitrate as N	**4.1**	mg/L	0.10	0.012	1		09/18/19 23:36	14797-55-8	
Sulfate	**33.8**	mg/L	1.2	0.28	1		09/18/19 23:36	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**5.0**	mg/L	0.50	0.088	5		09/26/19 11:02		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:43		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.78J**	mg/L	1.0	0.39	1		09/23/19 20:11	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW16D-GW-091719 **Lab ID: 10491870003** Collected: 09/17/19 11:15 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 15:04	09/20/19 15:04	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 15:04	09/20/19 15:04	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 15:04	09/20/19 15:04	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:04	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:04	7440-38-2	
Barium, Dissolved	**67.1**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:04	7440-39-3	
Beryllium, Dissolved	**0.18J**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:04	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:04	7440-43-9	
Chromium, Dissolved	**0.83J**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:04	7440-47-3	
Cobalt, Dissolved	**1.6J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:04	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:04	7440-50-8	
Lead, Dissolved	**2.5J**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:04	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:04	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:04	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:04	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:04	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:04	7440-28-0	
Vanadium, Dissolved	**10.5J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:04	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:04	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:22	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/18/19 22:13	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/18/19 22:13	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 22:13	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/18/19 22:13	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 22:13	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/18/19 22:13	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 22:13	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 22:13	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 22:13	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/18/19 22:13	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 22:13	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 22:13	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/18/19 22:13	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/18/19 22:13	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 22:13	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/18/19 22:13	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/18/19 22:13	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 22:13	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 22:13	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 22:13	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW16D-GW-091719 **Lab ID: 10491870003** Collected: 09/17/19 11:15 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/18/19 22:13	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 22:13	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/18/19 22:13	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/18/19 22:13	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/18/19 22:13	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/18/19 22:13	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 22:13	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/18/19 22:13	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/18/19 22:13	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/18/19 22:13	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/18/19 22:13	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/18/19 22:13	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/18/19 22:13	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 22:13	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/18/19 22:13	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/18/19 22:13	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/18/19 22:13	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/18/19 22:13	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/18/19 22:13	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/18/19 22:13	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/18/19 22:13	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 22:13	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/18/19 22:13	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/18/19 22:13	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/18/19 22:13	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/18/19 22:13	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/18/19 22:13	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/18/19 22:13	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/18/19 22:13	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/18/19 22:13	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/18/19 22:13	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/18/19 22:13	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 22:13	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/18/19 22:13	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/18/19 22:13	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/18/19 22:13	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/18/19 22:13	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/18/19 22:13	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/18/19 22:13	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/18/19 22:13	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/18/19 22:13	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/18/19 22:13	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/18/19 22:13	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/18/19 22:13	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/18/19 22:13	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/18/19 22:13	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW16D-GW-091719 **Lab ID: 10491870003** Collected: 09/17/19 11:15 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 22:13	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/18/19 22:13	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/18/19 22:13	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/18/19 22:13	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/18/19 22:13	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/18/19 22:13	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 22:13	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 22:13	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/18/19 22:13	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/18/19 22:13	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/18/19 22:13	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/18/19 22:13	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/18/19 22:13	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/18/19 22:13	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-136		1		09/18/19 22:13	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		09/18/19 22:13	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		09/18/19 22:13	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**221**	mg/L	5.0	2.0	1		09/25/19 16:04		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**369**	mg/L	10.0	5.0	1		09/24/19 10:25		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/24/19 12:25	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**7.6**	mg/L	1.2	0.12	1		09/18/19 23:53	16887-00-6	
Nitrate as N	**6.2**	mg/L	0.10	0.012	1		09/18/19 23:53	14797-55-8	
Sulfate	**26.5**	mg/L	1.2	0.28	1		09/18/19 23:53	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**7.2**	mg/L	0.50	0.088	5		09/26/19 11:04		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:43		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**<0.79**	mg/L	2.0	0.79	2		09/24/19 10:01	7440-44-0	D3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW18D-GW-091719 **Lab ID: 10491870004** Collected: 09/17/19 12:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 15:06	09/20/19 15:06	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 15:06	09/20/19 15:06	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 15:06	09/20/19 15:06	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:05	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:05	7440-38-2	
Barium, Dissolved	**54.1**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:05	7440-39-3	
Beryllium, Dissolved	**0.14J**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:05	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:05	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:05	7440-47-3	
Cobalt, Dissolved	**0.86J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:05	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:05	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:05	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:05	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:05	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:05	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:05	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:05	7440-28-0	
Vanadium, Dissolved	**<0.43**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:05	7440-62-2	
Zinc, Dissolved	**6.8J**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:05	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:24	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/23/19 22:03	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/23/19 22:03	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/23/19 22:03	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/23/19 22:03	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/23/19 22:03	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/23/19 22:03	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/23/19 22:03	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/23/19 22:03	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/23/19 22:03	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/23/19 22:03	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/23/19 22:03	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/23/19 22:03	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/23/19 22:03	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/23/19 22:03	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/23/19 22:03	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/23/19 22:03	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/23/19 22:03	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/23/19 22:03	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/23/19 22:03	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/23/19 22:03	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW18D-GW-091719 **Lab ID: 10491870004** Collected: 09/17/19 12:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/23/19 22:03	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/23/19 22:03	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/23/19 22:03	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/23/19 22:03	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/23/19 22:03	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/23/19 22:03	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/23/19 22:03	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/23/19 22:03	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/23/19 22:03	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/23/19 22:03	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/23/19 22:03	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/23/19 22:03	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/23/19 22:03	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/23/19 22:03	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/23/19 22:03	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/23/19 22:03	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/23/19 22:03	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/23/19 22:03	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/23/19 22:03	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/23/19 22:03	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/23/19 22:03	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/23/19 22:03	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/23/19 22:03	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/23/19 22:03	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/23/19 22:03	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/23/19 22:03	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/23/19 22:03	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/23/19 22:03	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/23/19 22:03	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/23/19 22:03	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/23/19 22:03	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/23/19 22:03	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/23/19 22:03	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/23/19 22:03	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/23/19 22:03	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/23/19 22:03	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/23/19 22:03	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/23/19 22:03	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/23/19 22:03	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/23/19 22:03	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/23/19 22:03	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/23/19 22:03	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/23/19 22:03	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/23/19 22:03	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/23/19 22:03	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/23/19 22:03	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW18D-GW-091719 **Lab ID: 10491870004** Collected: 09/17/19 12:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/23/19 22:03	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/23/19 22:03	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/23/19 22:03	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/23/19 22:03	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/23/19 22:03	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/23/19 22:03	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/23/19 22:03	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/23/19 22:03	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/23/19 22:03	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/23/19 22:03	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/23/19 22:03	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/23/19 22:03	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/23/19 22:03	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/23/19 22:03	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		09/23/19 22:03	17060-07-0	
Toluene-d8 (S)	104	%.	75-125		1		09/23/19 22:03	2037-26-5	
4-Bromofluorobenzene (S)	95	%.	75-125		1		09/23/19 22:03	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**155**	mg/L	5.0	2.0	1		09/25/19 16:08		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**203**	mg/L	10.0	5.0	1		09/24/19 10:25		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/24/19 12:26	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.1**	mg/L	1.2	0.12	1		09/19/19 00:09	16887-00-6	
Nitrate as N	**<0.012**	mg/L	0.10	0.012	1		09/19/19 00:09	14797-55-8	
Sulfate	**6.5**	mg/L	1.2	0.28	1		09/19/19 00:09	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		09/26/19 09:38		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:43		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.42J**	mg/L	1.0	0.39	1		09/23/19 20:37	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW15D-GW-091719 **Lab ID: 10491870005** Collected: 09/17/19 13:25 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 15:10	09/20/19 15:10	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 15:10	09/20/19 15:10	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 15:10	09/20/19 15:10	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:07	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:07	7440-38-2	
Barium, Dissolved	**11.4**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:07	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:07	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:07	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:07	7440-47-3	
Cobalt, Dissolved	**0.94J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:07	7440-48-4	
Copper, Dissolved	**1.5J**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:07	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:07	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:07	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:07	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:07	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:07	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:07	7440-28-0	
Vanadium, Dissolved	**10.8J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:07	7440-62-2	
Zinc, Dissolved	**18.7J**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:07	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:27	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		09/19/19 19:30	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/19/19 19:30	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:30	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/19/19 19:30	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 19:30	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:30	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:30	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 19:30	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		09/19/19 19:30	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/19/19 19:30	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		09/19/19 19:30	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 19:30	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/19/19 19:30	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/19/19 19:30	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 19:30	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 19:30	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/19/19 19:30	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 19:30	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 19:30	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:30	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW15D-GW-091719 **Lab ID: 10491870005** Collected: 09/17/19 13:25 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/19/19 19:30	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:30	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/19/19 19:30	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/19/19 19:30	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/19/19 19:30	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/19/19 19:30	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:30	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/19/19 19:30	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/19/19 19:30	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/19/19 19:30	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/19/19 19:30	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/19/19 19:30	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/19/19 19:30	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 19:30	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/19/19 19:30	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/19/19 19:30	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/19/19 19:30	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/19/19 19:30	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/19/19 19:30	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/19/19 19:30	75-15-0	
Carbon tetrachloride	**7.5**	ug/L	0.50	0.19	1		09/19/19 19:30	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:30	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/19/19 19:30	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/19/19 19:30	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 19:30	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		09/19/19 19:30	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/19/19 19:30	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/19/19 19:30	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/19/19 19:30	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/19/19 19:30	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/19/19 19:30	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 19:30	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 19:30	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		09/19/19 19:30	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:30	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/19/19 19:30	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/19/19 19:30	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		09/19/19 19:30	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:30	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/19/19 19:30	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/19/19 19:30	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/19/19 19:30	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/19/19 19:30	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/19/19 19:30	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/19/19 19:30	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/19/19 19:30	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW15D-GW-091719 **Lab ID: 10491870005** Collected: 09/17/19 13:25 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 19:30	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 19:30	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 19:30	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/19/19 19:30	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 19:30	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:30	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 19:30	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 19:30	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/19/19 19:30	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/19/19 19:30	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 19:30	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 19:30	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		09/19/19 19:30	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/19/19 19:30	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		09/19/19 19:30	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/19/19 19:30	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		09/19/19 19:30	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**175**	mg/L	5.0	2.0	1		09/25/19 16:12		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**242**	mg/L	10.0	5.0	1		09/24/19 10:25		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/24/19 12:26	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**2.9**	mg/L	1.2	0.12	1		09/19/19 00:26	16887-00-6	
Nitrate as N	**2.0**	mg/L	0.10	0.012	1		09/19/19 00:26	14797-55-8	
Sulfate	**6.0**	mg/L	1.2	0.28	1		09/19/19 00:26	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**2.4**	mg/L	0.50	0.088	5		09/26/19 11:05		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:43		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.48J**	mg/L	1.0	0.39	1		09/23/19 21:16	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW4D-GW-091719 **Lab ID: 10491870006** Collected: 09/17/19 14:35 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**60.4**	ug/L	10.0	2.91	1	09/20/19 15:42	09/20/19 15:42	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 15:42	09/20/19 15:42	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 15:42	09/20/19 15:42	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:09	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:09	7440-38-2	
Barium, Dissolved	**83.8**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:09	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:09	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:09	7440-43-9	
Chromium, Dissolved	**1.5J**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:09	7440-47-3	
Cobalt, Dissolved	**3.3J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:09	7440-48-4	
Copper, Dissolved	**2.8J**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:09	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:09	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:09	7439-98-7	
Nickel, Dissolved	**3.3J**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:09	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:09	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:09	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:09	7440-28-0	
Vanadium, Dissolved	**7.0J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:09	7440-62-2	
Zinc, Dissolved	**11.2J**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:09	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:29	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		09/19/19 19:47	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/19/19 19:47	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:47	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/19/19 19:47	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 19:47	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:47	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:47	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 19:47	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		09/19/19 19:47	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/19/19 19:47	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		09/19/19 19:47	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 19:47	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/19/19 19:47	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/19/19 19:47	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 19:47	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 19:47	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/19/19 19:47	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 19:47	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 19:47	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:47	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW4D-GW-091719 **Lab ID: 10491870006** Collected: 09/17/19 14:35 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/19/19 19:47	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:47	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/19/19 19:47	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/19/19 19:47	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/19/19 19:47	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/19/19 19:47	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:47	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/19/19 19:47	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/19/19 19:47	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/19/19 19:47	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/19/19 19:47	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/19/19 19:47	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/19/19 19:47	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 19:47	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/19/19 19:47	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/19/19 19:47	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/19/19 19:47	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/19/19 19:47	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/19/19 19:47	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/19/19 19:47	75-15-0	
Carbon tetrachloride	**2.8**	ug/L	0.50	0.19	1		09/19/19 19:47	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:47	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/19/19 19:47	75-00-3	
Chloroform	**1.0**	ug/L	1.0	0.45	1		09/19/19 19:47	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 19:47	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		09/19/19 19:47	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/19/19 19:47	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/19/19 19:47	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/19/19 19:47	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/19/19 19:47	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/19/19 19:47	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 19:47	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 19:47	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		09/19/19 19:47	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:47	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/19/19 19:47	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/19/19 19:47	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		09/19/19 19:47	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 19:47	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/19/19 19:47	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/19/19 19:47	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/19/19 19:47	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/19/19 19:47	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/19/19 19:47	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/19/19 19:47	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/19/19 19:47	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW4D-GW-091719 **Lab ID: 10491870006** Collected: 09/17/19 14:35 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 19:47	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 19:47	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 19:47	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/19/19 19:47	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 19:47	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 19:47	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 19:47	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 19:47	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/19/19 19:47	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/19/19 19:47	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 19:47	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 19:47	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		09/19/19 19:47	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/19/19 19:47	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		09/19/19 19:47	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		09/19/19 19:47	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		09/19/19 19:47	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**129**	mg/L	5.0	2.0	1		09/25/19 16:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**247**	mg/L	10.0	5.0	1		09/24/19 10:25		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**0.051**	mg/L	0.020	0.0054	1		09/24/19 12:27	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**6.6**	mg/L	1.2	0.12	1		09/19/19 00:43	16887-00-6	
Nitrate as N	**0.64**	mg/L	0.10	0.012	1		09/19/19 00:43	14797-55-8	
Sulfate	**4.6**	mg/L	1.2	0.28	1		09/19/19 00:43	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.58**	mg/L	0.10	0.018	1		09/26/19 10:36		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**53.3**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:43		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**7.3**	mg/L	1.0	0.39	1		09/23/19 21:30	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW5D-GW-091719 **Lab ID: 10491870007** Collected: 09/17/19 15:45 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/20/19 15:51	09/20/19 15:51	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/20/19 15:51	09/20/19 15:51	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/20/19 15:51	09/20/19 15:51	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:10	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:10	7440-38-2	
Barium, Dissolved	**95.0**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:10	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:10	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:10	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:10	7440-47-3	
Cobalt, Dissolved	**0.72J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:10	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:10	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:10	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:10	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:10	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:10	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:10	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:10	7440-28-0	
Vanadium, Dissolved	**8.3J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:10	7440-62-2	
Zinc, Dissolved	**<6.3**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:10	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:36	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		09/19/19 20:04	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/19/19 20:04	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:04	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/19/19 20:04	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 20:04	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:04	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:04	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 20:04	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		09/19/19 20:04	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/19/19 20:04	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		09/19/19 20:04	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 20:04	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/19/19 20:04	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/19/19 20:04	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 20:04	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 20:04	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/19/19 20:04	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 20:04	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 20:04	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:04	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW5D-GW-091719 **Lab ID: 10491870007** Collected: 09/17/19 15:45 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/19/19 20:04	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:04	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/19/19 20:04	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/19/19 20:04	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/19/19 20:04	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/19/19 20:04	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:04	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/19/19 20:04	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/19/19 20:04	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/19/19 20:04	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/19/19 20:04	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/19/19 20:04	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/19/19 20:04	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 20:04	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/19/19 20:04	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/19/19 20:04	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/19/19 20:04	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/19/19 20:04	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/19/19 20:04	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/19/19 20:04	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/19/19 20:04	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:04	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/19/19 20:04	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/19/19 20:04	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 20:04	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		09/19/19 20:04	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/19/19 20:04	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/19/19 20:04	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/19/19 20:04	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/19/19 20:04	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/19/19 20:04	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 20:04	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 20:04	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		09/19/19 20:04	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:04	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/19/19 20:04	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/19/19 20:04	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		09/19/19 20:04	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:04	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/19/19 20:04	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/19/19 20:04	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/19/19 20:04	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/19/19 20:04	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/19/19 20:04	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/19/19 20:04	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/19/19 20:04	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: MW5D-GW-091719 **Lab ID: 10491870007** Collected: 09/17/19 15:45 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:04	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 20:04	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 20:04	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/19/19 20:04	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 20:04	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:04	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:04	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:04	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/19/19 20:04	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/19/19 20:04	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:04	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 20:04	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		09/19/19 20:04	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/19/19 20:04	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-136		1		09/19/19 20:04	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/19/19 20:04	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		09/19/19 20:04	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**212**	mg/L	5.0	2.0	1		09/25/19 16:20		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**279**	mg/L	10.0	5.0	1		09/24/19 10:25		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/24/19 12:27	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.0J**	mg/L	1.2	0.12	1		09/19/19 00:59	16887-00-6	M1
Nitrate as N	**0.17**	mg/L	0.10	0.012	1		09/19/19 00:59	14797-55-8	M1
Sulfate	**2.8**	mg/L	1.2	0.28	1		09/19/19 00:59	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.22**	mg/L	0.10	0.018	1		09/26/19 10:38		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:44		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.47J**	mg/L	1.0	0.39	1		09/23/19 21:43	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: TB-03-091719 **Lab ID: 10491870008** Collected: 09/17/19 07:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		09/19/19 18:23	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/19/19 18:23	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 18:23	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/19/19 18:23	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 18:23	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 18:23	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 18:23	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 18:23	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		09/19/19 18:23	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/19/19 18:23	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		09/19/19 18:23	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 18:23	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/19/19 18:23	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/19/19 18:23	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 18:23	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 18:23	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/19/19 18:23	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 18:23	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 18:23	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 18:23	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/19/19 18:23	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 18:23	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/19/19 18:23	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/19/19 18:23	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/19/19 18:23	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/19/19 18:23	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 18:23	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/19/19 18:23	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/19/19 18:23	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/19/19 18:23	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/19/19 18:23	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/19/19 18:23	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/19/19 18:23	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 18:23	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/19/19 18:23	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/19/19 18:23	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/19/19 18:23	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/19/19 18:23	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/19/19 18:23	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/19/19 18:23	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/19/19 18:23	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 18:23	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/19/19 18:23	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/19/19 18:23	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 18:23	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		09/19/19 18:23	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Sample: TB-03-091719 **Lab ID: 10491870008** Collected: 09/17/19 07:00 Received: 09/18/19 08:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/19/19 18:23	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/19/19 18:23	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/19/19 18:23	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/19/19 18:23	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/19/19 18:23	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 18:23	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 18:23	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		09/19/19 18:23	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/19/19 18:23	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/19/19 18:23	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/19/19 18:23	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		09/19/19 18:23	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 18:23	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/19/19 18:23	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/19/19 18:23	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/19/19 18:23	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/19/19 18:23	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/19/19 18:23	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/19/19 18:23	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/19/19 18:23	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 18:23	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 18:23	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 18:23	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/19/19 18:23	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 18:23	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 18:23	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 18:23	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 18:23	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/19/19 18:23	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/19/19 18:23	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 18:23	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 18:23	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		09/19/19 18:23	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/19/19 18:23	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		09/19/19 18:23	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/19/19 18:23	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		09/19/19 18:23	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 1349235 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: R3452995-1 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/20/19 13:29	
Ethane	ug/L	<4.07	13.0	4.07	09/20/19 13:29	
Ethene	ug/L	<4.26	13.0	4.26	09/20/19 13:29	

LABORATORY CONTROL SAMPLE & LCSD: R3452995-3 R3452995-6

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	76.0	72.9	112	107	85.0-115	4.21	20	
Ethane	ug/L	129	120	117	92.7	91.1	85.0-115	1.77	20	
Ethene	ug/L	127	118	117	93.1	91.9	85.0-115	1.22	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3452995-4 R3452995-5

Parameter	Units	L1140957-09 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methane	ug/L	ND	67.8	67.8	81.4	83.0	120	122	85.0-115	1.98	20	MH
Ethane	ug/L	ND	129	129	142	148	110	114	85.0-115	3.59	20	
Ethene	ug/L	ND	127	127	140	145	110	114	85.0-115	3.41	20	

SAMPLE DUPLICATE: R3452995-2

Parameter	Units	L1140957-08 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	4.79	4.79J	0.00	20	J
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 633731 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: 3416567 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	09/27/19 13:13	

LABORATORY CONTROL SAMPLE: 3416568

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.3	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416569 3416570

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.1	5.2	103	104	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 633710 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: 3416481 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	10/01/19 11:54	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	10/01/19 11:54	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	10/01/19 11:54	
Beryllium, Dissolved	ug/L	0.17J	5.0	0.12	10/01/19 11:54	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	10/01/19 11:54	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	10/01/19 11:54	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	10/01/19 11:54	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	10/01/19 11:54	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	10/01/19 11:54	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	10/01/19 11:54	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	10/01/19 11:54	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	10/01/19 11:54	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	10/01/19 11:54	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	10/01/19 11:54	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	10/01/19 11:54	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	10/01/19 11:54	

LABORATORY CONTROL SAMPLE: 3416482

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	998	100	80-120	
Arsenic, Dissolved	ug/L	1000	1040	104	80-120	
Barium, Dissolved	ug/L	1000	1040	104	80-120	
Beryllium, Dissolved	ug/L	1000	1060	106	80-120	
Cadmium, Dissolved	ug/L	1000	1050	105	80-120	
Chromium, Dissolved	ug/L	1000	1040	104	80-120	
Cobalt, Dissolved	ug/L	1000	1030	103	80-120	
Copper, Dissolved	ug/L	1000	1010	101	80-120	
Lead, Dissolved	ug/L	1000	1040	104	80-120	
Molybdenum, Dissolved	ug/L	1000	1010	101	80-120	
Nickel, Dissolved	ug/L	1000	1040	104	80-120	
Selenium, Dissolved	ug/L	1000	1060	106	80-120	
Silver, Dissolved	ug/L	500	523	105	80-120	
Thallium, Dissolved	ug/L	1000	1020	102	80-120	
Vanadium, Dissolved	ug/L	1000	1030	103	80-120	
Zinc, Dissolved	ug/L	1000	1060	106	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416483 3416484

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	1060	1060	106	106	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1090	1100	109	110	75-125	1	20	
Barium, Dissolved	ug/L	31.2	1000	1000	1120	1120	108	109	75-125	1	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	1110	1110	111	111	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1080	1090	108	109	75-125	0	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1080	1090	108	109	75-125	0	20	
Cobalt, Dissolved	ug/L	1.8J	1000	1000	1060	1060	106	106	75-125	1	20	
Copper, Dissolved	ug/L	119	1000	1000	1170	1180	105	106	75-125	0	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1070	1080	107	108	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	1070	1070	107	107	75-125	0	20	
Nickel, Dissolved	ug/L	10.7J	1000	1000	1070	1080	106	106	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1100	1110	110	111	75-125	0	20	
Silver, Dissolved	ug/L	<0.40	500	500	547	549	109	110	75-125	0	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	1040	1050	104	104	75-125	0	20	
Vanadium, Dissolved	ug/L	4.0J	1000	1000	1080	1090	108	108	75-125	1	20	
Zinc, Dissolved	ug/L	21.7	1000	1000	1100	1110	108	108	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 632980 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003

METHOD BLANK: 3412676 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/18/19 14:16	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/18/19 14:16	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/18/19 14:16	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	09/18/19 14:16	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/18/19 14:16	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	09/18/19 14:16	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/18/19 14:16	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/18/19 14:16	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	09/18/19 14:16	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/18/19 14:16	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/18/19 14:16	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/18/19 14:16	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/18/19 14:16	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/18/19 14:16	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/18/19 14:16	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/18/19 14:16	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/18/19 14:16	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/18/19 14:16	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/18/19 14:16	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/18/19 14:16	
Acetone	ug/L	<9.2	20.0	9.2	09/18/19 14:16	
Acrolein	ug/L	<1.2	10.0	1.2	09/18/19 14:16	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/18/19 14:16	
Benzene	ug/L	<0.10	0.50	0.10	09/18/19 14:16	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/18/19 14:16	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/18/19 14:16	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/18/19 14:16	
Bromoform	ug/L	<0.80	4.0	0.80	09/18/19 14:16	
Bromomethane	ug/L	<1.8	4.0	1.8	09/18/19 14:16	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/18/19 14:16	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/18/19 14:16	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

METHOD BLANK: 3412676 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
Chloroethane	ug/L	<0.49	1.0	0.49	09/18/19 14:16	
Chloroform	ug/L	<0.45	1.0	0.45	09/18/19 14:16	
Chloromethane	ug/L	<0.16	4.0	0.16	09/18/19 14:16	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/18/19 14:16	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	09/18/19 14:16	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/18/19 14:16	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/18/19 14:16	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/18/19 14:16	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/18/19 14:16	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/18/19 14:16	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/18/19 14:16	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/18/19 14:16	
Isopropylbenzene (Cumene)	ug/L	<0.18	1.0	0.18	09/18/19 14:16	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/18/19 14:16	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/18/19 14:16	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/18/19 14:16	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/18/19 14:16	
Naphthalene	ug/L	<0.48	1.0	0.48	09/18/19 14:16	
o-Xylene	ug/L	<0.16	0.50	0.16	09/18/19 14:16	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
Styrene	ug/L	<0.19	1.0	0.19	09/18/19 14:16	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/18/19 14:16	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/18/19 14:16	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/18/19 14:16	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/18/19 14:16	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/18/19 14:16	
Toluene	ug/L	<0.083	0.50	0.083	09/18/19 14:16	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/18/19 14:16	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	09/18/19 14:16	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/18/19 14:16	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/18/19 14:16	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/18/19 14:16	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/18/19 14:16	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/18/19 14:16	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/18/19 14:16	
1,2-Dichloroethane-d4 (S)	%.	102	75-136		09/18/19 14:16	
4-Bromofluorobenzene (S)	%.	98	75-125		09/18/19 14:16	
Toluene-d8 (S)	%.	99	75-125		09/18/19 14:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

LABORATORY CONTROL SAMPLE: 3412677

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.5	98	68-141	
1,1,1-Trichloroethane	ug/L	20	20.3	101	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	20.4	102	73-125	
1,1,2-Trichloroethane	ug/L	20	20.7	104	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.0	100	69-132	
1,1-Dichloroethane	ug/L	20	20.1	100	73-125	
1,1-Dichloroethene	ug/L	20	19.0	95	71-126	
1,1-Dichloropropene	ug/L	20	20.6	103	73-126	
1,2,3-Trichlorobenzene	ug/L	20	18.2	91	72-126	
1,2,3-Trichloropropane	ug/L	20	19.4	97	75-126	
1,2,4-Trichlorobenzene	ug/L	20	16.6	83	71-134	
1,2,4-Trimethylbenzene	ug/L	20	19.2	96	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	49.9	100	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	20.1	101	75-129	
1,2-Dichlorobenzene	ug/L	20	18.7	94	75-129	
1,2-Dichloroethane	ug/L	20	20.4	102	75-125	
1,2-Dichloroethene (Total)	ug/L	40	38.9	97	74-125	N2
1,2-Dichloropropane	ug/L	20	20.2	101	75-125	
1,3,5-Trimethylbenzene	ug/L	20	19.4	97	75-127	
1,3-Dichlorobenzene	ug/L	20	19.5	98	75-126	
1,3-Dichloropropane	ug/L	20	19.7	98	75-125	
1,4-Dichlorobenzene	ug/L	20	18.4	92	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	392	98	72-129	
2,2,4-Trimethylpentane	ug/L	20	21.2	106	72-128	
2,2-Dichloropropane	ug/L	20	18.9	95	65-138	
2-Butanone (MEK)	ug/L	100	108	108	59-144	
2-Chlorotoluene	ug/L	20	18.9	94	75-127	
2-Hexanone	ug/L	100	104	104	73-134	
4-Chlorotoluene	ug/L	20	19.2	96	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	62-141	
Acetone	ug/L	100	94.8	95	60-137	
Acrolein	ug/L	200	231	116	60-141	
Acrylonitrile	ug/L	200	201	101	75-129	
Benzene	ug/L	20	20.1	101	73-125	
Bromobenzene	ug/L	20	18.8	94	73-125	
Bromochloromethane	ug/L	20	21.1	106	75-135	
Bromodichloromethane	ug/L	20	19.7	99	75-125	
Bromoform	ug/L	20	18.9	94	67-136	
Bromomethane	ug/L	20	16.6	83	30-150	
Carbon disulfide	ug/L	20	19.7	99	47-137	
Carbon tetrachloride	ug/L	20	20.3	101	75-125	
Chlorobenzene	ug/L	20	18.4	92	75-125	
Chloroethane	ug/L	20	18.4	92	63-136	
Chloroform	ug/L	20	19.4	97	73-128	
Chloromethane	ug/L	20	18.1	90	55-130	
cis-1,2-Dichloroethene	ug/L	20	19.8	99	75-125	
cis-1,3-Dichloropropene	ug/L	20	20.6	103	74-125	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

LABORATORY CONTROL SAMPLE: 3412677

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.3	102	75-125	
Dibromomethane	ug/L	20	21.0	105	75-125	
Dichlorodifluoromethane	ug/L	20	19.8	99	63-132	
Dichlorofluoromethane	ug/L	20	19.6	98	68-127	
Diisopropyl ether	ug/L	20	19.7	99	71-131	
Ethyl-tert-butyl ether	ug/L	20	18.0	90	75-125	
Ethylbenzene	ug/L	20	18.9	94	75-125	
Hexachloro-1,3-butadiene	ug/L	20	17.7	88	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.3	96	75-125	
m&p-Xylene	ug/L	40	38.8	97	75-126	
Methyl-tert-butyl ether	ug/L	20	19.1	96	75-125	
Methylene Chloride	ug/L	20	21.1	105	70-125	
n-Butylbenzene	ug/L	20	19.5	98	75-126	
n-Propylbenzene	ug/L	20	19.3	97	73-127	
Naphthalene	ug/L	20	16.7	84	63-128	
o-Xylene	ug/L	20	20.0	100	75-128	
p-Isopropyltoluene	ug/L	20	19.5	98	75-125	
sec-Butylbenzene	ug/L	20	20.4	102	75-126	
Styrene	ug/L	20	19.9	100	75-125	
tert-Amylmethyl ether	ug/L	20	18.6	93	75-125	
tert-Butyl Alcohol	ug/L	200	178	89	75-130	
tert-Butylbenzene	ug/L	20	19.5	98	75-131	
Tetrachloroethene	ug/L	20	19.8	99	74-125	
Tetrahydrofuran	ug/L	200	195	98	64-138	
Toluene	ug/L	20	18.9	94	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.1	96	68-128	
trans-1,3-Dichloropropene	ug/L	20	21.4	107	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	41.5	83	60-127	
Trichloroethene	ug/L	20	19.8	99	75-127	
Trichlorofluoromethane	ug/L	20	19.2	96	72-133	
Vinyl acetate	ug/L	20	20.7	104	61-129	
Vinyl chloride	ug/L	20	20.8	104	75-128	
Xylene (Total)	ug/L	60	58.8	98	75-125	
1,2-Dichloroethane-d4 (S)	%.			103	75-136	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412678 3412679

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	22.2	21.1	111	106	75-140	5	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	25.3	23.3	126	116	74-136	8	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	22.8	21.5	114	108	66-134	6	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	24.1	21.8	121	109	75-126	10	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412678 3412679

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	26.7	24.7	134	124	65-146	8	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	23.8	21.2	119	106	68-132	12	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	25.1	22.2	126	111	66-139	12	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	25.9	23.3	130	117	67-134	11	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	23.1	21.9	116	110	67-129	5	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	22.2	20.3	111	101	69-128	9	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	21.6	20.3	108	101	65-140	6	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	23.0	22.7	115	113	71-133	1	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	54.2	53.0	108	106	54-138	2	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	22.4	20.5	112	102	68-125	9	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	22.1	21.9	110	110	74-136	1	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	23.3	21.4	117	107	68-125	8	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	47.8	42.3	120	106	71-126	12	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	23.2	21.3	116	107	67-125	9	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	23.6	23.2	118	116	68-137	2	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	23.0	22.6	115	113	75-131	2	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	22.3	21.0	111	105	71-125	6	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	21.9	21.3	110	106	74-126	3	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	459	407	115	102	68-125	12	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	28.7	22.7	143	113	54-129	23	30	M1
2,2-Dichloropropane	ug/L	<0.17	20	20	25.1	21.6	126	108	69-139	15	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	110	106	110	106	54-144	4	30	
2-Chlorotoluene	ug/L	<0.16	20	20	22.5	22.3	112	111	75-134	1	30	
2-Hexanone	ug/L	<0.88	100	100	109	106	109	106	58-137	2	30	
4-Chlorotoluene	ug/L	<0.13	20	20	22.7	22.7	114	113	72-133	0	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	114	110	114	110	60-129	4	30	
Acetone	ug/L	<9.2	100	100	95.7	86.1	96	86	62-132	11	30	
Acrolein	ug/L	<1.2	200	200	299	279	149	140	30-150	7	30	
Acrylonitrile	ug/L	<0.91	200	200	223	209	111	104	68-125	7	30	
Benzene	ug/L	<0.10	20	20	23.6	21.3	118	107	68-125	10	30	
Bromobenzene	ug/L	<0.21	20	20	21.6	21.2	108	106	73-126	2	30	
Bromochloromethane	ug/L	<0.27	20	20	24.0	22.1	120	110	66-143	8	30	
Bromodichloromethane	ug/L	<0.22	20	20	23.4	21.2	117	106	74-125	10	30	
Bromoform	ug/L	<0.80	20	20	21.9	20.7	109	103	64-134	6	30	
Bromomethane	ug/L	<1.8	20	20	19.7	21.6	99	108	30-150	9	30	
Carbon disulfide	ug/L	<0.078	20	20	26.8	21.9	134	109	43-147	20	30	
Carbon tetrachloride	ug/L	<0.19	20	20	25.9	23.3	129	117	71-143	10	30	
Chlorobenzene	ug/L	<0.17	20	20	21.3	20.0	107	100	75-125	6	30	
Chloroethane	ug/L	<0.49	20	20	24.8	25.2	124	126	75-129	2	30	
Chloroform	ug/L	<0.45	20	20	21.9	20.4	110	102	66-132	7	30	
Chloromethane	ug/L	<0.16	20	20	24.0	24.2	120	121	53-137	1	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	23.6	21.2	118	106	67-133	11	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	23.4	21.2	117	106	66-125	10	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3412678 3412679

Parameter	Units	10491655005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	23.2	22.5	116	113	62-132	3	30	
Dibromomethane	ug/L	<0.16	20	20	25.7	26.4	129	132	67-125	3	30	M1
Dichlorodifluoromethane	ug/L	<0.23	20	20	26.1	27.1	130	136	71-142	4	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	23.4	24.2	117	121	70-131	4	30	
Diisopropyl ether	ug/L	<0.13	20	20	22.8	21.0	114	105	63-131	8	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	20.8	19.3	104	97	66-128	8	30	
Ethylbenzene	ug/L	<0.14	20	20	22.7	22.0	114	110	74-126	3	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	25.7	20.1	128	101	68-143	24	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	23.3	22.9	116	114	74-130	2	30	
m&p-Xylene	ug/L	<0.31	40	40	45.7	44.5	114	111	69-132	3	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	21.5	20.4	108	102	65-131	5	30	
Methylene Chloride	ug/L	<0.98	20	20	24.0	21.1	120	105	57-125	13	30	
n-Butylbenzene	ug/L	<0.24	20	20	26.1	23.2	130	116	71-131	12	30	
n-Propylbenzene	ug/L	<0.10	20	20	24.1	23.5	120	118	67-138	2	30	
Naphthalene	ug/L	<0.48	20	20	19.7	19.7	98	99	60-130	0	30	
o-Xylene	ug/L	<0.16	20	20	23.2	22.7	116	114	69-131	2	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	24.7	23.0	124	115	72-133	7	30	
sec-Butylbenzene	ug/L	<0.15	20	20	26.2	24.5	131	123	73-134	7	30	
Styrene	ug/L	<0.19	20	20	22.9	21.7	115	109	72-125	5	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	21.4	20.1	107	100	67-125	6	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	216	202	108	101	64-137	6	30	
tert-Butylbenzene	ug/L	<0.15	20	20	24.8	24.0	124	120	70-143	3	30	
Tetrachloroethene	ug/L	<0.17	20	20	24.5	23.4	123	117	72-129	5	30	
Tetrahydrofuran	ug/L	<2.2	200	200	218	206	109	103	66-128	6	30	
Toluene	ug/L	<0.083	20	20	22.3	20.7	112	103	73-125	8	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	24.2	21.1	121	105	62-137	14	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	25.7	23.1	128	115	61-136	11	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	46.7	44.0	93	88	45-128	6	30	
Trichloroethene	ug/L	<0.15	20	20	24.4	21.6	122	108	74-132	12	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	24.4	25.4	122	127	75-139	4	30	
Vinyl acetate	ug/L	<1.1	20	20	24.8	22.8	124	114	51-135	8	30	
Vinyl chloride	ug/L	<0.092	20	20	27.2	27.1	136	136	68-146	0	30	
Xylene (Total)	ug/L	<0.31	60	60	68.9	67.2	115	112	67-137	2	30	
1,2-Dichloroethane-d4 (S)	%.						106	102	75-136			
4-Bromofluorobenzene (S)	%.						98	98	75-125			
Toluene-d8 (S)	%.						97	95	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 633421 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10491870005, 10491870006, 10491870007, 10491870008

METHOD BLANK: 3414816 Matrix: Water
Associated Lab Samples: 10491870005, 10491870006, 10491870007, 10491870008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	1.0	0.20	09/19/19 18:06	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/19/19 18:06	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/19/19 18:06	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/19/19 18:06	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/19/19 18:06	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	09/19/19 18:06	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/19/19 18:06	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	09/19/19 18:06	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/19/19 18:06	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	09/19/19 18:06	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/19/19 18:06	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/19/19 18:06	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	09/19/19 18:06	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/19/19 18:06	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/19/19 18:06	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/19/19 18:06	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/19/19 18:06	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/19/19 18:06	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/19/19 18:06	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/19/19 18:06	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/19/19 18:06	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/19/19 18:06	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/19/19 18:06	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/19/19 18:06	
Acetone	ug/L	<9.2	20.0	9.2	09/19/19 18:06	
Acrolein	ug/L	<1.2	10.0	1.2	09/19/19 18:06	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/19/19 18:06	
Benzene	ug/L	<0.10	0.50	0.10	09/19/19 18:06	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/19/19 18:06	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/19/19 18:06	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/19/19 18:06	
Bromoform	ug/L	<0.80	4.0	0.80	09/19/19 18:06	
Bromomethane	ug/L	<1.8	4.0	1.8	09/19/19 18:06	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/19/19 18:06	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/19/19 18:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

METHOD BLANK: 3414816 Matrix: Water
Associated Lab Samples: 10491870005, 10491870006, 10491870007, 10491870008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
Chloroethane	ug/L	<0.49	1.0	0.49	09/19/19 18:06	
Chloroform	ug/L	<0.45	1.0	0.45	09/19/19 18:06	
Chloromethane	ug/L	<0.16	4.0	0.16	09/19/19 18:06	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/19/19 18:06	
Dibromochloromethane	ug/L	<0.12	1.0	0.12	09/19/19 18:06	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/19/19 18:06	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/19/19 18:06	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/19/19 18:06	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/19/19 18:06	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/19/19 18:06	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/19/19 18:06	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/19/19 18:06	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	09/19/19 18:06	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/19/19 18:06	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/19/19 18:06	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/19/19 18:06	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/19/19 18:06	
Naphthalene	ug/L	0.77J	1.0	0.48	09/19/19 18:06	
o-Xylene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
Styrene	ug/L	<0.19	0.50	0.19	09/19/19 18:06	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/19/19 18:06	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/19/19 18:06	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/19/19 18:06	
Toluene	ug/L	<0.083	0.50	0.083	09/19/19 18:06	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/19/19 18:06	
trans-1,3-Dichloropropene	ug/L	<0.18	1.0	0.18	09/19/19 18:06	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/19/19 18:06	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/19/19 18:06	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/19/19 18:06	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/19/19 18:06	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/19/19 18:06	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/19/19 18:06	
1,2-Dichloroethane-d4 (S)	%.	101	75-136		09/19/19 18:06	
4-Bromofluorobenzene (S)	%.	104	75-125		09/19/19 18:06	
Toluene-d8 (S)	%.	99	75-125		09/19/19 18:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

LABORATORY CONTROL SAMPLE: 3414817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.5	103	68-141	
1,1,1-Trichloroethane	ug/L	20	22.7	113	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.4	107	73-125	
1,1,2-Trichloroethane	ug/L	20	21.3	107	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	21.7	108	69-132	
1,1-Dichloroethane	ug/L	20	19.0	95	73-125	
1,1-Dichloroethene	ug/L	20	19.5	97	71-126	
1,1-Dichloropropene	ug/L	20	22.5	112	73-126	
1,2,3-Trichlorobenzene	ug/L	20	19.5	98	72-126	
1,2,3-Trichloropropane	ug/L	20	21.6	108	75-126	
1,2,4-Trichlorobenzene	ug/L	20	20.3	101	71-134	
1,2,4-Trimethylbenzene	ug/L	20	19.8	99	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	53.8	108	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	21.6	108	75-129	
1,2-Dichlorobenzene	ug/L	20	19.7	98	75-129	
1,2-Dichloroethane	ug/L	20	20.3	102	75-125	
1,2-Dichloroethene (Total)	ug/L	40	40.0	100	74-125	N2
1,2-Dichloropropane	ug/L	20	19.0	95	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.6	103	75-127	
1,3-Dichlorobenzene	ug/L	20	20.0	100	75-126	
1,3-Dichloropropane	ug/L	20	21.3	107	75-125	
1,4-Dichlorobenzene	ug/L	20	18.6	93	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	345	86	72-129	
2,2,4-Trimethylpentane	ug/L	20	21.3	107	72-128	
2,2-Dichloropropane	ug/L	20	24.0	120	65-138	
2-Butanone (MEK)	ug/L	100	93.3	93	59-144	
2-Chlorotoluene	ug/L	20	19.8	99	75-127	
2-Hexanone	ug/L	100	93.0	93	73-134	
4-Chlorotoluene	ug/L	20	19.5	97	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	95.2	95	62-141	
Acetone	ug/L	100	112	112	60-137	
Acrolein	ug/L	200	197	99	60-141	
Acrylonitrile	ug/L	200	197	99	75-129	
Benzene	ug/L	20	20.3	101	73-125	
Bromobenzene	ug/L	20	19.8	99	73-125	
Bromochloromethane	ug/L	20	21.4	107	75-135	
Bromodichloromethane	ug/L	20	20.4	102	75-125	
Bromoform	ug/L	20	20.7	104	67-136	
Bromomethane	ug/L	20	16.7	84	30-150	
Carbon disulfide	ug/L	20	16.6	83	47-137	
Carbon tetrachloride	ug/L	20	21.7	108	75-125	
Chlorobenzene	ug/L	20	20.8	104	75-125	
Chloroethane	ug/L	20	19.9	100	63-136	
Chloroform	ug/L	20	20.6	103	73-128	
Chloromethane	ug/L	20	16.6	83	55-130	
cis-1,2-Dichloroethene	ug/L	20	21.0	105	75-125	
cis-1,3-Dichloropropene	ug/L	20	21.7	109	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

LABORATORY CONTROL SAMPLE: 3414817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.9	104	75-125	
Dibromomethane	ug/L	20	21.7	109	75-125	
Dichlorodifluoromethane	ug/L	20	20.7	104	63-132	
Dichlorofluoromethane	ug/L	20	19.9	100	68-127	
Diisopropyl ether	ug/L	20	15.6	78	71-131	
Ethyl-tert-butyl ether	ug/L	20	19.9	100	75-125	
Ethylbenzene	ug/L	20	19.9	100	75-125	
Hexachloro-1,3-butadiene	ug/L	20	22.9	114	72-134	
Isopropylbenzene (Cumene)	ug/L	20	21.2	106	75-125	
m&p-Xylene	ug/L	40	40.6	101	75-126	
Methyl-tert-butyl ether	ug/L	20	17.9	90	75-125	
Methylene Chloride	ug/L	20	17.9	89	70-125	
n-Butylbenzene	ug/L	20	21.3	106	75-126	
n-Propylbenzene	ug/L	20	20.2	101	73-127	
Naphthalene	ug/L	20	18.9	94	63-128	
o-Xylene	ug/L	20	20.4	102	75-128	
p-Isopropyltoluene	ug/L	20	19.9	100	75-125	
sec-Butylbenzene	ug/L	20	20.2	101	75-126	
Styrene	ug/L	20	21.5	108	75-125	
tert-Amylmethyl ether	ug/L	20	20.1	101	75-125	
tert-Butyl Alcohol	ug/L	200	164	82	75-130	
tert-Butylbenzene	ug/L	20	20.0	100	75-131	
Tetrachloroethene	ug/L	20	20.8	104	74-125	
Tetrahydrofuran	ug/L	200	250	125	64-138	
Toluene	ug/L	20	20.6	103	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.0	95	68-128	
trans-1,3-Dichloropropene	ug/L	20	21.2	106	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	57.4	115	60-127	
Trichloroethene	ug/L	20	21.6	108	75-127	
Trichlorofluoromethane	ug/L	20	22.8	114	72-133	
Vinyl acetate	ug/L	20	23.2	116	61-129	
Vinyl chloride	ug/L	20	18.4	92	75-128	
Xylene (Total)	ug/L	60	60.9	102	75-125	
1,2-Dichloroethane-d4 (S)	%.			101	75-136	
4-Bromofluorobenzene (S)	%.			101	75-125	
Toluene-d8 (S)	%.			103	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418376 3418377

Parameter	Units	10492488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	19.1	19.5	95	98	75-140	2	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	22.1	22.0	110	110	74-136	0	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	18.8	20.0	94	100	66-134	6	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	18.9	19.7	94	98	75-126	4	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418376 3418377

Parameter	Units	10492488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	21.0	21.6	105	108	65-146	2	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	18.1	18.1	91	90	68-132	0	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	19.6	19.2	98	96	66-139	2	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	21.4	21.7	107	109	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	17.9	22.0	89	110	67-129	21	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	18.4	20.1	92	100	69-128	9	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	18.8	21.8	94	109	65-140	15	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	18.4	20.2	92	101	71-133	9	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	46.6	51.4	93	103	54-138	10	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	19.1	19.9	95	100	68-125	4	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	18.1	19.5	90	97	74-136	7	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	18.4	18.9	92	95	68-125	3	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	39.4	37.9	99	95	71-126	4	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	17.6	18.4	88	92	67-125	4	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	18.9	20.6	95	103	68-137	9	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	18.1	19.3	91	97	75-131	7	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	19.0	19.9	95	99	71-125	5	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	17.1	18.4	86	92	74-126	7	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	427	399	107	100	68-125	7	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	21.7	22.6	108	113	54-129	4	30	
2,2-Dichloropropane	ug/L	<0.17	20	20	24.4	23.8	122	119	69-139	2	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	70.0	77.8	70	78	54-144	11	30	
2-Chlorotoluene	ug/L	<0.16	20	20	18.3	19.2	92	96	75-134	5	30	
2-Hexanone	ug/L	<0.88	100	100	78.8	88.3	79	88	58-137	11	30	
4-Chlorotoluene	ug/L	<0.13	20	20	18.0	19.1	90	96	72-133	6	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	80.5	88.0	80	88	60-129	9	30	
Acetone	ug/L	<9.2	100	100	87.2	91.0	83	87	62-132	4	30	
Acrolein	ug/L	<1.2	200	200	243	258	122	129	30-150	6	30	
Acrylonitrile	ug/L	<0.91	200	200	173	182	87	91	68-125	5	30	
Benzene	ug/L	<0.10	20	20	19.4	19.0	97	95	68-125	2	30	
Bromobenzene	ug/L	<0.21	20	20	18.5	19.2	93	96	73-126	3	30	
Bromochloromethane	ug/L	<0.27	20	20	20.4	20.2	102	101	66-143	1	30	
Bromodichloromethane	ug/L	<0.22	20	20	19.5	20.1	97	101	74-125	3	30	
Bromoform	ug/L	<0.80	20	20	18.4	19.6	92	98	64-134	6	30	
Bromomethane	ug/L	<1.8	20	20	19.2	19.7	96	99	30-150	3	30	
Carbon disulfide	ug/L	<0.078	20	20	16.9	16.1	84	80	43-147	5	30	
Carbon tetrachloride	ug/L	<0.19	20	20	21.1	21.3	105	106	71-143	1	30	
Chlorobenzene	ug/L	<0.17	20	20	19.3	19.7	97	99	75-125	2	30	
Chloroethane	ug/L	<0.49	20	20	21.0	18.6	105	93	75-129	12	30	
Chloroform	ug/L	<0.45	20	20	18.8	19.3	94	96	66-132	2	30	
Chloromethane	ug/L	<0.16	20	20	16.6	16.3	83	82	53-137	2	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	20.6	19.9	103	100	67-133	3	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	20.6	20.8	103	104	66-125	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418376 3418377

Parameter	Units	10492488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	19.3	20.1	96	100	62-132	4	30	
Dibromomethane	ug/L	<0.16	20	20	19.4	20.4	97	102	67-125	5	30	
Dichlorodifluoromethane	ug/L	<0.23	20	20	20.8	21.1	104	105	71-142	1	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	20.4	19.7	102	99	70-131	4	30	
Diisopropyl ether	ug/L	<0.13	20	20	14.3	14.3	71	72	63-131	1	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	18.1	18.6	91	93	66-128	3	30	
Ethylbenzene	ug/L	<0.14	20	20	18.6	19.2	93	96	74-126	3	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	24.1	23.4	120	117	68-143	3	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	19.9	20.9	100	105	74-130	5	30	
m&p-Xylene	ug/L	<0.31	40	40	37.5	38.4	94	96	69-132	2	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	16.7	17.4	84	87	65-131	4	30	
Methylene Chloride	ug/L	<0.98	20	20	17.1	16.5	86	83	57-125	4	30	
n-Butylbenzene	ug/L	<0.24	20	20	20.8	23.8	104	119	71-131	13	30	
n-Propylbenzene	ug/L	<0.10	20	20	19.3	20.6	97	103	67-138	6	30	
Naphthalene	ug/L	<0.48	20	20	17.0	20.2	85	101	60-130	17	30	
o-Xylene	ug/L	<0.16	20	20	19.0	19.6	95	98	69-131	3	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	19.0	20.9	95	105	72-133	10	30	
sec-Butylbenzene	ug/L	<0.15	20	20	19.2	21.4	96	107	73-134	10	30	
Styrene	ug/L	<0.19	20	20	19.9	20.5	100	103	72-125	3	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	18.0	19.4	90	97	67-125	7	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	168	181	84	90	64-137	7	30	
tert-Butylbenzene	ug/L	<0.15	20	20	18.6	20.5	93	102	70-143	9	30	
Tetrachloroethene	ug/L	<0.17	20	20	19.7	20.3	99	101	72-129	3	30	
Tetrahydrofuran	ug/L	<2.2	200	200	225	235	113	118	66-128	4	30	
Toluene	ug/L	<0.083	20	20	19.3	19.5	97	97	73-125	1	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	18.9	18.0	94	90	62-137	5	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	19.0	20.1	95	100	61-136	5	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	49.9	53.5	100	107	45-128	7	30	
Trichloroethene	ug/L	<0.15	20	20	20.6	20.7	103	104	74-132	0	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	23.0	23.1	115	116	75-139	0	30	
Vinyl acetate	ug/L	<1.1	20	20	21.0	21.7	105	109	51-135	3	30	
Vinyl chloride	ug/L	<0.092	20	20	18.8	18.3	94	91	68-146	3	30	
Xylene (Total)	ug/L	<0.31	60	60	56.5	58.0	94	97	67-137	3	30	
1,2-Dichloroethane-d4 (S)	%.						101	101	75-136			
4-Bromofluorobenzene (S)	%.						100	100	75-125			
Toluene-d8 (S)	%.						101	102	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 634015 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10491870004

METHOD BLANK: 3417682 Matrix: Water
Associated Lab Samples: 10491870004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	09/23/19 17:18	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/23/19 17:18	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/23/19 17:18	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/23/19 17:18	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/23/19 17:18	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/23/19 17:18	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	09/23/19 17:18	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/23/19 17:18	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	09/23/19 17:18	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/23/19 17:18	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	09/23/19 17:18	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/23/19 17:18	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	09/23/19 17:18	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/23/19 17:18	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/23/19 17:18	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	09/23/19 17:18	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/23/19 17:18	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/23/19 17:18	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/23/19 17:18	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/23/19 17:18	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/23/19 17:18	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/23/19 17:18	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/23/19 17:18	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/23/19 17:18	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/23/19 17:18	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/23/19 17:18	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/23/19 17:18	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/23/19 17:18	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/23/19 17:18	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/23/19 17:18	
Acetone	ug/L	<9.2	20.0	9.2	09/23/19 17:18	
Acrolein	ug/L	<1.2	10.0	1.2	09/23/19 17:18	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/23/19 17:18	
Benzene	ug/L	<0.10	0.50	0.10	09/23/19 17:18	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/23/19 17:18	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/23/19 17:18	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/23/19 17:18	
Bromoform	ug/L	<0.80	4.0	0.80	09/23/19 17:18	
Bromomethane	ug/L	<1.8	4.0	1.8	09/23/19 17:18	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/23/19 17:18	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/23/19 17:18	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

METHOD BLANK: 3417682 Matrix: Water
Associated Lab Samples: 10491870004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	09/23/19 17:18	
Chloroethane	ug/L	<0.49	1.0	0.49	09/23/19 17:18	
Chloroform	ug/L	<0.45	1.0	0.45	09/23/19 17:18	
Chloromethane	ug/L	<0.16	4.0	0.16	09/23/19 17:18	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/23/19 17:18	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/23/19 17:18	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	09/23/19 17:18	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/23/19 17:18	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/23/19 17:18	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/23/19 17:18	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/23/19 17:18	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/23/19 17:18	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/23/19 17:18	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/23/19 17:18	
Isopropylbenzene (Cumene)	ug/L	<0.18	1.0	0.18	09/23/19 17:18	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/23/19 17:18	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/23/19 17:18	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/23/19 17:18	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/23/19 17:18	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/23/19 17:18	
Naphthalene	ug/L	<0.48	1.0	0.48	09/23/19 17:18	
o-Xylene	ug/L	<0.16	0.50	0.16	09/23/19 17:18	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/23/19 17:18	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/23/19 17:18	
Styrene	ug/L	<0.19	1.0	0.19	09/23/19 17:18	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/23/19 17:18	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/23/19 17:18	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/23/19 17:18	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/23/19 17:18	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/23/19 17:18	
Toluene	ug/L	<0.083	0.50	0.083	09/23/19 17:18	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/23/19 17:18	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	09/23/19 17:18	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/23/19 17:18	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/23/19 17:18	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/23/19 17:18	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/23/19 17:18	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/23/19 17:18	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/23/19 17:18	
1,2-Dichloroethane-d4 (S)	%.	100	75-136		09/23/19 17:18	
4-Bromofluorobenzene (S)	%.	96	75-125		09/23/19 17:18	
Toluene-d8 (S)	%.	104	75-125		09/23/19 17:18	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

LABORATORY CONTROL SAMPLE: 3417683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.6	98	68-141	
1,1,1-Trichloroethane	ug/L	20	19.3	97	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	20.1	100	73-125	
1,1,2-Trichloroethane	ug/L	20	20.3	102	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.1	95	69-132	
1,1-Dichloroethane	ug/L	20	17.7	88	73-125	
1,1-Dichloroethene	ug/L	20	17.3	87	71-126	
1,1-Dichloropropene	ug/L	20	18.0	90	73-126	
1,2,3-Trichlorobenzene	ug/L	20	18.6	93	72-126	
1,2,3-Trichloropropane	ug/L	20	19.9	99	75-126	
1,2,4-Trichlorobenzene	ug/L	20	17.4	87	71-134	
1,2,4-Trimethylbenzene	ug/L	20	19.8	99	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	51.4	103	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	19.6	98	75-129	
1,2-Dichlorobenzene	ug/L	20	19.5	98	75-129	
1,2-Dichloroethane	ug/L	20	18.6	93	75-125	
1,2-Dichloroethene (Total)	ug/L	40	35.3	88	74-125	N2
1,2-Dichloropropane	ug/L	20	17.4	87	75-125	
1,3,5-Trimethylbenzene	ug/L	20	19.9	100	75-127	
1,3-Dichlorobenzene	ug/L	20	19.9	100	75-126	
1,3-Dichloropropane	ug/L	20	19.4	97	75-125	
1,4-Dichlorobenzene	ug/L	20	19.1	95	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	454	113	72-129	
2,2,4-Trimethylpentane	ug/L	20	17.1	86	72-128	
2,2-Dichloropropane	ug/L	20	17.7	89	65-138	
2-Butanone (MEK)	ug/L	100	95.4	95	59-144	
2-Chlorotoluene	ug/L	20	18.9	95	75-127	
2-Hexanone	ug/L	100	102	102	73-134	
4-Chlorotoluene	ug/L	20	19.6	98	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	62-141	
Acetone	ug/L	100	109	109	60-137	
Acrolein	ug/L	200	211	105	60-141	
Acrylonitrile	ug/L	200	179	90	75-129	
Benzene	ug/L	20	18.2	91	73-125	
Bromobenzene	ug/L	20	19.4	97	73-125	
Bromochloromethane	ug/L	20	19.6	98	75-135	
Bromodichloromethane	ug/L	20	18.1	90	75-125	
Bromoform	ug/L	20	20.6	103	67-136	
Bromomethane	ug/L	20	15.0	75	30-150	
Carbon disulfide	ug/L	20	14.4	72	47-137	
Carbon tetrachloride	ug/L	20	19.9	99	75-125	
Chlorobenzene	ug/L	20	18.5	92	75-125	
Chloroethane	ug/L	20	18.7	93	63-136	
Chloroform	ug/L	20	18.0	90	73-128	
Chloromethane	ug/L	20	16.5	83	55-130	
cis-1,2-Dichloroethene	ug/L	20	18.3	91	75-125	
cis-1,3-Dichloropropene	ug/L	20	18.7	93	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

LABORATORY CONTROL SAMPLE: 3417683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	21.7	108	75-125	
Dibromomethane	ug/L	20	22.8	114	75-125	
Dichlorodifluoromethane	ug/L	20	17.9	90	63-132	
Dichlorofluoromethane	ug/L	20	18.3	92	68-127	
Diisopropyl ether	ug/L	20	17.0	85	71-131	
Ethyl-tert-butyl ether	ug/L	20	15.4	77	75-125	
Ethylbenzene	ug/L	20	19.1	95	75-125	
Hexachloro-1,3-butadiene	ug/L	20	18.7	94	72-134	
Isopropylbenzene (Cumene)	ug/L	20	19.5	97	75-125	
m&p-Xylene	ug/L	40	38.3	96	75-126	
Methyl-tert-butyl ether	ug/L	20	16.4	82	75-125	
Methylene Chloride	ug/L	20	17.8	89	70-125	
n-Butylbenzene	ug/L	20	20.1	101	75-126	
n-Propylbenzene	ug/L	20	19.9	99	73-127	
Naphthalene	ug/L	20	16.5	82	63-128	
o-Xylene	ug/L	20	19.4	97	75-128	
p-Isopropyltoluene	ug/L	20	20.1	101	75-125	
sec-Butylbenzene	ug/L	20	21.3	107	75-126	
Styrene	ug/L	20	20.2	101	75-125	
tert-Amylmethyl ether	ug/L	20	15.9	80	75-125	
tert-Butyl Alcohol	ug/L	200	202	101	75-130	
tert-Butylbenzene	ug/L	20	20.6	103	75-131	
Tetrachloroethene	ug/L	20	19.9	99	74-125	
Tetrahydrofuran	ug/L	200	191	95	64-138	
Toluene	ug/L	20	18.5	93	74-125	
trans-1,2-Dichloroethene	ug/L	20	17.0	85	68-128	
trans-1,3-Dichloropropene	ug/L	20	20.5	103	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	44.0	88	60-127	
Trichloroethene	ug/L	20	19.4	97	75-127	
Trichlorofluoromethane	ug/L	20	17.8	89	72-133	
Vinyl acetate	ug/L	20	18.3	92	61-129	
Vinyl chloride	ug/L	20	17.2	86	75-128	
Xylene (Total)	ug/L	60	57.7	96	75-125	
1,2-Dichloroethane-d4 (S)	%.			101	75-136	
4-Bromofluorobenzene (S)	%.			93	75-125	
Toluene-d8 (S)	%.			98	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417684 3417685

Parameter	Units	10492282002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	18.4	19.1	92	96	75-140	4	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	18.9	18.8	95	94	74-136	1	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	18.3	19.7	92	98	66-134	7	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	19.1	20.1	96	100	75-126	5	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417684 3417685

Parameter	Units	10492282002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	19.1	19.4	95	97	65-146	2	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	16.4	16.3	82	82	68-132	1	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	17.4	16.7	87	83	66-139	4	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	18.3	17.9	91	89	67-134	2	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	19.0	20.0	95	100	67-129	5	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	18.1	19.2	91	96	69-128	6	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	17.8	17.7	89	88	65-140	1	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	19.1	20.3	95	101	71-133	6	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	45.0	50.3	90	101	54-138	11	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	17.9	18.6	89	93	68-125	4	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	18.0	19.4	90	97	74-136	8	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	17.1	16.9	85	85	68-125	1	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	33.2	32.9	83	82	71-126	1	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	16.7	16.6	83	83	67-125	0	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	19.5	20.4	97	102	68-137	5	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	18.9	19.9	95	99	75-131	5	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	17.8	18.1	89	91	71-125	2	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	18.4	18.9	92	95	74-126	3	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	347	362	87	90	68-125	4	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	20.0	17.0	100	85	54-129	16	30	
2,2-Dichloropropane	ug/L	<0.17	20	20	17.6	18.3	88	91	69-139	4	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	74.5	83.9	74	84	54-144	12	30	
2-Chlorotoluene	ug/L	<0.16	20	20	18.2	19.8	91	99	75-134	8	30	
2-Hexanone	ug/L	<0.88	100	100	82.2	93.7	82	94	58-137	13	30	
4-Chlorotoluene	ug/L	<0.13	20	20	18.5	19.5	92	98	72-133	5	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	88.1	98.7	88	99	60-129	11	30	
Acetone	ug/L	<9.2	100	100	71.7	74.4	72	74	62-132	4	30	
Acrolein	ug/L	<1.2	200	200	208	227	104	114	30-150	9	30	
Acrylonitrile	ug/L	<0.91	200	200	154	167	77	84	68-125	9	30	
Benzene	ug/L	<0.10	20	20	16.8	16.5	84	83	68-125	2	30	
Bromobenzene	ug/L	<0.21	20	20	18.2	18.9	91	94	73-126	3	30	
Bromochloromethane	ug/L	<0.27	20	20	18.0	18.0	90	90	66-143	0	30	
Bromodichloromethane	ug/L	<0.22	20	20	17.4	17.1	87	86	74-125	1	30	
Bromoform	ug/L	<0.80	20	20	18.9	20.2	95	101	64-134	7	30	
Bromomethane	ug/L	<1.8	20	20	15.4	15.9	77	79	30-150	3	30	
Carbon disulfide	ug/L	<0.078	20	20	15.2	13.9	76	70	43-147	9	30	
Carbon tetrachloride	ug/L	82.3	20	20	106	107	118	125	71-143	1	30	
Chlorobenzene	ug/L	<0.17	20	20	17.2	17.9	86	90	75-125	4	30	
Chloroethane	ug/L	<0.49	20	20	18.3	17.8	91	89	75-129	3	30	
Chloroform	ug/L	2.7	20	20	19.3	19.3	83	83	66-132	0	30	
Chloromethane	ug/L	<0.16	20	20	16.3	13.1	81	65	53-137	22	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	16.6	16.8	83	84	67-133	1	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	16.5	16.4	83	82	66-125	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3417684 3417685

Parameter	Units	10492282002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	19.6	20.3	98	101	62-132	4	30	
Dibromomethane	ug/L	<0.16	20	20	20.4	18.4	102	92	67-125	10	30	
Dichlorodifluoromethane	ug/L	<0.23	20	20	19.0	18.6	95	93	71-142	2	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	19.3	18.7	96	94	70-131	3	30	
Diisopropyl ether	ug/L	<0.13	20	20	15.2	15.7	76	79	63-131	4	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	13.9	14.3	69	72	66-128	3	30	
Ethylbenzene	ug/L	<0.14	20	20	18.0	19.0	90	95	74-126	6	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	21.2	18.3	106	91	68-143	15	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	18.5	20.2	93	101	74-130	9	30	
m&p-Xylene	ug/L	<0.31	40	40	36.7	39.0	92	98	69-132	6	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	15.2	15.8	76	79	65-131	4	30	
Methylene Chloride	ug/L	<0.98	20	20	16.8	16.9	84	84	57-125	0	30	
n-Butylbenzene	ug/L	<0.24	20	20	21.0	20.2	105	101	71-131	4	30	
n-Propylbenzene	ug/L	<0.10	20	20	19.9	20.6	100	103	67-138	4	30	
Naphthalene	ug/L	<0.48	20	20	15.3	17.5	77	87	60-130	13	30	
o-Xylene	ug/L	<0.16	20	20	18.6	19.4	93	97	69-131	4	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	20.8	20.5	104	103	72-133	1	30	
sec-Butylbenzene	ug/L	<0.15	20	20	21.7	21.7	108	109	73-134	0	30	
Styrene	ug/L	<0.19	20	20	18.8	18.9	94	94	72-125	1	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	14.8	15.2	74	76	67-125	3	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	164	175	82	87	64-137	6	30	
tert-Butylbenzene	ug/L	<0.15	20	20	20.6	21.1	103	105	70-143	2	30	
Tetrachloroethene	ug/L	<0.17	20	20	19.2	20.2	96	101	72-129	5	30	
Tetrahydrofuran	ug/L	<2.2	200	200	167	183	83	91	66-128	9	30	
Toluene	ug/L	<0.083	20	20	17.7	17.8	88	89	73-125	1	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	16.6	16.1	83	81	62-137	3	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	19.6	19.3	98	97	61-136	1	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	40.8	42.2	82	84	45-128	3	30	
Trichloroethene	ug/L	<0.15	20	20	18.2	18.4	91	92	74-132	1	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	19.4	19.2	97	96	75-139	1	30	
Vinyl acetate	ug/L	<1.1	20	20	16.7	17.0	83	85	51-135	2	30	
Vinyl chloride	ug/L	<0.092	20	20	18.4	17.8	92	89	68-146	3	30	
Xylene (Total)	ug/L	<0.31	60	60	55.3	58.4	92	97	67-137	5	30	
1,2-Dichloroethane-d4 (S)	%.						101	102	75-136			
4-Bromofluorobenzene (S)	%.						96	95	75-125			
Toluene-d8 (S)	%.						99	100	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 634282 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10491870001

METHOD BLANK: 3418900 Matrix: Water
Associated Lab Samples: 10491870001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/25/19 10:45	

LABORATORY CONTROL SAMPLE & LCSD: 3418901 3418902

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	43.0	39.4	107	98	90-110	9	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418903 3418904

Parameter	Units	10491747008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	57.1	40	40	97.6	98.9	101	104	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418905 3418906

Parameter	Units	10492088001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	11.7	40	40	53.6	54.0	105	106	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 634533 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: 3419941 Matrix: Water
Associated Lab Samples: 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/25/19 14:13	

LABORATORY CONTROL SAMPLE & LCSD: 3419942 3419943

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	41.2	41.6	103	104	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3419944 3419945

Parameter	Units	10492679001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	273	40	40	296	295	58	55	80-120	0	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3419946 3419947

Parameter	Units	10492424005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	205	40	40	243	247	96	107	80-120	2	20	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 634032 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: 3417736 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	09/24/19 10:25	

LABORATORY CONTROL SAMPLE: 3417737

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 3417738

Parameter	Units	10491840001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	309	302	2	5	

SAMPLE DUPLICATE: 3417739

Parameter	Units	10491840002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	278	271	3	5	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 158530 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: 710236 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	09/24/19 12:16	

LABORATORY CONTROL SAMPLE: 710237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.19	94	90-110	

MATRIX SPIKE SAMPLE: 710239

Parameter	Units	10491870001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.0078J	0.2	0.21	102	75-125	

SAMPLE DUPLICATE: 710238

Parameter	Units	10491870001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.0078J	0.0078J		20	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 633082 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: 3413252 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	09/19/19 06:37	
Nitrate as N	mg/L	<0.012	0.10	0.012	09/19/19 06:37	
Sulfate	mg/L	<0.28	1.2	0.28	09/19/19 06:37	

LABORATORY CONTROL SAMPLE: 3413253

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	11.9	95	90-110	
Nitrate as N	mg/L	1	0.92	92	90-110	
Sulfate	mg/L	12.5	11.7	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3413254 3413255

Parameter	Units	10491887005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.6	12.5	12.5	12.4	12.4	79	79	90-110	0	20	M1
Nitrate as N	mg/L	ND	1	1	0.90	0.90	90	90	90-110	0	20	
Sulfate	mg/L	42.2	12.5	12.5	45.2	46.4	24	34	90-110	3	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3413256 3413257

Parameter	Units	10491870007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.0J	12.5	12.5	12.0	12.0	88	88	90-110	0	20	M1
Nitrate as N	mg/L	0.17	1	1	1.0	1.0	85	86	90-110	0	20	M1
Sulfate	mg/L	2.8	12.5	12.5	14.4	14.3	92	92	90-110	0	20	

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 634559 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: 3420088 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	09/26/19 09:25	

LABORATORY CONTROL SAMPLE: 3420089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.96	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420090 3420091

Parameter	Units	10491655010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	16.3	1	1	17.1	17.3	80	100	90-110	1	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420092 3420093

Parameter	Units	10491870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	1.0	1.0	100	100	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 634118 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: 3418139 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	09/25/19 07:41	

LABORATORY CONTROL SAMPLE: 3418140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	305	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418141 3418142

Parameter	Units	10491870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	254	254	101	101	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418143 3418144

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	246	241	98	96	90-110	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

QC Batch: 175392 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

METHOD BLANK: 694767 Matrix: Water
Associated Lab Samples: 10491870001, 10491870002, 10491870003, 10491870004, 10491870005, 10491870006, 10491870007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	09/23/19 16:03	

LABORATORY CONTROL SAMPLE: 694768

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 694769 694770

Parameter	Units	10491876003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<1.0	25	25	25.6	26.0	101	103	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 694771 694772

Parameter	Units	10492119005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<1.0	25	25	25.8	26.0	101	102	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
J	Analyte detected below the reporting limit, therefore result is an estimate. This qualifier is also used for all TICs.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
MH	Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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METHOD CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10491870001	MW21D-GW-091719	RSK175	1349235	RSK-175	1349235
10491870002	MW19D-GW-091719	RSK175	1349235	RSK-175	1349235
10491870003	MW16D-GW-091719	RSK175	1349235	RSK-175	1349235
10491870004	MW18D-GW-091719	RSK175	1349235	RSK-175	1349235
10491870005	MW15D-GW-091719	RSK175	1349235	RSK-175	1349235
10491870006	MW4D-GW-091719	RSK175	1349235	RSK-175	1349235
10491870007	MW5D-GW-091719	RSK175	1349235	RSK-175	1349235
10491870001	MW21D-GW-091719	EPA 3010	633710	EPA 6010D	635461
10491870002	MW19D-GW-091719	EPA 3010	633710	EPA 6010D	635461
10491870003	MW16D-GW-091719	EPA 3010	633710	EPA 6010D	635461
10491870004	MW18D-GW-091719	EPA 3010	633710	EPA 6010D	635461
10491870005	MW15D-GW-091719	EPA 3010	633710	EPA 6010D	635461
10491870006	MW4D-GW-091719	EPA 3010	633710	EPA 6010D	635461
10491870007	MW5D-GW-091719	EPA 3010	633710	EPA 6010D	635461
10491870001	MW21D-GW-091719	EPA 7470A	633731	EPA 7470A	635106
10491870002	MW19D-GW-091719	EPA 7470A	633731	EPA 7470A	635106
10491870003	MW16D-GW-091719	EPA 7470A	633731	EPA 7470A	635106
10491870004	MW18D-GW-091719	EPA 7470A	633731	EPA 7470A	635106
10491870005	MW15D-GW-091719	EPA 7470A	633731	EPA 7470A	635106
10491870006	MW4D-GW-091719	EPA 7470A	633731	EPA 7470A	635106
10491870007	MW5D-GW-091719	EPA 7470A	633731	EPA 7470A	635106
10491870001	MW21D-GW-091719	EPA 8260B	632980		
10491870002	MW19D-GW-091719	EPA 8260B	632980		
10491870003	MW16D-GW-091719	EPA 8260B	632980		
10491870004	MW18D-GW-091719	EPA 8260B	634015		
10491870005	MW15D-GW-091719	EPA 8260B	633421		
10491870006	MW4D-GW-091719	EPA 8260B	633421		
10491870007	MW5D-GW-091719	EPA 8260B	633421		
10491870008	TB-03-091719	EPA 8260B	633421		
10491870001	MW21D-GW-091719	SM 2320B	634282		
10491870002	MW19D-GW-091719	SM 2320B	634533		
10491870003	MW16D-GW-091719	SM 2320B	634533		
10491870004	MW18D-GW-091719	SM 2320B	634533		
10491870005	MW15D-GW-091719	SM 2320B	634533		
10491870006	MW4D-GW-091719	SM 2320B	634533		
10491870007	MW5D-GW-091719	SM 2320B	634533		
10491870001	MW21D-GW-091719	SM 2540C	634032		
10491870002	MW19D-GW-091719	SM 2540C	634032		
10491870003	MW16D-GW-091719	SM 2540C	634032		
10491870004	MW18D-GW-091719	SM 2540C	634032		
10491870005	MW15D-GW-091719	SM 2540C	634032		
10491870006	MW4D-GW-091719	SM 2540C	634032		
10491870007	MW5D-GW-091719	SM 2540C	634032		
10491870001	MW21D-GW-091719	SM 4500-S-2 D	158530		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Freeman WA-Cenex Harvest Lease
Pace Project No.: 10491870

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10491870002	**MW19D-GW-091719**	SM 4500-S-2 D	158530		
10491870003	**MW16D-GW-091719**	SM 4500-S-2 D	158530		
10491870004	**MW18D-GW-091719**	SM 4500-S-2 D	158530		
10491870005	**MW15D-GW-091719**	SM 4500-S-2 D	158530		
10491870006	**MW4D-GW-091719**	SM 4500-S-2 D	158530		
10491870007	**MW5D-GW-091719**	SM 4500-S-2 D	158530		
10491870001	**MW21D-GW-091719**	EPA 300.0	633082		
10491870002	**MW19D-GW-091719**	EPA 300.0	633082		
10491870003	**MW16D-GW-091719**	EPA 300.0	633082		
10491870004	**MW18D-GW-091719**	EPA 300.0	633082		
10491870005	**MW15D-GW-091719**	EPA 300.0	633082		
10491870006	**MW4D-GW-091719**	EPA 300.0	633082		
10491870007	**MW5D-GW-091719**	EPA 300.0	633082		
10491870001	**MW21D-GW-091719**	EPA 353.2	634559		
10491870002	**MW19D-GW-091719**	EPA 353.2	634559		
10491870003	**MW16D-GW-091719**	EPA 353.2	634559		
10491870004	**MW18D-GW-091719**	EPA 353.2	634559		
10491870005	**MW15D-GW-091719**	EPA 353.2	634559		
10491870006	**MW4D-GW-091719**	EPA 353.2	634559		
10491870007	**MW5D-GW-091719**	EPA 353.2	634559		
10491870001	**MW21D-GW-091719**	EPA 410.4	634118	EPA 410.4	634333
10491870002	**MW19D-GW-091719**	EPA 410.4	634118	EPA 410.4	634333
10491870003	**MW16D-GW-091719**	EPA 410.4	634118	EPA 410.4	634333
10491870004	**MW18D-GW-091719**	EPA 410.4	634118	EPA 410.4	634333
10491870005	**MW15D-GW-091719**	EPA 410.4	634118	EPA 410.4	634333
10491870006	**MW4D-GW-091719**	EPA 410.4	634118	EPA 410.4	634333
10491870007	**MW5D-GW-091719**	EPA 410.4	634118	EPA 410.4	634333
10491870001	**MW21D-GW-091719**	SM 5310C	175392		
10491870002	**MW19D-GW-091719**	SM 5310C	175392		
10491870003	**MW16D-GW-091719**	SM 5310C	175392		
10491870004	**MW18D-GW-091719**	SM 5310C	175392		
10491870005	**MW15D-GW-091719**	SM 5310C	175392		
10491870006	**MW4D-GW-091719**	SM 5310C	175392		
10491870007	**MW5D-GW-091719**	SM 5310C	175392		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: UPRR_Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR
Email:	Copy To: David Hodson, UPRR-Sysdat@gh[illegible].com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Phone: Fax:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 9900758938
Requested Due Date: 10 Day Standard	Project Name: Freeman WA-Cenex Harve[illegible]st Lease	Pace Project Manager: Jennifer Gross
	Project #: 1497	Pace Profile #: 36447 / 4

Regulatory Agency

State / Location: WA / Freeman

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Y/N	Analyses Test: Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Mercury	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	
	MATRIX CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Solid/Soil SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS													Y													
1	MW21D-GW-091719	WT	G	9/17/19	0900	—	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			MW1
2	MW19D-GW-091719	WT	G	9/17/19	1000		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			MW2
3	MW16D-GW-091719	WT	G	9/17/19	1115		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			MW3
4	MW18D-GW-091719	WT	G	9/17/19	1200		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			MW4
5	MW15D-GW-091719	WT	G	9/17/19	1325		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			MW5
6	MW4D-GW-091719	WT	G	9/17/19	1435		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			MW6
7	MW5D-GW-091719	WT	G	9/17/19	1545		13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			MW7
8	TB-03-091719	WT	G	9/17/19	0700		3				X				X												MW8
9																											
10																											
11																											
12																											

WO#: 10491870

10491870

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME			
Short hold analyses are in bold	[illegible] / Jacobs	9/17/19	1700	[illegible] Pace	9.18.19	830	1.8 - 1.9	Y	Y
*Field filtered by client									
Cooler 1 of 2									

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karla Savage

SIGNATURE of SAMPLER: [illegible]

DATE Signed: 9/17/19

Temp in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N)

Sample Condition Upon Receipt

Client Name: UPRR Jacobs

Project #: WO#: 10491870

PM: JMG Due Date: 10/02/19

CLIENT: UPRR_Jacobs

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial See Exceptions ☐

Tracking Number: 4934 3733 2228/2217

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☐ Yes ☐ No

Thermometer: ☐ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☐ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C	Cooler Temp Read w/temp blank: 1.7, 1.8 °C	Average Corrected Temp (no temp blank only): ☐ See Exceptions
Correction Factor: +0.1	Cooler Temp Corrected w/temp blank: 1.8, 1.9 °C	____ °C ☐ 1 Container

USDA Regulated Soil: (☐ N/A, water sample/Other: _____)
Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: _____
Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☒ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☒ Nitrate ☒ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☒ Yes	☐ No		8.
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☒ Yes	☐ No	☐ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☒ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other JMG 091819 JMG 091819	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	12. Sample # 1-7: 1/1 1-7: 1/1 1-7: 1/1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☒ Yes	☐ No	☐ N/A	☐ NaOH ☒ HNO_3 ☒ H_2SO_4 ☒ Zinc Acetate
Exceptions: VOA, Coliform, TOC, DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS JMG 091819	☒ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# **See Exception** ☐
				Res. Chlorine: 0-6 Roll: 0-6 Strip 203619 0-14 Strip 10D2981
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☒ No	☐ N/A	13. **See Exception** ☐
Trip Blank Present?	☒ Yes	☐ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☒ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased): 072219-3CYR

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ Jenni Gross _____ **Date:** 09/18/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: AM (2)

PRE

Chain of Custody

WO# : 12135776

12135776

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: [X] Yes [ ] ...

Workorder: 10491870 **Workorder Name:** Freeman WA-Cenex Harvest Lease

Owner Received Date: 9/18/2019 Results Requested By: 10/2/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4 DG9S						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	MW21D-GW-091719	PS	9/17/2019 09:00	10491870001	Water	2						X												
2	MW19D-GW-091719	PS	9/17/2019 10:00	10491870002	Water	2						X												
3	MW16D-GW-091719	PS	9/17/2019 11:15	10491870003	Water	2						X												
4	MW18D-GW-091719	PS	9/17/2019 12:00	10491870004	Water	2						X												
5	MW15D-GW-091719	PS	9/17/2019 13:25	10491870005	Water	2						X												
6	MW4D-GW-091719	PS	9/17/2019 14:35	10491870006	Water	2						X												
7	MW5D-GW-091719	PS	9/17/2019 15:45	10491870007	Water	2						X												

Transfers	Released By	Date/Time	Received By	Date/Time
1	PACE	9/18/19 1753	9/19/19	2220
2	9/20/19	0:40	K Mathers	9/20/19 0630
3				

Comments

Cooler Temperature on Receipt 0.7 °C	Custody Seal (Y) or N	Received on Ice (Y) or N	Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: **WO#: 12135776**

PM: RK1 **Due Date: 10/03/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☑ Yes ☐ No

Thermometer Used: ☑ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.4 Cooler Temp Corrected °C: 0.7 Biological Tissue Frozen? ☐ Yes ☐ No ☑ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 9/20/19 DC BM 9/20/19

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☑ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased): _____				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Davena Ferrer Date: 9/20/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

PRE

Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☒ No

Workorder: 10491870 **Workorder Name:** Freeman WA-Cenex Harvest Lease **Owner Received Date:** 9/18/2019 **Results Requested By:** 10/2/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Requested Analysis

WO# : 20122342

20122342

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	5636267 / 4500 Sulfide	LAB USE ONLY
1	MW21D-GW-091719	PS	9/17/2019 09:00	10491870001	Water	1	X	
2	MW19D-GW-091719	PS	9/17/2019 10:00	10491870002	Water	1	X	
3	MW16D-GW-091719	PS	9/17/2019 11:15	10491870003	Water	1	X	
4	MW18D-GW-091719	PS	9/17/2019 12:00	10491870004	Water	1	X	
5	MW15D-GW-091719	PS	9/17/2019 13:25	10491870005	Water	1	X	
6	MW4D-GW-091719	PS	9/17/2019 14:35	10491870006	Water	1	X	
7	MW5D-GW-091719	PS	9/17/2019 15:45	10491870007	Water	1	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	n/a / Pace	9/18/19 1725	Fed Ex	
2	Fed Ex 9/19 0830		[signature] 9/19/19 0830	
3				

Comments

Cooler Temperature on Receipt 1.4 °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Re

Proje

WO# : 20122342

PM: CMM Due Date: 10/02/19

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC] #10

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/19/19 JMS

Temp must be measured from Temperature blank when present

					Comments:
Temperature Blank Present"?	☑Yes	☐No	☐N/A	1	
Chain of Custody Present:	☑Yes	☐No	☐N/A	2	
Chain of Custody Complete:	☑Yes	☐No	☐N/A	3	
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4	
Sampler Name & Signature on COC:	☐Yes	☑No	☐N/A	5	
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6	
Sufficient Volume:	☑Yes	☐No	☐N/A	7	
Correct Containers Used:	☑Yes	☐No	☐N/A	8	
Filtered vol. Rec. for Diss. tests	☐Yes	☐No	☑N/A	9	
Sample Labels match COC:	☑Yes	☐No	☐N/A	10	
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12	
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13	If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14	
Trip Blank Present:	☐Yes	☑No		15	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

H106

Chain of Custody

Pace Analytical® www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: ☐ Yes ☒ No

Workorder: 10491870 Workorder Name: Freeman WA-Cenex Harvest Lease

Owner Received Date: 9/18/2019 Results Requested By: 10/2/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace National 12065 Lebanon Road Mt. Juliet, TN 37122 615-773-9710

Requested Analysis

1141085

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other VSG	5644436 / Headspace Analysis	LAB USE ONLY
1	MW21D-GW-091719	PS	9/17/2019 09:00	10491870001	Water	3	X	-01
2	MW19D-GW-091719	PS	9/17/2019 10:00	10491870002	Water	3	X	02
3	MW16D-GW-091719	PS	9/17/2019 11:15	10491870003	Water	3	X	03
4	MW18D-GW-091719	PS	9/17/2019 12:00	10491870004	Water	3	X	04
5	MW15D-GW-091719	PS	9/17/2019 13:25	10491870005	Water	3	X	05
6	MW4D-GW-091719	PS	9/17/2019 14:35	10491870006	Water	3	X	06
7	MW5D-GW-091719	PS	9/17/2019 15:45	10491870007	Water	3	X	07

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Kyle / Pace	9/18/19 1645	Hailey [illegible]	9/19/19 8:45	
2					
3					

Cooler Temperature on Receipt 0.1 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.3-.2 = 0.1
ASm

4638 0199 9508

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACETWA	SDG#:	1141085
Cooler Received/Opened On: 9/19/19	Temperature:	0.1
Received By: Hailey Melson		
Signature: Hailey Melson		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 16, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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CERTIFICATIONS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Pace Analytical National Certification IDs

Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Mold Certification #: LAB0152
Texas Certification #: T 104704245-17-14
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: VT2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

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SAMPLE SUMMARY

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10492090001	**TB04-091819**	Water	09/18/19 08:00	09/19/19 08:40
10492090002	**MW1D-GW-091819**	Water	09/18/19 09:05	09/19/19 08:40
10492090003	**MW2D-GW-091819**	Water	09/18/19 09:50	09/19/19 08:40
10492090004	**Stark-GW-091819SD**	Water	09/18/19 10:40	09/19/19 08:40
10492090005	**Stark-GW-091819MS**	Water	09/18/19 10:40	09/19/19 08:40
10492090006	**MW20D-GW-091819**	Water	09/18/19 13:45	09/19/19 08:40
10492090007	**MW20D-GW-091819B**	Water	09/18/19 13:45	09/19/19 08:40

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10492090001	**TB04-091819**	EPA 8260B	DS2	83	PASI-M
10492090002	**MW1D-GW-091819**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S2-F	KER	1	PASI-V
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10492090003	**MW2D-GW-091819**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S2-F	KER	1	PASI-V
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10492090004	**Stark-GW-091819SD**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S2-F	KER	1	PASI-V
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10492090005	**Stark-GW-091819MS**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S2-F	KER	1	PASI-V
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10492090006	**MW20D-GW-091819**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S2-F	KER	1	PASI-V
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V
10492090007	**MW20D-GW-091819B**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S2-F	KER	1	PASI-V
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10492090002	**MW1D-GW-091819**					
EPA 6010D	Barium, Dissolved	76.0	ug/L	10.0	10/01/19 12:12	
EPA 6010D	Cobalt, Dissolved	0.69J	ug/L	10.0	10/01/19 12:12	
EPA 6010D	Copper, Dissolved	1.2J	ug/L	10.0	10/01/19 12:12	
EPA 6010D	Molybdenum, Dissolved	7.0J	ug/L	15.0	10/01/19 12:12	
EPA 6010D	Vanadium, Dissolved	1.3J	ug/L	15.0	10/01/19 12:12	
EPA 6010D	Zinc, Dissolved	9.3J	ug/L	20.0	10/01/19 12:12	
SM 2320B	Alkalinity, Total as CaCO3	196	mg/L	5.0	09/26/19 10:02	
SM 2540C	Total Dissolved Solids	246	mg/L	10.0	09/24/19 16:15	
EPA 300.0	Chloride	1.8	mg/L	1.2	09/19/19 18:32	
EPA 300.0	Nitrate as N	0.14	mg/L	0.10	09/19/19 18:32	
EPA 300.0	Sulfate	3.7	mg/L	1.2	09/19/19 18:32	
EPA 353.2	Nitrogen, NO2 plus NO3	0.18	mg/L	0.10	09/26/19 10:39	
SM 5310C	Total Organic Carbon	68.5	mg/L	4.0	10/13/19 17:16	
10492090003	**MW2D-GW-091819**					
RSK-175	Methane	61.2	ug/L	10.0	09/25/19 15:08	
EPA 6010D	Barium, Dissolved	80.8	ug/L	10.0	10/01/19 12:14	
EPA 6010D	Cobalt, Dissolved	2.0J	ug/L	10.0	10/01/19 12:14	
EPA 6010D	Molybdenum, Dissolved	9.8J	ug/L	15.0	10/01/19 12:14	
EPA 6010D	Nickel, Dissolved	1.2J	ug/L	20.0	10/01/19 12:14	
EPA 6010D	Vanadium, Dissolved	1.4J	ug/L	15.0	10/01/19 12:14	
EPA 6010D	Zinc, Dissolved	7.9J	ug/L	20.0	10/01/19 12:14	
SM 2320B	Alkalinity, Total as CaCO3	153	mg/L	5.0	09/26/19 10:14	
SM 2540C	Total Dissolved Solids	206	mg/L	10.0	09/24/19 16:15	
EPA 300.0	Chloride	1.5	mg/L	1.2	09/19/19 19:04	
EPA 300.0	Nitrate as N	0.044J	mg/L	0.10	09/19/19 19:04	
EPA 300.0	Sulfate	3.8	mg/L	1.2	09/19/19 19:04	
EPA 410.4	Chemical Oxygen Demand	36.0J	mg/L	50.0	09/25/19 07:44	
SM 5310C	Total Organic Carbon	3.1	mg/L	1.0	10/11/19 22:04	
10492090004	**Stark-GW-091819SD**					
EPA 6010D	Barium, Dissolved	32.5	ug/L	10.0	10/01/19 12:15	
EPA 6010D	Beryllium, Dissolved	0.17J	ug/L	5.0	10/01/19 12:15	B
EPA 6010D	Cobalt, Dissolved	1.8J	ug/L	10.0	10/01/19 12:15	
EPA 6010D	Copper, Dissolved	150	ug/L	10.0	10/01/19 12:15	
EPA 6010D	Nickel, Dissolved	10.4J	ug/L	20.0	10/01/19 12:15	
EPA 6010D	Vanadium, Dissolved	4.2J	ug/L	15.0	10/01/19 12:15	
EPA 6010D	Zinc, Dissolved	24.7	ug/L	20.0	10/01/19 12:15	
SM 2320B	Alkalinity, Total as CaCO3	142	mg/L	5.0	09/26/19 10:19	
SM 2540C	Total Dissolved Solids	233	mg/L	10.0	09/25/19 12:44	
EPA 300.0	Chloride	1.3	mg/L	1.2	09/19/19 19:20	
EPA 300.0	Nitrate as N	1.1	mg/L	0.10	09/19/19 19:20	
EPA 300.0	Sulfate	14.4	mg/L	1.2	09/19/19 19:20	
EPA 353.2	Nitrogen, NO2 plus NO3	1.4	mg/L	0.10	09/26/19 10:41	
SM 5310C	Total Organic Carbon	0.47J	mg/L	1.0	10/11/19 22:17	
10492090005	**Stark-GW-091819MS**					
EPA 6010D	Barium, Dissolved	31.2	ug/L	10.0	10/01/19 12:17	
EPA 6010D	Cobalt, Dissolved	1.8J	ug/L	10.0	10/01/19 12:17	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10492090005	**Stark-GW-091819MS**					
EPA 6010D	Copper, Dissolved	119	ug/L	10.0	10/01/19 12:17	
EPA 6010D	Nickel, Dissolved	10.7J	ug/L	20.0	10/01/19 12:17	
EPA 6010D	Vanadium, Dissolved	4.0J	ug/L	15.0	10/01/19 12:17	
EPA 6010D	Zinc, Dissolved	21.7	ug/L	20.0	10/01/19 12:17	
SM 2320B	Alkalinity, Total as CaCO3	142	mg/L	5.0	09/26/19 10:23	
SM 2540C	Total Dissolved Solids	235	mg/L	10.0	09/25/19 12:44	
EPA 300.0	Chloride	1.3	mg/L	1.2	09/19/19 19:36	M1
EPA 300.0	Nitrate as N	1.1	mg/L	0.10	09/19/19 19:36	M1
EPA 300.0	Sulfate	14.4	mg/L	1.2	09/19/19 19:36	M1
EPA 353.2	Nitrogen, NO2 plus NO3	1.4	mg/L	0.10	09/26/19 10:42	
SM 5310C	Total Organic Carbon	0.89J	mg/L	1.0	10/11/19 23:08	
10492090006	**MW20D-GW-091819**					
EPA 6010D	Barium, Dissolved	18.0	ug/L	10.0	10/01/19 12:29	
EPA 6010D	Cobalt, Dissolved	1.0J	ug/L	10.0	10/01/19 12:29	
EPA 6010D	Thallium, Dissolved	6.4J	ug/L	20.0	10/01/19 12:29	
EPA 6010D	Vanadium, Dissolved	5.9J	ug/L	15.0	10/01/19 12:29	
EPA 6010D	Zinc, Dissolved	24.3	ug/L	20.0	10/01/19 12:29	
EPA 8260B	Carbon tetrachloride	25.5	ug/L	0.50	09/20/19 15:18	
SM 2320B	Alkalinity, Total as CaCO3	274	mg/L	5.0	09/26/19 10:36	
SM 2540C	Total Dissolved Solids	347	mg/L	10.0	09/25/19 12:44	
EPA 300.0	Chloride	5.6	mg/L	1.2	09/19/19 19:52	
EPA 300.0	Nitrate as N	1.1	mg/L	0.10	09/19/19 19:52	
EPA 300.0	Sulfate	7.3	mg/L	1.2	09/19/19 19:52	
EPA 353.2	Nitrogen, NO2 plus NO3	1.5	mg/L	0.10	09/26/19 10:43	
SM 5310C	Total Organic Carbon	0.99J	mg/L	1.0	10/12/19 00:13	
10492090007	**MW20D-GW-091819B**					
EPA 6010D	Barium, Dissolved	18.6	ug/L	10.0	10/01/19 12:30	
EPA 6010D	Cobalt, Dissolved	1.2J	ug/L	10.0	10/01/19 12:30	
EPA 6010D	Lead, Dissolved	2.1J	ug/L	10.0	10/01/19 12:30	
EPA 6010D	Vanadium, Dissolved	5.8J	ug/L	15.0	10/01/19 12:30	
EPA 6010D	Zinc, Dissolved	7.0J	ug/L	20.0	10/01/19 12:30	
EPA 8260B	Carbon tetrachloride	27.7	ug/L	0.50	09/20/19 15:42	
SM 2320B	Alkalinity, Total as CaCO3	269	mg/L	5.0	09/26/19 10:40	
SM 2540C	Total Dissolved Solids	343	mg/L	10.0	09/25/19 12:44	
EPA 300.0	Chloride	5.6	mg/L	1.2	09/19/19 20:08	
EPA 300.0	Nitrate as N	1.1	mg/L	0.10	09/19/19 20:08	
EPA 300.0	Sulfate	7.2	mg/L	1.2	09/19/19 20:08	
EPA 353.2	Nitrogen, NO2 plus NO3	1.4	mg/L	0.10	09/26/19 10:44	
EPA 410.4	Chemical Oxygen Demand	27.0J	mg/L	50.0	09/25/19 07:45	
SM 5310C	Total Organic Carbon	0.96J	mg/L	1.0	10/12/19 00:26	

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **RSK-175**
Description: VOA (GC) RSK175
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for RSK-175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 633710

B: Analyte was detected in the associated method blank.
- BLANK for HBN 633710 [MPRP/970 (Lab ID: 3416481)
  - Beryllium, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
7 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 633558

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10492090005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3415553)
  - 2,2,4-Trimethylpentane
  - Dibromomethane

Additional Comments:

Analyte Comments:

QC Batch: 633558

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3415551)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 16, 2019

Analyte Comments:

QC Batch: 633558

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- LCS (Lab ID: 3415552)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3415553)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3415554)
  - 1,2-Dichloroethene (Total)
- MW1D-GW-091819 (Lab ID: 10492090002)
  - 1,2-Dichloroethene (Total)
- MW20D-GW-091819 (Lab ID: 10492090006)
  - 1,2-Dichloroethene (Total)
- MW20D-GW-091819B (Lab ID: 10492090007)
  - 1,2-Dichloroethene (Total)
- MW2D-GW-091819 (Lab ID: 10492090003)
  - 1,2-Dichloroethene (Total)
- Stark-GW-091819MS (Lab ID: 10492090005)
  - 1,2-Dichloroethene (Total)
- Stark-GW-091819SD (Lab ID: 10492090004)
  - 1,2-Dichloroethene (Total)
- TB04-091819 (Lab ID: 10492090001)
  - 1,2-Dichloroethene (Total)

- BLANK (Lab ID: 3415551)
  - Dichlorofluoromethane
- LCS (Lab ID: 3415552)
  - Dichlorofluoromethane
- MS (Lab ID: 3415553)
  - Dichlorofluoromethane
- MSD (Lab ID: 3415554)
  - Dichlorofluoromethane
- MW1D-GW-091819 (Lab ID: 10492090002)
  - Dichlorofluoromethane
- MW20D-GW-091819 (Lab ID: 10492090006)
  - Dichlorofluoromethane
- MW20D-GW-091819B (Lab ID: 10492090007)
  - Dichlorofluoromethane
- MW2D-GW-091819 (Lab ID: 10492090003)
  - Dichlorofluoromethane
- Stark-GW-091819MS (Lab ID: 10492090005)
  - Dichlorofluoromethane
- Stark-GW-091819SD (Lab ID: 10492090004)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 16, 2019

Analyte Comments:

QC Batch: 633558

- TB04-091819 (Lab ID: 10492090001)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **SM 4500-S2-F**
Description: 4500S2F Sulfide Water
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for SM 4500-S2-F. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 633434

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491876001,10492090005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3414857)
  - Chloride
  - Nitrate as N
- MS (Lab ID: 3414859)
  - Chloride
  - Nitrate as N
  - Sulfate
- MSD (Lab ID: 3414858)
  - Chloride
  - Nitrate as N
- MSD (Lab ID: 3414860)
  - Chloride
  - Nitrate as N
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 634559

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655010,10491870001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 3420090)
  - Nitrogen, NO2 plus NO3

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: October 16, 2019

General Information:
6 samples were analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: TB04-091819 **Lab ID: 10492090001** Collected: 09/18/19 08:00 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:19	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/20/19 13:19	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:19	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/20/19 13:19	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 13:19	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:19	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:19	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:19	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 13:19	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/20/19 13:19	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:19	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:19	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/20/19 13:19	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/20/19 13:19	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 13:19	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 13:19	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/20/19 13:19	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 13:19	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 13:19	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:19	541-73-1	
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/20/19 13:19	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:19	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/20/19 13:19	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/20/19 13:19	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/20/19 13:19	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/20/19 13:19	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:19	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/20/19 13:19	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/20/19 13:19	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/20/19 13:19	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/20/19 13:19	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/20/19 13:19	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/20/19 13:19	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 13:19	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 13:19	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/20/19 13:19	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/20/19 13:19	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/20/19 13:19	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/20/19 13:19	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/20/19 13:19	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/20/19 13:19	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:19	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/20/19 13:19	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/20/19 13:19	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 13:19	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/20/19 13:19	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: TB04-091819 **Lab ID: 10492090001** Collected: 09/18/19 08:00 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/20/19 13:19	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/20/19 13:19	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/20/19 13:19	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/20/19 13:19	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/20/19 13:19	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 13:19	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 13:19	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/20/19 13:19	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:19	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/20/19 13:19	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/20/19 13:19	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/20/19 13:19	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:19	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/20/19 13:19	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/20/19 13:19	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/20/19 13:19	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/20/19 13:19	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/20/19 13:19	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/20/19 13:19	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/20/19 13:19	1330-20-7	
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 13:19	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:19	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 13:19	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/20/19 13:19	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 13:19	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:19	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 13:19	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 13:19	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/20/19 13:19	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/20/19 13:19	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 13:19	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 13:19	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/20/19 13:19	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/20/19 13:19	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		09/20/19 13:19	17060-07-0	
Toluene-d8 (S)	95	%.	75-125		1		09/20/19 13:19	2037-26-5	
4-Bromofluorobenzene (S)	94	%.	75-125		1		09/20/19 13:19	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW1D-GW-091819 **Lab ID: 10492090002** Collected: 09/18/19 09:05 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/25/19 15:06	09/25/19 15:06	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/25/19 15:06	09/25/19 15:06	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/25/19 15:06	09/25/19 15:06	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:12	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:12	7440-38-2	
Barium, Dissolved	**76.0**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:12	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:12	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:12	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:12	7440-47-3	
Cobalt, Dissolved	**0.69J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:12	7440-48-4	
Copper, Dissolved	**1.2J**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:12	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:12	7439-92-1	
Molybdenum, Dissolved	**7.0J**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:12	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:12	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:12	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:12	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:12	7440-28-0	
Vanadium, Dissolved	**1.3J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:12	7440-62-2	
Zinc, Dissolved	**9.3J**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:12	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:38	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:07	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/20/19 14:07	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:07	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/20/19 14:07	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 14:07	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:07	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:07	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:07	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 14:07	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/20/19 14:07	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:07	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:07	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/20/19 14:07	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/20/19 14:07	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 14:07	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 14:07	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/20/19 14:07	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 14:07	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 14:07	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:07	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW1D-GW-091819 **Lab ID: 10492090002** Collected: 09/18/19 09:05 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/20/19 14:07	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:07	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/20/19 14:07	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/20/19 14:07	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/20/19 14:07	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/20/19 14:07	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:07	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/20/19 14:07	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/20/19 14:07	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/20/19 14:07	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/20/19 14:07	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/20/19 14:07	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/20/19 14:07	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 14:07	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 14:07	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/20/19 14:07	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/20/19 14:07	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/20/19 14:07	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/20/19 14:07	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/20/19 14:07	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/20/19 14:07	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:07	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/20/19 14:07	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/20/19 14:07	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 14:07	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/20/19 14:07	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/20/19 14:07	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/20/19 14:07	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/20/19 14:07	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/20/19 14:07	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/20/19 14:07	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 14:07	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 14:07	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/20/19 14:07	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:07	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/20/19 14:07	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/20/19 14:07	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/20/19 14:07	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:07	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/20/19 14:07	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/20/19 14:07	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/20/19 14:07	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/20/19 14:07	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/20/19 14:07	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/20/19 14:07	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/20/19 14:07	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW1D-GW-091819 **Lab ID: 10492090002** Collected: 09/18/19 09:05 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:07	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:07	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 14:07	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/20/19 14:07	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 14:07	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:07	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:07	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:07	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/20/19 14:07	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/20/19 14:07	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:07	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 14:07	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/20/19 14:07	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/20/19 14:07	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-136		1		09/20/19 14:07	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/20/19 14:07	2037-26-5	
4-Bromofluorobenzene (S)	91	%.	75-125		1		09/20/19 14:07	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**196**	mg/L	5.0	2.0	1		09/26/19 10:02		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**246**	mg/L	10.0	5.0	1		09/24/19 16:15		
4500S2F Sulfide Water	Analytical Method: SM 4500-S2-F								
Sulfide	**<2.0**	mg/L	2.0	2.0	1		09/25/19 09:37		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.8**	mg/L	1.2	0.12	1		09/19/19 18:32	16887-00-6	
Nitrate as N	**0.14**	mg/L	0.10	0.012	1		09/19/19 18:32	14797-55-8	
Sulfate	**3.7**	mg/L	1.2	0.28	1		09/19/19 18:32	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.18**	mg/L	0.10	0.018	1		09/26/19 10:39		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:44		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**68.5**	mg/L	4.0	1.6	4		10/13/19 17:16	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW2D-GW-091819 **Lab ID: 10492090003** Collected: 09/18/19 09:50 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**61.2**	ug/L	10.0	2.91	1	09/25/19 15:08	09/25/19 15:08	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/25/19 15:08	09/25/19 15:08	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/25/19 15:08	09/25/19 15:08	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:14	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:14	7440-38-2	
Barium, Dissolved	**80.8**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:14	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:14	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:14	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:14	7440-47-3	
Cobalt, Dissolved	**2.0J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:14	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:14	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:14	7439-92-1	
Molybdenum, Dissolved	**9.8J**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:14	7439-98-7	
Nickel, Dissolved	**1.2J**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:14	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:14	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:14	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:14	7440-28-0	
Vanadium, Dissolved	**1.4J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:14	7440-62-2	
Zinc, Dissolved	**7.9J**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:14	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:40	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:31	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/20/19 14:31	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:31	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/20/19 14:31	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 14:31	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:31	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:31	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:31	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 14:31	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/20/19 14:31	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:31	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:31	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/20/19 14:31	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/20/19 14:31	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 14:31	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 14:31	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/20/19 14:31	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 14:31	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 14:31	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:31	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW2D-GW-091819 **Lab ID: 10492090003** Collected: 09/18/19 09:50 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/20/19 14:31	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:31	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/20/19 14:31	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/20/19 14:31	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/20/19 14:31	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/20/19 14:31	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:31	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/20/19 14:31	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/20/19 14:31	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/20/19 14:31	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/20/19 14:31	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/20/19 14:31	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/20/19 14:31	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 14:31	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 14:31	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/20/19 14:31	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/20/19 14:31	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/20/19 14:31	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/20/19 14:31	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/20/19 14:31	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/20/19 14:31	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:31	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/20/19 14:31	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/20/19 14:31	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 14:31	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/20/19 14:31	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/20/19 14:31	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/20/19 14:31	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/20/19 14:31	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/20/19 14:31	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/20/19 14:31	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 14:31	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 14:31	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/20/19 14:31	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:31	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/20/19 14:31	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/20/19 14:31	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/20/19 14:31	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:31	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/20/19 14:31	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/20/19 14:31	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/20/19 14:31	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/20/19 14:31	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/20/19 14:31	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/20/19 14:31	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/20/19 14:31	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW2D-GW-091819 **Lab ID: 10492090003** Collected: 09/18/19 09:50 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:31	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:31	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 14:31	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/20/19 14:31	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 14:31	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:31	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:31	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:31	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/20/19 14:31	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/20/19 14:31	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:31	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 14:31	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/20/19 14:31	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/20/19 14:31	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-136		1		09/20/19 14:31	17060-07-0	
Toluene-d8 (S)	96	%.	75-125		1		09/20/19 14:31	2037-26-5	
4-Bromofluorobenzene (S)	93	%.	75-125		1		09/20/19 14:31	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**153**	mg/L	5.0	2.0	1		09/26/19 10:14		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**206**	mg/L	10.0	5.0	1		09/24/19 16:15		
4500S2F Sulfide Water	Analytical Method: SM 4500-S2-F								
Sulfide	**<2.0**	mg/L	2.0	2.0	1		09/25/19 09:15		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.5**	mg/L	1.2	0.12	1		09/19/19 19:04	16887-00-6	
Nitrate as N	**0.044J**	mg/L	0.10	0.012	1		09/19/19 19:04	14797-55-8	
Sulfate	**3.8**	mg/L	1.2	0.28	1		09/19/19 19:04	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**<0.018**	mg/L	0.10	0.018	1		09/26/19 10:40		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**36.0J**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:44		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**3.1**	mg/L	1.0	0.39	1		10/11/19 22:04	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: Stark-GW-091819SD **Lab ID: 10492090004** Collected: 09/18/19 10:40 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/25/19 15:10	09/25/19 15:10	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/25/19 15:10	09/25/19 15:10	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/25/19 15:10	09/25/19 15:10	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:15	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:15	7440-38-2	
Barium, Dissolved	**32.5**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:15	7440-39-3	
Beryllium, Dissolved	**0.17J**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:15	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:15	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:15	7440-47-3	
Cobalt, Dissolved	**1.8J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:15	7440-48-4	
Copper, Dissolved	**150**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:15	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:15	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:15	7439-98-7	
Nickel, Dissolved	**10.4J**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:15	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:15	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:15	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:15	7440-28-0	
Vanadium, Dissolved	**4.2J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:15	7440-62-2	
Zinc, Dissolved	**24.7**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:15	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:43	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:55	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/20/19 14:55	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:55	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/20/19 14:55	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 14:55	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:55	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:55	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:55	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 14:55	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/20/19 14:55	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:55	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:55	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/20/19 14:55	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/20/19 14:55	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 14:55	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 14:55	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/20/19 14:55	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 14:55	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 14:55	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:55	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: Stark-GW-091819SD **Lab ID: 10492090004** Collected: 09/18/19 10:40 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/20/19 14:55	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:55	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/20/19 14:55	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/20/19 14:55	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/20/19 14:55	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/20/19 14:55	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:55	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/20/19 14:55	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/20/19 14:55	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/20/19 14:55	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/20/19 14:55	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/20/19 14:55	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/20/19 14:55	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 14:55	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 14:55	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/20/19 14:55	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/20/19 14:55	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/20/19 14:55	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/20/19 14:55	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/20/19 14:55	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/20/19 14:55	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:55	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/20/19 14:55	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/20/19 14:55	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 14:55	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/20/19 14:55	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/20/19 14:55	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/20/19 14:55	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/20/19 14:55	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/20/19 14:55	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/20/19 14:55	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 14:55	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 14:55	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/20/19 14:55	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:55	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/20/19 14:55	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/20/19 14:55	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/20/19 14:55	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 14:55	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/20/19 14:55	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/20/19 14:55	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/20/19 14:55	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/20/19 14:55	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/20/19 14:55	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/20/19 14:55	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/20/19 14:55	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: Stark-GW-091819SD **Lab ID: 10492090004** Collected: 09/18/19 10:40 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:55	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 14:55	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 14:55	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/20/19 14:55	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 14:55	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 14:55	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:55	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:55	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/20/19 14:55	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/20/19 14:55	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 14:55	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 14:55	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/20/19 14:55	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/20/19 14:55	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		09/20/19 14:55	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		09/20/19 14:55	2037-26-5	
4-Bromofluorobenzene (S)	91	%.	75-125		1		09/20/19 14:55	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**142**	mg/L	5.0	2.0	1		09/26/19 10:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**233**	mg/L	10.0	5.0	1		09/25/19 12:44		
4500S2F Sulfide Water	Analytical Method: SM 4500-S2-F								
Sulfide	**<2.0**	mg/L	2.0	2.0	1		09/25/19 09:20		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.3**	mg/L	1.2	0.12	1		09/19/19 19:20	16887-00-6	
Nitrate as N	**1.1**	mg/L	0.10	0.012	1		09/19/19 19:20	14797-55-8	
Sulfate	**14.4**	mg/L	1.2	0.28	1		09/19/19 19:20	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.4**	mg/L	0.10	0.018	1		09/26/19 10:41		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:44		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.47J**	mg/L	1.0	0.39	1		10/11/19 22:17	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: Stark-GW-091819MS **Lab ID: 10492090005** Collected: 09/18/19 10:40 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/25/19 18:24	09/25/19 18:24	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/25/19 18:24	09/25/19 18:24	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/25/19 18:24	09/25/19 18:24	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:17	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:17	7440-38-2	
Barium, Dissolved	**31.2**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:17	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:17	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:17	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:17	7440-47-3	
Cobalt, Dissolved	**1.8J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:17	7440-48-4	
Copper, Dissolved	**119**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:17	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:17	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:17	7439-98-7	
Nickel, Dissolved	**10.7J**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:17	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:17	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:17	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:17	7440-28-0	
Vanadium, Dissolved	**4.0J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:17	7440-62-2	
Zinc, Dissolved	**21.7**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:17	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:45	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:43	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/20/19 13:43	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:43	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/20/19 13:43	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 13:43	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:43	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:43	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:43	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 13:43	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/20/19 13:43	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:43	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:43	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/20/19 13:43	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/20/19 13:43	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 13:43	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 13:43	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/20/19 13:43	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 13:43	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 13:43	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:43	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: Stark-GW-091819MS **Lab ID: 10492090005** Collected: 09/18/19 10:40 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/20/19 13:43	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:43	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/20/19 13:43	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/20/19 13:43	540-84-1	M1
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/20/19 13:43	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/20/19 13:43	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:43	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/20/19 13:43	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/20/19 13:43	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/20/19 13:43	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/20/19 13:43	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/20/19 13:43	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/20/19 13:43	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 13:43	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 13:43	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/20/19 13:43	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/20/19 13:43	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/20/19 13:43	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/20/19 13:43	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/20/19 13:43	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/20/19 13:43	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:43	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/20/19 13:43	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/20/19 13:43	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 13:43	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/20/19 13:43	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/20/19 13:43	74-95-3	M1
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/20/19 13:43	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/20/19 13:43	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/20/19 13:43	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/20/19 13:43	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 13:43	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 13:43	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/20/19 13:43	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:43	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/20/19 13:43	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/20/19 13:43	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/20/19 13:43	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 13:43	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/20/19 13:43	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/20/19 13:43	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/20/19 13:43	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/20/19 13:43	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/20/19 13:43	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/20/19 13:43	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/20/19 13:43	1330-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: Stark-GW-091819MS **Lab ID: 10492090005** Collected: 09/18/19 10:40 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 13:43	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 13:43	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 13:43	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/20/19 13:43	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 13:43	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 13:43	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 13:43	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 13:43	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/20/19 13:43	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/20/19 13:43	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 13:43	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 13:43	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/20/19 13:43	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/20/19 13:43	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	75-136		1		09/20/19 13:43	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/20/19 13:43	2037-26-5	
4-Bromofluorobenzene (S)	94	%.	75-125		1		09/20/19 13:43	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**142**	mg/L	5.0	2.0	1		09/26/19 10:23		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**235**	mg/L	10.0	5.0	1		09/25/19 12:44		
4500S2F Sulfide Water	Analytical Method: SM 4500-S2-F								
Sulfide	**<2.0**	mg/L	2.0	2.0	1		09/25/19 09:01		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.3**	mg/L	1.2	0.12	1		09/19/19 19:36	16887-00-6	M1
Nitrate as N	**1.1**	mg/L	0.10	0.012	1		09/19/19 19:36	14797-55-8	M1
Sulfate	**14.4**	mg/L	1.2	0.28	1		09/19/19 19:36	14808-79-8	M1
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.4**	mg/L	0.10	0.018	1		09/26/19 10:42		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:45		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.89J**	mg/L	1.0	0.39	1		10/11/19 23:08	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW20D-GW-091819 **Lab ID: 10492090006** Collected: 09/18/19 13:45 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/25/19 15:17	09/25/19 15:17	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/25/19 15:17	09/25/19 15:17	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/25/19 15:17	09/25/19 15:17	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:29	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:29	7440-38-2	
Barium, Dissolved	**18.0**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:29	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:29	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:29	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:29	7440-47-3	
Cobalt, Dissolved	**1.0J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:29	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:29	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:29	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:29	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:29	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:29	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:29	7440-22-4	
Thallium, Dissolved	**6.4J**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:29	7440-28-0	
Vanadium, Dissolved	**5.9J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:29	7440-62-2	
Zinc, Dissolved	**24.3**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:29	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:52	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:18	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/20/19 15:18	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:18	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/20/19 15:18	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 15:18	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:18	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:18	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:18	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 15:18	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/20/19 15:18	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:18	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:18	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/20/19 15:18	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/20/19 15:18	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 15:18	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 15:18	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/20/19 15:18	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 15:18	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 15:18	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:18	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW20D-GW-091819 **Lab ID: 10492090006** Collected: 09/18/19 13:45 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/20/19 15:18	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:18	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/20/19 15:18	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/20/19 15:18	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/20/19 15:18	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/20/19 15:18	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:18	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/20/19 15:18	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/20/19 15:18	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/20/19 15:18	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/20/19 15:18	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/20/19 15:18	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/20/19 15:18	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 15:18	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 15:18	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/20/19 15:18	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/20/19 15:18	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/20/19 15:18	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/20/19 15:18	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/20/19 15:18	75-15-0	
Carbon tetrachloride	**25.5**	ug/L	0.50	0.19	1		09/20/19 15:18	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:18	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/20/19 15:18	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/20/19 15:18	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 15:18	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/20/19 15:18	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/20/19 15:18	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/20/19 15:18	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/20/19 15:18	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/20/19 15:18	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/20/19 15:18	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 15:18	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 15:18	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/20/19 15:18	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:18	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/20/19 15:18	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/20/19 15:18	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/20/19 15:18	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:18	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/20/19 15:18	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/20/19 15:18	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/20/19 15:18	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/20/19 15:18	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/20/19 15:18	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/20/19 15:18	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/20/19 15:18	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW20D-GW-091819 **Lab ID: 10492090006** Collected: 09/18/19 13:45 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 15:18	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:18	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 15:18	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/20/19 15:18	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 15:18	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:18	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 15:18	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 15:18	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/20/19 15:18	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/20/19 15:18	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 15:18	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 15:18	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/20/19 15:18	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/20/19 15:18	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		09/20/19 15:18	17060-07-0	
Toluene-d8 (S)	96	%.	75-125		1		09/20/19 15:18	2037-26-5	
4-Bromofluorobenzene (S)	93	%.	75-125		1		09/20/19 15:18	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**274**	mg/L	5.0	2.0	1		09/26/19 10:36		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**347**	mg/L	10.0	5.0	1		09/25/19 12:44		
4500S2F Sulfide Water	Analytical Method: SM 4500-S2-F								
Sulfide	**<2.0**	mg/L	2.0	2.0	1		09/25/19 09:26		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**5.6**	mg/L	1.2	0.12	1		09/19/19 19:52	16887-00-6	
Nitrate as N	**1.1**	mg/L	0.10	0.012	1		09/19/19 19:52	14797-55-8	
Sulfate	**7.3**	mg/L	1.2	0.28	1		09/19/19 19:52	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.5**	mg/L	0.10	0.018	1		09/26/19 10:43		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:45		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.99J**	mg/L	1.0	0.39	1		10/12/19 00:13	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW20D-GW-091819B **Lab ID: 10492090007** Collected: 09/18/19 13:45 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/25/19 15:19	09/25/19 15:19	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/25/19 15:19	09/25/19 15:19	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/25/19 15:19	09/25/19 15:19	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:30	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:30	7440-38-2	
Barium, Dissolved	**18.6**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:30	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:30	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:30	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:30	7440-47-3	
Cobalt, Dissolved	**1.2J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:30	7440-48-4	
Copper, Dissolved	**<1.2**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:30	7440-50-8	
Lead, Dissolved	**2.1J**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:30	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:30	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:30	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:30	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:30	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:30	7440-28-0	
Vanadium, Dissolved	**5.8J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:30	7440-62-2	
Zinc, Dissolved	**7.0J**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:30	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 13:59	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:42	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/20/19 15:42	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:42	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/20/19 15:42	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 15:42	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:42	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:42	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:42	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 15:42	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/20/19 15:42	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:42	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:42	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/20/19 15:42	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/20/19 15:42	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 15:42	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 15:42	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/20/19 15:42	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 15:42	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 15:42	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:42	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW20D-GW-091819B **Lab ID: 10492090007** Collected: 09/18/19 13:45 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/20/19 15:42	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:42	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/20/19 15:42	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/20/19 15:42	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/20/19 15:42	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/20/19 15:42	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:42	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/20/19 15:42	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/20/19 15:42	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/20/19 15:42	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/20/19 15:42	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/20/19 15:42	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/20/19 15:42	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 15:42	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 15:42	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/20/19 15:42	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/20/19 15:42	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/20/19 15:42	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/20/19 15:42	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/20/19 15:42	75-15-0	
Carbon tetrachloride	**27.7**	ug/L	0.50	0.19	1		09/20/19 15:42	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:42	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/20/19 15:42	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/20/19 15:42	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 15:42	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/20/19 15:42	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/20/19 15:42	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/20/19 15:42	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/20/19 15:42	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/20/19 15:42	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/20/19 15:42	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 15:42	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 15:42	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/20/19 15:42	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:42	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/20/19 15:42	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/20/19 15:42	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/20/19 15:42	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 15:42	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/20/19 15:42	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/20/19 15:42	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/20/19 15:42	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/20/19 15:42	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/20/19 15:42	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/20/19 15:42	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/20/19 15:42	1330-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Sample: MW20D-GW-091819B **Lab ID: 10492090007** Collected: 09/18/19 13:45 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 15:42	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 15:42	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 15:42	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/20/19 15:42	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 15:42	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 15:42	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 15:42	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 15:42	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/20/19 15:42	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/20/19 15:42	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 15:42	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 15:42	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/20/19 15:42	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/20/19 15:42	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-136		1		09/20/19 15:42	17060-07-0	
Toluene-d8 (S)	95	%.	75-125		1		09/20/19 15:42	2037-26-5	
4-Bromofluorobenzene (S)	93	%.	75-125		1		09/20/19 15:42	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**269**	mg/L	5.0	2.0	1		09/26/19 10:40		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**343**	mg/L	10.0	5.0	1		09/25/19 12:44		
4500S2F Sulfide Water	Analytical Method: SM 4500-S2-F								
Sulfide	**<2.0**	mg/L	2.0	2.0	1		09/25/19 09:31		
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**5.6**	mg/L	1.2	0.12	1		09/19/19 20:08	16887-00-6	
Nitrate as N	**1.1**	mg/L	0.10	0.012	1		09/19/19 20:08	14797-55-8	
Sulfate	**7.2**	mg/L	1.2	0.28	1		09/19/19 20:08	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.4**	mg/L	0.10	0.018	1		09/26/19 10:44		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**27.0J**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:45		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.96J**	mg/L	1.0	0.39	1		10/12/19 00:26	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 1351455 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10492090005

METHOD BLANK: R3454559-1 Matrix: Water
Associated Lab Samples: 10492090005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/25/19 15:34	
Ethane	ug/L	<4.07	13.0	4.07	09/25/19 15:34	
Ethene	ug/L	<4.26	13.0	4.26	09/25/19 15:34	

LABORATORY CONTROL SAMPLE & LCSD: R3454559-4 R3454559-5

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	67.9	67.9	100	100	85.0-115	0.0513	20	
Ethane	ug/L	129	113	114	87.5	88.3	85.0-115	0.869	20	
Ethene	ug/L	127	112	113	88.4	88.9	85.0-115	0.569	20	

SAMPLE DUPLICATE: R3454559-2

Parameter	Units	L1141735-29 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	119	116	2.75	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

SAMPLE DUPLICATE: R3454559-3

Parameter	Units	10492090005 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 1351457 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090006, 10492090007

METHOD BLANK: R3454500-1 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/25/19 13:38	
Ethane	ug/L	<4.07	13.0	4.07	09/25/19 13:38	
Ethene	ug/L	<4.26	13.0	4.26	09/25/19 13:38	

LABORATORY CONTROL SAMPLE & LCSD: R3454500-4 R3454500-5

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	74.6	77.5	110	114	85.0-115	3.88	20	
Ethane	ug/L	129	122	127	94.6	98.4	85.0-115	3.93	20	
Ethene	ug/L	127	121	126	95.0	99.6	85.0-115	4.69	20	

SAMPLE DUPLICATE: R3454500-2

Parameter	Units	L1142312-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

SAMPLE DUPLICATE: R3454500-3

Parameter	Units	10492090007 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 633731 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

METHOD BLANK: 3416567 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	09/27/19 13:13	

LABORATORY CONTROL SAMPLE: 3416568

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.3	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416569 3416570

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.1	5.2	103	104	80-120	1	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 633710 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

METHOD BLANK: 3416481 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	10/01/19 11:54	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	10/01/19 11:54	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	10/01/19 11:54	
Beryllium, Dissolved	ug/L	0.17J	5.0	0.12	10/01/19 11:54	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	10/01/19 11:54	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	10/01/19 11:54	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	10/01/19 11:54	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	10/01/19 11:54	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	10/01/19 11:54	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	10/01/19 11:54	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	10/01/19 11:54	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	10/01/19 11:54	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	10/01/19 11:54	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	10/01/19 11:54	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	10/01/19 11:54	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	10/01/19 11:54	

LABORATORY CONTROL SAMPLE: 3416482

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	998	100	80-120	
Arsenic, Dissolved	ug/L	1000	1040	104	80-120	
Barium, Dissolved	ug/L	1000	1040	104	80-120	
Beryllium, Dissolved	ug/L	1000	1060	106	80-120	
Cadmium, Dissolved	ug/L	1000	1050	105	80-120	
Chromium, Dissolved	ug/L	1000	1040	104	80-120	
Cobalt, Dissolved	ug/L	1000	1030	103	80-120	
Copper, Dissolved	ug/L	1000	1010	101	80-120	
Lead, Dissolved	ug/L	1000	1040	104	80-120	
Molybdenum, Dissolved	ug/L	1000	1010	101	80-120	
Nickel, Dissolved	ug/L	1000	1040	104	80-120	
Selenium, Dissolved	ug/L	1000	1060	106	80-120	
Silver, Dissolved	ug/L	500	523	105	80-120	
Thallium, Dissolved	ug/L	1000	1020	102	80-120	
Vanadium, Dissolved	ug/L	1000	1030	103	80-120	
Zinc, Dissolved	ug/L	1000	1060	106	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416483 3416484

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	1060	1060	106	106	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1090	1100	109	110	75-125	1	20	
Barium, Dissolved	ug/L	31.2	1000	1000	1120	1120	108	109	75-125	1	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	1110	1110	111	111	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1080	1090	108	109	75-125	0	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1080	1090	108	109	75-125	0	20	
Cobalt, Dissolved	ug/L	1.8J	1000	1000	1060	1060	106	106	75-125	1	20	
Copper, Dissolved	ug/L	119	1000	1000	1170	1180	105	106	75-125	0	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1070	1080	107	108	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	1070	1070	107	107	75-125	0	20	
Nickel, Dissolved	ug/L	10.7J	1000	1000	1070	1080	106	106	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1100	1110	110	111	75-125	0	20	
Silver, Dissolved	ug/L	<0.40	500	500	547	549	109	110	75-125	0	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	1040	1050	104	104	75-125	0	20	
Vanadium, Dissolved	ug/L	4.0J	1000	1000	1080	1090	108	108	75-125	1	20	
Zinc, Dissolved	ug/L	21.7	1000	1000	1100	1110	108	108	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 633558 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10492090001, 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

METHOD BLANK: 3415551 Matrix: Water
Associated Lab Samples: 10492090001, 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/20/19 12:08	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/20/19 12:08	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/20/19 12:08	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	09/20/19 12:08	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/20/19 12:08	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	09/20/19 12:08	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/20/19 12:08	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/20/19 12:08	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	09/20/19 12:08	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/20/19 12:08	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/20/19 12:08	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/20/19 12:08	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/20/19 12:08	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/20/19 12:08	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/20/19 12:08	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/20/19 12:08	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/20/19 12:08	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/20/19 12:08	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/20/19 12:08	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/20/19 12:08	
Acetone	ug/L	<9.2	20.0	9.2	09/20/19 12:08	
Acrolein	ug/L	<1.2	10.0	1.2	09/20/19 12:08	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/20/19 12:08	
Benzene	ug/L	<0.10	0.50	0.10	09/20/19 12:08	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/20/19 12:08	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/20/19 12:08	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/20/19 12:08	
Bromoform	ug/L	<0.80	4.0	0.80	09/20/19 12:08	
Bromomethane	ug/L	<1.8	4.0	1.8	09/20/19 12:08	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/20/19 12:08	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/20/19 12:08	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

METHOD BLANK: 3415551 Matrix: Water
Associated Lab Samples: 10492090001, 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
Chloroethane	ug/L	<0.49	1.0	0.49	09/20/19 12:08	
Chloroform	ug/L	<0.45	1.0	0.45	09/20/19 12:08	
Chloromethane	ug/L	<0.16	4.0	0.16	09/20/19 12:08	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/20/19 12:08	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	09/20/19 12:08	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/20/19 12:08	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/20/19 12:08	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/20/19 12:08	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/20/19 12:08	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/20/19 12:08	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/20/19 12:08	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/20/19 12:08	
Isopropylbenzene (Cumene)	ug/L	<0.18	1.0	0.18	09/20/19 12:08	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/20/19 12:08	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/20/19 12:08	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/20/19 12:08	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/20/19 12:08	
Naphthalene	ug/L	<0.48	1.0	0.48	09/20/19 12:08	
o-Xylene	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/20/19 12:08	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/20/19 12:08	
Styrene	ug/L	<0.19	1.0	0.19	09/20/19 12:08	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/20/19 12:08	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/20/19 12:08	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/20/19 12:08	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/20/19 12:08	
Toluene	ug/L	<0.083	0.50	0.083	09/20/19 12:08	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/20/19 12:08	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	09/20/19 12:08	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/20/19 12:08	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/20/19 12:08	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/20/19 12:08	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/20/19 12:08	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/20/19 12:08	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/20/19 12:08	
1,2-Dichloroethane-d4 (S)	%.	97	75-136		09/20/19 12:08	
4-Bromofluorobenzene (S)	%.	93	75-125		09/20/19 12:08	
Toluene-d8 (S)	%.	98	75-125		09/20/19 12:08	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

LABORATORY CONTROL SAMPLE: 3415552

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.1	95	68-141	
1,1,1-Trichloroethane	ug/L	20	19.7	99	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	97	73-125	
1,1,2-Trichloroethane	ug/L	20	19.9	100	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.7	99	69-132	
1,1-Dichloroethane	ug/L	20	19.0	95	73-125	
1,1-Dichloroethene	ug/L	20	18.8	94	71-126	
1,1-Dichloropropene	ug/L	20	19.0	95	73-126	
1,2,3-Trichlorobenzene	ug/L	20	17.9	90	72-126	
1,2,3-Trichloropropane	ug/L	20	19.0	95	75-126	
1,2,4-Trichlorobenzene	ug/L	20	17.2	86	71-134	
1,2,4-Trimethylbenzene	ug/L	20	18.6	93	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	48.8	98	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	19.4	97	75-129	
1,2-Dichlorobenzene	ug/L	20	18.4	92	75-129	
1,2-Dichloroethane	ug/L	20	19.3	97	75-125	
1,2-Dichloroethene (Total)	ug/L	40	37.5	94	74-125	N2
1,2-Dichloropropane	ug/L	20	18.9	94	75-125	
1,3,5-Trimethylbenzene	ug/L	20	18.2	91	75-127	
1,3-Dichlorobenzene	ug/L	20	18.8	94	75-126	
1,3-Dichloropropane	ug/L	20	18.6	93	75-125	
1,4-Dichlorobenzene	ug/L	20	18.1	90	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	403	101	72-129	
2,2,4-Trimethylpentane	ug/L	20	19.0	95	72-128	
2,2-Dichloropropane	ug/L	20	18.7	93	65-138	
2-Butanone (MEK)	ug/L	100	115	115	59-144	
2-Chlorotoluene	ug/L	20	17.6	88	75-127	
2-Hexanone	ug/L	100	104	104	73-134	
4-Chlorotoluene	ug/L	20	17.9	90	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	62-141	
Acetone	ug/L	100	116	116	60-137	
Acrolein	ug/L	200	229	115	60-141	
Acrylonitrile	ug/L	200	193	96	75-129	
Benzene	ug/L	20	18.9	95	73-125	
Bromobenzene	ug/L	20	18.3	92	73-125	
Bromochloromethane	ug/L	20	20.6	103	75-135	
Bromodichloromethane	ug/L	20	18.5	92	75-125	
Bromoform	ug/L	20	19.7	99	67-136	
Bromomethane	ug/L	20	16.3	81	30-150	
Carbon disulfide	ug/L	20	17.7	89	47-137	
Carbon tetrachloride	ug/L	20	20.1	100	75-125	
Chlorobenzene	ug/L	20	18.1	91	75-125	
Chloroethane	ug/L	20	20.3	102	63-136	
Chloroform	ug/L	20	18.9	94	73-128	
Chloromethane	ug/L	20	18.2	91	55-130	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	75-125	
cis-1,3-Dichloropropene	ug/L	20	19.9	99	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

LABORATORY CONTROL SAMPLE: 3415552

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.5	103	75-125	
Dibromomethane	ug/L	20	22.8	114	75-125	
Dichlorodifluoromethane	ug/L	20	18.6	93	63-132	
Dichlorofluoromethane	ug/L	20	19.0	95	68-127	
Diisopropyl ether	ug/L	20	18.9	94	71-131	
Ethyl-tert-butyl ether	ug/L	20	17.6	88	75-125	
Ethylbenzene	ug/L	20	18.4	92	75-125	
Hexachloro-1,3-butadiene	ug/L	20	17.8	89	72-134	
Isopropylbenzene (Cumene)	ug/L	20	18.6	93	75-125	
m&p-Xylene	ug/L	40	37.7	94	75-126	
Methyl-tert-butyl ether	ug/L	20	18.5	92	75-125	
Methylene Chloride	ug/L	20	19.2	96	70-125	
n-Butylbenzene	ug/L	20	18.9	95	75-126	
n-Propylbenzene	ug/L	20	17.9	90	73-127	
Naphthalene	ug/L	20	16.2	81	63-128	
o-Xylene	ug/L	20	19.8	99	75-128	
p-Isopropyltoluene	ug/L	20	19.0	95	75-125	
sec-Butylbenzene	ug/L	20	19.6	98	75-126	
Styrene	ug/L	20	19.4	97	75-125	
tert-Amylmethyl ether	ug/L	20	18.4	92	75-125	
tert-Butyl Alcohol	ug/L	200	184	92	75-130	
tert-Butylbenzene	ug/L	20	18.8	94	75-131	
Tetrachloroethene	ug/L	20	19.4	97	74-125	
Tetrahydrofuran	ug/L	200	201	101	64-138	
Toluene	ug/L	20	18.2	91	74-125	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	68-128	
trans-1,3-Dichloropropene	ug/L	20	20.4	102	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	41.1	82	60-127	
Trichloroethene	ug/L	20	19.8	99	75-127	
Trichlorofluoromethane	ug/L	20	19.1	96	72-133	
Vinyl acetate	ug/L	20	20.0	100	61-129	
Vinyl chloride	ug/L	20	19.3	96	75-128	
Xylene (Total)	ug/L	60	57.5	96	75-125	
1,2-Dichloroethane-d4 (S)	%.			99	75-136	
4-Bromofluorobenzene (S)	%.			94	75-125	
Toluene-d8 (S)	%.			95	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3415553 3415554

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	20.3	20.6	101	103	75-140	2	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	22.3	22.7	112	113	74-136	2	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	19.1	19.6	95	98	66-134	3	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	20.6	21.1	103	106	75-126	3	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3415553 3415554

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	24.0	24.3	120	122	65-146	1	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	20.7	20.0	103	100	68-132	3	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	22.5	21.2	113	106	66-139	6	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	22.8	22.6	114	113	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	20.7	21.6	103	108	67-129	5	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	18.8	19.7	94	98	69-128	5	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	20.3	19.5	101	97	65-140	4	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	20.0	21.8	100	109	71-133	8	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	47.2	51.4	94	103	54-138	9	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	20.5	21.1	102	105	68-125	3	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	19.4	21.2	97	106	74-136	9	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	20.2	21.4	101	107	68-125	6	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	43.6	41.1	109	103	71-126	6	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	20.1	23.5	101	118	67-125	16	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	19.9	22.1	100	111	68-137	10	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	20.1	21.7	101	109	75-131	8	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	19.9	19.7	100	99	71-125	1	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	19.5	20.6	97	103	74-126	6	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	406	416	101	104	68-125	3	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	27.1	22.0	135	110	54-129	21	30	M1
2,2-Dichloropropane	ug/L	<0.17	20	20	21.4	21.1	107	105	69-139	1	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	95.1	97.1	95	97	54-144	2	30	
2-Chlorotoluene	ug/L	<0.16	20	20	19.0	20.7	95	103	75-134	9	30	
2-Hexanone	ug/L	<0.88	100	100	94.4	102	94	102	58-137	8	30	
4-Chlorotoluene	ug/L	<0.13	20	20	19.2	20.7	96	103	72-133	8	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	98.4	104	98	104	60-129	6	30	
Acetone	ug/L	<9.2	100	100	96.5	97.5	96	98	62-132	1	30	
Acrolein	ug/L	<1.2	200	200	257	255	128	127	30-150	1	30	
Acrylonitrile	ug/L	<0.91	200	200	194	202	97	101	68-125	4	30	
Benzene	ug/L	<0.10	20	20	20.8	20.9	104	105	68-125	1	30	
Bromobenzene	ug/L	<0.21	20	20	18.9	20.7	95	103	73-126	9	30	
Bromochloromethane	ug/L	<0.27	20	20	21.9	21.8	110	109	66-143	1	30	
Bromodichloromethane	ug/L	<0.22	20	20	19.4	21.9	97	109	74-125	12	30	
Bromoform	ug/L	<0.80	20	20	20.2	21.0	101	105	64-134	4	30	
Bromomethane	ug/L	<1.8	20	20	18.2	18.6	91	93	30-150	2	30	
Carbon disulfide	ug/L	<0.078	20	20	21.7	19.5	109	97	43-147	11	30	
Carbon tetrachloride	ug/L	<0.19	20	20	23.7	23.5	118	117	71-143	1	30	
Chlorobenzene	ug/L	<0.17	20	20	19.0	20.1	95	101	75-125	6	30	
Chloroethane	ug/L	<0.49	20	20	22.8	22.8	114	114	75-129	0	30	
Chloroform	ug/L	<0.45	20	20	19.9	19.4	99	97	66-132	3	30	
Chloromethane	ug/L	<0.16	20	20	21.5	21.4	107	107	53-137	1	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	21.3	20.8	107	104	67-133	2	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	19.0	19.8	95	99	66-125	4	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3415553 3415554

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	21.3	22.5	107	112	62-132	5	30	
Dibromomethane	ug/L	<0.16	20	20	25.3	22.5	126	113	67-125	11	30	M1
Dichlorodifluoromethane	ug/L	<0.23	20	20	24.8	23.9	124	120	71-142	3	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	22.4	22.3	112	112	70-131	0	30	
Diisopropyl ether	ug/L	<0.13	20	20	20.0	19.7	100	99	63-131	1	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	18.3	18.5	92	93	66-128	1	30	
Ethylbenzene	ug/L	<0.14	20	20	20.3	21.2	102	106	74-126	4	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	24.5	19.8	123	99	68-143	21	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	20.7	22.4	104	112	74-130	8	30	
m&p-Xylene	ug/L	<0.31	40	40	41.2	43.8	103	110	69-132	6	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	19.6	19.5	98	97	65-131	1	30	
Methylene Chloride	ug/L	<0.98	20	20	21.3	20.2	107	101	57-125	5	30	
n-Butylbenzene	ug/L	<0.24	20	20	22.6	21.2	113	106	71-131	7	30	
n-Propylbenzene	ug/L	<0.10	20	20	20.1	21.7	101	109	67-138	8	30	
Naphthalene	ug/L	<0.48	20	20	17.2	19.0	86	95	60-130	10	30	
o-Xylene	ug/L	<0.16	20	20	20.4	22.6	102	113	69-131	10	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	22.4	21.9	112	109	72-133	2	30	
sec-Butylbenzene	ug/L	<0.15	20	20	23.3	22.9	117	114	73-134	2	30	
Styrene	ug/L	<0.19	20	20	19.9	21.2	100	106	72-125	6	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	19.1	19.9	96	99	67-125	4	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	184	203	92	101	64-137	9	30	
tert-Butylbenzene	ug/L	<0.15	20	20	22.1	22.7	110	114	70-143	3	30	
Tetrachloroethene	ug/L	<0.17	20	20	21.4	23.1	107	115	72-129	7	30	
Tetrahydrofuran	ug/L	<2.2	200	200	204	226	102	113	66-128	10	30	
Toluene	ug/L	<0.083	20	20	19.5	20.0	98	100	73-125	3	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	22.2	20.3	111	101	62-137	9	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	21.2	21.2	106	106	61-136	0	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	40.2	43.1	80	86	45-128	7	30	
Trichloroethene	ug/L	<0.15	20	20	22.3	22.3	111	112	74-132	0	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	23.6	23.4	118	117	75-139	1	30	
Vinyl acetate	ug/L	<1.1	20	20	20.9	20.7	104	103	51-135	1	30	
Vinyl chloride	ug/L	<0.092	20	20	25.1	23.5	125	118	68-146	6	30	
Xylene (Total)	ug/L	<0.31	60	60	61.6	66.5	103	111	67-137	8	30	
1,2-Dichloroethane-d4 (S)	%.						97	95	75-136			
4-Bromofluorobenzene (S)	%.						92	91	75-125			
Toluene-d8 (S)	%.						92	92	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 634553 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

METHOD BLANK: 3420028 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/26/19 07:50	

LABORATORY CONTROL SAMPLE & LCSD: 3420029 3420030

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.0	43.2	105	108	90-110	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420031 3420032

Parameter	Units	10492089001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	5.4	40	40	46.8	47.1	103	104	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420033 3420034

Parameter	Units	10492090002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	196	40	40	240	240	109	108	80-120	0	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 634034 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10492090002, 10492090003

METHOD BLANK: 3417748 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	09/24/19 16:15	

LABORATORY CONTROL SAMPLE: 3417749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1030	103	80-120	

SAMPLE DUPLICATE: 3417750

Parameter	Units	10492080001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	860	856	0	5	

SAMPLE DUPLICATE: 3417751

Parameter	Units	10491747026 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	574	591	3	5	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 634181 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10492090004, 10492090005, 10492090006, 10492090007

METHOD BLANK: 3418509 Matrix: Water
Associated Lab Samples: 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	09/25/19 12:44	

LABORATORY CONTROL SAMPLE: 3418510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1030	103	80-120	

SAMPLE DUPLICATE: 3418511

Parameter	Units	10492090004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	233	224	4	5	

SAMPLE DUPLICATE: 3418512

Parameter	Units	10492090005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	235	229	3	5	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 175508 Analysis Method: SM 4500-S2-F
QC Batch Method: SM 4500-S2-F Analysis Description: 4500S2F Sulfide Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

METHOD BLANK: 695416 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	<2.0	2.0	2.0	09/25/19 08:52	

LABORATORY CONTROL SAMPLE: 695415

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	4	4.0	100	80-120	

SAMPLE DUPLICATE: 695417

Parameter	Units	10492090005 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide	mg/L	<2.0	<2.0		20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 633434 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

METHOD BLANK: 3414855 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	09/19/19 18:15	
Nitrate as N	mg/L	<0.012	0.10	0.012	09/19/19 18:15	
Sulfate	mg/L	<0.28	1.2	0.28	09/19/19 18:15	

LABORATORY CONTROL SAMPLE: 3414856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	11.9	96	90-110	
Nitrate as N	mg/L	1	0.93	93	90-110	
Sulfate	mg/L	12.5	11.4	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414857 3414858

Parameter	Units	10491876001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	19.7	12.5	12.5	28.1	28.2	67	68	90-110	0	20	M1
Nitrate as N	mg/L	0.42	1	1	1.3	1.3	86	86	90-110	0	20	M1
Sulfate	mg/L	2.1J	12.5	12.5	14.1	14.1	96	96	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414859 3414860

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.3	12.5	12.5	12.4	12.4	89	89	90-110	0	20	M1
Nitrate as N	mg/L	1.1	1	1	1.9	1.9	77	77	90-110	0	20	M1
Sulfate	mg/L	14.4	12.5	12.5	23.9	24.1	76	77	90-110	1	20	M1

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 634559 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

METHOD BLANK: 3420088 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	09/26/19 09:25	

LABORATORY CONTROL SAMPLE: 3420089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.96	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420090 3420091

Parameter	Units	10491655010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	16.3	1	1	17.1	17.3	80	100	90-110	1	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420092 3420093

Parameter	Units	10491870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	1.0	1.0	100	100	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 634118 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

METHOD BLANK: 3418139 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004, 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	09/25/19 07:41	

LABORATORY CONTROL SAMPLE: 3418140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	305	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418141 3418142

Parameter	Units	10491870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	254	254	101	101	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418143 3418144

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	246	241	98	96	90-110	2	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 176913 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10492090002, 10492090003, 10492090004

METHOD BLANK: 701102 Matrix: Water
Associated Lab Samples: 10492090002, 10492090003, 10492090004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	10/11/19 15:56	

LABORATORY CONTROL SAMPLE: 701103

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.3	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 701104 701105

Parameter	Units	10494589001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	6.3	25	25	31.5	30.6	100	97	80-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 701106 701107

Parameter	Units	10494776014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	ND	25	25	26.0	25.9	103	103	80-120	0	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

QC Batch: 176914 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10492090005, 10492090006, 10492090007

METHOD BLANK: 701108 Matrix: Water
Associated Lab Samples: 10492090005, 10492090006, 10492090007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	10/11/19 22:42	

LABORATORY CONTROL SAMPLE: 701109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	25.8	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 701110 701111

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	0.89J	25	25	26.3	26.1	102	101	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 701112 701113

Parameter	Units	10492998004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	27.0	50	50	76.8	76.5	100	99	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-M	Pace Analytical Services - Minneapolis
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10492090002	MW1D-GW-091819	RSK175	1351457	RSK-175	1351457
10492090003	MW2D-GW-091819	RSK175	1351457	RSK-175	1351457
10492090004	Stark-GW-091819SD	RSK175	1351457	RSK-175	1351457
10492090005	Stark-GW-091819MS	RSK175	1351455	RSK-175	1351455
10492090006	MW20D-GW-091819	RSK175	1351457	RSK-175	1351457
10492090007	MW20D-GW-091819B	RSK175	1351457	RSK-175	1351457
10492090002	MW1D-GW-091819	EPA 3010	633710	EPA 6010D	635461
10492090003	MW2D-GW-091819	EPA 3010	633710	EPA 6010D	635461
10492090004	Stark-GW-091819SD	EPA 3010	633710	EPA 6010D	635461
10492090005	Stark-GW-091819MS	EPA 3010	633710	EPA 6010D	635461
10492090006	MW20D-GW-091819	EPA 3010	633710	EPA 6010D	635461
10492090007	MW20D-GW-091819B	EPA 3010	633710	EPA 6010D	635461
10492090002	MW1D-GW-091819	EPA 7470A	633731	EPA 7470A	635106
10492090003	MW2D-GW-091819	EPA 7470A	633731	EPA 7470A	635106
10492090004	Stark-GW-091819SD	EPA 7470A	633731	EPA 7470A	635106
10492090005	Stark-GW-091819MS	EPA 7470A	633731	EPA 7470A	635106
10492090006	MW20D-GW-091819	EPA 7470A	633731	EPA 7470A	635106
10492090007	MW20D-GW-091819B	EPA 7470A	633731	EPA 7470A	635106
10492090001	TB04-091819	EPA 8260B	633558		
10492090002	MW1D-GW-091819	EPA 8260B	633558		
10492090003	MW2D-GW-091819	EPA 8260B	633558		
10492090004	Stark-GW-091819SD	EPA 8260B	633558		
10492090005	Stark-GW-091819MS	EPA 8260B	633558		
10492090006	MW20D-GW-091819	EPA 8260B	633558		
10492090007	MW20D-GW-091819B	EPA 8260B	633558		
10492090002	MW1D-GW-091819	SM 2320B	634553		
10492090003	MW2D-GW-091819	SM 2320B	634553		
10492090004	Stark-GW-091819SD	SM 2320B	634553		
10492090005	Stark-GW-091819MS	SM 2320B	634553		
10492090006	MW20D-GW-091819	SM 2320B	634553		
10492090007	MW20D-GW-091819B	SM 2320B	634553		
10492090002	MW1D-GW-091819	SM 2540C	634034		
10492090003	MW2D-GW-091819	SM 2540C	634034		
10492090004	Stark-GW-091819SD	SM 2540C	634181		
10492090005	Stark-GW-091819MS	SM 2540C	634181		
10492090006	MW20D-GW-091819	SM 2540C	634181		
10492090007	MW20D-GW-091819B	SM 2540C	634181		
10492090002	MW1D-GW-091819	SM 4500-S2-F	175508		
10492090003	MW2D-GW-091819	SM 4500-S2-F	175508		
10492090004	Stark-GW-091819SD	SM 4500-S2-F	175508		
10492090005	Stark-GW-091819MS	SM 4500-S2-F	175508		
10492090006	MW20D-GW-091819	SM 4500-S2-F	175508		
10492090007	MW20D-GW-091819B	SM 4500-S2-F	175508		
10492090002	MW1D-GW-091819	EPA 300.0	633434		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492090

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10492090003	**MW2D-GW-091819**	EPA 300.0	633434		
10492090004	**Stark-GW-091819SD**	EPA 300.0	633434		
10492090005	**Stark-GW-091819MS**	EPA 300.0	633434		
10492090006	**MW20D-GW-091819**	EPA 300.0	633434		
10492090007	**MW20D-GW-091819B**	EPA 300.0	633434		
10492090002	**MW1D-GW-091819**	EPA 353.2	634559		
10492090003	**MW2D-GW-091819**	EPA 353.2	634559		
10492090004	**Stark-GW-091819SD**	EPA 353.2	634559		
10492090005	**Stark-GW-091819MS**	EPA 353.2	634559		
10492090006	**MW20D-GW-091819**	EPA 353.2	634559		
10492090007	**MW20D-GW-091819B**	EPA 353.2	634559		
10492090002	**MW1D-GW-091819**	EPA 410.4	634118	EPA 410.4	634333
10492090003	**MW2D-GW-091819**	EPA 410.4	634118	EPA 410.4	634333
10492090004	**Stark-GW-091819SD**	EPA 410.4	634118	EPA 410.4	634333
10492090005	**Stark-GW-091819MS**	EPA 410.4	634118	EPA 410.4	634333
10492090006	**MW20D-GW-091819**	EPA 410.4	634118	EPA 410.4	634333
10492090007	**MW20D-GW-091819B**	EPA 410.4	634118	EPA 410.4	634333
10492090002	**MW1D-GW-091819**	SM 5310C	176913		
10492090003	**MW2D-GW-091819**	SM 5310C	176913		
10492090004	**Stark-GW-091819SD**	SM 5310C	176913		
10492090005	**Stark-GW-091819MS**	SM 5310C	176914		
10492090006	**MW20D-GW-091819**	SM 5310C	176914		
10492090007	**MW20D-GW-091819B**	SM 5310C	176914		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: UPRR Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W Riverside Ave, Suite 500	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR
Spokane, WA 99201	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave. Denver, CO 80221
Email:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 9800758938
Phone: Fax:	Project Name: Freeman WA-Cenex Harvest Lease S	Pace Project Manager: Jennifer Gross
Requested Due Date: 10 Day Standard	Project #: 1497	Pace Profile #: 36447 / 4

Regulatory Agency: State / Location: WA / Freeman

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH+Zn Acetate	Other	Analyses Test Y/N	Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	
	Matrix Codes: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS													Y													
1	TB04-091819	WT	G	9/18/19	0800	-	3				X			X													001
2	MW1D-GW-091819	WT	G	9/18/19	0905	-	13	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X				002
3	MW2D-GW-091819	WT	G	9/18/19	0950	-	13	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X				003
4	Stark-GW-091819SD	WT	G	9/18/19	1040	-	13	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X				004
5	Stark-GW-091819MS	WT	G	9/18/19	1040	-	13	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X				005
6	MW20D-GW-091819	WT	G	9/18/19	1345		13	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X				006
7	MW20D-GW-091819B	WT	G	9/18/19	1345		13	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X				007
8																											
9																											
10																											
11																											
12																											

WO#: 10492090

10492090

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Short hold analyses are in bold	K Ose / Jacobs	9/18/19	1630	K PACE	9.19.19	840	8.0 Y Y Y
*Field filtered by client							
Cooler 1 of 2							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kaila Savage

SIGNATURE of SAMPLER: K Ose DATE Signed: 9/18/19

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.29**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR Jacobs

Project #: **WO#: 10492090**

PM: JMG **Due Date: 09/24/19**

CLIENT: UPRR_Jacobs

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial See Exceptions ☐

Tracking Number: 493437332938 2927

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other:_____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☑ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C	**Cooler Temp Read w/temp blank:** 0.1 0.1 °C	**Average Corrected Temp (no temp blank only):** ☐ See Exceptions
Correction Factor: -0.1	**Cooler Temp Corrected w/temp blank:** 0.0 0.0 °C	____°C ☐ 1 Container

USDA Regulated Soil: (☑ N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** RNC 9.19.19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes ☐ No	1.
Chain of Custody Relinquished?	☑ Yes ☐ No	2.
Sampler Name and/or Signature on COC?	☑ Yes ☐ No ☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes ☐ No	4.
Short Hold Time Analysis (<72 hr)?	☑ Yes ☐ No	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☑ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other_____
Rush Turn Around Time Requested?	☐ Yes ☑ No	6.
Sufficient Volume?	☑ Yes ☐ No	7.
Correct Containers Used?	☑ Yes ☐ No	8.
-Pace Containers Used?	☑ Yes ☐ No	
Containers Intact?	☑ Yes ☐ No	9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes ☐ No ☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☑ Yes ☐ No	11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other_____		
All containers needing acid/base preservation have been checked?	☑ Yes ☐ No ☐ N/A	12. Sample # 2-7 1/1 1/1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes ☐ No ☐ N/A	☐ NaOH ☑ HNO_3 ☑ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☑ Yes ☐ No ☑ N/A RNC 9.19.19	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐
		Res. Chlorine: 0-6 Roll 203619; 0-6 Strip: ; 0-14 Strip 10D3501
Headspace in VOA Vials (greater than 6mm)?	☐ Yes ☑ No ☐ N/A	13. **See Exception** ☐
Trip Blank Present?	☑ Yes ☐ No ☐ N/A	14.
Trip Blank Custody Seals Present?	☑ Yes ☐ No ☐ N/A	Pace Trip Blank Lot # (if purchased): 225458

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 9/20/2019

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: SJ (1)

Chain of Custody

WO# : 20122772

20122772

/tical®
slabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐

Workorder: 10492090 **Workorder Name:** 1497 Freeman WA-Cenex Harvest **Owner Received Date:** 9/19/2019 **Results Requested By:** 10/3/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

JMG 092419

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4	Requested Analysis: 5310 TOC (5962/67 / 4500 Sulfide)	LAB USE ONLY
1	MW1D-GW-091819	PS	9/18/2019 09:05	10492090002	Water	2	X	
2	MW2D-GW-091819	PS	9/18/2019 09:50	10492090003	Water	2	X	
3	Stark-GW-091819SD	PS	9/18/2019 10:40	10492090004	Water	2	X	
4	Stark-GW-091819MS	RQS	9/18/2019 10:40	10492090005	Water	2	X	
5	MW20D-GW-091819	PS	9/18/2019 13:45	10492090006	Water	2	X	
6	MW20D-GW-091819B	PS	9/18/2019 13:45	10492090007	Water	2	X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Pace	9/23/19 1720	FY	
2	FY		[illegible] Pace	9/24 930
3				

Comments

Cooler Temperature on Receipt 0.1 °C | Custody Seal Ⓞ or N | Received on Ice Ⓨ or N | Samples Intact Ⓨ or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Rec

Projec

WO#: 20122772

PM: CMM Due Date: 10/08/19

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR #10

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9.24.19 CAL

Temp must be measured from Temperature blank when present

			Comments:
Temperature Blank Present"?	☑Yes ☐No ☐N/A	1	
Chain of Custody Present:	☑Yes ☐No ☐N/A	2	
Chain of Custody Complete:	☑Yes ☐No ☐N/A	3	
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	4	
Sampler Name & Signature on COC:	☐Yes ☐No ☑N/A	5	
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	6	
Sufficient Volume:	☑Yes ☐No ☐N/A	7	
Correct Containers Used:	☑Yes ☐No ☐N/A	8	
Filtered vol. Rec. for Diss. tests	☐Yes ☐No ☑N/A	9	
Sample Labels match COC:	☑Yes ☐No ☐N/A	10	
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes ☐No ☐N/A	11	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☐Yes ☐No ☑N/A	12	
All containers preservation checked found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	13	If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14	
Trip Blank Present:	☐Yes ☑No	15	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

WO#: 12135931

12135931

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes

Workorder: 10492090 Workorder Name: 1497 Freeman WA-Cenex Harvest Owner Received Date: 9/19/2019 Results Requested By: 10/3/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	5636267 / 4500 Sulfide	LAB USE ONLY
1	MW1D-GW-091819	PS	9/18/2019 09:05	10492090002	Water	1	X	
2	MW2D-GW-091819	PS	9/18/2019 09:50	10492090003	Water	1	X	
3	Stark-GW-091819SD	PS	9/18/2019 10:40	10492090004	Water	1	X	
4	Stark-GW-091819MS	RQS	9/18/2019 10:40	10492090005	Water	1	X	
5	MW20D-GW-091819	PS	9/18/2019 13:45	10492090006	Water	1	X	
6	MW20D-GW-091819B	PS	9/18/2019 13:45	10492090007	Water	1	X	

Requested Analysis

Comments

Transfers	Released By	Date/Time	Received By	Date/Time
1			B. Mathews	9/24/19 0630
2				
3				

Cooler Temperature on Receipt ____ °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #:

WO#: 12135931

PM: RK1 **Due Date: 10/03/19**

CLIENT: PACE MPLS

Courier: ☐Fed Ex ☐UPS ☐USPS ☐Client ☐Commercial ☑Pace ☐Other:

Tracking Number:

Custody Seal on Cooler/Box Present? ☑Yes ☐No Seals Intact? ☑Yes ☐No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☑Bubble Wrap ☑Bubble Bags ☐None ☐Other: Temp Blank? ☑Yes ☐No

Thermometer Used: ☑140792808 Type of Ice: ☐Wet ☐Blue ☐None ☑Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.3 Cooler Temp Corrected °C: 0.6 Biological Tissue Frozen? ☐Yes ☐No ☑NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 9/23/19 DC

				Comments: PM 9/24/19
Chain of Custody Present?	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out?	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished?	☑Yes	☐No	☐N/A	3.
Sampler Name and Signature on COC?	☐Yes	☑No	☐N/A	4.
Samples Arrived within Hold Time?	☑Yes	☐No	☐N/A	5. If Fecal: ☐<8 hours ☐>8, <24 hours ☐>24 hours
Short Hold Time Analysis (<72 hr)?	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested?	☐Yes	☑No	☐N/A	7.
Sufficient Volume?	☑Yes	☐No	☐N/A	8.
Correct Containers Used?	☑Yes	☐No	☐N/A	9.
-Pace Containers Used?	☑Yes	☐No	☐N/A	
Containers Intact?	☑Yes	☐No	☐N/A	10.
Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☐Yes	☑No	☐N/A	12. Rec'd sulfide samples instead of TOC
All containers needing acid/base preservation properly preserved?	☑Yes	☐No	☐N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm)?	☐Yes	☐No	☑N/A	15.
Trip Blank Present?	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present?	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐Yes ☐No

Person Contacted: Date/Time:

Comments/Resolution: Confirmed with PM to run sulfide samples in VM due to short hold time- RSK 9/24/19

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Davena Ferver Date: 9/24/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

H017

Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 9/19/2019 Results Requested By: 10/3/2019

Workorder: 10492090 **Workorder Name:** 1497 Freeman WA-Cenex Harvest

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace National Mt. Juliet, TN

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	5644436 / Headspace Analysis	Requested Analysis	LAB USE ONLY
1	MW1D-GW-091819	PS	9/18/2019 09:05	10492090002	Water	3	X		-01
2	MW2D-GW-091819	PS	9/18/2019 09:50	10492090003	Water	3	X		02
3	Stark-GW-091819SD	PS	9/18/2019 10:40	10492090004	Water	3	X		03
4	Stark-GW-091819MS	RQS	9/18/2019 10:40	10492090005	Water	3	X		03
5	MW20D-GW-091819	PS	9/18/2019 13:45	10492090006	Water	3	X		04
6	MW20D-GW-091819B	PS	9/18/2019 13:45	10492090007	Water	3	X		05

11/24/11

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Pace	9/23/19 1615	Hailey [illegible]	9/24/19 9:00
2				
3				

Comments

Cooler Temperature on Receipt 0.4 °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.4-3=0.1
ASR

RAD SCREEN: <0.5 mR/hr

4638 0200 1007

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACETWA	SDG#: 1142411
Cooler Received/Opened On: 9/24/19	Temperature: 0.1
Received By: Hailey Melson	
Signature: Hailey Mls	

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 03, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
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Pace Analytical Services, LLC
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CERTIFICATIONS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Pace Analytical National Certification IDs

Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

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SAMPLE SUMMARY

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10492109001	**Lang-GW-091819**	Water	09/18/19 12:35	09/19/19 08:40

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10492109001	**Lang-GW-091819**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10492109001	**Lang-GW-091819**					
EPA 6010D	Barium, Dissolved	19.5	ug/L	10.0	10/01/19 12:32	
EPA 6010D	Cobalt, Dissolved	0.63J	ug/L	10.0	10/01/19 12:32	
EPA 6010D	Copper, Dissolved	8.5J	ug/L	10.0	10/01/19 12:32	
EPA 6010D	Vanadium, Dissolved	6.2J	ug/L	15.0	10/01/19 12:32	
EPA 6010D	Zinc, Dissolved	27.0	ug/L	20.0	10/01/19 12:32	
EPA 8260B	1,4-Dioxane (p-Dioxane)	29.4J	ug/L	200	09/19/19 20:21	
SM 2320B	Alkalinity, Total as CaCO3	201	mg/L	5.0	09/26/19 08:40	
SM 2540C	Total Dissolved Solids	253	mg/L	10.0	09/25/19 12:44	
EPA 300.0	Chloride	1.7	mg/L	1.2	09/19/19 20:24	
EPA 300.0	Nitrate as N	0.45	mg/L	0.10	09/19/19 20:24	
EPA 300.0	Sulfate	1.7	mg/L	1.2	09/19/19 20:24	
EPA 353.2	Nitrogen, NO2 plus NO3	0.66	mg/L	0.10	09/26/19 10:50	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **RSK-175**
Description: VOA (GC) RSK175
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for RSK-175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 633421

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3414816)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3414817)
  - 1,2-Dichloroethene (Total)
- Lang-GW-091819 (Lab ID: 10492109001)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3418376)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3418377)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 03, 2019

Analyte Comments:

QC Batch: 633421

- BLANK (Lab ID: 3414816)
  - Dichlorofluoromethane
- LCS (Lab ID: 3414817)
  - Dichlorofluoromethane
- Lang-GW-091819 (Lab ID: 10492109001)
  - Dichlorofluoromethane
- MS (Lab ID: 3418376)
  - Dichlorofluoromethane
- MSD (Lab ID: 3418377)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 158705

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20122719001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 711142)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 633434

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491876001,10492090005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3414857)
  - Chloride
  - Nitrate as N
- MS (Lab ID: 3414859)
  - Chloride
  - Nitrate as N
  - Sulfate
- MSD (Lab ID: 3414858)
  - Chloride
  - Nitrate as N
- MSD (Lab ID: 3414860)
  - Chloride
  - Nitrate as N
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 634559

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655010,10491870001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 3420090)
  - Nitrogen, NO2 plus NO3

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Sample: Lang-GW-091819 **Lab ID: 10492109001** Collected: 09/18/19 12:35 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/25/19 14:56	09/25/19 14:56	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/25/19 14:56	09/25/19 14:56	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/25/19 14:56	09/25/19 14:56	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:32	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:32	7440-38-2	
Barium, Dissolved	**19.5**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:32	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:32	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:32	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:32	7440-47-3	
Cobalt, Dissolved	**0.63J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:32	7440-48-4	
Copper, Dissolved	**8.5J**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:32	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:32	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:32	7439-98-7	
Nickel, Dissolved	**<1.1**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:32	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:32	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:32	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:32	7440-28-0	
Vanadium, Dissolved	**6.2J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:32	7440-62-2	
Zinc, Dissolved	**27.0**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:32	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 14:01	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		09/19/19 20:21	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/19/19 20:21	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:21	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/19/19 20:21	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 20:21	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:21	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:21	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 20:21	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		09/19/19 20:21	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/19/19 20:21	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		09/19/19 20:21	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 20:21	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/19/19 20:21	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/19/19 20:21	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 20:21	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 20:21	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/19/19 20:21	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 20:21	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 20:21	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:21	541-73-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Sample: Lang-GW-091819 **Lab ID: 10492109001** Collected: 09/18/19 12:35 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/19/19 20:21	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:21	106-46-7	
1,4-Dioxane (p-Dioxane)	**29.4J**	ug/L	200	16.3	1		09/19/19 20:21	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/19/19 20:21	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/19/19 20:21	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/19/19 20:21	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:21	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/19/19 20:21	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/19/19 20:21	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/19/19 20:21	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/19/19 20:21	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/19/19 20:21	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/19/19 20:21	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 20:21	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/19/19 20:21	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/19/19 20:21	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/19/19 20:21	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/19/19 20:21	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/19/19 20:21	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/19/19 20:21	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/19/19 20:21	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:21	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/19/19 20:21	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/19/19 20:21	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 20:21	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		09/19/19 20:21	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/19/19 20:21	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/19/19 20:21	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/19/19 20:21	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/19/19 20:21	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/19/19 20:21	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 20:21	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 20:21	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		09/19/19 20:21	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:21	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/19/19 20:21	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/19/19 20:21	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		09/19/19 20:21	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:21	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/19/19 20:21	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/19/19 20:21	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/19/19 20:21	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/19/19 20:21	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/19/19 20:21	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/19/19 20:21	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/19/19 20:21	1330-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Sample: Lang-GW-091819 **Lab ID: 10492109001** Collected: 09/18/19 12:35 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:21	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 20:21	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 20:21	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/19/19 20:21	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 20:21	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:21	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:21	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:21	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/19/19 20:21	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/19/19 20:21	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:21	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 20:21	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		09/19/19 20:21	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/19/19 20:21	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-136		1		09/19/19 20:21	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		09/19/19 20:21	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		09/19/19 20:21	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**201**	mg/L	5.0	2.0	1		09/26/19 08:40		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**253**	mg/L	10.0	5.0	1		09/25/19 12:44		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/25/19 14:54	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.7**	mg/L	1.2	0.12	1		09/19/19 20:24	16887-00-6	
Nitrate as N	**0.45**	mg/L	0.10	0.012	1		09/19/19 20:24	14797-55-8	
Sulfate	**1.7**	mg/L	1.2	0.28	1		09/19/19 20:24	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**0.66**	mg/L	0.10	0.018	1		09/26/19 10:50		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:33		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**<0.39**	mg/L	1.0	0.39	1		09/27/19 23:40	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 1351457 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10492109001

METHOD BLANK: R3454500-1 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/25/19 13:38	
Ethane	ug/L	<4.07	13.0	4.07	09/25/19 13:38	
Ethene	ug/L	<4.26	13.0	4.26	09/25/19 13:38	

LABORATORY CONTROL SAMPLE & LCSD: R3454500-4 R3454500-5

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	74.6	77.5	110	114	85.0-115	3.88	20	
Ethane	ug/L	129	122	127	94.6	98.4	85.0-115	3.93	20	
Ethene	ug/L	127	121	126	95.0	99.6	85.0-115	4.69	20	

SAMPLE DUPLICATE: R3454500-2

Parameter	Units	L1142312-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

SAMPLE DUPLICATE: R3454500-3

Parameter	Units	L1142411-05 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 633731 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10492109001

METHOD BLANK: 3416567 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	09/27/19 13:13	

LABORATORY CONTROL SAMPLE: 3416568

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.3	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416569 3416570

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.1	5.2	103	104	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 633710
QC Batch Method: EPA 3010
Analysis Method: EPA 6010D
Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10492109001

METHOD BLANK: 3416481 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	10/01/19 11:54	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	10/01/19 11:54	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	10/01/19 11:54	
Beryllium, Dissolved	ug/L	0.17J	5.0	0.12	10/01/19 11:54	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	10/01/19 11:54	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	10/01/19 11:54	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	10/01/19 11:54	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	10/01/19 11:54	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	10/01/19 11:54	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	10/01/19 11:54	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	10/01/19 11:54	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	10/01/19 11:54	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	10/01/19 11:54	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	10/01/19 11:54	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	10/01/19 11:54	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	10/01/19 11:54	

LABORATORY CONTROL SAMPLE: 3416482

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	998	100	80-120	
Arsenic, Dissolved	ug/L	1000	1040	104	80-120	
Barium, Dissolved	ug/L	1000	1040	104	80-120	
Beryllium, Dissolved	ug/L	1000	1060	106	80-120	
Cadmium, Dissolved	ug/L	1000	1050	105	80-120	
Chromium, Dissolved	ug/L	1000	1040	104	80-120	
Cobalt, Dissolved	ug/L	1000	1030	103	80-120	
Copper, Dissolved	ug/L	1000	1010	101	80-120	
Lead, Dissolved	ug/L	1000	1040	104	80-120	
Molybdenum, Dissolved	ug/L	1000	1010	101	80-120	
Nickel, Dissolved	ug/L	1000	1040	104	80-120	
Selenium, Dissolved	ug/L	1000	1060	106	80-120	
Silver, Dissolved	ug/L	500	523	105	80-120	
Thallium, Dissolved	ug/L	1000	1020	102	80-120	
Vanadium, Dissolved	ug/L	1000	1030	103	80-120	
Zinc, Dissolved	ug/L	1000	1060	106	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416483 3416484

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	1060	1060	106	106	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1090	1100	109	110	75-125	1	20	
Barium, Dissolved	ug/L	31.2	1000	1000	1120	1120	108	109	75-125	1	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	1110	1110	111	111	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1080	1090	108	109	75-125	0	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1080	1090	108	109	75-125	0	20	
Cobalt, Dissolved	ug/L	1.8J	1000	1000	1060	1060	106	106	75-125	1	20	
Copper, Dissolved	ug/L	119	1000	1000	1170	1180	105	106	75-125	0	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1070	1080	107	108	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	1070	1070	107	107	75-125	0	20	
Nickel, Dissolved	ug/L	10.7J	1000	1000	1070	1080	106	106	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1100	1110	110	111	75-125	0	20	
Silver, Dissolved	ug/L	<0.40	500	500	547	549	109	110	75-125	0	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	1040	1050	104	104	75-125	0	20	
Vanadium, Dissolved	ug/L	4.0J	1000	1000	1080	1090	108	108	75-125	1	20	
Zinc, Dissolved	ug/L	21.7	1000	1000	1100	1110	108	108	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 633421 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10492109001

METHOD BLANK: 3414816 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	1.0	0.20	09/19/19 18:06	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/19/19 18:06	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/19/19 18:06	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/19/19 18:06	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/19/19 18:06	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	09/19/19 18:06	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/19/19 18:06	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	09/19/19 18:06	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/19/19 18:06	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	09/19/19 18:06	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/19/19 18:06	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/19/19 18:06	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	09/19/19 18:06	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/19/19 18:06	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/19/19 18:06	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/19/19 18:06	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/19/19 18:06	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/19/19 18:06	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/19/19 18:06	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/19/19 18:06	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/19/19 18:06	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/19/19 18:06	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/19/19 18:06	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/19/19 18:06	
Acetone	ug/L	<9.2	20.0	9.2	09/19/19 18:06	
Acrolein	ug/L	<1.2	10.0	1.2	09/19/19 18:06	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/19/19 18:06	
Benzene	ug/L	<0.10	0.50	0.10	09/19/19 18:06	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/19/19 18:06	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/19/19 18:06	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/19/19 18:06	
Bromoform	ug/L	<0.80	4.0	0.80	09/19/19 18:06	
Bromomethane	ug/L	<1.8	4.0	1.8	09/19/19 18:06	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/19/19 18:06	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/19/19 18:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

METHOD BLANK: 3414816 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
Chloroethane	ug/L	<0.49	1.0	0.49	09/19/19 18:06	
Chloroform	ug/L	<0.45	1.0	0.45	09/19/19 18:06	
Chloromethane	ug/L	<0.16	4.0	0.16	09/19/19 18:06	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/19/19 18:06	
Dibromochloromethane	ug/L	<0.12	1.0	0.12	09/19/19 18:06	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/19/19 18:06	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/19/19 18:06	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/19/19 18:06	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/19/19 18:06	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/19/19 18:06	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/19/19 18:06	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/19/19 18:06	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	09/19/19 18:06	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/19/19 18:06	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/19/19 18:06	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/19/19 18:06	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/19/19 18:06	
Naphthalene	ug/L	0.77J	1.0	0.48	09/19/19 18:06	
o-Xylene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
Styrene	ug/L	<0.19	0.50	0.19	09/19/19 18:06	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/19/19 18:06	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/19/19 18:06	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/19/19 18:06	
Toluene	ug/L	<0.083	0.50	0.083	09/19/19 18:06	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/19/19 18:06	
trans-1,3-Dichloropropene	ug/L	<0.18	1.0	0.18	09/19/19 18:06	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/19/19 18:06	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/19/19 18:06	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/19/19 18:06	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/19/19 18:06	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/19/19 18:06	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/19/19 18:06	
1,2-Dichloroethane-d4 (S)	%.	101	75-136		09/19/19 18:06	
4-Bromofluorobenzene (S)	%.	104	75-125		09/19/19 18:06	
Toluene-d8 (S)	%.	99	75-125		09/19/19 18:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

LABORATORY CONTROL SAMPLE: 3414817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.5	103	68-141	
1,1,1-Trichloroethane	ug/L	20	22.7	113	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.4	107	73-125	
1,1,2-Trichloroethane	ug/L	20	21.3	107	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	21.7	108	69-132	
1,1-Dichloroethane	ug/L	20	19.0	95	73-125	
1,1-Dichloroethene	ug/L	20	19.5	97	71-126	
1,1-Dichloropropene	ug/L	20	22.5	112	73-126	
1,2,3-Trichlorobenzene	ug/L	20	19.5	98	72-126	
1,2,3-Trichloropropane	ug/L	20	21.6	108	75-126	
1,2,4-Trichlorobenzene	ug/L	20	20.3	101	71-134	
1,2,4-Trimethylbenzene	ug/L	20	19.8	99	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	53.8	108	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	21.6	108	75-129	
1,2-Dichlorobenzene	ug/L	20	19.7	98	75-129	
1,2-Dichloroethane	ug/L	20	20.3	102	75-125	
1,2-Dichloroethene (Total)	ug/L	40	40.0	100	74-125	N2
1,2-Dichloropropane	ug/L	20	19.0	95	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.6	103	75-127	
1,3-Dichlorobenzene	ug/L	20	20.0	100	75-126	
1,3-Dichloropropane	ug/L	20	21.3	107	75-125	
1,4-Dichlorobenzene	ug/L	20	18.6	93	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	345	86	72-129	
2,2,4-Trimethylpentane	ug/L	20	21.3	107	72-128	
2,2-Dichloropropane	ug/L	20	24.0	120	65-138	
2-Butanone (MEK)	ug/L	100	93.3	93	59-144	
2-Chlorotoluene	ug/L	20	19.8	99	75-127	
2-Hexanone	ug/L	100	93.0	93	73-134	
4-Chlorotoluene	ug/L	20	19.5	97	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	95.2	95	62-141	
Acetone	ug/L	100	112	112	60-137	
Acrolein	ug/L	200	197	99	60-141	
Acrylonitrile	ug/L	200	197	99	75-129	
Benzene	ug/L	20	20.3	101	73-125	
Bromobenzene	ug/L	20	19.8	99	73-125	
Bromochloromethane	ug/L	20	21.4	107	75-135	
Bromodichloromethane	ug/L	20	20.4	102	75-125	
Bromoform	ug/L	20	20.7	104	67-136	
Bromomethane	ug/L	20	16.7	84	30-150	
Carbon disulfide	ug/L	20	16.6	83	47-137	
Carbon tetrachloride	ug/L	20	21.7	108	75-125	
Chlorobenzene	ug/L	20	20.8	104	75-125	
Chloroethane	ug/L	20	19.9	100	63-136	
Chloroform	ug/L	20	20.6	103	73-128	
Chloromethane	ug/L	20	16.6	83	55-130	
cis-1,2-Dichloroethene	ug/L	20	21.0	105	75-125	
cis-1,3-Dichloropropene	ug/L	20	21.7	109	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

LABORATORY CONTROL SAMPLE: 3414817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.9	104	75-125	
Dibromomethane	ug/L	20	21.7	109	75-125	
Dichlorodifluoromethane	ug/L	20	20.7	104	63-132	
Dichlorofluoromethane	ug/L	20	19.9	100	68-127	
Diisopropyl ether	ug/L	20	15.6	78	71-131	
Ethyl-tert-butyl ether	ug/L	20	19.9	100	75-125	
Ethylbenzene	ug/L	20	19.9	100	75-125	
Hexachloro-1,3-butadiene	ug/L	20	22.9	114	72-134	
Isopropylbenzene (Cumene)	ug/L	20	21.2	106	75-125	
m&p-Xylene	ug/L	40	40.6	101	75-126	
Methyl-tert-butyl ether	ug/L	20	17.9	90	75-125	
Methylene Chloride	ug/L	20	17.9	89	70-125	
n-Butylbenzene	ug/L	20	21.3	106	75-126	
n-Propylbenzene	ug/L	20	20.2	101	73-127	
Naphthalene	ug/L	20	18.9	94	63-128	
o-Xylene	ug/L	20	20.4	102	75-128	
p-Isopropyltoluene	ug/L	20	19.9	100	75-125	
sec-Butylbenzene	ug/L	20	20.2	101	75-126	
Styrene	ug/L	20	21.5	108	75-125	
tert-Amylmethyl ether	ug/L	20	20.1	101	75-125	
tert-Butyl Alcohol	ug/L	200	164	82	75-130	
tert-Butylbenzene	ug/L	20	20.0	100	75-131	
Tetrachloroethene	ug/L	20	20.8	104	74-125	
Tetrahydrofuran	ug/L	200	250	125	64-138	
Toluene	ug/L	20	20.6	103	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.0	95	68-128	
trans-1,3-Dichloropropene	ug/L	20	21.2	106	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	57.4	115	60-127	
Trichloroethene	ug/L	20	21.6	108	75-127	
Trichlorofluoromethane	ug/L	20	22.8	114	72-133	
Vinyl acetate	ug/L	20	23.2	116	61-129	
Vinyl chloride	ug/L	20	18.4	92	75-128	
Xylene (Total)	ug/L	60	60.9	102	75-125	
1,2-Dichloroethane-d4 (S)	%.			101	75-136	
4-Bromofluorobenzene (S)	%.			101	75-125	
Toluene-d8 (S)	%.			103	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418376 3418377

Parameter	Units	10492488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	19.1	19.5	95	98	75-140	2	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	22.1	22.0	110	110	74-136	0	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	18.8	20.0	94	100	66-134	6	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	18.9	19.7	94	98	75-126	4	30	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418376 3418377

Parameter	Units	10492488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	21.0	21.6	105	108	65-146	2	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	18.1	18.1	91	90	68-132	0	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	19.6	19.2	98	96	66-139	2	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	21.4	21.7	107	109	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	17.9	22.0	89	110	67-129	21	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	18.4	20.1	92	100	69-128	9	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	18.8	21.8	94	109	65-140	15	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	18.4	20.2	92	101	71-133	9	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	46.6	51.4	93	103	54-138	10	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	19.1	19.9	95	100	68-125	4	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	18.1	19.5	90	97	74-136	7	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	18.4	18.9	92	95	68-125	3	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	39.4	37.9	99	95	71-126	4	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	17.6	18.4	88	92	67-125	4	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	18.9	20.6	95	103	68-137	9	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	18.1	19.3	91	97	75-131	7	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	19.0	19.9	95	99	71-125	5	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	17.1	18.4	86	92	74-126	7	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	427	399	107	100	68-125	7	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	21.7	22.6	108	113	54-129	4	30	
2,2-Dichloropropane	ug/L	<0.17	20	20	24.4	23.8	122	119	69-139	2	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	70.0	77.8	70	78	54-144	11	30	
2-Chlorotoluene	ug/L	<0.16	20	20	18.3	19.2	92	96	75-134	5	30	
2-Hexanone	ug/L	<0.88	100	100	78.8	88.3	79	88	58-137	11	30	
4-Chlorotoluene	ug/L	<0.13	20	20	18.0	19.1	90	96	72-133	6	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	80.5	88.0	80	88	60-129	9	30	
Acetone	ug/L	<9.2	100	100	87.2	91.0	83	87	62-132	4	30	
Acrolein	ug/L	<1.2	200	200	243	258	122	129	30-150	6	30	
Acrylonitrile	ug/L	<0.91	200	200	173	182	87	91	68-125	5	30	
Benzene	ug/L	<0.10	20	20	19.4	19.0	97	95	68-125	2	30	
Bromobenzene	ug/L	<0.21	20	20	18.5	19.2	93	96	73-126	3	30	
Bromochloromethane	ug/L	<0.27	20	20	20.4	20.2	102	101	66-143	1	30	
Bromodichloromethane	ug/L	<0.22	20	20	19.5	20.1	97	101	74-125	3	30	
Bromoform	ug/L	<0.80	20	20	18.4	19.6	92	98	64-134	6	30	
Bromomethane	ug/L	<1.8	20	20	19.2	19.7	96	99	30-150	3	30	
Carbon disulfide	ug/L	<0.078	20	20	16.9	16.1	84	80	43-147	5	30	
Carbon tetrachloride	ug/L	<0.19	20	20	21.1	21.3	105	106	71-143	1	30	
Chlorobenzene	ug/L	<0.17	20	20	19.3	19.7	97	99	75-125	2	30	
Chloroethane	ug/L	<0.49	20	20	21.0	18.6	105	93	75-129	12	30	
Chloroform	ug/L	<0.45	20	20	18.8	19.3	94	96	66-132	2	30	
Chloromethane	ug/L	<0.16	20	20	16.6	16.3	83	82	53-137	2	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	20.6	19.9	103	100	67-133	3	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	20.6	20.8	103	104	66-125	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418376 3418377

Parameter	Units	10492488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	19.3	20.1	96	100	62-132	4	30	
Dibromomethane	ug/L	<0.16	20	20	19.4	20.4	97	102	67-125	5	30	
Dichlorodifluoromethane	ug/L	<0.23	20	20	20.8	21.1	104	105	71-142	1	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	20.4	19.7	102	99	70-131	4	30	
Diisopropyl ether	ug/L	<0.13	20	20	14.3	14.3	71	72	63-131	1	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	18.1	18.6	91	93	66-128	3	30	
Ethylbenzene	ug/L	<0.14	20	20	18.6	19.2	93	96	74-126	3	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	24.1	23.4	120	117	68-143	3	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	19.9	20.9	100	105	74-130	5	30	
m&p-Xylene	ug/L	<0.31	40	40	37.5	38.4	94	96	69-132	2	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	16.7	17.4	84	87	65-131	4	30	
Methylene Chloride	ug/L	<0.98	20	20	17.1	16.5	86	83	57-125	4	30	
n-Butylbenzene	ug/L	<0.24	20	20	20.8	23.8	104	119	71-131	13	30	
n-Propylbenzene	ug/L	<0.10	20	20	19.3	20.6	97	103	67-138	6	30	
Naphthalene	ug/L	<0.48	20	20	17.0	20.2	85	101	60-130	17	30	
o-Xylene	ug/L	<0.16	20	20	19.0	19.6	95	98	69-131	3	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	19.0	20.9	95	105	72-133	10	30	
sec-Butylbenzene	ug/L	<0.15	20	20	19.2	21.4	96	107	73-134	10	30	
Styrene	ug/L	<0.19	20	20	19.9	20.5	100	103	72-125	3	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	18.0	19.4	90	97	67-125	7	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	168	181	84	90	64-137	7	30	
tert-Butylbenzene	ug/L	<0.15	20	20	18.6	20.5	93	102	70-143	9	30	
Tetrachloroethene	ug/L	<0.17	20	20	19.7	20.3	99	101	72-129	3	30	
Tetrahydrofuran	ug/L	<2.2	200	200	225	235	113	118	66-128	4	30	
Toluene	ug/L	<0.083	20	20	19.3	19.5	97	97	73-125	1	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	18.9	18.0	94	90	62-137	5	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	19.0	20.1	95	100	61-136	5	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	49.9	53.5	100	107	45-128	7	30	
Trichloroethene	ug/L	<0.15	20	20	20.6	20.7	103	104	74-132	0	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	23.0	23.1	115	116	75-139	0	30	
Vinyl acetate	ug/L	<1.1	20	20	21.0	21.7	105	109	51-135	3	30	
Vinyl chloride	ug/L	<0.092	20	20	18.8	18.3	94	91	68-146	3	30	
Xylene (Total)	ug/L	<0.31	60	60	56.5	58.0	94	97	67-137	3	30	
1,2-Dichloroethane-d4 (S)	%.						101	101	75-136			
4-Bromofluorobenzene (S)	%.						100	100	75-125			
Toluene-d8 (S)	%.						101	102	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 634678 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10492109001

METHOD BLANK: 3420836 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/26/19 08:08	

LABORATORY CONTROL SAMPLE & LCSD: 3420837 3420838

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.5	42.3	106	106	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420839 3420840

Parameter	Units	10492172002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	103	40	40	144	144	103	102	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420841 3420842

Parameter	Units	10492113001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	146	40	40	189	194	106	119	80-120	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 634181 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10492109001

METHOD BLANK: 3418509 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	09/25/19 12:44	

LABORATORY CONTROL SAMPLE: 3418510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1030	103	80-120	

SAMPLE DUPLICATE: 3418511

Parameter	Units	10492090004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	233	224	4	5	

SAMPLE DUPLICATE: 3418512

Parameter	Units	10492090005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	235	229	3	5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 158705 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10492109001

METHOD BLANK: 711139 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	09/25/19 14:27	

LABORATORY CONTROL SAMPLE: 711140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.22	109	90-110	

MATRIX SPIKE SAMPLE: 711142

Parameter	Units	20122719001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	ND	0.2	0.11	54	75-125	M1

SAMPLE DUPLICATE: 711141

Parameter	Units	20122719001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.0054		20	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 633434 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10492109001

METHOD BLANK: 3414855 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	09/19/19 18:15	
Nitrate as N	mg/L	<0.012	0.10	0.012	09/19/19 18:15	
Sulfate	mg/L	<0.28	1.2	0.28	09/19/19 18:15	

LABORATORY CONTROL SAMPLE: 3414856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	11.9	96	90-110	
Nitrate as N	mg/L	1	0.93	93	90-110	
Sulfate	mg/L	12.5	11.4	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414857 3414858

Parameter	Units	10491876001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	19.7	12.5	12.5	28.1	28.2	67	68	90-110	0	20	M1
Nitrate as N	mg/L	0.42	1	1	1.3	1.3	86	86	90-110	0	20	M1
Sulfate	mg/L	2.1J	12.5	12.5	14.1	14.1	96	96	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414859 3414860

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.3	12.5	12.5	12.4	12.4	89	89	90-110	0	20	M1
Nitrate as N	mg/L	1.1	1	1	1.9	1.9	77	77	90-110	0	20	M1
Sulfate	mg/L	14.4	12.5	12.5	23.9	24.1	76	77	90-110	1	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 634559
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10492109001

METHOD BLANK: 3420088 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	09/26/19 09:25	

LABORATORY CONTROL SAMPLE: 3420089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.96	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420090 3420091

Parameter	Units	10491655010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	16.3	1	1	17.1	17.3	80	100	90-110	1	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420092 3420093

Parameter	Units	10491870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	1.0	1.0	100	100	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 634119 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10492109001

METHOD BLANK: 3418145 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	09/25/19 07:33	

LABORATORY CONTROL SAMPLE: 3418146

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	309	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418147 3418148

Parameter	Units	10492109001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	253	245	101	98	90-110	3	20	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

QC Batch: 175791 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10492109001

METHOD BLANK: 696578 Matrix: Water
Associated Lab Samples: 10492109001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	09/27/19 19:07	

LABORATORY CONTROL SAMPLE: 696579

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.2	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 696580 696581

Parameter	Units	10492266011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.3	25	25	28.2	28.3	99	100	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 696582 696583

Parameter	Units	12135907001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	ND	50	50	52.2	51.4	102	100	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
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(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492109

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10492109001	**Lang-GW-091819**	RSK175	1351457	RSK-175	1351457
10492109001	**Lang-GW-091819**	EPA 3010	633710	EPA 6010D	635461
10492109001	**Lang-GW-091819**	EPA 7470A	633731	EPA 7470A	635106
10492109001	**Lang-GW-091819**	EPA 8260B	633421		
10492109001	**Lang-GW-091819**	SM 2320B	634678		
10492109001	**Lang-GW-091819**	SM 2540C	634181		
10492109001	**Lang-GW-091819**	SM 4500-S-2 D	158705		
10492109001	**Lang-GW-091819**	EPA 300.0	633434		
10492109001	**Lang-GW-091819**	EPA 353.2	634559		
10492109001	**Lang-GW-091819**	EPA 410.4	634119	EPA 410.4	634331
10492109001	**Lang-GW-091819**	SM 5310C	175791		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 Of 1

Section A Required Client Information:

Company:	UPRR -Jacobs
Address:	999 W Riverside Ave, Suite 500, Spokane, WA 99201
Email:	
Phone:	Fax:
Requested Due Date:	*10 Day Standard*

Section B Required Project Information:

Report To:	Mark Ochsner, Brad Ostapkowicz
Copy To:	Steve Demus, Jonathan Espinoza
Copy To:	David Hodson, UPRR-Sysdat@ghd.com
Purchase Order #	PEDD# 1497
Project Name:	Freeman WA-Cenex Harvest Lease
Project #:	1497

Section C Invoice Information:

Attention:	Anne Walsh
Company:	UPRR
Address:	1400 W. 52nd Ave, Denver, CO 80221
Pace Quote:	Contract# 9900758938
Pace Project Manager:	Jennifer Gross
Pace Profile #:	*36447 / 4*

Regulatory Agency:

State / Location: WA / Freeman

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N): 6010/7470 TAL Dissolved Metals* — Y

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test Y/N	Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, **Nitrate 300.0**	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	
1	Lang-GW-091819	WT	G	9/18/19	1235	–	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X				001
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

WO#: 10492109

10492109

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Short hold analyses are in **bold**	KES / Jacobs	9/18/19	1630	IJ-PACE	9/19/19	8:40	0.1	Y	Y	Y
*field filtered by client										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kaila Savage

SIGNATURE of SAMPLER: KES

DATE Signed: 9/18/19

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.29**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR - Jacobs

Project #: **WO#: 10492109**

PM: JMG **Due Date: 10/03/19**

CLIENT: UPRR_Jacobs

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exceptions** ☐

Tracking Number: 4394 3733 2916

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other:_____ **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☐ T1(0461) ☒ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.1 °C **Average Corrected Temp (no temp blank only):** ☐ See Exceptions

Correction Factor: 0.0 **Cooler Temp Corrected w/temp blank:** 0.1 °C ☐ 1 Container

USDA Regulated Soil: (☒ N/A, water sample/Other:_____) **Date/Initials of Person Examining Contents:** 9/19/19 LJ

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☒ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☒ Nitrate ☒ Nitrite ☐ Orthophos ☐ Other_____
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☒ Yes	☐ No		
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests? JMG 092419	☒ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other_____				
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	12. Sample # 1:1/1 1:1/1 1:1/1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☒ Yes	☐ No	☐ N/A	☐ NaOH ☒ HNO_3 ☒ H_2SO_4 ☒ Zinc Acetate
Exceptions: VOA, Coliform, TOC, DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS JMG 092419	☒ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** 203619 **See Exception** ☐
				Res. Chlorine: 0-6 Roll / 0-6 Strip / 0-14 Strip 10D24681
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☒ No	☐ N/A	13. **See Exception** ☐
Trip Blank Present?	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased):_____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted:_____ Date/Time:_____

Comments/Resolution:_____

Project Manager Review: _____ Jenni Gross Date: 09/24/19

Note: Whenever there is a discrepancy affecting Nor ance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: LJ

WO#: 12135839

PM: RK1 Due Date: 10/07/19
CLIENT: PACE MPLS

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☒ Yes ☐ No

Workorder: 10492109 **Workorder Name:** 1497 Freeman WA-Cenex Harvest
Owner Received Date: 9/19/2019 **Results Requested By:** 10/3/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4	Preserved Containers: DG9S					Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	Lang-GW-091819	PS	9/18/2019 12:35	10492109001	Water	1						X												
2																								
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	PACE	9/20/19 1739	9.20.19	1900
2	RG 9/20/19	2330	9/23/19	8:10
3				

Comments

Cooler Temperature on Receipt 4.8 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: WO#: 12135839

12135839

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☑ Yes ☐ No

Thermometer Used: ☑ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temp Read °C: 4.5 Cooler Temp Corrected °C: 4.8 Biological Tissue Frozen? ☐ Yes ☐ No ☑ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 9/20/19 AL 9/23/19 KR

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☒ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased): _____				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Lauren Forur Date: 9/23/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

Pace Analytical®
www.pacelabs.com

State Of Origin: WA
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 9/19/2019 **Results Requested By:** 10/3/2019

Workorder: 10492109 **Workorder Name:** 1497 Freeman WA-Cenex Harvest

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

Requested Analysis

WO# : 20122549

20122549

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other BP2Z	5636267 / 4500 Sulfide	LAB USE ONLY
1	Lang-GW-091819	PS	9/18/2019 12:35	10492109001	Water	1	X	
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	PACE	9/20/19 1636	Fed Ex	9/21/19 0900
2	Fed Ex 9/21/19 0900		Fed Ex	9/21/19 0900
3				

Comments

Cooler Temperature on Receipt 3.0 °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon R

Pro

WO# : 20122549

PM: CMM Due Date: 10/03/19

CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

#10

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/21/19 MS

Temp must be measured from Temperature blank when present

				Comments:
Temperature Blank Present"?	☑Yes	☐No	☐N/A	1
Chain of Custody Present:	☑Yes	☐No	☐N/A	2
Chain of Custody Complete:	☑Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☐Yes	☑No	☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6
Sufficient Volume:	☑Yes	☐No	☐N/A	7
Correct Containers Used:	☑Yes	☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☐No	☑N/A	9
Sample Labels match COC:	☑Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14
Trip Blank Present:	☐Yes	☑No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Chain of Custody

G214

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☒ No

Workorder: 10492109 **Workorder Name:** 1497 Freeman WA-Cenex Harvest **Owner Received Date:** 9/19/2019 **Results Requested By:** 10/3/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace National 12065 Lebanon Road Mt. Juliet, TN 37122 615-773-9710

						Preserved Containers						Requested Analysis													
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Other	VSG					5644436 / Headspace Analysis	Methane, Ethane, Ethene												114/871 LAB USE ONLY
1	Lang-GW-091819	PS	9/18/2019 12:35	10492109001	Water	3	3					X													-01
2																									
3																									
4																									
5																									

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	9/20/19 1615	Carol Kemp	9/20/19
2				9:00
3				

Comments: Short Hold

Cooler Temperature on Receipt 0.1 °C | Custody Seal ☒ or N | Received on Ice ☒ or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.3-.2=0.1 ASM

RAD SCREEN: <0.5 mR/hr

11411871

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.29	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR - Jacobs

Project #: **WO#: 10492109**

PM: JMG **Due Date: 10/03/19**

CLIENT: UPRR_Jacobs

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial See Exceptions ☐

Tracking Number: 4394 3333 2916

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☐ T1(0461) ☒ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.1 °C

Correction Factor: 0.0 **Cooler Temp Corrected w/temp blank:** 0.1 °C

Average Corrected Temp (no temp blank only): ☐ See Exceptions ☐ 1 Container _____ °C

USDA Regulated Soil: (☒ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: 9/19/19 LS

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☒ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☒ Nitrate ☒ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☒ Yes	☐ No		
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. If no, write ID/ Date/Time on Container Below: See Exception ☐
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other _____				
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	12. Sample # 1:1/1 1:1/1 1:1/1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☒ Yes	☐ No	☐ N/A	☐ NaOH ☒ HNO_3 ☒ H_2SO_4 ☒ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# 203619 See Exception ☐
				Res. Chlorine: 0-6 Roll: 0-6 Strip: 0-14 Strip 1082481
				13. See Exception ☐
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☒ No	☐ N/A	
Trip Blank Present?	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 9/20/2019

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: _____

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: PACETWN	1141871	
Cooler Received/Opened On: 9/2/19 Temperature:	0.1	
Received By: Carol Kemp		
Signature: Carol Kemp		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 03, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Pace Analytical National Certification IDs

Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

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SAMPLE SUMMARY

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10492111001	**Stark-GW-091819**	Water	09/18/19 10:40	09/19/19 08:40

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10492111001	**Stark-GW-091819**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	AEZ	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10492111001	**Stark-GW-091819**					
EPA 6010D	Barium, Dissolved	32.1	ug/L	10.0	10/01/19 12:34	
EPA 6010D	Beryllium, Dissolved	0.14J	ug/L	5.0	10/01/19 12:34	B
EPA 6010D	Cobalt, Dissolved	1.7J	ug/L	10.0	10/01/19 12:34	
EPA 6010D	Copper, Dissolved	113	ug/L	10.0	10/01/19 12:34	
EPA 6010D	Nickel, Dissolved	10.8J	ug/L	20.0	10/01/19 12:34	
EPA 6010D	Vanadium, Dissolved	4.0J	ug/L	15.0	10/01/19 12:34	
EPA 6010D	Zinc, Dissolved	21.4	ug/L	20.0	10/01/19 12:34	
SM 2320B	Alkalinity, Total as CaCO3	142	mg/L	5.0	09/26/19 08:46	
SM 2540C	Total Dissolved Solids	224	mg/L	10.0	09/25/19 12:44	
EPA 300.0	Chloride	1.3	mg/L	1.2	09/19/19 20:41	
EPA 300.0	Nitrate as N	1.3	mg/L	0.10	09/19/19 20:41	
EPA 300.0	Sulfate	14.5	mg/L	1.2	09/19/19 20:41	
EPA 353.2	Nitrogen, NO2 plus NO3	1.4	mg/L	0.10	09/26/19 10:51	
EPA 410.4	Chemical Oxygen Demand	37.4J	mg/L	50.0	09/25/19 07:34	
SM 5310C	Total Organic Carbon	0.56J	mg/L	1.0	09/27/19 14:25	

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **RSK-175**
Description: VOA (GC) RSK175
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for RSK-175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 633710

B: Analyte was detected in the associated method blank.
- BLANK for HBN 633710 [MPRP/970 (Lab ID: 3416481)
  - Beryllium, Dissolved

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 633421

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3414816)
  - 1,2-Dichloroethene (Total)
- LCS (Lab ID: 3414817)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3418376)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3418377)
  - 1,2-Dichloroethene (Total)
- Stark-GW-091819 (Lab ID: 10492111001)
  - 1,2-Dichloroethene (Total)

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 03, 2019

Analyte Comments:

QC Batch: 633421

- BLANK (Lab ID: 3414816)
  - Dichlorofluoromethane
- LCS (Lab ID: 3414817)
  - Dichlorofluoromethane
- MS (Lab ID: 3418376)
  - Dichlorofluoromethane
- MSD (Lab ID: 3418377)
  - Dichlorofluoromethane
- Stark-GW-091819 (Lab ID: 10492111001)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 158705

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20122719001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 711142)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 633434

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491876001,10492090005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3414857)
  - Chloride
  - Nitrate as N
- MS (Lab ID: 3414859)
  - Chloride
  - Nitrate as N
  - Sulfate
- MSD (Lab ID: 3414858)
  - Chloride
  - Nitrate as N
- MSD (Lab ID: 3414860)
  - Chloride
  - Nitrate as N
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 634559

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655010,10491870001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 3420090)
  - Nitrogen, NO2 plus NO3

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: October 03, 2019

General Information:
1 sample was analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Sample: Stark-GW-091819 **Lab ID: 10492111001** Collected: 09/18/19 10:40 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/25/19 15:02	09/25/19 15:02	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/25/19 15:02	09/25/19 15:02	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/25/19 15:02	09/25/19 15:02	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/30/19 05:06	10/01/19 12:34	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/30/19 05:06	10/01/19 12:34	7440-38-2	
Barium, Dissolved	**32.1**	ug/L	10.0	0.60	1	09/30/19 05:06	10/01/19 12:34	7440-39-3	
Beryllium, Dissolved	**0.14J**	ug/L	5.0	0.12	1	09/30/19 05:06	10/01/19 12:34	7440-41-7	B
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/30/19 05:06	10/01/19 12:34	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/30/19 05:06	10/01/19 12:34	7440-47-3	
Cobalt, Dissolved	**1.7J**	ug/L	10.0	0.50	1	09/30/19 05:06	10/01/19 12:34	7440-48-4	
Copper, Dissolved	**113**	ug/L	10.0	1.2	1	09/30/19 05:06	10/01/19 12:34	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/30/19 05:06	10/01/19 12:34	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/30/19 05:06	10/01/19 12:34	7439-98-7	
Nickel, Dissolved	**10.8J**	ug/L	20.0	1.1	1	09/30/19 05:06	10/01/19 12:34	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/30/19 05:06	10/01/19 12:34	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/30/19 05:06	10/01/19 12:34	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/30/19 05:06	10/01/19 12:34	7440-28-0	
Vanadium, Dissolved	**4.0J**	ug/L	15.0	0.43	1	09/30/19 05:06	10/01/19 12:34	7440-62-2	
Zinc, Dissolved	**21.4**	ug/L	20.0	6.3	1	09/30/19 05:06	10/01/19 12:34	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/27/19 10:06	09/27/19 14:03	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	1.0	0.20	1		09/19/19 20:38	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/19/19 20:38	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:38	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/19/19 20:38	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 20:38	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:38	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:38	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 20:38	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	1.0	0.21	1		09/19/19 20:38	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/19/19 20:38	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	1.0	0.20	1		09/19/19 20:38	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 20:38	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/19/19 20:38	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/19/19 20:38	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 20:38	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/19/19 20:38	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/19/19 20:38	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 20:38	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 20:38	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:38	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Sample: Stark-GW-091819 **Lab ID: 10492111001** Collected: 09/18/19 10:40 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/19/19 20:38	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:38	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/19/19 20:38	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/19/19 20:38	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/19/19 20:38	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/19/19 20:38	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:38	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/19/19 20:38	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/19/19 20:38	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/19/19 20:38	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/19/19 20:38	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/19/19 20:38	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/19/19 20:38	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 20:38	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/19/19 20:38	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/19/19 20:38	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/19/19 20:38	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/19/19 20:38	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/19/19 20:38	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/19/19 20:38	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/19/19 20:38	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:38	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/19/19 20:38	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/19/19 20:38	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/19/19 20:38	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	1.0	0.12	1		09/19/19 20:38	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/19/19 20:38	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/19/19 20:38	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/19/19 20:38	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/19/19 20:38	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/19/19 20:38	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/19/19 20:38	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 20:38	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	0.50	0.18	1		09/19/19 20:38	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:38	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/19/19 20:38	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/19/19 20:38	91-20-3	
Styrene	**<0.19**	ug/L	0.50	0.19	1		09/19/19 20:38	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/19/19 20:38	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/19/19 20:38	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/19/19 20:38	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/19/19 20:38	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/19/19 20:38	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/19/19 20:38	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/19/19 20:38	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/19/19 20:38	1330-20-7	

REPORT OF LABORATORY ANALYSIS

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(612)607-1700

ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Sample: Stark-GW-091819 **Lab ID: 10492111001** Collected: 09/18/19 10:40 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:38	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/19/19 20:38	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/19/19 20:38	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/19/19 20:38	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/19/19 20:38	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/19/19 20:38	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:38	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:38	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/19/19 20:38	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/19/19 20:38	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/19/19 20:38	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/19/19 20:38	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	1.0	0.18	1		09/19/19 20:38	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/19/19 20:38	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-136		1		09/19/19 20:38	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		09/19/19 20:38	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		09/19/19 20:38	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**142**	mg/L	5.0	2.0	1		09/26/19 08:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**224**	mg/L	10.0	5.0	1		09/25/19 12:44		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/25/19 14:53	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**1.3**	mg/L	1.2	0.12	1		09/19/19 20:41	16887-00-6	
Nitrate as N	**1.3**	mg/L	0.10	0.012	1		09/19/19 20:41	14797-55-8	
Sulfate	**14.5**	mg/L	1.2	0.28	1		09/19/19 20:41	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**1.4**	mg/L	0.10	0.018	1		09/26/19 10:51		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**37.4J**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:34		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.56J**	mg/L	1.0	0.39	1		09/27/19 14:25	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 1351457 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10492111001

METHOD BLANK: R3454500-1 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/25/19 13:38	
Ethane	ug/L	<4.07	13.0	4.07	09/25/19 13:38	
Ethene	ug/L	<4.26	13.0	4.26	09/25/19 13:38	

LABORATORY CONTROL SAMPLE & LCSD: R3454500-4 R3454500-5

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	74.6	77.5	110	114	85.0-115	3.88	20	
Ethane	ug/L	129	122	127	94.6	98.4	85.0-115	3.93	20	
Ethene	ug/L	127	121	126	95.0	99.6	85.0-115	4.69	20	

SAMPLE DUPLICATE: R3454500-2

Parameter	Units	L1142312-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

SAMPLE DUPLICATE: R3454500-3

Parameter	Units	L1142411-05 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 633731 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10492111001

METHOD BLANK: 3416567 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	09/27/19 13:13	

LABORATORY CONTROL SAMPLE: 3416568

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.3	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416569 3416570

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.1	5.2	103	104	80-120	1	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 633710
QC Batch Method: EPA 3010
Analysis Method: EPA 6010D
Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10492111001

METHOD BLANK: 3416481 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	10/01/19 11:54	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	10/01/19 11:54	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	10/01/19 11:54	
Beryllium, Dissolved	ug/L	0.17J	5.0	0.12	10/01/19 11:54	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	10/01/19 11:54	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	10/01/19 11:54	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	10/01/19 11:54	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	10/01/19 11:54	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	10/01/19 11:54	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	10/01/19 11:54	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	10/01/19 11:54	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	10/01/19 11:54	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	10/01/19 11:54	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	10/01/19 11:54	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	10/01/19 11:54	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	10/01/19 11:54	

LABORATORY CONTROL SAMPLE: 3416482

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	998	100	80-120	
Arsenic, Dissolved	ug/L	1000	1040	104	80-120	
Barium, Dissolved	ug/L	1000	1040	104	80-120	
Beryllium, Dissolved	ug/L	1000	1060	106	80-120	
Cadmium, Dissolved	ug/L	1000	1050	105	80-120	
Chromium, Dissolved	ug/L	1000	1040	104	80-120	
Cobalt, Dissolved	ug/L	1000	1030	103	80-120	
Copper, Dissolved	ug/L	1000	1010	101	80-120	
Lead, Dissolved	ug/L	1000	1040	104	80-120	
Molybdenum, Dissolved	ug/L	1000	1010	101	80-120	
Nickel, Dissolved	ug/L	1000	1040	104	80-120	
Selenium, Dissolved	ug/L	1000	1060	106	80-120	
Silver, Dissolved	ug/L	500	523	105	80-120	
Thallium, Dissolved	ug/L	1000	1020	102	80-120	
Vanadium, Dissolved	ug/L	1000	1030	103	80-120	
Zinc, Dissolved	ug/L	1000	1060	106	80-120	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416483 3416484

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	1060	1060	106	106	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1090	1100	109	110	75-125	1	20	
Barium, Dissolved	ug/L	31.2	1000	1000	1120	1120	108	109	75-125	1	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	1110	1110	111	111	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1080	1090	108	109	75-125	0	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1080	1090	108	109	75-125	0	20	
Cobalt, Dissolved	ug/L	1.8J	1000	1000	1060	1060	106	106	75-125	1	20	
Copper, Dissolved	ug/L	119	1000	1000	1170	1180	105	106	75-125	0	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1070	1080	107	108	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	1070	1070	107	107	75-125	0	20	
Nickel, Dissolved	ug/L	10.7J	1000	1000	1070	1080	106	106	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1100	1110	110	111	75-125	0	20	
Silver, Dissolved	ug/L	<0.40	500	500	547	549	109	110	75-125	0	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	1040	1050	104	104	75-125	0	20	
Vanadium, Dissolved	ug/L	4.0J	1000	1000	1080	1090	108	108	75-125	1	20	
Zinc, Dissolved	ug/L	21.7	1000	1000	1100	1110	108	108	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 633421 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10492111001

METHOD BLANK: 3414816 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	1.0	0.20	09/19/19 18:06	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/19/19 18:06	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/19/19 18:06	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/19/19 18:06	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/19/19 18:06	
1,2,3-Trichlorobenzene	ug/L	<0.21	1.0	0.21	09/19/19 18:06	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/19/19 18:06	
1,2,4-Trichlorobenzene	ug/L	<0.20	1.0	0.20	09/19/19 18:06	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/19/19 18:06	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	09/19/19 18:06	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/19/19 18:06	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/19/19 18:06	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	09/19/19 18:06	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/19/19 18:06	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/19/19 18:06	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/19/19 18:06	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/19/19 18:06	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/19/19 18:06	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/19/19 18:06	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/19/19 18:06	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/19/19 18:06	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/19/19 18:06	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/19/19 18:06	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/19/19 18:06	
Acetone	ug/L	<9.2	20.0	9.2	09/19/19 18:06	
Acrolein	ug/L	<1.2	10.0	1.2	09/19/19 18:06	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/19/19 18:06	
Benzene	ug/L	<0.10	0.50	0.10	09/19/19 18:06	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/19/19 18:06	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/19/19 18:06	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/19/19 18:06	
Bromoform	ug/L	<0.80	4.0	0.80	09/19/19 18:06	
Bromomethane	ug/L	<1.8	4.0	1.8	09/19/19 18:06	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/19/19 18:06	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/19/19 18:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

METHOD BLANK: 3414816 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
Chloroethane	ug/L	<0.49	1.0	0.49	09/19/19 18:06	
Chloroform	ug/L	<0.45	1.0	0.45	09/19/19 18:06	
Chloromethane	ug/L	<0.16	4.0	0.16	09/19/19 18:06	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/19/19 18:06	
Dibromochloromethane	ug/L	<0.12	1.0	0.12	09/19/19 18:06	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/19/19 18:06	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/19/19 18:06	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/19/19 18:06	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/19/19 18:06	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/19/19 18:06	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/19/19 18:06	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/19/19 18:06	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.50	0.18	09/19/19 18:06	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/19/19 18:06	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/19/19 18:06	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/19/19 18:06	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/19/19 18:06	
Naphthalene	ug/L	0.77J	1.0	0.48	09/19/19 18:06	
o-Xylene	ug/L	<0.16	0.50	0.16	09/19/19 18:06	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
Styrene	ug/L	<0.19	0.50	0.19	09/19/19 18:06	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/19/19 18:06	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/19/19 18:06	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/19/19 18:06	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/19/19 18:06	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/19/19 18:06	
Toluene	ug/L	<0.083	0.50	0.083	09/19/19 18:06	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/19/19 18:06	
trans-1,3-Dichloropropene	ug/L	<0.18	1.0	0.18	09/19/19 18:06	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/19/19 18:06	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/19/19 18:06	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/19/19 18:06	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/19/19 18:06	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/19/19 18:06	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/19/19 18:06	
1,2-Dichloroethane-d4 (S)	%.	101	75-136		09/19/19 18:06	
4-Bromofluorobenzene (S)	%.	104	75-125		09/19/19 18:06	
Toluene-d8 (S)	%.	99	75-125		09/19/19 18:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

LABORATORY CONTROL SAMPLE: 3414817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.5	103	68-141	
1,1,1-Trichloroethane	ug/L	20	22.7	113	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.4	107	73-125	
1,1,2-Trichloroethane	ug/L	20	21.3	107	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	21.7	108	69-132	
1,1-Dichloroethane	ug/L	20	19.0	95	73-125	
1,1-Dichloroethene	ug/L	20	19.5	97	71-126	
1,1-Dichloropropene	ug/L	20	22.5	112	73-126	
1,2,3-Trichlorobenzene	ug/L	20	19.5	98	72-126	
1,2,3-Trichloropropane	ug/L	20	21.6	108	75-126	
1,2,4-Trichlorobenzene	ug/L	20	20.3	101	71-134	
1,2,4-Trimethylbenzene	ug/L	20	19.8	99	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	53.8	108	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	21.6	108	75-129	
1,2-Dichlorobenzene	ug/L	20	19.7	98	75-129	
1,2-Dichloroethane	ug/L	20	20.3	102	75-125	
1,2-Dichloroethene (Total)	ug/L	40	40.0	100	74-125	N2
1,2-Dichloropropane	ug/L	20	19.0	95	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.6	103	75-127	
1,3-Dichlorobenzene	ug/L	20	20.0	100	75-126	
1,3-Dichloropropane	ug/L	20	21.3	107	75-125	
1,4-Dichlorobenzene	ug/L	20	18.6	93	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	345	86	72-129	
2,2,4-Trimethylpentane	ug/L	20	21.3	107	72-128	
2,2-Dichloropropane	ug/L	20	24.0	120	65-138	
2-Butanone (MEK)	ug/L	100	93.3	93	59-144	
2-Chlorotoluene	ug/L	20	19.8	99	75-127	
2-Hexanone	ug/L	100	93.0	93	73-134	
4-Chlorotoluene	ug/L	20	19.5	97	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	95.2	95	62-141	
Acetone	ug/L	100	112	112	60-137	
Acrolein	ug/L	200	197	99	60-141	
Acrylonitrile	ug/L	200	197	99	75-129	
Benzene	ug/L	20	20.3	101	73-125	
Bromobenzene	ug/L	20	19.8	99	73-125	
Bromochloromethane	ug/L	20	21.4	107	75-135	
Bromodichloromethane	ug/L	20	20.4	102	75-125	
Bromoform	ug/L	20	20.7	104	67-136	
Bromomethane	ug/L	20	16.7	84	30-150	
Carbon disulfide	ug/L	20	16.6	83	47-137	
Carbon tetrachloride	ug/L	20	21.7	108	75-125	
Chlorobenzene	ug/L	20	20.8	104	75-125	
Chloroethane	ug/L	20	19.9	100	63-136	
Chloroform	ug/L	20	20.6	103	73-128	
Chloromethane	ug/L	20	16.6	83	55-130	
cis-1,2-Dichloroethene	ug/L	20	21.0	105	75-125	
cis-1,3-Dichloropropene	ug/L	20	21.7	109	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

LABORATORY CONTROL SAMPLE: 3414817

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.9	104	75-125	
Dibromomethane	ug/L	20	21.7	109	75-125	
Dichlorodifluoromethane	ug/L	20	20.7	104	63-132	
Dichlorofluoromethane	ug/L	20	19.9	100	68-127	
Diisopropyl ether	ug/L	20	15.6	78	71-131	
Ethyl-tert-butyl ether	ug/L	20	19.9	100	75-125	
Ethylbenzene	ug/L	20	19.9	100	75-125	
Hexachloro-1,3-butadiene	ug/L	20	22.9	114	72-134	
Isopropylbenzene (Cumene)	ug/L	20	21.2	106	75-125	
m&p-Xylene	ug/L	40	40.6	101	75-126	
Methyl-tert-butyl ether	ug/L	20	17.9	90	75-125	
Methylene Chloride	ug/L	20	17.9	89	70-125	
n-Butylbenzene	ug/L	20	21.3	106	75-126	
n-Propylbenzene	ug/L	20	20.2	101	73-127	
Naphthalene	ug/L	20	18.9	94	63-128	
o-Xylene	ug/L	20	20.4	102	75-128	
p-Isopropyltoluene	ug/L	20	19.9	100	75-125	
sec-Butylbenzene	ug/L	20	20.2	101	75-126	
Styrene	ug/L	20	21.5	108	75-125	
tert-Amylmethyl ether	ug/L	20	20.1	101	75-125	
tert-Butyl Alcohol	ug/L	200	164	82	75-130	
tert-Butylbenzene	ug/L	20	20.0	100	75-131	
Tetrachloroethene	ug/L	20	20.8	104	74-125	
Tetrahydrofuran	ug/L	200	250	125	64-138	
Toluene	ug/L	20	20.6	103	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.0	95	68-128	
trans-1,3-Dichloropropene	ug/L	20	21.2	106	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	57.4	115	60-127	
Trichloroethene	ug/L	20	21.6	108	75-127	
Trichlorofluoromethane	ug/L	20	22.8	114	72-133	
Vinyl acetate	ug/L	20	23.2	116	61-129	
Vinyl chloride	ug/L	20	18.4	92	75-128	
Xylene (Total)	ug/L	60	60.9	102	75-125	
1,2-Dichloroethane-d4 (S)	%.			101	75-136	
4-Bromofluorobenzene (S)	%.			101	75-125	
Toluene-d8 (S)	%.			103	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418376 3418377

Parameter	Units	10492488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	19.1	19.5	95	98	75-140	2	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	22.1	22.0	110	110	74-136	0	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	18.8	20.0	94	100	66-134	6	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	18.9	19.7	94	98	75-126	4	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418376 3418377

Parameter	Units	10492488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	21.0	21.6	105	108	65-146	2	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	18.1	18.1	91	90	68-132	0	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	19.6	19.2	98	96	66-139	2	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	21.4	21.7	107	109	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	17.9	22.0	89	110	67-129	21	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	18.4	20.1	92	100	69-128	9	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	18.8	21.8	94	109	65-140	15	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	18.4	20.2	92	101	71-133	9	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	46.6	51.4	93	103	54-138	10	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	19.1	19.9	95	100	68-125	4	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	18.1	19.5	90	97	74-136	7	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	18.4	18.9	92	95	68-125	3	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	39.4	37.9	99	95	71-126	4	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	17.6	18.4	88	92	67-125	4	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	18.9	20.6	95	103	68-137	9	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	18.1	19.3	91	97	75-131	7	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	19.0	19.9	95	99	71-125	5	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	17.1	18.4	86	92	74-126	7	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	427	399	107	100	68-125	7	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	21.7	22.6	108	113	54-129	4	30	
2,2-Dichloropropane	ug/L	<0.17	20	20	24.4	23.8	122	119	69-139	2	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	70.0	77.8	70	78	54-144	11	30	
2-Chlorotoluene	ug/L	<0.16	20	20	18.3	19.2	92	96	75-134	5	30	
2-Hexanone	ug/L	<0.88	100	100	78.8	88.3	79	88	58-137	11	30	
4-Chlorotoluene	ug/L	<0.13	20	20	18.0	19.1	90	96	72-133	6	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	80.5	88.0	80	88	60-129	9	30	
Acetone	ug/L	<9.2	100	100	87.2	91.0	83	87	62-132	4	30	
Acrolein	ug/L	<1.2	200	200	243	258	122	129	30-150	6	30	
Acrylonitrile	ug/L	<0.91	200	200	173	182	87	91	68-125	5	30	
Benzene	ug/L	<0.10	20	20	19.4	19.0	97	95	68-125	2	30	
Bromobenzene	ug/L	<0.21	20	20	18.5	19.2	93	96	73-126	3	30	
Bromochloromethane	ug/L	<0.27	20	20	20.4	20.2	102	101	66-143	1	30	
Bromodichloromethane	ug/L	<0.22	20	20	19.5	20.1	97	101	74-125	3	30	
Bromoform	ug/L	<0.80	20	20	18.4	19.6	92	98	64-134	6	30	
Bromomethane	ug/L	<1.8	20	20	19.2	19.7	96	99	30-150	3	30	
Carbon disulfide	ug/L	<0.078	20	20	16.9	16.1	84	80	43-147	5	30	
Carbon tetrachloride	ug/L	<0.19	20	20	21.1	21.3	105	106	71-143	1	30	
Chlorobenzene	ug/L	<0.17	20	20	19.3	19.7	97	99	75-125	2	30	
Chloroethane	ug/L	<0.49	20	20	21.0	18.6	105	93	75-129	12	30	
Chloroform	ug/L	<0.45	20	20	18.8	19.3	94	96	66-132	2	30	
Chloromethane	ug/L	<0.16	20	20	16.6	16.3	83	82	53-137	2	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	20.6	19.9	103	100	67-133	3	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	20.6	20.8	103	104	66-125	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418376 3418377

Parameter	Units	10492488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	19.3	20.1	96	100	62-132	4	30	
Dibromomethane	ug/L	<0.16	20	20	19.4	20.4	97	102	67-125	5	30	
Dichlorodifluoromethane	ug/L	<0.23	20	20	20.8	21.1	104	105	71-142	1	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	20.4	19.7	102	99	70-131	4	30	
Diisopropyl ether	ug/L	<0.13	20	20	14.3	14.3	71	72	63-131	1	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	18.1	18.6	91	93	66-128	3	30	
Ethylbenzene	ug/L	<0.14	20	20	18.6	19.2	93	96	74-126	3	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	24.1	23.4	120	117	68-143	3	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	19.9	20.9	100	105	74-130	5	30	
m&p-Xylene	ug/L	<0.31	40	40	37.5	38.4	94	96	69-132	2	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	16.7	17.4	84	87	65-131	4	30	
Methylene Chloride	ug/L	<0.98	20	20	17.1	16.5	86	83	57-125	4	30	
n-Butylbenzene	ug/L	<0.24	20	20	20.8	23.8	104	119	71-131	13	30	
n-Propylbenzene	ug/L	<0.10	20	20	19.3	20.6	97	103	67-138	6	30	
Naphthalene	ug/L	<0.48	20	20	17.0	20.2	85	101	60-130	17	30	
o-Xylene	ug/L	<0.16	20	20	19.0	19.6	95	98	69-131	3	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	19.0	20.9	95	105	72-133	10	30	
sec-Butylbenzene	ug/L	<0.15	20	20	19.2	21.4	96	107	73-134	10	30	
Styrene	ug/L	<0.19	20	20	19.9	20.5	100	103	72-125	3	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	18.0	19.4	90	97	67-125	7	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	168	181	84	90	64-137	7	30	
tert-Butylbenzene	ug/L	<0.15	20	20	18.6	20.5	93	102	70-143	9	30	
Tetrachloroethene	ug/L	<0.17	20	20	19.7	20.3	99	101	72-129	3	30	
Tetrahydrofuran	ug/L	<2.2	200	200	225	235	113	118	66-128	4	30	
Toluene	ug/L	<0.083	20	20	19.3	19.5	97	97	73-125	1	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	18.9	18.0	94	90	62-137	5	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	19.0	20.1	95	100	61-136	5	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	49.9	53.5	100	107	45-128	7	30	
Trichloroethene	ug/L	<0.15	20	20	20.6	20.7	103	104	74-132	0	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	23.0	23.1	115	116	75-139	0	30	
Vinyl acetate	ug/L	<1.1	20	20	21.0	21.7	105	109	51-135	3	30	
Vinyl chloride	ug/L	<0.092	20	20	18.8	18.3	94	91	68-146	3	30	
Xylene (Total)	ug/L	<0.31	60	60	56.5	58.0	94	97	67-137	3	30	
1,2-Dichloroethane-d4 (S)	%.						101	101	75-136			
4-Bromofluorobenzene (S)	%.						100	100	75-125			
Toluene-d8 (S)	%.						101	102	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 634678 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10492111001

METHOD BLANK: 3420836 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/26/19 08:08	

LABORATORY CONTROL SAMPLE & LCSD: 3420837 3420838

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.5	42.3	106	106	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420839 3420840

Parameter	Units	10492172002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	103	40	40	144	144	103	102	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420841 3420842

Parameter	Units	10492113001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	146	40	40	189	194	106	119	80-120	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 634181 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10492111001

METHOD BLANK: 3418509 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	09/25/19 12:44	

LABORATORY CONTROL SAMPLE: 3418510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1030	103	80-120	

SAMPLE DUPLICATE: 3418511

Parameter	Units	10492090004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	233	224	4	5	

SAMPLE DUPLICATE: 3418512

Parameter	Units	10492090005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	235	229	3	5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 158705 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10492111001

METHOD BLANK: 711139 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	09/25/19 14:27	

LABORATORY CONTROL SAMPLE: 711140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.22	109	90-110	

MATRIX SPIKE SAMPLE: 711142

Parameter	Units	20122719001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	ND	0.2	0.11	54	75-125	M1

SAMPLE DUPLICATE: 711141

Parameter	Units	20122719001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.0054		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 633434 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10492111001

METHOD BLANK: 3414855 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	09/19/19 18:15	
Nitrate as N	mg/L	<0.012	0.10	0.012	09/19/19 18:15	
Sulfate	mg/L	<0.28	1.2	0.28	09/19/19 18:15	

LABORATORY CONTROL SAMPLE: 3414856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	11.9	96	90-110	
Nitrate as N	mg/L	1	0.93	93	90-110	
Sulfate	mg/L	12.5	11.4	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414857 3414858

Parameter	Units	10491876001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	19.7	12.5	12.5	28.1	28.2	67	68	90-110	0	20	M1
Nitrate as N	mg/L	0.42	1	1	1.3	1.3	86	86	90-110	0	20	M1
Sulfate	mg/L	2.1J	12.5	12.5	14.1	14.1	96	96	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414859 3414860

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.3	12.5	12.5	12.4	12.4	89	89	90-110	0	20	M1
Nitrate as N	mg/L	1.1	1	1	1.9	1.9	77	77	90-110	0	20	M1
Sulfate	mg/L	14.4	12.5	12.5	23.9	24.1	76	77	90-110	1	20	M1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 634559 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10492111001

METHOD BLANK: 3420088 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	09/26/19 09:25	

LABORATORY CONTROL SAMPLE: 3420089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.96	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420090 3420091

Parameter	Units	10491655010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	16.3	1	1	17.1	17.3	80	100	90-110	1	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420092 3420093

Parameter	Units	10491870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	1.0	1.0	100	100	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 634119 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10492111001

METHOD BLANK: 3418145 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	09/25/19 07:33	

LABORATORY CONTROL SAMPLE: 3418146

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	309	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418147 3418148

Parameter	Units	10492109001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	253	245	101	98	90-110	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

QC Batch: 175792 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10492111001

METHOD BLANK: 696584 Matrix: Water
Associated Lab Samples: 10492111001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	09/27/19 12:28	

LABORATORY CONTROL SAMPLE: 696585

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.2	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 696586 696587

Parameter	Units	10492264001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<1.0	25	25	25.6	26.0	101	102	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 696588 696589

Parameter	Units	10492503001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<393 ug/L	25	25	25.6	25.7	102	102	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALIFIERS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492111

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10492111001	**Stark-GW-091819**	RSK175	1351457	RSK-175	1351457
10492111001	**Stark-GW-091819**	EPA 3010	633710	EPA 6010D	635461
10492111001	**Stark-GW-091819**	EPA 7470A	633731	EPA 7470A	635106
10492111001	**Stark-GW-091819**	EPA 8260B	633421		
10492111001	**Stark-GW-091819**	SM 2320B	634678		
10492111001	**Stark-GW-091819**	SM 2540C	634181		
10492111001	**Stark-GW-091819**	SM 4500-S-2 D	158705		
10492111001	**Stark-GW-091819**	EPA 300.0	633434		
10492111001	**Stark-GW-091819**	EPA 353.2	634559		
10492111001	**Stark-GW-091819**	EPA 410.4	634119	EPA 410.4	634331
10492111001	**Stark-GW-091819**	SM 5310C	175792		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: UPRR Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh
Address: 999 W. Riverside Ave, Suite 500 Spokane, WA 99201	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR
	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221
Email:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 9900758938
Phone: Fax:	Project Name: Freeman WA-Cenex Harvest Lease	Pace Project Manager: Jennifer Gross
Requested Due Date: *10 Day Standard*	Project #: 1497	Pace Profile #: *36447 / 4*

Regulatory Agency

State / Location: WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Analyses Test: Y/N	Low Level VOCs by 8260	8016/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested
1	Stark-GW-091819	WT	G	9/18/19	1040	-	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			CVI
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

WO# : 10492111

10492111

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Short hold analyses are in bold	KE&L/Jacobs	9/18/19	~~1600~~ 1630	IJ-PACE	9/19/19	8:40	0.1 Y Y Y
*Field filtered by client							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Karla Savage

SIGNATURE of SAMPLER: K E&L

DATE Signed: 9/18/19

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: **F-MN-L-213-rev.29**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR - Jacobs

Project #: **WO#: 10492111**

PM: JMG **Due Date: 10/03/19**

CLIENT: UPRR_Jacobs

Courier: ☒ Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial See Exceptions ☐

Tracking Number: 4394 3333 2916

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other:_____ **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☐ T1(0461) ☒ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.1 °C

Correction Factor: 0.0 **Cooler Temp Corrected w/temp blank:** 0.1 °C

Average Corrected Temp (no temp blank only): °C ☐ See Exceptions ☐ 1 Container

USDA Regulated Soil: (☒ N/A, water sample/Other:_____)

Date/Initials of Person Examining Contents: 9/19/19 LS

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☒ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other_____
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☒ Yes	☐ No		
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other_____				
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	12. Sample # 1.1/1 1.1/1 1.1/1
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☒ Yes	☐ No	☐ N/A	☐ NaOH ☒ HNO_3 ☒ H_2SO_4 ☒ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# 207619 **See Exception** ☐
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip 10024281
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☒ No	☐ N/A	13. **See Exception** ☐
Trip Blank Present?	☐ Yes	☐ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A	Pace Trip Blank Lot # (if purchased):_____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted:_____ Date/Time:_____

Comments/Resolution:_____

Project Manager Review: Oyeyemi Odeyole Date: 9/20/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by:_____

WO#: 12135898

12135898

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☐

Workorder: 10492111 **Workorder Name:** 1497 Freeman WA-Cenex Harvest **Owner Received Date:** 9/19/2019 **Results Requested By:** 10/3/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	Stark-GW-091819	PS	9/18/2019 10:40	10492111001	Water	3						X												
2																								
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	9/23/19 [illegible]	[illegible] 9/23/19	1900
2	[illegible] 9/23/19	2330	B Mathews	9/24/19 0630
3				

Comments

Cooler Temperature on Receipt 0.6 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: **WO#: 12135898**

PM: RK1 **Due Date: 10/03/19**

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No Optional: Proj. Due Date: Proj. Name:

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☑ Yes ☐ No

Thermometer Used: ☑ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.3 Cooler Temp Corrected °C: 0.6 Biological Tissue Frozen? ☐ Yes ☐ No ☑ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 9/23/19 DC

Comments: BM 9/24/19

Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation properly preserved?	☑ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased): _____				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Lauren Jerue Date: 9/24/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☐ No

Workorder: 10492111 **Workorder Name:** 1497 Freeman WA-Cenex Harvest
Owner Received Date: 9/19/2019 **Results Requested By:** 10/3/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

BP22

WO# : 20122548

20122548

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	5636267 / 4500 Sulfide	LAB USE ONLY
1	Stark-GW-091819	PS	9/18/2019 10:40	10492111001	Water	1	X	
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	PACE	9.20.19 1636	FedEx	
2	FedEx 9/21/19 0900		FedEx 9/21/19 0900	
3				

Comments

Cooler Temperature on Receipt 3.0 °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon R

WO# : 20122548

PM: CMM Due Date: 10/03/19

Proj CLIENT: PASI-MINN

Courier: ☐ Pace Courier ☐ Hired Courier ☑ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

#10

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 9/21/19 TMS

Temp must be measured from Temperature blank when present

				Comments:
Temperature Blank Present"?	☑Yes	☐No	☐N/A	1
Chain of Custody Present:	☑Yes	☐No	☐N/A	2
Chain of Custody Complete:	☑Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☐Yes	☑No	☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6
Sufficient Volume:	☑Yes	☐No	☐N/A	7
Correct Containers Used:	☑Yes	☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☐No	☑N/A	9
Sample Labels match COC:	☑Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14
Trip Blank Present:	☐Yes	☑No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Chain of Custody

G217

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☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 9/19/2019 Results Requested By: 10/3/2019

Workorder: 10492111 **Workorder Name:** 1497 Freeman WA-Cenex Harvest

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	Requested Analysis: 5644436 / Headspace Analysis	LAB USE ONLY
1	Stark-GW-091819	PS	9/18/2019 10:40	10492111001	Water	3	X	-01
2								
3								
4								
5								

114/1873

Transfers	Released By	Date/Time	Received By	Date/Time
1	Fed Ex Pace	9/20/19 1645	Carol Kemp	9/21/19 9:00
2				
3				

Comments

Cooler Temperature on Receipt 0.1 °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.3-.220.1
ASP

RAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: FACETVA	1141823	
Cooler Received/Opened On: 9/12/19 Temperature:	0.1	
Received By: Carol Kemp		
Signature: Carol Kemp		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 04, 2019

David Hodson
Jacobs
155 Grand Ave
#800
Oakland, CA 94612

RE: Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Dear David Hodson:
Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(206)957-2426
Project Manager

Enclosures

cc: Steve Demus, Jacobs
Jonathan Espinoza, Jacobs
Mark Ochsner, Jacobs
Brad Ostapkowicz, Jacobs
UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792
Montana Certificate #CERT0103
Alaska Certification UST-107
Minnesota Dept of Health Certification #: 027-137-445
North Dakota Certification: # R-203
Wisconsin DNR Certification # : 998027470
WA Department of Ecology Lab ID# C1007

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylvania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

CERTIFICATIONS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Pace Analytical National Certification IDs

Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

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SAMPLE SUMMARY

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10492112001	**Marlow-GW-091819**	Water	09/18/19 16:10	09/19/19 08:40

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SAMPLE ANALYTE COUNT

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10492112001	**Marlow-GW-091819**	RSK-175	DAH	3	PAN
		EPA 6010D	DM	16	PASI-M
		EPA 7470A	LMW	1	PASI-M
		EPA 8260B	DS2	83	PASI-M
		SM 2320B	KDC	1	PASI-M
		SM 2540C	EPT	1	PASI-M
		SM 4500-S-2 D	PNT	1	PASI-N
		EPA 300.0	KEO	3	PASI-M
		EPA 353.2	KEO	1	PASI-M
		EPA 410.4	KEO	1	PASI-M
		SM 5310C	CSD	1	PASI-V

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SUMMARY OF DETECTION

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10492112001	**Marlow-GW-091819**					
EPA 6010D	Barium, Dissolved	16.2	ug/L	10.0	09/27/19 10:40	
EPA 6010D	Cobalt, Dissolved	1.0J	ug/L	10.0	09/27/19 10:40	
EPA 6010D	Copper, Dissolved	19.7	ug/L	10.0	09/27/19 10:40	
EPA 6010D	Nickel, Dissolved	2.1J	ug/L	20.0	09/27/19 10:40	
EPA 6010D	Vanadium, Dissolved	0.49J	ug/L	15.0	09/27/19 10:40	
EPA 6010D	Zinc, Dissolved	226	ug/L	20.0	09/27/19 10:40	
SM 2320B	Alkalinity, Total as CaCO3	168	mg/L	5.0	09/26/19 08:50	
SM 2540C	Total Dissolved Solids	305	mg/L	10.0	09/25/19 12:44	
EPA 300.0	Chloride	17.2	mg/L	1.2	09/19/19 21:29	
EPA 300.0	Nitrate as N	3.0	mg/L	0.10	09/19/19 21:29	
EPA 300.0	Sulfate	13.1	mg/L	1.2	09/19/19 21:29	
EPA 353.2	Nitrogen, NO2 plus NO3	3.5	mg/L	0.50	09/26/19 11:06	

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **RSK-175**
Description: VOA (GC) RSK175
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for RSK-175. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **EPA 6010D**
Description: 6010D MET ICP, Dissolved
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **EPA 7470A**
Description: 7470A Mercury, Dissolved
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 633558

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10492090005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3415553)
  - 2,2,4-Trimethylpentane
  - Dibromomethane

Additional Comments:

Analyte Comments:

QC Batch: 633558

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3415551)
  - 1,2-Dichloroethene (Total)

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **EPA 8260B**
Description: 8260B MSV Low Level
Client: UPRR_Jacobs
Date: October 04, 2019

Analyte Comments:

QC Batch: 633558

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- LCS (Lab ID: 3415552)
  - 1,2-Dichloroethene (Total)
- MS (Lab ID: 3415553)
  - 1,2-Dichloroethene (Total)
- MSD (Lab ID: 3415554)
  - 1,2-Dichloroethene (Total)
- Marlow-GW-091819 (Lab ID: 10492112001)
  - 1,2-Dichloroethene (Total)

- BLANK (Lab ID: 3415551)
  - Dichlorofluoromethane
- LCS (Lab ID: 3415552)
  - Dichlorofluoromethane
- MS (Lab ID: 3415553)
  - Dichlorofluoromethane
- MSD (Lab ID: 3415554)
  - Dichlorofluoromethane
- Marlow-GW-091819 (Lab ID: 10492112001)
  - Dichlorofluoromethane

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **SM 4500-S-2 D**
Description: 4500S2D Sulfide, Total
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for SM 4500-S-2 D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 158705

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20122719001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 711142)
  - Sulfide, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **EPA 300.0**
Description: 300.0 IC Anions
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 633434

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491876001,10492090005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3414857)
  - Chloride
  - Nitrate as N
- MS (Lab ID: 3414859)
  - Chloride
  - Nitrate as N
  - Sulfate
- MSD (Lab ID: 3414858)
  - Chloride
  - Nitrate as N
- MSD (Lab ID: 3414860)
  - Chloride
  - Nitrate as N
  - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **EPA 353.2**
Description: 353.2 Nitrate + Nitrite
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 634559

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10491655010,10491870001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 3420090)
  - Nitrogen, NO2 plus NO3

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **EPA 410.4**
Description: 410.4 COD
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Method: **SM 5310C**
Description: 5310C TOC
Client: UPRR_Jacobs
Date: October 04, 2019

General Information:
1 sample was analyzed for SM 5310C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Sample: Marlow-GW-091819 **Lab ID: 10492112001** Collected: 09/18/19 16:10 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC) RSK175	Analytical Method: RSK-175 Preparation Method: RSK175								
Methane	**<2.91**	ug/L	10.0	2.91	1	09/25/19 15:00	09/25/19 15:00	74-82-8	
Ethane	**<4.07**	ug/L	13.0	4.07	1	09/25/19 15:00	09/25/19 15:00	74-84-0	
Ethene	**<4.26**	ug/L	13.0	4.26	1	09/25/19 15:00	09/25/19 15:00	74-85-1	
6010D MET ICP, Dissolved	Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Antimony, Dissolved	**<7.0**	ug/L	20.0	7.0	1	09/25/19 21:04	09/27/19 10:40	7440-36-0	
Arsenic, Dissolved	**<3.8**	ug/L	20.0	3.8	1	09/25/19 21:04	09/27/19 10:40	7440-38-2	
Barium, Dissolved	**16.2**	ug/L	10.0	0.60	1	09/25/19 21:04	09/27/19 10:40	7440-39-3	
Beryllium, Dissolved	**<0.12**	ug/L	5.0	0.12	1	09/25/19 21:04	09/27/19 10:40	7440-41-7	
Cadmium, Dissolved	**<0.28**	ug/L	3.0	0.28	1	09/25/19 21:04	09/27/19 10:40	7440-43-9	
Chromium, Dissolved	**<0.66**	ug/L	10.0	0.66	1	09/25/19 21:04	09/27/19 10:40	7440-47-3	
Cobalt, Dissolved	**1.0J**	ug/L	10.0	0.50	1	09/25/19 21:04	09/27/19 10:40	7440-48-4	
Copper, Dissolved	**19.7**	ug/L	10.0	1.2	1	09/25/19 21:04	09/27/19 10:40	7440-50-8	
Lead, Dissolved	**<2.0**	ug/L	10.0	2.0	1	09/25/19 21:04	09/27/19 10:40	7439-92-1	
Molybdenum, Dissolved	**<3.8**	ug/L	15.0	3.8	1	09/25/19 21:04	09/27/19 10:40	7439-98-7	
Nickel, Dissolved	**2.1J**	ug/L	20.0	1.1	1	09/25/19 21:04	09/27/19 10:40	7440-02-0	
Selenium, Dissolved	**<5.8**	ug/L	20.0	5.8	1	09/25/19 21:04	09/27/19 10:40	7782-49-2	
Silver, Dissolved	**<0.40**	ug/L	10.0	0.40	1	09/25/19 21:04	09/27/19 10:40	7440-22-4	
Thallium, Dissolved	**<5.5**	ug/L	20.0	5.5	1	09/25/19 21:04	09/27/19 10:40	7440-28-0	
Vanadium, Dissolved	**0.49J**	ug/L	15.0	0.43	1	09/25/19 21:04	09/27/19 10:40	7440-62-2	
Zinc, Dissolved	**226**	ug/L	20.0	6.3	1	09/25/19 21:04	09/27/19 10:40	7440-66-6	
7470A Mercury, Dissolved	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury, Dissolved	**<0.093**	ug/L	0.20	0.093	1	09/24/19 11:53	09/25/19 12:46	7439-97-6	
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,1,1,2-Tetrachloroethane	**<0.20**	ug/L	0.50	0.20	1		09/20/19 16:06	630-20-6	
1,1,1-Trichloroethane	**<0.14**	ug/L	0.50	0.14	1		09/20/19 16:06	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 16:06	79-34-5	
1,1,2-Trichloroethane	**<0.18**	ug/L	0.50	0.18	1		09/20/19 16:06	79-00-5	
1,1,2-Trichlorotrifluoroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 16:06	76-13-1	
1,1-Dichloroethane	**<0.17**	ug/L	0.50	0.17	1		09/20/19 16:06	75-34-3	
1,1-Dichloroethene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 16:06	75-35-4	
1,1-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 16:06	563-58-6	
1,2,3-Trichlorobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 16:06	87-61-6	
1,2,3-Trichloropropane	**<0.26**	ug/L	4.0	0.26	1		09/20/19 16:06	96-18-4	
1,2,4-Trichlorobenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 16:06	120-82-1	
1,2,4-Trimethylbenzene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 16:06	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.7**	ug/L	4.0	1.7	1		09/20/19 16:06	96-12-8	
1,2-Dibromoethane (EDB)	**<0.24**	ug/L	0.50	0.24	1		09/20/19 16:06	106-93-4	
1,2-Dichlorobenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 16:06	95-50-1	
1,2-Dichloroethane	**<0.22**	ug/L	1.0	0.22	1		09/20/19 16:06	107-06-2	
1,2-Dichloroethene (Total)	**<0.27**	ug/L	1.0	0.27	1		09/20/19 16:06	540-59-0	N2
1,2-Dichloropropane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 16:06	78-87-5	
1,3,5-Trimethylbenzene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 16:06	108-67-8	
1,3-Dichlorobenzene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 16:06	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Sample: Marlow-GW-091819 **Lab ID: 10492112001** Collected: 09/18/19 16:10 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
1,3-Dichloropropane	**<0.070**	ug/L	0.50	0.070	1		09/20/19 16:06	142-28-9	
1,4-Dichlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 16:06	106-46-7	
1,4-Dioxane (p-Dioxane)	**<16.3**	ug/L	200	16.3	1		09/20/19 16:06	123-91-1	
2,2,4-Trimethylpentane	**<0.19**	ug/L	4.0	0.19	1		09/20/19 16:06	540-84-1	
2,2-Dichloropropane	**<0.17**	ug/L	1.0	0.17	1		09/20/19 16:06	594-20-7	
2-Butanone (MEK)	**<0.99**	ug/L	5.0	0.99	1		09/20/19 16:06	78-93-3	
2-Chlorotoluene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 16:06	95-49-8	
2-Hexanone	**<0.88**	ug/L	5.0	0.88	1		09/20/19 16:06	591-78-6	
4-Chlorotoluene	**<0.13**	ug/L	0.50	0.13	1		09/20/19 16:06	106-43-4	
4-Methyl-2-pentanone (MIBK)	**<0.42**	ug/L	5.0	0.42	1		09/20/19 16:06	108-10-1	
Acetone	**<9.2**	ug/L	20.0	9.2	1		09/20/19 16:06	67-64-1	
Acrolein	**<1.2**	ug/L	10.0	1.2	1		09/20/19 16:06	107-02-8	
Acrylonitrile	**<0.91**	ug/L	10.0	0.91	1		09/20/19 16:06	107-13-1	
Benzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 16:06	71-43-2	
Bromobenzene	**<0.21**	ug/L	0.50	0.21	1		09/20/19 16:06	108-86-1	
Bromochloromethane	**<0.27**	ug/L	1.0	0.27	1		09/20/19 16:06	74-97-5	
Bromodichloromethane	**<0.22**	ug/L	0.50	0.22	1		09/20/19 16:06	75-27-4	
Bromoform	**<0.80**	ug/L	4.0	0.80	1		09/20/19 16:06	75-25-2	
Bromomethane	**<1.8**	ug/L	4.0	1.8	1		09/20/19 16:06	74-83-9	
Carbon disulfide	**<0.078**	ug/L	1.0	0.078	1		09/20/19 16:06	75-15-0	
Carbon tetrachloride	**<0.19**	ug/L	0.50	0.19	1		09/20/19 16:06	56-23-5	
Chlorobenzene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 16:06	108-90-7	
Chloroethane	**<0.49**	ug/L	1.0	0.49	1		09/20/19 16:06	75-00-3	
Chloroform	**<0.45**	ug/L	1.0	0.45	1		09/20/19 16:06	67-66-3	
Chloromethane	**<0.16**	ug/L	4.0	0.16	1		09/20/19 16:06	74-87-3	
Dibromochloromethane	**<0.12**	ug/L	0.50	0.12	1		09/20/19 16:06	124-48-1	
Dibromomethane	**<0.16**	ug/L	1.0	0.16	1		09/20/19 16:06	74-95-3	
Dichlorodifluoromethane	**<0.23**	ug/L	1.0	0.23	1		09/20/19 16:06	75-71-8	
Dichlorofluoromethane	**<0.14**	ug/L	1.0	0.14	1		09/20/19 16:06	75-43-4	
Diisopropyl ether	**<0.13**	ug/L	1.0	0.13	1		09/20/19 16:06	108-20-3	
Ethyl-tert-butyl ether	**<0.18**	ug/L	0.50	0.18	1		09/20/19 16:06	637-92-3	
Ethylbenzene	**<0.14**	ug/L	0.50	0.14	1		09/20/19 16:06	100-41-4	
Hexachloro-1,3-butadiene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 16:06	87-68-3	
Isopropylbenzene (Cumene)	**<0.18**	ug/L	1.0	0.18	1		09/20/19 16:06	98-82-8	
Methyl-tert-butyl ether	**<0.16**	ug/L	0.50	0.16	1		09/20/19 16:06	1634-04-4	
Methylene Chloride	**<0.98**	ug/L	4.0	0.98	1		09/20/19 16:06	75-09-2	
Naphthalene	**<0.48**	ug/L	1.0	0.48	1		09/20/19 16:06	91-20-3	
Styrene	**<0.19**	ug/L	1.0	0.19	1		09/20/19 16:06	100-42-5	
Tetrachloroethene	**<0.17**	ug/L	0.50	0.17	1		09/20/19 16:06	127-18-4	
Tetrahydrofuran	**<2.2**	ug/L	10.0	2.2	1		09/20/19 16:06	109-99-9	
Toluene	**<0.083**	ug/L	0.50	0.083	1		09/20/19 16:06	108-88-3	
Trichloroethene	**<0.15**	ug/L	0.40	0.15	1		09/20/19 16:06	79-01-6	
Trichlorofluoromethane	**<0.23**	ug/L	0.50	0.23	1		09/20/19 16:06	75-69-4	
Vinyl acetate	**<1.1**	ug/L	10.0	1.1	1		09/20/19 16:06	108-05-4	
Vinyl chloride	**<0.092**	ug/L	0.20	0.092	1		09/20/19 16:06	75-01-4	
Xylene (Total)	**<0.31**	ug/L	1.5	0.31	1		09/20/19 16:06	1330-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Sample: Marlow-GW-091819 **Lab ID: 10492112001** Collected: 09/18/19 16:10 Received: 09/19/19 08:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV Low Level	Analytical Method: EPA 8260B								
cis-1,2-Dichloroethene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 16:06	156-59-2	
cis-1,3-Dichloropropene	**<0.20**	ug/L	0.50	0.20	1		09/20/19 16:06	10061-01-5	
m&p-Xylene	**<0.31**	ug/L	1.0	0.31	1		09/20/19 16:06	179601-23-1	
n-Butylbenzene	**<0.24**	ug/L	0.50	0.24	1		09/20/19 16:06	104-51-8	
n-Propylbenzene	**<0.10**	ug/L	0.50	0.10	1		09/20/19 16:06	103-65-1	
o-Xylene	**<0.16**	ug/L	0.50	0.16	1		09/20/19 16:06	95-47-6	
p-Isopropyltoluene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 16:06	99-87-6	
sec-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 16:06	135-98-8	
tert-Amylmethyl ether	**<0.11**	ug/L	0.50	0.11	1		09/20/19 16:06	994-05-8	
tert-Butyl Alcohol	**<1.2**	ug/L	10.0	1.2	1		09/20/19 16:06	75-65-0	
tert-Butylbenzene	**<0.15**	ug/L	0.50	0.15	1		09/20/19 16:06	98-06-6	
trans-1,2-Dichloroethene	**<0.12**	ug/L	0.50	0.12	1		09/20/19 16:06	156-60-5	
trans-1,3-Dichloropropene	**<0.18**	ug/L	0.50	0.18	1		09/20/19 16:06	10061-02-6	
trans-1,4-Dichloro-2-butene	**<2.0**	ug/L	10.0	2.0	1		09/20/19 16:06	110-57-6	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-136		1		09/20/19 16:06	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		09/20/19 16:06	2037-26-5	
4-Bromofluorobenzene (S)	92	%.	75-125		1		09/20/19 16:06	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**168**	mg/L	5.0	2.0	1		09/26/19 08:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**305**	mg/L	10.0	5.0	1		09/25/19 12:44		
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D								
Sulfide, Total	**<0.0054**	mg/L	0.020	0.0054	1		09/25/19 14:53	18496-25-8	
300.0 IC Anions	Analytical Method: EPA 300.0								
Chloride	**17.2**	mg/L	1.2	0.12	1		09/19/19 21:29	16887-00-6	
Nitrate as N	**3.0**	mg/L	0.10	0.012	1		09/19/19 21:29	14797-55-8	
Sulfate	**13.1**	mg/L	1.2	0.28	1		09/19/19 21:29	14808-79-8	
353.2 Nitrate + Nitrite	Analytical Method: EPA 353.2								
Nitrogen, NO2 plus NO3	**3.5**	mg/L	0.50	0.088	5		09/26/19 11:06		
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	**<17.0**	mg/L	50.0	17.0	1	09/24/19 16:39	09/25/19 07:34		
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**<0.39**	mg/L	1.0	0.39	1		09/27/19 15:03	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 1351457 Analysis Method: RSK-175
QC Batch Method: RSK175 Analysis Description: VOA (GC) RSK175
Associated Lab Samples: 10492112001

METHOD BLANK: R3454500-1 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methane	ug/L	<2.91	10.0	2.91	09/25/19 13:38	
Ethane	ug/L	<4.07	13.0	4.07	09/25/19 13:38	
Ethene	ug/L	<4.26	13.0	4.26	09/25/19 13:38	

LABORATORY CONTROL SAMPLE & LCSD: R3454500-4 R3454500-5

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	67.8	74.6	77.5	110	114	85.0-115	3.88	20	
Ethane	ug/L	129	122	127	94.6	98.4	85.0-115	3.93	20	
Ethene	ug/L	127	121	126	95.0	99.6	85.0-115	4.69	20	

SAMPLE DUPLICATE: R3454500-2

Parameter	Units	L1142312-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

SAMPLE DUPLICATE: R3454500-3

Parameter	Units	L1142411-05 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	ug/L	ND	<2.91	0.00	20	
Ethane	ug/L	ND	<4.07	0.00	20	
Ethene	ug/L	ND	<4.26	0.00	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 633733 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury Water Dissolved
Associated Lab Samples: 10492112001

METHOD BLANK: 3416575 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.093	0.20	0.093	09/25/19 12:18	

LABORATORY CONTROL SAMPLE: 3416576

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.6	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416577 3416578

Parameter	Units	10491724002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.093	5	5	5.4	5.4	107	108	80-120	0	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 633712 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D Water Dissolved
Associated Lab Samples: 10492112001

METHOD BLANK: 3416489 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	<7.0	20.0	7.0	09/27/19 10:25	
Arsenic, Dissolved	ug/L	<3.8	20.0	3.8	09/27/19 10:25	
Barium, Dissolved	ug/L	<0.60	10.0	0.60	09/27/19 10:25	
Beryllium, Dissolved	ug/L	<0.12	5.0	0.12	09/27/19 10:25	
Cadmium, Dissolved	ug/L	<0.28	3.0	0.28	09/27/19 10:25	
Chromium, Dissolved	ug/L	<0.66	10.0	0.66	09/27/19 10:25	
Cobalt, Dissolved	ug/L	<0.50	10.0	0.50	09/27/19 10:25	
Copper, Dissolved	ug/L	<1.2	10.0	1.2	09/27/19 10:25	
Lead, Dissolved	ug/L	<2.0	10.0	2.0	09/27/19 10:25	
Molybdenum, Dissolved	ug/L	<3.8	15.0	3.8	09/27/19 10:25	
Nickel, Dissolved	ug/L	<1.1	20.0	1.1	09/27/19 10:25	
Selenium, Dissolved	ug/L	<5.8	20.0	5.8	09/27/19 10:25	
Silver, Dissolved	ug/L	<0.40	10.0	0.40	09/27/19 10:25	
Thallium, Dissolved	ug/L	<5.5	20.0	5.5	09/27/19 10:25	
Vanadium, Dissolved	ug/L	<0.43	15.0	0.43	09/27/19 10:25	
Zinc, Dissolved	ug/L	<6.3	20.0	6.3	09/27/19 10:25	

LABORATORY CONTROL SAMPLE: 3416490

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	1000	1010	101	80-120	
Arsenic, Dissolved	ug/L	1000	1020	102	80-120	
Barium, Dissolved	ug/L	1000	1020	102	80-120	
Beryllium, Dissolved	ug/L	1000	1030	103	80-120	
Cadmium, Dissolved	ug/L	1000	1050	105	80-120	
Chromium, Dissolved	ug/L	1000	1020	102	80-120	
Cobalt, Dissolved	ug/L	1000	1030	103	80-120	
Copper, Dissolved	ug/L	1000	1010	101	80-120	
Lead, Dissolved	ug/L	1000	1030	103	80-120	
Molybdenum, Dissolved	ug/L	1000	1000	100	80-120	
Nickel, Dissolved	ug/L	1000	1020	102	80-120	
Selenium, Dissolved	ug/L	1000	1060	106	80-120	
Silver, Dissolved	ug/L	500	511	102	80-120	
Thallium, Dissolved	ug/L	1000	1000	100	80-120	
Vanadium, Dissolved	ug/L	1000	1010	101	80-120	
Zinc, Dissolved	ug/L	1000	1050	105	80-120	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3416491 3416492

Parameter	Units	10492113001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	<7.0	1000	1000	975	989	97	99	75-125	1	20	
Arsenic, Dissolved	ug/L	<3.8	1000	1000	1010	1030	101	103	75-125	1	20	
Barium, Dissolved	ug/L	53.8	1000	1000	1070	1080	101	102	75-125	1	20	
Beryllium, Dissolved	ug/L	<0.12	1000	1000	1030	1040	103	104	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.28	1000	1000	1030	1040	103	104	75-125	1	20	
Chromium, Dissolved	ug/L	<0.66	1000	1000	1010	1030	101	103	75-125	1	20	
Cobalt, Dissolved	ug/L	<0.50	1000	1000	1010	1020	101	102	75-125	1	20	
Copper, Dissolved	ug/L	1.7J	1000	1000	1000	1010	100	101	75-125	1	20	
Lead, Dissolved	ug/L	<2.0	1000	1000	1010	1020	101	102	75-125	1	20	
Molybdenum, Dissolved	ug/L	<3.8	1000	1000	983	991	98	99	75-125	1	20	
Nickel, Dissolved	ug/L	<1.1	1000	1000	995	1010	100	101	75-125	1	20	
Selenium, Dissolved	ug/L	<5.8	1000	1000	1040	1050	104	105	75-125	1	20	
Silver, Dissolved	ug/L	<0.40	500	500	508	513	102	103	75-125	1	20	
Thallium, Dissolved	ug/L	<5.5	1000	1000	991	1000	99	100	75-125	1	20	
Vanadium, Dissolved	ug/L	<0.43	1000	1000	1010	1020	101	102	75-125	1	20	
Zinc, Dissolved	ug/L	16.2J	1000	1000	1040	1050	103	104	75-125	1	20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 633558 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV LL Water
Associated Lab Samples: 10492112001

METHOD BLANK: 3415551 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
1,1,1-Trichloroethane	ug/L	<0.14	0.50	0.14	09/20/19 12:08	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
1,1,2-Trichloroethane	ug/L	<0.18	0.50	0.18	09/20/19 12:08	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	1.0	0.22	09/20/19 12:08	
1,1-Dichloroethane	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
1,1-Dichloroethene	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
1,1-Dichloropropene	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.50	0.21	09/20/19 12:08	
1,2,3-Trichloropropane	ug/L	<0.26	4.0	0.26	09/20/19 12:08	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	4.0	1.7	09/20/19 12:08	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.50	0.24	09/20/19 12:08	
1,2-Dichlorobenzene	ug/L	<0.14	0.50	0.14	09/20/19 12:08	
1,2-Dichloroethane	ug/L	<0.22	1.0	0.22	09/20/19 12:08	
1,2-Dichloroethene (Total)	ug/L	<0.27	1.0	0.27	09/20/19 12:08	N2
1,2-Dichloropropane	ug/L	<0.16	4.0	0.16	09/20/19 12:08	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.50	0.12	09/20/19 12:08	
1,3-Dichlorobenzene	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
1,3-Dichloropropane	ug/L	<0.070	0.50	0.070	09/20/19 12:08	
1,4-Dichlorobenzene	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	200	16.3	09/20/19 12:08	
2,2,4-Trimethylpentane	ug/L	<0.19	4.0	0.19	09/20/19 12:08	
2,2-Dichloropropane	ug/L	<0.17	1.0	0.17	09/20/19 12:08	
2-Butanone (MEK)	ug/L	<0.99	5.0	0.99	09/20/19 12:08	
2-Chlorotoluene	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
2-Hexanone	ug/L	<0.88	5.0	0.88	09/20/19 12:08	
4-Chlorotoluene	ug/L	<0.13	0.50	0.13	09/20/19 12:08	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	5.0	0.42	09/20/19 12:08	
Acetone	ug/L	<9.2	20.0	9.2	09/20/19 12:08	
Acrolein	ug/L	<1.2	10.0	1.2	09/20/19 12:08	
Acrylonitrile	ug/L	<0.91	10.0	0.91	09/20/19 12:08	
Benzene	ug/L	<0.10	0.50	0.10	09/20/19 12:08	
Bromobenzene	ug/L	<0.21	0.50	0.21	09/20/19 12:08	
Bromochloromethane	ug/L	<0.27	1.0	0.27	09/20/19 12:08	
Bromodichloromethane	ug/L	<0.22	0.50	0.22	09/20/19 12:08	
Bromoform	ug/L	<0.80	4.0	0.80	09/20/19 12:08	
Bromomethane	ug/L	<1.8	4.0	1.8	09/20/19 12:08	
Carbon disulfide	ug/L	<0.078	1.0	0.078	09/20/19 12:08	
Carbon tetrachloride	ug/L	<0.19	0.50	0.19	09/20/19 12:08	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

METHOD BLANK: 3415551 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorobenzene	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
Chloroethane	ug/L	<0.49	1.0	0.49	09/20/19 12:08	
Chloroform	ug/L	<0.45	1.0	0.45	09/20/19 12:08	
Chloromethane	ug/L	<0.16	4.0	0.16	09/20/19 12:08	
cis-1,2-Dichloroethene	ug/L	<0.15	0.50	0.15	09/20/19 12:08	
cis-1,3-Dichloropropene	ug/L	<0.20	0.50	0.20	09/20/19 12:08	
Dibromochloromethane	ug/L	<0.12	0.50	0.12	09/20/19 12:08	
Dibromomethane	ug/L	<0.16	1.0	0.16	09/20/19 12:08	
Dichlorodifluoromethane	ug/L	<0.23	1.0	0.23	09/20/19 12:08	
Dichlorofluoromethane	ug/L	<0.14	1.0	0.14	09/20/19 12:08	
Diisopropyl ether	ug/L	<0.13	1.0	0.13	09/20/19 12:08	
Ethyl-tert-butyl ether	ug/L	<0.18	0.50	0.18	09/20/19 12:08	
Ethylbenzene	ug/L	<0.14	0.50	0.14	09/20/19 12:08	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	0.31	09/20/19 12:08	
Isopropylbenzene (Cumene)	ug/L	<0.18	1.0	0.18	09/20/19 12:08	
m&p-Xylene	ug/L	<0.31	1.0	0.31	09/20/19 12:08	
Methyl-tert-butyl ether	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
Methylene Chloride	ug/L	<0.98	4.0	0.98	09/20/19 12:08	
n-Butylbenzene	ug/L	<0.24	0.50	0.24	09/20/19 12:08	
n-Propylbenzene	ug/L	<0.10	0.50	0.10	09/20/19 12:08	
Naphthalene	ug/L	<0.48	1.0	0.48	09/20/19 12:08	
o-Xylene	ug/L	<0.16	0.50	0.16	09/20/19 12:08	
p-Isopropyltoluene	ug/L	<0.15	0.50	0.15	09/20/19 12:08	
sec-Butylbenzene	ug/L	<0.15	0.50	0.15	09/20/19 12:08	
Styrene	ug/L	<0.19	1.0	0.19	09/20/19 12:08	
tert-Amylmethyl ether	ug/L	<0.11	0.50	0.11	09/20/19 12:08	
tert-Butyl Alcohol	ug/L	<1.2	10.0	1.2	09/20/19 12:08	
tert-Butylbenzene	ug/L	<0.15	0.50	0.15	09/20/19 12:08	
Tetrachloroethene	ug/L	<0.17	0.50	0.17	09/20/19 12:08	
Tetrahydrofuran	ug/L	<2.2	10.0	2.2	09/20/19 12:08	
Toluene	ug/L	<0.083	0.50	0.083	09/20/19 12:08	
trans-1,2-Dichloroethene	ug/L	<0.12	0.50	0.12	09/20/19 12:08	
trans-1,3-Dichloropropene	ug/L	<0.18	0.50	0.18	09/20/19 12:08	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	10.0	2.0	09/20/19 12:08	
Trichloroethene	ug/L	<0.15	0.40	0.15	09/20/19 12:08	
Trichlorofluoromethane	ug/L	<0.23	0.50	0.23	09/20/19 12:08	
Vinyl acetate	ug/L	<1.1	10.0	1.1	09/20/19 12:08	
Vinyl chloride	ug/L	<0.092	0.20	0.092	09/20/19 12:08	
Xylene (Total)	ug/L	<0.31	1.5	0.31	09/20/19 12:08	
1,2-Dichloroethane-d4 (S)	%.	97	75-136		09/20/19 12:08	
4-Bromofluorobenzene (S)	%.	93	75-125		09/20/19 12:08	
Toluene-d8 (S)	%.	98	75-125		09/20/19 12:08	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

LABORATORY CONTROL SAMPLE: 3415552

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.1	95	68-141	
1,1,1-Trichloroethane	ug/L	20	19.7	99	75-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	97	73-125	
1,1,2-Trichloroethane	ug/L	20	19.9	100	74-131	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.7	99	69-132	
1,1-Dichloroethane	ug/L	20	19.0	95	73-125	
1,1-Dichloroethene	ug/L	20	18.8	94	71-126	
1,1-Dichloropropene	ug/L	20	19.0	95	73-126	
1,2,3-Trichlorobenzene	ug/L	20	17.9	90	72-126	
1,2,3-Trichloropropane	ug/L	20	19.0	95	75-126	
1,2,4-Trichlorobenzene	ug/L	20	17.2	86	71-134	
1,2,4-Trimethylbenzene	ug/L	20	18.6	93	72-134	
1,2-Dibromo-3-chloropropane	ug/L	50	48.8	98	60-135	
1,2-Dibromoethane (EDB)	ug/L	20	19.4	97	75-129	
1,2-Dichlorobenzene	ug/L	20	18.4	92	75-129	
1,2-Dichloroethane	ug/L	20	19.3	97	75-125	
1,2-Dichloroethene (Total)	ug/L	40	37.5	94	74-125	N2
1,2-Dichloropropane	ug/L	20	18.9	94	75-125	
1,3,5-Trimethylbenzene	ug/L	20	18.2	91	75-127	
1,3-Dichlorobenzene	ug/L	20	18.8	94	75-126	
1,3-Dichloropropane	ug/L	20	18.6	93	75-125	
1,4-Dichlorobenzene	ug/L	20	18.1	90	75-125	
1,4-Dioxane (p-Dioxane)	ug/L	400	403	101	72-129	
2,2,4-Trimethylpentane	ug/L	20	19.0	95	72-128	
2,2-Dichloropropane	ug/L	20	18.7	93	65-138	
2-Butanone (MEK)	ug/L	100	115	115	59-144	
2-Chlorotoluene	ug/L	20	17.6	88	75-127	
2-Hexanone	ug/L	100	104	104	73-134	
4-Chlorotoluene	ug/L	20	17.9	90	75-127	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	62-141	
Acetone	ug/L	100	116	116	60-137	
Acrolein	ug/L	200	229	115	60-141	
Acrylonitrile	ug/L	200	193	96	75-129	
Benzene	ug/L	20	18.9	95	73-125	
Bromobenzene	ug/L	20	18.3	92	73-125	
Bromochloromethane	ug/L	20	20.6	103	75-135	
Bromodichloromethane	ug/L	20	18.5	92	75-125	
Bromoform	ug/L	20	19.7	99	67-136	
Bromomethane	ug/L	20	16.3	81	30-150	
Carbon disulfide	ug/L	20	17.7	89	47-137	
Carbon tetrachloride	ug/L	20	20.1	100	75-125	
Chlorobenzene	ug/L	20	18.1	91	75-125	
Chloroethane	ug/L	20	20.3	102	63-136	
Chloroform	ug/L	20	18.9	94	73-128	
Chloromethane	ug/L	20	18.2	91	55-130	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	75-125	
cis-1,3-Dichloropropene	ug/L	20	19.9	99	74-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

LABORATORY CONTROL SAMPLE: 3415552

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	20	20.5	103	75-125	
Dibromomethane	ug/L	20	22.8	114	75-125	
Dichlorodifluoromethane	ug/L	20	18.6	93	63-132	
Dichlorofluoromethane	ug/L	20	19.0	95	68-127	
Diisopropyl ether	ug/L	20	18.9	94	71-131	
Ethyl-tert-butyl ether	ug/L	20	17.6	88	75-125	
Ethylbenzene	ug/L	20	18.4	92	75-125	
Hexachloro-1,3-butadiene	ug/L	20	17.8	89	72-134	
Isopropylbenzene (Cumene)	ug/L	20	18.6	93	75-125	
m&p-Xylene	ug/L	40	37.7	94	75-126	
Methyl-tert-butyl ether	ug/L	20	18.5	92	75-125	
Methylene Chloride	ug/L	20	19.2	96	70-125	
n-Butylbenzene	ug/L	20	18.9	95	75-126	
n-Propylbenzene	ug/L	20	17.9	90	73-127	
Naphthalene	ug/L	20	16.2	81	63-128	
o-Xylene	ug/L	20	19.8	99	75-128	
p-Isopropyltoluene	ug/L	20	19.0	95	75-125	
sec-Butylbenzene	ug/L	20	19.6	98	75-126	
Styrene	ug/L	20	19.4	97	75-125	
tert-Amylmethyl ether	ug/L	20	18.4	92	75-125	
tert-Butyl Alcohol	ug/L	200	184	92	75-130	
tert-Butylbenzene	ug/L	20	18.8	94	75-131	
Tetrachloroethene	ug/L	20	19.4	97	74-125	
Tetrahydrofuran	ug/L	200	201	101	64-138	
Toluene	ug/L	20	18.2	91	74-125	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	68-128	
trans-1,3-Dichloropropene	ug/L	20	20.4	102	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	41.1	82	60-127	
Trichloroethene	ug/L	20	19.8	99	75-127	
Trichlorofluoromethane	ug/L	20	19.1	96	72-133	
Vinyl acetate	ug/L	20	20.0	100	61-129	
Vinyl chloride	ug/L	20	19.3	96	75-128	
Xylene (Total)	ug/L	60	57.5	96	75-125	
1,2-Dichloroethane-d4 (S)	%.			99	75-136	
4-Bromofluorobenzene (S)	%.			94	75-125	
Toluene-d8 (S)	%.			95	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3415553 3415554

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.20	20	20	20.3	20.6	101	103	75-140	2	30	
1,1,1-Trichloroethane	ug/L	<0.14	20	20	22.3	22.7	112	113	74-136	2	30	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	20	20	19.1	19.6	95	98	66-134	3	30	
1,1,2-Trichloroethane	ug/L	<0.18	20	20	20.6	21.1	103	106	75-126	3	30	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3415553 3415554

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	20	20	24.0	24.3	120	122	65-146	1	30	
1,1-Dichloroethane	ug/L	<0.17	20	20	20.7	20.0	103	100	68-132	3	30	
1,1-Dichloroethene	ug/L	<0.16	20	20	22.5	21.2	113	106	66-139	6	30	
1,1-Dichloropropene	ug/L	<0.20	20	20	22.8	22.6	114	113	67-134	1	30	
1,2,3-Trichlorobenzene	ug/L	<0.21	20	20	20.7	21.6	103	108	67-129	5	30	
1,2,3-Trichloropropane	ug/L	<0.26	20	20	18.8	19.7	94	98	69-128	5	30	
1,2,4-Trichlorobenzene	ug/L	<0.20	20	20	20.3	19.5	101	97	65-140	4	30	
1,2,4-Trimethylbenzene	ug/L	<0.20	20	20	20.0	21.8	100	109	71-133	8	30	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	50	50	47.2	51.4	94	103	54-138	9	30	
1,2-Dibromoethane (EDB)	ug/L	<0.24	20	20	20.5	21.1	102	105	68-125	3	30	
1,2-Dichlorobenzene	ug/L	<0.14	20	20	19.4	21.2	97	106	74-136	9	30	
1,2-Dichloroethane	ug/L	<0.22	20	20	20.2	21.4	101	107	68-125	6	30	
1,2-Dichloroethene (Total)	ug/L	<0.27	40	40	43.6	41.1	109	103	71-126	6	30	N2
1,2-Dichloropropane	ug/L	<0.16	20	20	20.1	23.5	101	118	67-125	16	30	
1,3,5-Trimethylbenzene	ug/L	<0.12	20	20	19.9	22.1	100	111	68-137	10	30	
1,3-Dichlorobenzene	ug/L	<0.16	20	20	20.1	21.7	101	109	75-131	8	30	
1,3-Dichloropropane	ug/L	<0.070	20	20	19.9	19.7	100	99	71-125	1	30	
1,4-Dichlorobenzene	ug/L	<0.17	20	20	19.5	20.6	97	103	74-126	6	30	
1,4-Dioxane (p-Dioxane)	ug/L	<16.3	400	400	406	416	101	104	68-125	3	30	
2,2,4-Trimethylpentane	ug/L	<0.19	20	20	27.1	22.0	135	110	54-129	21	30	M1
2,2-Dichloropropane	ug/L	<0.17	20	20	21.4	21.1	107	105	69-139	1	30	
2-Butanone (MEK)	ug/L	<0.99	100	100	95.1	97.1	95	97	54-144	2	30	
2-Chlorotoluene	ug/L	<0.16	20	20	19.0	20.7	95	103	75-134	9	30	
2-Hexanone	ug/L	<0.88	100	100	94.4	102	94	102	58-137	8	30	
4-Chlorotoluene	ug/L	<0.13	20	20	19.2	20.7	96	103	72-133	8	30	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	100	100	98.4	104	98	104	60-129	6	30	
Acetone	ug/L	<9.2	100	100	96.5	97.5	96	98	62-132	1	30	
Acrolein	ug/L	<1.2	200	200	257	255	128	127	30-150	1	30	
Acrylonitrile	ug/L	<0.91	200	200	194	202	97	101	68-125	4	30	
Benzene	ug/L	<0.10	20	20	20.8	20.9	104	105	68-125	1	30	
Bromobenzene	ug/L	<0.21	20	20	18.9	20.7	95	103	73-126	9	30	
Bromochloromethane	ug/L	<0.27	20	20	21.9	21.8	110	109	66-143	1	30	
Bromodichloromethane	ug/L	<0.22	20	20	19.4	21.9	97	109	74-125	12	30	
Bromoform	ug/L	<0.80	20	20	20.2	21.0	101	105	64-134	4	30	
Bromomethane	ug/L	<1.8	20	20	18.2	18.6	91	93	30-150	2	30	
Carbon disulfide	ug/L	<0.078	20	20	21.7	19.5	109	97	43-147	11	30	
Carbon tetrachloride	ug/L	<0.19	20	20	23.7	23.5	118	117	71-143	1	30	
Chlorobenzene	ug/L	<0.17	20	20	19.0	20.1	95	101	75-125	6	30	
Chloroethane	ug/L	<0.49	20	20	22.8	22.8	114	114	75-129	0	30	
Chloroform	ug/L	<0.45	20	20	19.9	19.4	99	97	66-132	3	30	
Chloromethane	ug/L	<0.16	20	20	21.5	21.4	107	107	53-137	1	30	
cis-1,2-Dichloroethene	ug/L	<0.15	20	20	21.3	20.8	107	104	67-133	2	30	
cis-1,3-Dichloropropene	ug/L	<0.20	20	20	19.0	19.8	95	99	66-125	4	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3415553 3415554

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromochloromethane	ug/L	<0.12	20	20	21.3	22.5	107	112	62-132	5	30	
Dibromomethane	ug/L	<0.16	20	20	25.3	22.5	126	113	67-125	11	30	M1
Dichlorodifluoromethane	ug/L	<0.23	20	20	24.8	23.9	124	120	71-142	3	30	
Dichlorofluoromethane	ug/L	<0.14	20	20	22.4	22.3	112	112	70-131	0	30	
Diisopropyl ether	ug/L	<0.13	20	20	20.0	19.7	100	99	63-131	1	30	
Ethyl-tert-butyl ether	ug/L	<0.18	20	20	18.3	18.5	92	93	66-128	1	30	
Ethylbenzene	ug/L	<0.14	20	20	20.3	21.2	102	106	74-126	4	30	
Hexachloro-1,3-butadiene	ug/L	<0.31	20	20	24.5	19.8	123	99	68-143	21	30	
Isopropylbenzene (Cumene)	ug/L	<0.18	20	20	20.7	22.4	104	112	74-130	8	30	
m&p-Xylene	ug/L	<0.31	40	40	41.2	43.8	103	110	69-132	6	30	
Methyl-tert-butyl ether	ug/L	<0.16	20	20	19.6	19.5	98	97	65-131	1	30	
Methylene Chloride	ug/L	<0.98	20	20	21.3	20.2	107	101	57-125	5	30	
n-Butylbenzene	ug/L	<0.24	20	20	22.6	21.2	113	106	71-131	7	30	
n-Propylbenzene	ug/L	<0.10	20	20	20.1	21.7	101	109	67-138	8	30	
Naphthalene	ug/L	<0.48	20	20	17.2	19.0	86	95	60-130	10	30	
o-Xylene	ug/L	<0.16	20	20	20.4	22.6	102	113	69-131	10	30	
p-Isopropyltoluene	ug/L	<0.15	20	20	22.4	21.9	112	109	72-133	2	30	
sec-Butylbenzene	ug/L	<0.15	20	20	23.3	22.9	117	114	73-134	2	30	
Styrene	ug/L	<0.19	20	20	19.9	21.2	100	106	72-125	6	30	
tert-Amylmethyl ether	ug/L	<0.11	20	20	19.1	19.9	96	99	67-125	4	30	
tert-Butyl Alcohol	ug/L	<1.2	200	200	184	203	92	101	64-137	9	30	
tert-Butylbenzene	ug/L	<0.15	20	20	22.1	22.7	110	114	70-143	3	30	
Tetrachloroethene	ug/L	<0.17	20	20	21.4	23.1	107	115	72-129	7	30	
Tetrahydrofuran	ug/L	<2.2	200	200	204	226	102	113	66-128	10	30	
Toluene	ug/L	<0.083	20	20	19.5	20.0	98	100	73-125	3	30	
trans-1,2-Dichloroethene	ug/L	<0.12	20	20	22.2	20.3	111	101	62-137	9	30	
trans-1,3-Dichloropropene	ug/L	<0.18	20	20	21.2	21.2	106	106	61-136	0	30	
trans-1,4-Dichloro-2-butene	ug/L	<2.0	50	50	40.2	43.1	80	86	45-128	7	30	
Trichloroethene	ug/L	<0.15	20	20	22.3	22.3	111	112	74-132	0	30	
Trichlorofluoromethane	ug/L	<0.23	20	20	23.6	23.4	118	117	75-139	1	30	
Vinyl acetate	ug/L	<1.1	20	20	20.9	20.7	104	103	51-135	1	30	
Vinyl chloride	ug/L	<0.092	20	20	25.1	23.5	125	118	68-146	6	30	
Xylene (Total)	ug/L	<0.31	60	60	61.6	66.5	103	111	67-137	8	30	
1,2-Dichloroethane-d4 (S)	%.						97	95	75-136			
4-Bromofluorobenzene (S)	%.						92	91	75-125			
Toluene-d8 (S)	%.						92	92	75-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 634678 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10492112001

METHOD BLANK: 3420836 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	5.0	2.0	09/26/19 08:08	

LABORATORY CONTROL SAMPLE & LCSD: 3420837 3420838

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.5	42.3	106	106	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420839 3420840

Parameter	Units	10492172002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	103	40	40	144	144	103	102	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420841 3420842

Parameter	Units	10492113001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	146	40	40	189	194	106	119	80-120	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 634181 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 10492112001

METHOD BLANK: 3418509 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	10.0	5.0	09/25/19 12:44	

LABORATORY CONTROL SAMPLE: 3418510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1030	103	80-120	

SAMPLE DUPLICATE: 3418511

Parameter	Units	10492090004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	233	224	4	5	

SAMPLE DUPLICATE: 3418512

Parameter	Units	10492090005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	235	229	3	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 158705 Analysis Method: SM 4500-S-2 D
QC Batch Method: SM 4500-S-2 D Analysis Description: 4500S2D Sulfide, Total
Associated Lab Samples: 10492112001

METHOD BLANK: 711139 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.0054	0.020	0.0054	09/25/19 14:27	

LABORATORY CONTROL SAMPLE: 711140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.2	0.22	109	90-110	

MATRIX SPIKE SAMPLE: 711142

Parameter	Units	20122719001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	ND	0.2	0.11	54	75-125	M1

SAMPLE DUPLICATE: 711141

Parameter	Units	20122719001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	<0.0054		20	

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 633434
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 10492112001

METHOD BLANK: 3414855 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.12	1.2	0.12	09/19/19 18:15	
Nitrate as N	mg/L	<0.012	0.10	0.012	09/19/19 18:15	
Sulfate	mg/L	<0.28	1.2	0.28	09/19/19 18:15	

LABORATORY CONTROL SAMPLE: 3414856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	12.5	11.9	96	90-110	
Nitrate as N	mg/L	1	0.93	93	90-110	
Sulfate	mg/L	12.5	11.4	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414857 3414858

Parameter	Units	10491876001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	19.7	12.5	12.5	28.1	28.2	67	68	90-110	0	20	M1
Nitrate as N	mg/L	0.42	1	1	1.3	1.3	86	86	90-110	0	20	M1
Sulfate	mg/L	2.1J	12.5	12.5	14.1	14.1	96	96	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3414859 3414860

Parameter	Units	10492090005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.3	12.5	12.5	12.4	12.4	89	89	90-110	0	20	M1
Nitrate as N	mg/L	1.1	1	1	1.9	1.9	77	77	90-110	0	20	M1
Sulfate	mg/L	14.4	12.5	12.5	23.9	24.1	76	77	90-110	1	20	M1

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QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 634559 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved
Associated Lab Samples: 10492112001

METHOD BLANK: 3420088 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.018	0.10	0.018	09/26/19 09:25	

LABORATORY CONTROL SAMPLE: 3420089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	1	0.96	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420090 3420091

Parameter	Units	10491655010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	16.3	1	1	17.1	17.3	80	100	90-110	1	20	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420092 3420093

Parameter	Units	10491870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.018	1	1	1.0	1.0	100	100	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 634119 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 10492112001

METHOD BLANK: 3418145 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<17.0	50.0	17.0	09/25/19 07:33	

LABORATORY CONTROL SAMPLE: 3418146

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	300	309	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418147 3418148

Parameter	Units	10492109001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	<17.0	250	250	253	245	101	98	90-110	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

QC Batch: 175792 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C TOC
Associated Lab Samples: 10492112001

METHOD BLANK: 696584 Matrix: Water
Associated Lab Samples: 10492112001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<0.39	1.0	0.39	09/27/19 12:28	

LABORATORY CONTROL SAMPLE: 696585

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	24.2	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 696586 696587

Parameter	Units	10492264001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<1.0	25	25	25.6	26.0	101	102	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 696588 696589

Parameter	Units	10492503001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	<393 ug/L	25	25	25.6	25.7	102	102	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-M	Pace Analytical Services - Minneapolis
PASI-N	Pace Analytical Services - New Orleans
PASI-V	Pace Analytical Services - Virginia

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Parameter	Matrix	Analytical Method	Preparation Method
8260B MSV Low Level	Water	SW-846 8260B/5030B	N/A

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1497 Freeman WA-Cenex Harvest
Pace Project No.: 10492112

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10492112001	**Marlow-GW-091819**	RSK175	1351457	RSK-175	1351457
10492112001	**Marlow-GW-091819**	EPA 3010	633712	EPA 6010D	634702
10492112001	**Marlow-GW-091819**	EPA 7470A	633733	EPA 7470A	634286
10492112001	**Marlow-GW-091819**	EPA 8260B	633558		
10492112001	**Marlow-GW-091819**	SM 2320B	634678		
10492112001	**Marlow-GW-091819**	SM 2540C	634181		
10492112001	**Marlow-GW-091819**	SM 4500-S-2 D	158705		
10492112001	**Marlow-GW-091819**	EPA 300.0	633434		
10492112001	**Marlow-GW-091819**	EPA 353.2	634559		
10492112001	**Marlow-GW-091819**	EPA 410.4	634119	EPA 410.4	634331
10492112001	**Marlow-GW-091819**	SM 5310C	175792		

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: UPRR Jacobs	Report To: Mark Ochsner, Brad Ostapkowicz	Attention: Anne Walsh	
Address: 999 W. Riverside Ave, Suite 500	Copy To: Steve Demus, Jonathan Espinoza	Company: UPRR	Regulatory Agency
Spokane, WA 99201	Copy To: David Hodson, UPRR-Sysdat@ghd.com	Address: 1400 W. 52nd Ave, Denver, CO 80221	
Email:	Purchase Order # PEDD# 1497	Pace Quote: Contract# 9900758938	
Phone: Fax:	Project Name: Freeman WA-Cenex Harvest Lease	Pace Project Manager: Jennifer Gross	State / Location
Requested Due Date: *10 Day Standard*	Project #: 1497	Pace Profile #: *36447 / 4*	WA / Freeman

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + Zn Acetate	Other	Y/N	Analyses Test: Low Level VOCs by 8260	6010/7470 TAL Dissolved Metals*	2320 Alkalinity	Chloride, Sulfate, Nitrate 300.0	2540 TDS	TOC 5310	Sulfide 4500	Methane, Ethane, Ethene RSK175	COD 410.4	Nitrate+Nitrite 353.2	4500 Total Phosphorus	6010 Total Iron	MS/MSD Requested	Requested Analysis Filtered (Y/N)
														Y													
1	Marlow-GW-091819	WTG		9/18/19	1610	–	13	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X			col
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11		–													–												
12																											

WO#: 10492112

10492112

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Short hold analyses are in bold	KL SeJ	9/18/19	1630	IJ-PACE	9/19/19	8:40	0.1 Y Y Y
*Field filtered by client							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kaila Savage

SIGNATURE of SAMPLER: KL SeJ DATE Signed: 9/18/19

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 23Aug2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.29	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: UPRR - Jacobs

Project #: **WO#: 10492112**

PM: JMG **Due Date: 10/03/19**

CLIENT: UPRR_Jacobs

Courier: ☒ Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial **See Exceptions** ☐

Tracking Number: 4394 3733 2916

Custody Seal on Cooler/Box Present? ☐ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☐ T1(0461) ☒ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.1 °C

Correction Factor: 0.0 **Cooler Temp Corrected w/temp blank:** 0.1 °C

Average Corrected Temp (no temp blank only): ☐ See Exceptions ☐ 1 Container °C

USDA Regulated Soil: (☒ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: 9/19/19 LJ

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☒ Yes	☐ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☒ Yes ☒ Yes	☐ No ☐ No		8.
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other	☒ Yes	☐ No		11. If no, write ID/ Date/Time on Container Below: **See Exception** ☐
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	12. Sample # 1.1A 1.1A 1.1A
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☒ Yes	☐ No	☐ N/A	☐ NaOH ☒ HNO_3 ☒ H_2SO_4 ☒ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# 207619 **See Exception** ☐
				Res. Chlorine: 0-6 Roll | 0-6 Strip | 0-14 Strip 100248
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☒ No	☐ N/A	13. **See Exception** ☐
Trip Blank Present?	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Oyeyemi Odugole Date: 9/20/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples a copy of this form will be sent to the North Caroline DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: _____

WO# : 12135899

12135899

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA

Cert. Needed: ☐ Yes ☐ No

Workorder: 10492112 **Workorder Name:** 1497 Freeman WA-Cenex Harvest **Owner Received Date:** 9/19/2019 **Results Requested By:** 10/3/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4						Requested Analysis: 5632354 / 5310 TOC												LAB USE ONLY
1	Marlow-GW-091819	PS	9/18/2019 16:10	10492112001	Water	2						X												
2																								
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Pace	9/23/19 [illegible]	[illegible] 9/23/19	1700
2	K Ch 9/23/19	2330	B Mathews	9/24/19 0030
3				

Comments

Cooler Temperature on Receipt 0.6 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 30Apr2019 Page 1 of 1
	Document No.: F-VM-C-001-rev.13	Issuing Authority: Pace Virginia Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Pace WA

Project #: WO#: 12135899

PM: RK1 Due Date: 10/03/19

CLIENT: PACE MPLS

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☑ Yes ☐ No

Thermometer Used: ☑ 140792808 Type of Ice: ☐ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temp Read °C: 0.3 Cooler Temp Corrected °C: 0.6 Biological Tissue Frozen? ☐ Yes ☐ No ☑ NA

Temp should be above freezing to 6°C Correction Factor: 0.3 Date and Initials of Person Examining Contents: 9/23/19 DC

Comments: BM 9/24/19

Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5. If Fecal: ☐ <8 hours ☐ >8, <24 hours ☐ >24 hours
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation properly preserved?	☑ Yes	☐ No	☐ N/A	13. Note samples needing adjustment:
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☑ N/A	14.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased): _____				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: Davena Jerue Date: 9/24/19

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Chain of Custody

☐ Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WA
Cert. Needed: ☐ Yes ☐ No

Pace Analytical® www.pacelabs.com

Workorder: 10492112 **Workorder Name:** 1497 Freeman WA-Cenex Harvest **Owner Received Date:** 9/19/2019 **Results Requested By:** 10/3/2019

Report To	Subcontract To
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)957-2426	Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone (504)469-0333

BP2Z

WO# : 20122547

20122547

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Other	5636267 / 4500 Sulfide	LAB USE ONLY
1	Marlow-GW-091819	PS	9/18/2019 16:10	10492112001	Water	1	X	
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	PACE	9/20/19 1634	FedEx	
2	FedEx 9/21/19 0900		[signature] 9/21/19 0900	
3				

Comments

Cooler Temperature on Receipt 3.0 °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.