QUANTUM Engineering
and Geologic Consulting

November 12, 2020

Ted Uecker
Washington Department of Ecology
4601 Monroe, Suite 202
Spokane, WA 99205-1295

Re: Dusty Four Star Supply-Semi Annual Monitoring Report
Correspondence #117.46

Dear Mr. Uecker:

Semi annual monitoring was performed at Four Star Supply, (formerly Dusty Farm Coop) on October 12, 2020. This report provides data regarding samples collected at that time. All wells were sampled except for MW5, GW5, GW7, GW9 and the onsite water supply wellhead. The afore-mentioned well/sampling locations have revealed numerous, consecutive samples below the minimum detection limits of the laboratory for the constituents of concern at the site. Sampling of these wells is not considered critical for operation of the groundwater treatment system. These wells will be included in the future sampling plan when the site nears closure.

Wells MW2 through MW4, GW1 and GW3 were opened and allowed to equilibrate to atmospheric pressure prior to collection of static water level measurement. All wells were sampled using low-flow sampling techniques and samples were collected in laboratory certified containers, placed on ice and transported to the laboratory for analyses. All samples were analyzed using Method 8260C for benzene, toluene, ethylbenzene and total xylene (BTEX) and methyl tert-butyl ether (MTBE). Gasoline analyses were performed using method NWTPH-Gx.

MW2 revealed TPH-Gasoline and BTEX above the detection limit of the laboratory but were all below the MTCA Method A groundwater standards. All other wells were below the detection limit of the laboratory.

All wells sampled during this event revealed detectable levels of MTBE, but all were below the MTCA Method A groundwater standard of 20.0 μg/L.

Operation of the treatment system continues automatically based on floats in the collection basin. The next sampling event is scheduled for the spring of 2021.

A data summary table and supporting laboratory data are attached for your review. If you have any questions or need any additional information, please feel free to call.

Sincerely,

James S. De Smet, PE, PG

Cc: Don Boyd, CDA Service
Ben Cochran, Four Star Supply

Groundwater Data Summary
Dusty Four Star Supply

Well ID	Date	TPH-G	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	DRO	Heavy Oil	SWL
	8/10/2001*			ND						9.20
	3/25/02	129000.00	13700.00	30600.00	2410.00	14200.00				3.11
	6/27/02	120000.00	19700.00	38500.00	2310.00	15000.00				6.11
MW1	12/3/02*									
	1/24/2003**									4.73
	4/3/03	108000.00	13100.00	21000.00	1870.00	11500.00				4.18
	7/30/03	98200.00	4670.00	11100.00	1250.00	7550.00	ND	6900.00	633.00	7.13
	12/10/03*									8.30
	4/9/2004**									5.10
	9/7/2004**									8.30
	2/17/2005**									5.77
	5/12/2005**									5.40
	10/25/2005**									8.00
	3/15/2006**									3.60
	7/26/2006**									7.13
	11/21/2006**									8.10
	3/13/2007**									5.00
	6/28/2007**									6.69
	9/26/2007*									9.30
	12/21/2007*									7.20
	3/25/2008*									4.06
	6/30/2008*									6.02
	9/23/2008*									7.98
	12/4/2008*									7.28
	3/19/2009*	Well Abandoned								
	6/25/09	Well Abandoned								
	12/3/09	Well Abandoned								
	4/25/11	Well Abandoned								
	5/8/12	Well Abandoned								
	11/16/12	Well Abandoned								
	5/2/13	Well Abandoned								
	10/1/13	Well Abandoned								
	3/11/15	Well Abandoned								
	9/10/15	Well Abandoned								
	5/21/16	Well Abandoned								
	4/19/17	Well Abandoned								
	9/16/17	Well Abandoned								
	3/14/18	Well Abandoned								
	10/30/18	Well Abandoned								
	10/30/18	Well Abandoned								
	4/29/19	Well Abandoned								
	9/16/19	Well Abandoned								
	10/12/20	Well Abandoned								
	8/10/01	32000.00	838.00	ND	389.00	4410.00				7.45
	3/25/02	12700.00	19900.00	29800.00	1850.00	12200.00				3.33
	6/27/02	72300.00	13300.00	21500.00	1130.00	8230.00				5.95
	12/03/02*									
MW2	1/24/2003**									4.95
	4/3/03	218000.00	24900.00	53100.00	3330.00	18100.00				4.22
	7/30/03*									7.50
	12/10/2003*									7.85
	4/9/04	1420.00	192.00	280.00	32.60	208.00				4.75
	9/7/2004**									8.02
	2/17/2005**									5.67
	5/12/2005**									5.53
	10/25/2005**									7.77
	3/15/2006**									
	7/26/2006**									7.15
	11/21/2006**									8.20
	3/13/07									4.20
	6/28/07									6.80
	9/26/07									9.33
	12/21/07									7.10
	3/25/08									4.35
	6/30/08									6.20
	9/23/08									8.25
	12/4/08									7.32
	3/19/09									3.19
	6/25/09									6.20
	12/3/09									6.76
	3/31/10	29600.00	2730.00	ND	1480.00	3190.00				4.95
	6/24/10	23500.00	3020.00	ND	69.40	3080.00				5.35
	11/12/10	Not Sampled								
	4/25/11	Not Sampled								
	11/21/11	Not Sampled								
	5/8/12	Not Sampled								
	11/16/12	6750.00	591.00	10.00	6.80	274.30				
	5/2/13	6360.00	614.00	10.30	ND	ND				
	10/1/13	3710.00	527.00	4.27	ND	34.20				
	4/23/14	2860.00	65.20	ND	1.05	9.38				5.15
	10/7/14	2100.00	201.00	2.28	20.50	39.82				9.23
	3/11/15	2000.00	98.00	ND	6.80	11.00	ND			5.32
	9/10/15	1600.00	110.00	4.70	98.00	23.10				8.67
	5/21/16	1600.00	46.00	1.80	5.40	11.00	2.70			4.70
	9/20/16	1500.00	50.00	5.70	84.00	43.00				8.27
	4/19/17	560.00	16.00	ND	ND	ND	3.90			
	9/16/17	610.00	20.00	ND	9.00	10.00	3.00			7.20
	3/14/18	220.00	4.40	ND	ND	ND	4.30			2.20
	10/30/18	580.00	12.00	1.00	58.00	ND	3.50			7.95
	4/29/19	200.00	1.70	ND	ND	ND	4.30			2.57
	9/16/19	210.00	2.60	ND	18.00	ND	3.30			7.45
	10/12/20	220.00	1.10	ND	7.00	2.00	2.90			7.50
	8/10/01	25900.00	2380.00	ND	515.00	3180.00				9.20
	3/25/02	42500.00	4540.00	8900.00	758.00	4380.00				4.97
	6/27/02	3760.00	1320.00	474.00	25.90	168.00				7.68
	12/3/02	10500.00	6750.00	91.00	5.47	43.10				
MW3	1/24/2003**									6.55
	4/3/03	3550.00	1760.00	56.70	2.93	47.70				5.94
	7/30/03	24400.00	4820.00	431.00	ND	358.00	462.00	3470.00	1290.00	8.95
	12/10/03	13100.00	9140.00	12.90	ND	1.82				9.20

Well ID	Date	TPH-G	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	DRO	Heavy Oil	SWL
	4/9/04	3540.00	1590.00	68.60	5.04	91.20				6.55
	9/7/04	18000.00	8760.00	182.00	ND	113.00				9.65
	2/17/05	3990.00	490.00	77.40	9.13	50.80				4.45
	5/12/05	4090.00	733.00	588.00	45.30	274.00				7.45
	10/25/05	18600.00	1140.00	1890.00	233.00	1210.00				9.52
	3/15/06	2440.00	88.70	176.00	54.90	381.00				5.55
	7/26/06	6700.00	1620.00	124.00	ND	253.00				8.94
	11/21/06	10500.00	1640.00	839.00	210.00	1170.00				9.70
	3/13/07	ND	224.00	144.00	55.40	379.00				6.50
	6/28/07	555.00	197.00	14.70	5.57	25.60				8.53
	9/26/07	3720.00	954.00	217.00	87.00	467.00				11.01
	12/21/07	5440.00	1170.00	296.00	144.00	778.00				8.92
	3/25/08	977.00	32.70	10.70	19.80	140.00				6.00
	6/30/08	888.00	71.10	7.25	24.20	165.00				7.97
	9/23/08	927.00	461.00	17.00	27.70	118.00		524.00	ND	9.95
	12/4/08	3640.00	352.00	210.00	125.00	354.00				9.38
	3/19/09	843.00	15.40	11.40	15.20	185.00				4.83
	6/25/09	605.00	37.30	2.24	7.10	94.80				6.99
	12/3/09	1450.00	125.00	10.90	66.30	217.00				8.78
	3/31/10	721.00	31.80	ND	22.70	82.10				6.81
	6/24/10	447.00	979.00	4.13	ND	6.29				7.05
	11/12/10	263.00	31.50	ND	5.77	6.46				Bad Probe
	4/25/11	ND	1.18	ND	ND	ND				5.29
	11/21/11	ND	ND	ND	ND	ND				9.56
	5/8/12	ND	12.60	ND	ND	ND				4.54
	11/16/12	413.00	67.50	0.74	22.10	5.22				8.77
	5/2/13	98.00	10.90	ND	ND	ND				***
	10/1/13	259.00	34.30	ND	3.64	1.12				
	4/23/14	165.00	9.31	ND	ND	ND				6.91
	10/7/14	135.00	22.00	ND	ND	0.50				10.86
	3/11/15	ND	8.40	ND	ND	ND	20.00			7.02
	9/10/15	120.00	36.00	ND	ND	ND				10.36
	5/21/16	ND	19.00	ND	ND	ND	17.00			6.60
	9/20/16	ND	3.00	ND	ND	ND				9.98
	4/19/17	ND	19.00	ND	ND	ND	11.00			3.25
	9/16/17	ND	6.40	ND	ND	ND	21.00			8.81
	3/14/18	ND	7.00	ND	ND	ND	12.00			3.50
	10/30/18	ND	0.48	ND	ND	ND	36.00			9.71
	4/29/19	ND	15.00	ND	ND	ND	8.20			4.23
	9/16/19	Damaged in Transit								9.15
	10/12/20	ND	ND	ND	ND	ND	6.80			9.22
	8/10/01	736.00	79.30	ND	2.22	114.00				9.65
	3/25/02	1130.00	199.00	4.87	ND	14.30				5.75
	6/27/02	1530.00	541.00	29.20	4.24	28.10				8.11
	12/3/02	2680.00	728.00	8.80	ND	46.70				
MW4	1/24/2003**									4.32
	4/3/03	3350.00	1450.00	13.40	ND	2.61				6.41
	8/13/03	5420.00	199.00	2.26	ND	ND	160.00	551.00	ND	9.36
	12/10/03	2860.00	1170.00	6.24	ND	ND				9.69
	4/9/04	5300.00	8000.00	18.80	ND	7.19				7.12
	9/7/04	4460.00	2220.00	9.93	ND	6.24				10.04
	2/17/05	3270.00	452.00	8.85	ND	ND				8.06
	5/12/05	3950.00	1390.00	7.06	ND	ND				8.04
	10/25/05	1810.00	323.00	8.10	ND	ND				9.99
	3/15/06	1650.00	489.00	ND	ND	ND				6.09
	7/26/06	1660.00	180.00	2.75	ND	2.00				9.31
	11/21/06	674.00	61.00	ND	ND	ND				10.24
	3/13/07	1270.00	48.00	ND	ND	ND				7.19
	6/28/07	576.00	38.50	ND	ND	ND				9.01
	9/26/07	125.00	9.09	ND	ND	ND				10.70
	12/21/07	192.00	30.00	ND	ND	2.72				9.54
	3/25/08	ND	7.90	ND	ND	ND				6.65
	6/30/08	ND	2.27	ND	ND	ND				8.41
	9/23/08	275.00	17.20	ND	ND	ND		ND	274.00	10.42
	12/4/08	350.00	5.01	ND	ND	ND				9.94
	3/19/09	177.00	1.68	ND	ND	ND				5.56
	6/25/09	385.00	2.37	ND	ND	ND				7.31
	12/3/09	ND	1.22	ND	ND	ND				9.33
	3/31/10	157.00	0.80	ND	ND	ND				7.19
	6/24/10	326.00	1.65	ND	ND	ND				7.50
	11/12/10	320.00	1.94	ND	ND	ND				Bad Probe
	4/25/11	105.00	0.68	ND	ND	ND				5.66
	11/21/11	119.00	0.70	ND	ND	ND				9.97
	5/8/12	121.00	ND	ND	ND	ND				5.06
	11/16/12	454.00	ND	ND	ND	ND				9.35
	5/2/13	189.00	ND	ND	ND	ND				***
	10/1/13	353.00	2.84	ND	ND	ND				
	4/23/14	124.00	ND	ND	ND	ND				7.50
	10/7/14	123.00	ND	ND	ND	ND				11.37
	3/11/15	120.00	ND	ND	ND	ND	15.00			7.71
	9/10/15	240.00	ND	ND	ND	ND				10.90
	5/21/16	300.00	ND	ND	ND	ND	11.00			7.14
	9/20/16	300.00	0.80	ND	ND	ND				10.55
	4/19/17	ND	ND	ND	ND	ND	21.00			3.79
	9/16/17	ND	3.30	ND	ND	ND	7.50			9.35
	3/14/18	ND	ND	ND	ND	ND	15.00			4.10
	10/30/18	ND	ND	ND	ND	ND	8.90			10.20
	4/29/19	ND	ND	ND	ND	ND	11.00			Probe MF
	9/16/19	ND	ND	ND	ND	ND	7.00			9.70
	10/12/20	ND	ND	ND	ND	ND	5.00			9.75
	8/10/01	3380.00	535.00	ND	90.90	663.00				7.50
	3/25/02	3690.00	933.00	56.10	3.01	406.00				3.32
	6/27/02	779.00	183.00	46.30	5.05	61.70				6.07
	12/3/02	525.00	185.00	6.02	ND	49.40				
MW5	1/24/2003**									4.90
	4/3/03	915.00	245.00	4.51	ND	40.30				4.34
	8/13/03	539.00	102.00	3.21	3.09	40.80	ND	ND	ND	7.25
	12/10/03	411.00	121.00	ND	ND	32.30				7.47
	4/9/04	514.00	226.00	ND	ND	16.70				4.90
	9/7/04	395.00	158.00	ND	ND	28.20				7.91
	2/17/05	1880.00	203.00	2.42	ND	125.00				5.61
	5/12/05	842.00	189.00	ND	ND	9.66				5.59
	10/25/05	154.00	12.20	ND	ND	ND				
	3/15/06	1630.00	53.10	2.84	ND	148.00				3.60

Well ID	Date	TPH-G	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	DRO	Heavy Oil	SWL
	7/26/06	457.00	21.40	ND	ND	3.09				7.20
	11/21/06	119.00	1.74	ND	ND	ND				7.93
	3/13/07	431.00	5.00	ND	ND	ND				4.39
	6/28/07	428.00	1.25	ND	ND	ND				6.73
	9/26/07	105.00	ND	ND	ND	ND				9.28
	12/21/07	ND	0.93	ND	ND	ND				6.92
	3/25/08	485.00	1.05	ND	ND	ND				3.65
	6/30/08	182.00	ND	ND	ND	ND				5.97
	9/23/08	ND	0.94	ND	ND	ND		282.00	ND	8.19
	12/4/08	119.00	ND	ND	ND	ND				7.41
	3/19/09	ND	ND	ND	ND	ND				2.81
	6/25/09	101.00	ND	ND	ND	ND				5.04
	12/3/09	142.00	ND	ND	ND	ND				6.79
	3/31/10	ND	ND	ND	ND	ND				4.25
	6/24/10	ND	ND	ND	ND	ND				4.69
	11/12/10	ND	ND	ND	ND	ND				Bad Probe
	4/25/11	ND	ND	ND	ND	ND				2.62
	11/21/11	ND	ND	ND	ND	ND				7.80
	5/8/12	ND	ND	ND	ND	ND				2.99
	11/16/12	ND	ND	ND	ND	ND				7.06
	5/2/13	ND	ND	ND	ND	ND				***
	10/1/13	ND	ND	ND	ND	ND				
	4/23/14	ND	ND	ND	ND	ND				5.10
	10/7/14	ND	ND	ND	ND	ND				9.29
	3/11/15	ND	ND	ND	ND	ND	11.00			4.73
	9/10/15	ND	ND	ND	ND	ND				7.65
	5/21/16	ND	ND	ND	ND	ND	12.00			4.24
	9/20/16	ND	ND	ND	ND	ND				8.21
	4/19/17	ND	ND	ND	ND	ND	6.40			1.97
	9/16/17	ND	ND	ND	ND	ND	7.20			7.22
	3/14/18	ND	ND	ND	ND	ND	4.10			2.25
	10/30/18	ND	ND	ND	ND	ND	3.60			7.92
	4/29/19	ND	ND	ND	ND	ND	2.10			2.59
	9/16/19	ND	ND	ND	ND	ND	2.30			7.50
	10/12/20	NOT SAMPLED								
	5/11/01	85.50	ND	ND	ND	1.52				
	3/25/02	ND	ND	ND	ND	ND				
Well Head	6/27/02	ND	ND	ND	ND	ND				
	12/3/02	ND	0.51	ND	ND	ND				
	4/3/03	ND	ND	ND	ND	ND				
	8/13/03	100.00	ND	ND	ND	ND	ND	ND	ND	
	12/10/03	ND	ND	ND	ND	ND				
	4/9/04	ND	ND	ND	ND	ND				
	9/7/04	ND	ND	ND	ND	ND				
	2/17/05	ND	ND	ND	ND	ND				
	5/12/05	ND	ND	ND	ND	ND				
	3/15/06	ND	ND	ND	ND	ND				
	7/26/06	ND	ND	ND	ND	ND				
	11/21/06	ND	ND	ND	ND	ND				
	3/13/07	ND	ND	ND	ND	ND				
	6/27/07	ND	ND	ND	ND	ND				
	9/26/07	ND	ND	ND	ND	ND				
	12/21/07	ND	ND	ND	ND	ND				
	3/25/08	ND	ND	ND	ND	ND				
	6/30/08	ND	ND	ND	ND	ND				
	9/23/08	ND	ND	ND	ND	ND		ND	ND	
	12/4/08	ND	ND	ND	ND	ND				
	3/19/09	Not Sampled								
	6/25/09	Not Sampled								
	12/3/09	Not Sampled								
	12/3/09	Not Sampled								
	3/31/10	Not Sampled								
	6/30/10	Not Sampled								
	5/8/12	Not Sampled								
	11/16/12	Not Sampled								
	5/2/13	Not Sampled								
	10/1/13	Not Sampled								
	4/23/14	Not Sampled								
	10/7/14	Not Sampled								
	3/11/15	Not Sampled								
	9/10/15	Not Sampled								
	5/21/16	Not Sampled								
	9/20/16	Not Sampled								
	4/19/17	Not Sampled								
	9/16/17	Not Sampled								
	3/14/18	Not Sampled								
	10/30/18	Not Sampled								
	10/30/18	Not Sampled								
	4/29/19	Not Sampled								
	9/16/19	Not Sampled								
	10/12/20	Not Sampled								
	1/24/03	120.00	ND	ND	ND	ND				4.95
	4/3/03	ND	2.66	ND	ND	ND				4.67
GW1	7/30/03	148.00	1.28	2.12	3.37	31.40	ND	ND	ND	7.51
	12/10/03	ND	ND	ND	ND	ND				7.77
	4/9/04	ND	ND	ND	ND	ND				4.14
	9/7/04	ND	8.78	ND	ND	ND				7.79
	2/17/05	ND	13.70	ND	MD	ND				5.84
	5/12/05	ND	3.20	ND	ND	ND				
	10/25/2005*									
	3/15/06	ND	0.79	ND	ND	ND				4.00
	7/26/06	1540.00	684.00	ND	ND	8.77				7.95
	11/21/06	ND	2.24	ND	ND	ND				8.35
	3/13/07	ND	ND	ND	ND	ND				4.55
	6/28/07	1850.00	1090.00	ND	ND	3.59				7.33
	9/26/07	3720.00	954.00	217.00	87.00	467.00				9.72
	12/21/07	ND	1.68	ND	ND	ND				7.53
	3/25/08	ND	ND	ND	ND	ND				3.94
	6/30/08	ND	ND	ND	ND	ND				6.57
	9/23/08	ND	ND	ND	ND	ND		ND	ND	8.31
	12/4/08	ND	ND	ND	ND	ND				7.66
	3/19/09	ND	ND	ND	ND	ND				2.48
	6/25/09	ND	ND	ND	ND	ND				6.50
	12/3/09	ND	ND	ND	ND	ND				6.96

Well ID	Date	TPH-G	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	DRO	Heavy Oil	SWL
	3/31/10	ND	ND	ND	ND	ND				4.71
	6/24/10	ND	ND	ND	ND	ND				5.19
	11/12/10	ND	ND	ND	ND	ND				Bad Probe
	4/25/11	ND	ND	ND	ND	ND				3.01
	11/21/11	ND	ND	ND	ND	ND				8.12
	5/8/12	ND	ND	ND	ND	ND				3.13
	11/16/12	ND	ND	ND	ND	ND				7.33
	5/2/13	ND	ND	ND	ND	ND				***
	10/1/13	ND	ND	ND	ND	ND				
	4/23/14	ND	ND	ND	ND	ND				5.23
	10/7/14	ND	ND	ND	ND	ND				9.41
	3/11/15	ND	ND	ND	ND	ND	14.00			5.27
	9/10/15	ND	ND	ND	ND	ND				8.85
	5/21/16	ND	ND	ND	ND	ND	9.10			4.78
	9/20/16	ND	ND	ND	ND	ND				8.44
	4/19/17	ND	ND	ND	ND	ND	ND			1.90
	9/16/17	ND	ND	ND	ND	ND	11.00			7.39
	3/14/18	ND	ND	ND	ND	ND	1.80			2.00
	10/30/18	ND	ND	ND	ND	ND	9.80			8.22
	4/29/19	ND	ND	ND	ND	ND	1.20			Probe MF
	9/16/19	ND	ND	ND	ND	ND	6.20			7.76
	10/12/20	ND	ND	ND	ND	ND	5.00			7.80
	1/24/03	100.00	ND	ND	ND	ND				5.09
	4/3/03	179.00	50.70	6.20	ND	ND				4.68
GW3	7/30/03	294.00	84.40	2.00	2.38	25.90	ND	ND	ND	7.65
	12/10/03	107.00	12.50	ND	ND	ND				7.91
	4/9/04	232.00	47.00	ND	ND	23.00				5.20
	9/7/04	642.00	375.00	ND	ND	ND				8.34
	2/17/05	ND	8.16	ND	ND	ND				6.19
	5/12/05	ND	7.25	ND	ND	ND				6.38
	10/25/2005*									
	3/15/06	119.00	3.12	ND	ND	ND				4.09
	7/26/06	200.00	62.20	ND	ND	ND				7.77
	11/21/06	ND	ND	ND	ND	ND				8.49
	3/13/07	ND	ND	ND	ND	ND				5.20
	6/28/07	ND	8.68	ND	ND	ND				7.25
	9/26/07	ND	ND	ND	ND	ND				9.74
	12/21/07	ND	1.04	ND	ND	ND				7.55
	3/25/08	ND	ND	ND	ND	ND				4.55
	6/30/08	ND	ND	ND	ND	ND				6.60
	9/23/08	ND	17.40	ND	ND	ND		276.00	ND	8.36
	12/4/08	ND	ND	ND	ND	ND				7.94
	3/19/09	ND	2.43	ND	ND	ND				2.25
	6/25/09	ND	2.69	ND	ND	ND				5.98
	12/3/09	ND	ND	ND	ND	ND				7.38
	3/31/10	ND	0.75	ND	ND	ND				5.19
	6/24/10	ND	ND	ND	ND	ND				5.52
	11/12/10	ND	ND	ND	ND	ND				Bad Probe
	4/25/11	ND	ND	ND	ND	ND				3.78
	11/21/11	ND	ND	ND	ND	ND				8.29
	5/8/12	ND	2.14	ND	ND	ND				3.43
	11/16/12	126.00	ND	ND	ND	ND				7.42
	5/2/13	ND	ND	ND	ND	ND				
	10/1/13	183.00	ND	ND	ND	ND				
	4/23/14	ND	1.78	ND	ND	1.03				5.40
	10/7/14	Not Sampled								
	3/11/15	Not Sampled								
	9/10/15	ND	ND	ND	ND	ND				
	5/21/16	ND	ND	ND	ND	ND	1.40			5.13
	9/20/16	ND	ND	ND	ND	ND				8.80
	4/19/17	ND	ND	ND	ND	ND	2.80			2.45
	9/16/17	ND	0.98	ND	ND	ND	20.00			7.58
	3/14/18	ND	0.98	ND	ND	ND	2.70			2.10
	10/30/18	ND	ND	ND	ND	ND	17.00			8.40
	4/29/19	ND	ND	ND	ND	ND	ND			Probe MF
	9/16/19	ND	ND	ND	ND	ND	9.00			7.88
	10/12/20	ND	ND	ND	ND	ND	4.90			7.96
	1/24/03	ND	ND	ND	ND	ND				6.29
	4/3/03	ND	21.50	2.61	ND	ND				5.53
	7/30/03	108.00	2.07	ND	1.17	17.80	40.90	ND	ND	8.58
GW5	12/10/03	164.00	1.14	11.20	ND	15.40				8.89
	4/9/04	ND	3.05	ND	ND	3.38				
	9/7/04	329.00	172.00	ND	ND	ND				9.30
	2/17/05	1680.00	340.00	ND	ND	ND				7.55
	5/12/05	1200.00	416.00	ND	ND	ND				
	10/25/2005*									
	3/15/06	233.00	47.80	ND	ND	ND				5.53
	7/26/06	227.00	83.30	ND	ND	ND				8.95
	11/21/06	1380.00	535.00	ND	ND	ND				9.65
	3/13/07	1980.00	894.00	ND	ND	1.64				6.93
	6/28/07	197.00	59.80	ND	ND	ND				8.65
	9/26/07	284.00	106.00	ND	ND	ND				10.93
	12/21/07	245.00	86.60	ND	ND	ND				8.69
	3/25/08	ND	6.19	ND	ND	ND				5.63
	6/30/08	ND	2.17	ND	ND	ND				7.75
	9/23/08	ND	0.62	ND	ND	ND		ND	ND	9.51
	12/4/08	ND	ND	ND	ND	ND				8.96
	3/19/09	ND	ND	ND	ND	ND				4.28
	6/25/09	ND	ND	ND	ND	ND				6.41
	12/3/09	ND	ND	ND	ND	ND				8.62
	3/31/10	ND	ND	ND	ND	ND				6.20
	6/24/10	Not Sampled								6.82
	11/12/10	ND	ND	ND	ND	ND				Bad Probe
	4/25/11	ND	ND	ND	ND	ND				4.75
	11/21/11	ND	ND	ND	ND	ND				10.88
	5/8/12	ND	ND	ND	ND	ND				4.64
	11/16/12	141.00	ND	ND	ND	ND				8.48
	5/2/13	ND	ND	ND	ND	ND				***
	10/1/13	124.00	ND	ND	ND	ND				
	4/23/14	ND	ND	ND	ND	ND				6.70
	10/7/14	Not Sampled								
	3/11/15	Not Sampled								
	9/10/15	Not Sampled								
	5/21/16	Not Sampled								

Well ID	Date	TPH-G	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	DRO	Heavy Oil	SWL
	9/20/16	Not Sampled								
	4/19/17	Not Sampled								
	9/16/17	Not Sampled								
	3/14/18	Not Sampled								
	10/30/18	Not Sampled								
	10/30/18	Not Sampled								
	4/29/19	Not Sampled								
	9/16/19	Not Sampled								
	10/12/20	Not Sampled								
	1/24/03	ND	ND	ND	ND	ND				7.52
	4/3/03	ND	ND	ND	ND	ND				6.43
GW7	7/30/03	ND	ND	ND	ND	4.06	ND	ND	ND	9.44
	12/10/03	ND	ND	ND	ND	ND				9.79
	4/9/04	ND	1.06	ND	ND	ND				7.65
	9/7/04	ND	ND	ND	ND	ND				10.10
	2/17/05	ND	4.26	ND	ND	ND				8.32
	5/12/05	ND	ND	ND	ND	ND				8.20
	10/25/2005*									
	3/15/06	ND	ND	ND	ND	ND				6.05
	7/26/06	ND	1.45	ND	ND	ND				9.41
	11/21/06	ND	ND	ND	ND	ND				10.30
	3/13/07	ND	0.55	ND	ND	ND				7.35
	6/28/07	ND	ND	ND	ND	ND				9.02
	9/26/07	ND	ND	ND	ND	ND				11.45
	12/21/07	ND	ND	ND	ND	ND				9.62
	3/25/08	ND	ND	ND	ND	ND				6.55
	6/30/08	ND	ND	ND	ND	ND				8.35
	9/23/08	ND	ND	ND	ND	ND		ND	ND	10.36
	12/4/08	ND	ND	ND	ND	ND				9.87
	3/19/09	ND	ND	ND	ND	ND				5.38
	6/25/09	ND	ND	ND	ND	ND				7.26
	12/3/09	ND	ND	ND	ND	ND				9.36
	3/31/10	ND	ND	ND	ND	ND				7.10
	6/24/10	Not Sampled								7.97
	11/12/10	Not Sampled								
	4/25/11	Not Sampled								
	11/21/11	Not Sampled								
	5/8/12	Not Sampled								
	11/16/12	Not Sampled								
	5/2/13	Not Sampled								
	10/1/13	Not Sampled								
	4/23/14	Not Sampled								
	10/7/14	Not Sampled								
	3/11/15	Not Sampled								
	9/10/15	Not Sampled								
	5/21/16	Not Sampled								
	9/20/16	Not Sampled								
	4/19/17	Not Sampled								
	9/16/17	Not Sampled								
	3/14/18	Not Sampled								
	10/30/18	Not Sampled								
	10/30/18	Not Sampled								
	4/29/19	Not Sampled								
	9/16/19	Not Sampled								
	10/12/20	Not Sampled								
	1/24/03	ND	ND	ND	ND	ND				7.97
	4/3/03	ND	ND	ND	ND	ND				6.80
GW9	7/30/03	ND	0.70	ND	1.12	8.94	ND	ND	578.00	9.68
	12/10/03	118.00	0.89	5.71	ND	8.96				9.98
	4/9/04	ND	ND	ND	ND	ND				7.24
	9/7/04	ND	ND	ND	ND	3.49				10.30
	2/17/05	ND	2.39	ND	ND	ND				8.48
	5/12/05	ND	ND	ND	ND	ND				8.69
	10/25/2005*									
	3/15/06	ND	ND	ND	ND	ND				6.77
	7/26/06	119.00	0.85	ND	ND	ND				***
	11/21/06	ND	ND	ND	ND	ND				***
	3/13/07	ND	ND	ND	ND	ND				***
	6/28/07	ND	ND	ND	ND	ND				***
	9/26/07	ND	ND	ND	ND	ND				***
	12/21/07	ND	ND	ND	ND	ND				***
	3/25/08	ND	ND	ND	ND	ND				***
	6/30/08	ND	ND	ND	ND	ND				***
	9/23/08	ND	ND	ND	ND	ND		ND	ND	***
	12/4/08	ND	ND	ND	ND	ND				***
	3/19/09	ND	ND	ND	ND	ND				***
	6/25/09	ND	ND	ND	ND	ND				***
	12/3/09	ND	ND	ND	ND	ND				***
	3/31/10	ND	ND	ND	ND	ND				***
	6/30/10	Not Sampled								
	11/12/10	Not Sampled								
	4/25/11	Not Sampled								
	11/21/11	Not Sampled								
	5/8/12	Not Sampled								
	11/16/12	Not Sampled								
	5/2/13	Not Sampled								
	10/1/13	Not Sampled								
	4/23/14	Not Sampled								
	10/7/14	Not Sampled								
	3/11/15	Not Sampled								
	9/10/15	Not Sampled								
	5/21/16	Not Sampled								
	9/20/16	Not Sampled								
	4/19/17	Not Sampled								
	9/16/17	Not Sampled								
	3/14/18	Not Sampled								
	10/30/18	Not Sampled								
	10/30/18	Not Sampled								
	4/29/19	Not Sampled								
	9/16/19	Not Sampled								
	10/12/20	Not Sampled								
Method A Std. (µg/L)		1000.0	5.0	40.0	30.0	20.0	N/A	1000.00	1000.00	

Shaded Cell Indicates Exceedence of WDOE Method A Cleanup Standards (WAC 173-340, December, 1993)
*No sample taken-free product in well
**Static Water Level Survey Only
***No SWL measurement-casing bent or probe malfunction

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

Laboratory Job ID: 590-14043-1
Client Project/Site: Dusty/117

For:
Quantum Engineering
S. 2641 Silver Beach Lp.
Coeur d Alene, Idaho 83824

Attn: Jim DeSmet

Randee Arrington

Authorized for release by:
10/22/2020 2:06:43 PM

Randee Arrington, Project Manager II
(509)924-9200
Randee.Arrington@Eurofinset.com

Table of Contents

Case Narrative

Client: Quantum Engineering
Project/Site: Dusty/117

Job ID: 590-14043-1

Job ID: 590-14043-1

Laboratory: Eurofins TestAmerica, Spokane

Narrative

Receipt
The samples were received on 10/12/2020 3:50 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 7.3º C.

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: MW 2 (590-14043-1), MW 3 (590-14043-2), MW 4 (590-14043-3), GW 1 (590-14043-4) and GW 3 (590-14043-5). The samples are considered acceptable since they were collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

GC/MS VOA
Method NWTPH-Gx: Insufficient sample volume was available to perform a sample duplicate (DUP) associated with analytical batch 590-29387.

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

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

Sample Summary

Client: Quantum Engineering
Project/Site: Dusty/117

Job ID: 590-14043-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
590-14043-1	MW 2	Water	10/12/20 00:00	10/12/20 15:50	
590-14043-2	MW 3	Water	10/12/20 00:00	10/12/20 15:50	
590-14043-3	MW 4	Water	10/12/20 00:00	10/12/20 15:50	
590-14043-4	GW 1	Water	10/12/20 00:00	10/12/20 15:50	
590-14043-5	GW 3	Water	10/12/20 00:00	10/12/20 15:50	

Definitions/Glossary

Client: Quantum Engineering
Project/Site: Dusty/117

Job ID: 590-14043-1

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Client: Quantum Engineering
Project/Site: Dusty/117

Job ID: 590-14043-1

Client Sample ID: MW 2

Date Collected: 10/12/20 00:00
Date Received: 10/12/20 15:50

Lab Sample ID: 590-14043-1
Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.1**		0.40		ug/L			10/19/20 14:45	1
Ethylbenzene	**7.0**		1.0		ug/L			10/19/20 14:45	1
m,p-Xylene	**2.0**		2.0		ug/L			10/19/20 14:45	1
Methyl tert-butyl ether	**2.9**		1.0		ug/L			10/19/20 14:45	1
o-Xylene	ND		1.0		ug/L			10/19/20 14:45	1
Toluene	ND		1.0		ug/L			10/19/20 14:45	1
Xylenes, Total	ND		3.0		ug/L			10/19/20 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*10/19/20 14:45*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*10/19/20 14:45*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*10/19/20 14:45*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/19/20 14:45*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**220**		150		ug/L			10/19/20 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*10/19/20 14:45*	*1*

Client Sample ID: MW 3

Date Collected: 10/12/20 00:00
Date Received: 10/12/20 15:50

Lab Sample ID: 590-14043-2
Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40		ug/L			10/19/20 15:29	1
Ethylbenzene	ND		1.0		ug/L			10/19/20 15:29	1
m,p-Xylene	ND		2.0		ug/L			10/19/20 15:29	1
Methyl tert-butyl ether	**6.8**		1.0		ug/L			10/19/20 15:29	1
o-Xylene	ND		1.0		ug/L			10/19/20 15:29	1
Toluene	ND		1.0		ug/L			10/19/20 15:29	1
Xylenes, Total	ND		3.0		ug/L			10/19/20 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*10/19/20 15:29*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*10/19/20 15:29*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*10/19/20 15:29*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*10/19/20 15:29*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			10/19/20 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*10/19/20 15:29*	*1*

Client: Quantum Engineering
Project/Site: Dusty/117

Job ID: 590-14043-1

Client Sample ID: MW 4

Date Collected: 10/12/20 00:00
Date Received: 10/12/20 15:50

Lab Sample ID: 590-14043-3

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40		ug/L			10/19/20 15:50	1
Ethylbenzene	ND		1.0		ug/L			10/19/20 15:50	1
m,p-Xylene	ND		2.0		ug/L			10/19/20 15:50	1
Methyl tert-butyl ether	**5.0**		1.0		ug/L			10/19/20 15:50	1
o-Xylene	ND		1.0		ug/L			10/19/20 15:50	1
Toluene	ND		1.0		ug/L			10/19/20 15:50	1
Xylenes, Total	ND		3.0		ug/L			10/19/20 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*10/19/20 15:50*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*10/19/20 15:50*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*10/19/20 15:50*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/19/20 15:50*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			10/19/20 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*68.7 - 141*		*10/19/20 15:50*	*1*

Client Sample ID: GW 1

Date Collected: 10/12/20 00:00
Date Received: 10/12/20 15:50

Lab Sample ID: 590-14043-4

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40		ug/L			10/19/20 16:12	1
Ethylbenzene	ND		1.0		ug/L			10/19/20 16:12	1
m,p-Xylene	ND		2.0		ug/L			10/19/20 16:12	1
Methyl tert-butyl ether	**5.0**		1.0		ug/L			10/19/20 16:12	1
o-Xylene	ND		1.0		ug/L			10/19/20 16:12	1
Toluene	ND		1.0		ug/L			10/19/20 16:12	1
Xylenes, Total	ND		3.0		ug/L			10/19/20 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*10/19/20 16:12*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*10/19/20 16:12*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*10/19/20 16:12*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*10/19/20 16:12*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			10/19/20 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*10/19/20 16:12*	*1*

Client Sample Results

Client: Quantum Engineering
Project/Site: Dusty/117

Job ID: 590-14043-1

Client Sample ID: GW 3

Date Collected: 10/12/20 00:00
Date Received: 10/12/20 15:50

Lab Sample ID: 590-14043-5

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40		ug/L			10/19/20 16:34	1
Ethylbenzene	ND		1.0		ug/L			10/19/20 16:34	1
m,p-Xylene	ND		2.0		ug/L			10/19/20 16:34	1
Methyl tert-butyl ether	**4.9**		1.0		ug/L			10/19/20 16:34	1
o-Xylene	ND		1.0		ug/L			10/19/20 16:34	1
Toluene	ND		1.0		ug/L			10/19/20 16:34	1
Xylenes, Total	ND		3.0		ug/L			10/19/20 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*10/19/20 16:34*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*10/19/20 16:34*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*10/19/20 16:34*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*10/19/20 16:34*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			10/19/20 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*10/19/20 16:34*	*1*

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-29386/6
Matrix: Water
Analysis Batch: 29386

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40		ug/L			10/19/20 11:31	1
Ethylbenzene	ND		1.0		ug/L			10/19/20 11:31	1
m,p-Xylene	ND		2.0		ug/L			10/19/20 11:31	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/19/20 11:31	1
o-Xylene	ND		1.0		ug/L			10/19/20 11:31	1
Toluene	ND		1.0		ug/L			10/19/20 11:31	1
Xylenes, Total	ND		3.0		ug/L			10/19/20 11:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*10/19/20 11:31*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*10/19/20 11:31*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*10/19/20 11:31*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*10/19/20 11:31*	*1*

Lab Sample ID: LCS 590-29386/1003
Matrix: Water
Analysis Batch: 29386

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			10.0	9.55		ug/L		96	80 - 126		
Ethylbenzene			10.0	9.74		ug/L		97	80 - 120		
m,p-Xylene			10.0	9.80		ug/L		98	80 - 120		
Methyl tert-butyl ether			10.0	9.18		ug/L		92	77 - 128		
o-Xylene			10.0	9.59		ug/L		96	80 - 120		
Toluene			10.0	9.69		ug/L		97	80 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 590-29386/4
Matrix: Water
Analysis Batch: 29386

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
Benzene			10.0	9.68		ug/L		97	80 - 126	1	18
Ethylbenzene			10.0	9.37		ug/L		94	80 - 120	4	18
m,p-Xylene			10.0	9.34		ug/L		93	80 - 120	5	18
Methyl tert-butyl ether			10.0	9.36		ug/L		94	77 - 128	2	20
o-Xylene			10.0	9.32		ug/L		93	80 - 120	3	17
Toluene			10.0	9.27		ug/L		93	80 - 123	5	18

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 590-29386/4
Matrix: Water
Analysis Batch: 29386

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	97		80 - 120

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-29387/6
Matrix: Water
Analysis Batch: 29387

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			10/19/20 11:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		68.7 - 141		10/19/20 11:31	1

Lab Sample ID: LCS 590-29387/1005
Matrix: Water
Analysis Batch: 29387

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1000	1120		ug/L		112	80 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		68.7 - 141

Lab Chronicle

Client: Quantum Engineering
Project/Site: Dusty/117

Job ID: 590-14043-1

Client Sample ID: MW 2
Lab Sample ID: 590-14043-1
Date Collected: 10/12/20 00:00
Matrix: Water
Date Received: 10/12/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	29386	10/19/20 14:45	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	29387	10/19/20 14:45	JSP	TAL SPK

Client Sample ID: MW 3
Lab Sample ID: 590-14043-2
Date Collected: 10/12/20 00:00
Matrix: Water
Date Received: 10/12/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	29386	10/19/20 15:29	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	29387	10/19/20 15:29	JSP	TAL SPK

Client Sample ID: MW 4
Lab Sample ID: 590-14043-3
Date Collected: 10/12/20 00:00
Matrix: Water
Date Received: 10/12/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	29386	10/19/20 15:50	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	29387	10/19/20 15:50	JSP	TAL SPK

Client Sample ID: GW 1
Lab Sample ID: 590-14043-4
Date Collected: 10/12/20 00:00
Matrix: Water
Date Received: 10/12/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	29386	10/19/20 16:12	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	29387	10/19/20 16:12	JSP	TAL SPK

Client Sample ID: GW 3
Lab Sample ID: 590-14043-5
Date Collected: 10/12/20 00:00
Matrix: Water
Date Received: 10/12/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	29386	10/19/20 16:34	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	29387	10/19/20 16:34	JSP	TAL SPK

Laboratory References:

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: Quantum Engineering
Project/Site: Dusty/117

Job ID: 590-14043-1

Laboratory: Eurofins TestAmerica, Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-06-21

Method Summary

Client: Quantum Engineering
Project/Site: Dusty/117

Job ID: 590-14043-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
5030C	Purge and Trap	SW846	TAL SPK

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 E. 1st Ave.

Spokane, WA 99206
Phone: 509.924.9200 Fax:

Chain of Custody Record

013885

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

Client Contact	Project Manager: Jim Desmet	Site Contact:	Date:	COC No:
Company Name: Quantum	Tel/Fax:	Lab Contact:	Carrier:	1 of 1 COCs
Address: PO Box 1853	Analysis Turnaround Time			Sampler:
City/State/Zip: Cda ID 83816	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 208-261-5200	TAT if different from Below			Walk-in Client:
Fax:	☑ 2 weeks			Lab Sampling:
Project Name: Diesty Fow StanCorps	☐ 1 week			
Site: # 117	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	NWTPH-G	BTEX	MTBE	Sample Specific Notes:
MW 2	10/2/20		G	W	2			✓	✓	✓	
MW 3	|		|	|	|			|	|	|	
MW 4	|		|	|	|			|	|	|	
GW 1	|		|	|	|			|	|	|	
GW 3											

590-14043 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ______

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ______ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: 7.1 Corr'd: 7.3		Therm ID No.: [illegible]
Relinquished by: [signature]	Company: Quantum	Date/Time: 10/12/20 15:00	Received by: [signature]	Company: TASPO	Date/Time: 10/12/20 15:50
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: Quantum Engineering

Job Number: 590-14043-1

Login Number: 14043
List Number: 1
Creator: O'Toole, Maria C

List Source: Eurofins TestAmerica, Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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.	N/A	Received same day of collection; chilling process has begun.
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?	N/A	Not present
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.