



BSK Associates Vancouver
2517 E. Evergreen Blvd.
Vancouver, WA 98661
360-750-0055 (Main)
360-750-0057 (FAX)

VEI0572

10/13/2021

Invoice: VE03117

Marjorie Brice
Clark PUD - River Road Generating Facility
5201 NW Lower River Road
Vancouver, WA 98660

RE: Report for VEI0572 Biannual NPDES Priority Pollutants

Dear Marjorie Brice,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 9/28/2021. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2016 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

This certificate of analysis shall not be reproduced except in full, without written approval of the laboratory.

If additional clarification of any information is required, please contact your Project Manager, Debra Karlsson, at (360) 750-0055.

Thank you again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

A handwritten signature in black ink, appearing to read "Elizabeth Bunger", written over a horizontal line.

Elizabeth Bunger, Laboratory Director - Vancouver



Accredited in Accordance with NELAP
ORELAP #WA100008

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

VEI0572 FINAL 10132021 1530

Case Narrative

Project and Report Details

Client: Clark PUD - River Road Generating Facility
Report To: Marjorie Brice
Project #: -
Received: 9/28/2021 - 14:29
Report Due: 10/13/2021

Invoice Details

Invoice To: Clark PUD - River Road Generating Fa
Invoice Attn: Clark Public Utilities
Project PO#: PSC1551B

Sample Receipt Conditions

Cooler: #1
Temperature on Receipt °C: 16.5

Containers Intact
COC/Labels Agree
Received On Blue Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Other
Initial receipt at BSK-VAL

Cooler: #2
Temperature on Receipt °C: 18.9

Containers Intact
COC/Labels Agree
Received On Blue Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Other
Initial receipt at BSK-VAL

Cooler: #3
Temperature on Receipt °C: 18.3

Containers Intact
COC/Labels Agree
Received On Blue Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Other
Initial receipt at BSK-VAL

Cooler: #4
Temperature on Receipt °C: 13.2

Containers Intact
COC/Labels Agree
Received On Blue Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Other
Initial receipt at BSK-VAL

Cooler: #5
Temperature on Receipt °C: 16.1

Containers Intact
COC/Labels Agree
Received On Blue Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Other
Initial receipt at BSK-VAL

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

B2.0	Analyte present in the method blank above the method detection limit (MDL). Laboratory does not determine batch acceptance on detections below the reporting limit (RL).
B2.1	Analyte detected in associated method blank below the reporting limit. No material impact on reported result as sample is ND for this parameter.
BS	Blank spike recoveries did not meet acceptance limits.
BS1.0	Blank spike recovery for this analyte was above upper control limit; no material impact on reported result as sample is ND for this parameter.
BS1.1	Blank spike recovery for this analyte was above upper control limit. Associated result should be considered biased high; reanalysis not feasible.
BS3.0	BS/BSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
CV0.0	CCV recovery was above method acceptance limits; no material impact on reported result as sample detection is below the reporting limit for this parameter.
J	Estimated value
MS1.0	Matrix spike recoveries exceed control limits.
MS1.2	Matrix spike recovery exceeds lower control limit. Reported results for parent matrix should be considered estimated due to matrix interferences.

Report Distribution

Recipient(s)	Report Format	CC:
Marjorie Brice	FINAL.RPT	

Certificate of Analysis

Sample ID: VEI0572-01
Sampled By: Debra Karlsson
Sample Description: Outfall 002

Sample Date - Time: 09/28/2021 - 13:59
Matrix: Waste Water
Sample Type: Grab

BSK Associates Laboratory Fresno General Chemistry

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Ammonia as N	EPA 350.1	ND		0.10	mg/L	1	AEJ0234	10/07/21	10/07/21	
Chemical Oxygen Demand	SM 5220D	ND		15	mg/L	1	AEJ0351	10/07/21	10/07/21	
Cyanide (total)	SM 4500-CN E	ND	2.2	5.0	ug/L	1	AEJ0266	10/06/21	10/07/21	
Cyanide (weak acid dissociable)	SM 4500-CN I	ND	0.0068	0.010	mg/L	2	AEJ0269	10/06/21	10/08/21	
Hexavalent Chromium - Dissolved (1)	EPA 218.7	2.5		0.050	ug/L	1	AEJ0382	10/07/21	10/07/21	
Salinity, Practical	SM 2520B	0.61			PSU	1	AEJ0580	10/11/21	10/11/21	
Temperature	SM 2550B	22			°C	1	AEJ0580	10/11/21	10/11/21	
Total Kjeldahl Nitrogen	EPA 351.2	ND	0.059	0.10	mg/L	1	AEJ0277	10/06/21	10/11/21	MS1.2
Total Organic Carbon	SM 5310C	1.7	0.085	0.20	mg/L	1	AEJ0333	10/07/21	10/07/21	

Organics

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Organochlorine Pesticides and PCBs by GC-ECD										
4,4'-DDD	EPA 608.3	ND		0.050	ug/L	1	AEJ0155	10/05/21	10/06/21	
4,4'-DDE	EPA 608.3	ND		0.050	ug/L	1	AEJ0155	10/05/21	10/06/21	
4,4'-DDT	EPA 608.3	ND		0.010	ug/L	1	AEJ0155	10/05/21	10/06/21	
Aldrin	EPA 608.3	ND		0.0050	ug/L	1	AEJ0155	10/05/21	10/06/21	
alpha-BHC	EPA 608.3	ND		0.010	ug/L	1	AEJ0155	10/05/21	10/06/21	
alpha-Chlordane	EPA 608.3	ND		0.10	ug/L	1	AEJ0155	10/05/21	10/06/21	
Aroclor-1016	EPA 608.3	ND		0.50	ug/L	1	AEJ0155	10/05/21	10/06/21	
Aroclor-1221	EPA 608.3	ND		0.50	ug/L	1	AEJ0155	10/05/21	10/06/21	
Aroclor-1232	EPA 608.3	ND		0.50	ug/L	1	AEJ0155	10/05/21	10/06/21	
Aroclor-1242	EPA 608.3	ND		0.50	ug/L	1	AEJ0155	10/05/21	10/06/21	
Aroclor-1248	EPA 608.3	ND		0.50	ug/L	1	AEJ0155	10/05/21	10/06/21	
Aroclor-1254	EPA 608.3	ND		0.50	ug/L	1	AEJ0155	10/05/21	10/06/21	
Aroclor-1260	EPA 608.3	ND		0.50	ug/L	1	AEJ0155	10/05/21	10/06/21	
beta-BHC	EPA 608.3	ND		0.0050	ug/L	1	AEJ0155	10/05/21	10/06/21	
Chlordane (Technical)	EPA 608.3	ND		0.10	ug/L	1	AEJ0155	10/05/21	10/06/21	
delta-BHC	EPA 608.3	ND		0.0050	ug/L	1	AEJ0155	10/05/21	10/06/21	
Dieldrin	EPA 608.3	ND		0.010	ug/L	1	AEJ0155	10/05/21	10/06/21	
Endosulfan I	EPA 608.3	ND		0.020	ug/L	1	AEJ0155	10/05/21	10/06/21	
Endosulfan II	EPA 608.3	ND		0.010	ug/L	1	AEJ0155	10/05/21	10/06/21	
Endosulfan Sulfate	EPA 608.3	ND		0.050	ug/L	1	AEJ0155	10/05/21	10/06/21	
Endrin	EPA 608.3	ND		0.010	ug/L	1	AEJ0155	10/05/21	10/06/21	
Endrin Aldehyde	EPA 608.3	ND		0.010	ug/L	1	AEJ0155	10/05/21	10/06/21	
gamma-Chlordane	EPA 608.3	ND		0.10	ug/L	1	AEJ0155	10/05/21	10/06/21	
Heptachlor	EPA 608.3	ND		0.010	ug/L	1	AEJ0155	10/05/21	10/06/21	
Heptachlor Epoxide	EPA 608.3	ND		0.010	ug/L	1	AEJ0155	10/05/21	10/06/21	
Lindane	EPA 608.3	ND		0.020	ug/L	1	AEJ0155	10/05/21	10/06/21	
Toxaphene	EPA 608.3	ND		0.50	ug/L	1	AEJ0155	10/05/21	10/06/21	
Surrogate: TCMX	EPA 608.3	98 %		Acceptable range: 26-144 %						

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VEI0572 FINAL 10132021 1530

Certificate of Analysis

Sample ID: VEI0572-01
Sampled By: Debra Karlsson
Sample Description: Outfall 002

Sample Date - Time: 09/28/2021 - 13:59
Matrix: Waste Water
Sample Type: Grab

Organics

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>2-CEVE by EPA 624.1</u>										
2-Chloroethyl vinyl ether	EPA 624.1	ND		1.0	ug/L	1	AEJ0162	10/04/21	10/04/21	
Surrogate: 1,2-Dichloroethane-d4	EPA 624.1	111 %		Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 624.1	97 %		Acceptable range: 70-130 %						
Surrogate: Toluene-d8	EPA 624.1	91 %		Acceptable range: 70-130 %						
<u>Acrolein and Acrylonitrile by EPA 624</u>										
Acrolein	EPA 624.1	ND		2.0	ug/L	1	AEJ0162	10/04/21	10/04/21	
Acrylonitrile	EPA 624.1	ND		2.0	ug/L	1	AEJ0162	10/04/21	10/04/21	
Surrogate: 1,2-Dichloroethane-d4	EPA 624.1	112 %		Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 624.1	105 %		Acceptable range: 70-130 %						
Surrogate: Toluene-d8	EPA 624.1	85 %		Acceptable range: 70-130 %						
<u>Volatile Organics by GC-MS</u>										
1,1,1-Trichloroethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
1,1,2,2-Tetrachloroethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
1,1,2-Trichloroethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
1,1-Dichloroethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
1,1-Dichloroethene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	CV0.0
1,2-Dibromoethane (EDB)	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
1,2-Dichlorobenzene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
1,2-Dichloroethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
1,2-Dichloropropane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	CV0.0
1,3-Dichlorobenzene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
1,4-Dichlorobenzene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
2-Hexanone	EPA 624.1	ND		20	ug/L	1	AEJ0162	10/04/21	10/04/21	
4-Methyl-2-pentanone	EPA 624.1	ND		20	ug/L	1	AEJ0162	10/04/21	10/04/21	
Acetone	EPA 624.1	ND		20	ug/L	1	AEJ0162	10/04/21	10/04/21	
Benzene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Bromodichloromethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Bromoform	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Bromomethane	EPA 624.1	ND		1.0	ug/L	1	AEJ0162	10/04/21	10/04/21	
Carbon disulfide	EPA 624.1	ND		50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Carbon Tetrachloride	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	CV0.0
Chlorobenzene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	B2.1
Chloroethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Chloroform	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Chloromethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
cis-1,2-Dichloroethene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
cis-1,3-Dichloropropene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Dibromochloromethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Dichloromethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Ethylbenzene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
p-Isopropyltoluene	EPA 624.1	ND		5.0	ug/L	1	AEJ0162	10/04/21	10/04/21	

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VEI0572 FINAL 10132021 1530

Certificate of Analysis

Sample ID: VEI0572-01
Sampled By: Debra Karlsson
Sample Description: Outfall 002

Sample Date - Time: 09/28/2021 - 13:59
Matrix: Waste Water
Sample Type: Grab

Organics

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Volatile Organics by GC-MS</u>										
m,p-Xylenes	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Methyl-t-butyl ether	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
o-Xylene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Styrene	EPA 624.1	ND		5.0	ug/L	1	AEJ0162	10/04/21	10/04/21	
Tetrachloroethene (PCE)	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Toluene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
trans-1,2-Dichloroethene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
trans-1,3-Dichloropropene	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Trichloroethene (TCE)	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	CV0.0
Trichlorofluoromethane	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Vinyl Chloride	EPA 624.1	ND		0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	CV0.0
Surrogate: 1,2-Dichloroethane-d4	EPA 624.1	110 %		Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 624.1	102 %		Acceptable range: 70-130 %						
Surrogate: Toluene-d8	EPA 624.1	93 %		Acceptable range: 70-130 %						
<u>Washington SVOC by GC-MS</u>										
1,2,4-Trichlorobenzene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
1,2-Diphenylhydrazine (as Azobenzene)	EPA 625.1	ND		20	ug/L	1	AEJ0099	10/04/21	10/07/21	
2,2'-oxybis(1-chloropropane) ⁽²⁾	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
2,4,6-Trichlorophenol	EPA 625.1	ND		4.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
2,4-Dichlorophenol	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
2,4-Dimethylphenol	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
2,4-Dinitrophenol	EPA 625.1	ND		2.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
2,4-Dinitrotoluene	EPA 625.1	ND		0.40	ug/L	1	AEJ0099	10/04/21	10/07/21	
2,6-Dinitrotoluene	EPA 625.1	ND		0.40	ug/L	1	AEJ0099	10/04/21	10/07/21	
2-Chloronaphthalene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
2-Chlorophenol	EPA 625.1	ND		2.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
2-Nitrophenol	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
3,3-Dichlorobenzidine	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
4,6-Dinitro-2-methylphenol	EPA 625.1	ND		2.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
4-Bromophenyl phenyl ether	EPA 625.1	ND		0.40	ug/L	1	AEJ0099	10/04/21	10/07/21	
4-Chloro-3-methylphenol	EPA 625.1	ND		2.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
4-Chlorophenyl phenyl ether	EPA 625.1	ND		0.50	ug/L	1	AEJ0099	10/04/21	10/07/21	
4-Nitrophenol	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Acenaphthene	EPA 625.1	ND		0.40	ug/L	1	AEJ0099	10/04/21	10/07/21	
Acenaphthylene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Anthracene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Benzidine	EPA 625.1	ND		24	ug/L	1	AEJ0099	10/04/21	10/07/21	B2.1
Benzo(a)anthracene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Benzo(a)pyrene	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Benzo(b)fluoranthene	EPA 625.1	ND		1.6	ug/L	1	AEJ0099	10/04/21	10/07/21	
Benzo(g,h,i)perylene	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Benzo(k)fluoranthene	EPA 625.1	ND		1.6	ug/L	1	AEJ0099	10/04/21	10/07/21	
Bis(2-chloroethoxy)methane	EPA 625.1	ND		21	ug/L	1	AEJ0099	10/04/21	10/07/21	

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VEI0572 FINAL 10132021 1530

Certificate of Analysis

Sample ID: VEI0572-01
Sampled By: Debra Karlsson
Sample Description: Outfall 002

Sample Date - Time: 09/28/2021 - 13:59
Matrix: Waste Water
Sample Type: Grab

Organics

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Washington SVOC by GC-MS</u>										
Bis(2-chloroethyl) ether	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Bis(2-ethylhexyl) phthalate	EPA 625.1	ND		0.50	ug/L	1	AEJ0099	10/04/21	10/07/21	
Butyl benzyl phthalate	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Chrysene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Dibenzo(a,h)anthracene	EPA 625.1	ND		1.6	ug/L	1	AEJ0099	10/04/21	10/07/21	
Diethyl phthalate	EPA 625.1	ND		7.6	ug/L	1	AEJ0099	10/04/21	10/07/21	
Dimethyl phthalate	EPA 625.1	ND		6.4	ug/L	1	AEJ0099	10/04/21	10/07/21	
Di-n-butyl phthalate	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Di-n-octyl phthalate	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Fluoranthene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Fluorene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Hexachlorobenzene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Hexachlorobutadiene	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Hexachlorocyclopentadiene	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Hexachloroethane	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Indeno(1,2,3-cd)pyrene	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Isophorone	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Naphthalene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Nitrobenzene	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
N-Nitrosodimethylamine (NDMA)	EPA 625.1	ND		4.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
N-Nitrosodi-n-propylamine (NDPA)	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
N-Nitrosodiphenylamine (as DPA)	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Pentachlorophenol	EPA 625.1	ND		1.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Phenanthrene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Phenol	EPA 625.1	ND		4.0	ug/L	1	AEJ0099	10/04/21	10/07/21	
Pyrene	EPA 625.1	ND		0.60	ug/L	1	AEJ0099	10/04/21	10/07/21	
Surrogate: 2,4,6-Tribromophenol	EPA 625.1	127 %		Acceptable range: 53-200 %						
Surrogate: 2-Fluorobiphenyl	EPA 625.1	88 %		Acceptable range: 40-127 %						
Surrogate: 2-Fluorophenol	EPA 625.1	83 %		Acceptable range: 42-123 %						
Surrogate: Nitrobenzene-d5	EPA 625.1	91 %		Acceptable range: 15-200 %						
Surrogate: Phenol-d6	EPA 625.1	91 %		Acceptable range: 10-200 %						
Surrogate: p-Terphenyl-d14	EPA 625.1	95 %		Acceptable range: 50-150 %						

Volatile Organics (BTEX) by GC-MS

Benzene	EPA 8260B	ND	0.20	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Ethylbenzene	EPA 8260B	ND	0.29	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
m,p-Xylenes	EPA 8260B	ND	0.35	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
o-Xylene	EPA 8260B	ND	0.22	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Toluene	EPA 8260B	ND	0.14	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Surrogate: 1,2-Dichloroethane-d4	EPA 8260B	110 %		Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 8260B	102 %		Acceptable range: 70-130 %						
Surrogate: Toluene-d8	EPA 8260B	93 %		Acceptable range: 70-130 %						

TPH-Gasoline by NWTPH-Gx

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

VEI0572 FINAL 10132021 1530

Certificate of Analysis

Sample ID: VEI0572-01
Sampled By: Debra Karlsson
Sample Description: Outfall 002

Sample Date - Time: 09/28/2021 - 13:59
Matrix: Waste Water
Sample Type: Grab

Organics

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>TPH-Gasoline by NWTPH-Gx</u>										
TPH as Gasoline	NWTPH-Gx	91		50	ug/L	1	AEJ0184	10/05/21	10/05/21	
Surrogate: 1,2-Dichloroethane-d4	NWTPH-Gx	122 %	Acceptable range: 50-150 %							
<u>Oil and Grease (1664B)</u>										
Total Oil & Grease	EPA 1664B	ND	1.5	5.0	mg/L	1	AEJ0071	10/01/21	10/03/21	

BSK Associates Vancouver General Chemistry

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Alkalinity as CaCO3	SM 2320B	240		5.0	mg/L	1	VEJ0022	10/06/21	10/06/21	
Biochemical Oxygen Demand	SM 5210B	<2.4		1.2	mg/L	1.2	VEI0110	09/29/21 07:30	10/04/21	BS1.0
Biochemical Oxygen Demand - Dissolved (1)	SM 5210B	<2.4		1.2	mg/L	1.2	VEI0111	09/29/21 09:00	10/04/21	BS1.0
Chloride	EPA 300.0	ND		20	mg/L	3	VEI0116	09/29/21	09/29/21	
Chlorine, Free Residual (1)	SM 4500-Cl G	ND		0.10	mg/L	1	VEI0115	09/29/21 10:57	09/29/21	
Color, Apparent	SM 2120B	ND		15	CU	1	VEI0120	09/30/21 10:11	09/30/21	
Color pH (1)	SM 4500-H+ B	8.7			pH Units	1	VEI0120	09/30/21	09/30/21	
Conductivity @ 25C	SM 2510B	1100		70	umhos/cm	1	VEJ0024	10/06/21	10/06/21	
Fluoride	EPA 300.0	0.45	0.0072	0.20	mg/L	1	VEI0116	09/29/21	09/29/21	
Nitrate + Nitrite as N	EPA 300.0	13		0.50	mg/L					
Nitrate as N	EPA 300.0	13	0.040	0.50	mg/L	5	VEI0116	09/29/21 14:12	09/29/21	
Nitrite as N	EPA 300.0	0.14	0.084	0.30	mg/L	3	VEI0116	09/29/21 14:12	09/29/21	J
pH (1)	SM 4500-H+ B	8.6			pH Units	1	VEI0121	09/30/21 12:03	09/30/21	
pH Temperature in °C		20.0								
Settleable Solids	SM 2540F	ND		0.10	mL/L	1	VEI0124	09/30/21 11:35	09/30/21	
Total Dissolved Solids	SM 2540C	1000		100	mg/L	1	VEJ0011	10/05/21	10/10/21	
Phosphorus	EPA 365.3	0.43	0.0042	0.010	mg/L	1	VEJ0004	10/01/21	10/02/21	
Phosphorus - Dissolved (1)	EPA 365.3	0.43		0.010	mg/L	1	VEJ0004	10/01/21	10/02/21	
Total Suspended Solids	SM 2540D	ND		2.0	mg/L	1	VEI0123	09/30/21	10/05/21	

Microbiology

Analyte	Method	Result	RL	Units	Batch	Prepared	Analyzed	Qual
<u>Fecal Coliform Count by Membrane Filtration</u>								
Fecal Coliform	SM 9222D	20	1	CFU/100 ml	VEI0112	09/28/21 16:18		
<u>Coliform, Total and E.Coli in Non-Potable Water</u>								
E. Coli	SM 9223B	16.8	1	MPN/100 mL	VEI0113	09/28/21 16:26	09/29/21 11:08	
Total Coliform	SM 9223B	517.2	1	MPN/100 mL	VEI0113	09/28/21 16:26	09/29/21 11:08	

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VEI0572 FINAL 10132021 1530



VEI0572

Biannual NPDES Priority Pollutants

Certificate of Analysis

Sample ID: VEI0572-01

Sampled By: Debra Karlsson

Sample Description: Outfall 002

Sample Date - Time: 09/28/2021 - 13:59

Matrix: Waste Water

Sample Type: Grab



VEI0572

Biannual NPDES Priority Pollutants

Certificate of Analysis

Sample ID: VEI0572-02
Sampled By: bsK
Sample Description: Trip Blank

Sample Date - Time: 09/27/2021 - 00:00
Matrix: Water
Sample Type: Trip Blank

BSK Associates Laboratory Fresno
Organics

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Volatile Organics (BTEX) by GC-MS</u>										
Benzene	EPA 8260B	ND	0.20	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Ethylbenzene	EPA 8260B	ND	0.29	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
m,p-Xylenes	EPA 8260B	ND	0.35	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
o-Xylene	EPA 8260B	ND	0.22	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Toluene	EPA 8260B	ND	0.14	0.50	ug/L	1	AEJ0162	10/04/21	10/04/21	
Surrogate: 1,2-Dichloroethane-d4	EPA 8260B	116 %		Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 8260B	104 %		Acceptable range: 70-130 %						
Surrogate: Toluene-d8	EPA 8260B	94 %		Acceptable range: 70-130 %						

BSK Associates Laboratory Fresno
General Chemistry Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 218.7 - Quality Control

Batch: AEJ0382

Prepared: 10/7/2021

Prep Method: Method Specific Preparation

Analyst: DXR

Blank (AEJ0382-BLK1)

Hexavalent Chromium - Dissolved (1)	ND		0.050	ug/L							10/07/21	
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Blank Spike (AEJ0382-BS1)

Hexavalent Chromium - Dissolved (1)	0.033		0.050	ug/L	0.050	ND	66	50-150			10/07/21	
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Matrix Spike (AEJ0382-MS1), Source: SEJ0013-02

Hexavalent Chromium - Dissolved (1)	1.9		0.050	ug/L	2.0	ND	97	85-115			10/07/21	
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Matrix Spike Dup (AEJ0382-MSD1), Source: SEJ0013-02

Hexavalent Chromium - Dissolved (1)	2.0		0.050	ug/L	2.0	ND	98	85-115	1	15	10/07/21	
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EPA 350.1 - Quality Control

Batch: AEJ0234

Prepared: 10/7/2021

Prep Method: Method Specific Preparation

Analyst: CTD

Blank (AEJ0234-BLK1)

Ammonia as N	ND		0.10	mg/L							10/07/21	
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Blank Spike (AEJ0234-BS1)

Ammonia as N	3.9		0.10	mg/L	4.0	ND	98	90-110			10/07/21	
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Blank Spike Dup (AEJ0234-BSD1)

Ammonia as N	4.0		0.10	mg/L	4.0	ND	99	90-110	1	20	10/07/21	
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Matrix Spike (AEJ0234-MS1), Source: REI0171-01

Ammonia as N	3.9		0.10	mg/L	4.0	ND	94	90-110			10/07/21	
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Matrix Spike (AEJ0234-MS2), Source: VEI0572-01

Ammonia as N	3.8		0.10	mg/L	4.0	ND	95	90-110			10/07/21	
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EPA 351.2 - Quality Control

Batch: AEJ0277

Prepared: 10/6/2021

Prep Method: Digestion

Analyst: CTD

Blank (AEJ0277-BLK1)

Total Kjeldahl Nitrogen	ND	0.059	0.10	mg/L							10/11/21	
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Blank Spike (AEJ0277-BS1)

Total Kjeldahl Nitrogen	9.8	0.059	0.10	mg/L	10		98	90-110			10/11/21	
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Blank Spike Dup (AEJ0277-BSD1)

Total Kjeldahl Nitrogen	9.6	0.059	0.10	mg/L	10		96	90-110	2	10	10/11/21	
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Matrix Spike (AEJ0277-MS1), Source: VEI0572-01

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno
General Chemistry Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 351.2 - Quality Control

Batch: AEJ0277

Prepared: 10/6/2021

Prep Method: Digestion

Analyst: CTD

Matrix Spike (AEJ0277-MS1), Source: VEI0572-01

Total Kjeldahl Nitrogen	7.0	0.059	0.10	mg/L	10	ND	70	90-110			10/11/21	MS1.0 Low
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Matrix Spike Dup (AEJ0277-MSD1), Source: VEI0572-01

Total Kjeldahl Nitrogen	6.2	0.059	0.10	mg/L	10	ND	62	90-110	12	10	10/11/21	MS1.0 Low
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SM 2520B - Quality Control

Batch: AEJ0580

Prepared: 10/11/2021

Prep Method: Method Specific Preparation

Analyst: CEG

Duplicate (AEJ0580-DUP1), Source: VEI0572-01

Salinity, Practical	0.61			PSU		0.61			0		10/11/21	
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SM 2550B - Quality Control

Batch: AEJ0580

Prepared: 10/11/2021

Prep Method: Method Specific Preparation

Analyst: CEG

Duplicate (AEJ0580-DUP1), Source: VEI0572-01

Temperature	21.8			°C		21.9			0		10/11/21	
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SM 4500-CN E - Quality Control

Batch: AEJ0266

Prepared: 10/6/2021

Prep Method: Total Cyanide Distillation

Analyst: CMH

Blank (AEJ0266-BLK1)

Cyanide (total)	ND	2.2	5.0	ug/L							10/07/21	
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Blank Spike (AEJ0266-BS1)

Cyanide (total)	260	2.2	5.0	ug/L	250		103	80-120			10/07/21	
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Blank Spike Dup (AEJ0266-BSD1)

Cyanide (total)	250	2.2	5.0	ug/L	250		99	80-120	4	20	10/07/21	
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Matrix Spike (AEJ0266-MS1), Source: AEJ0293-01

Cyanide (total)	250	2.2	5.0	ug/L	250	ND	99	80-120			10/07/21	
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Matrix Spike Dup (AEJ0266-MSD1), Source: AEJ0293-01

Cyanide (total)	230	2.2	5.0	ug/L	250	ND	91	80-120	8	20	10/07/21	
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SM 4500-CN I - Quality Control

Batch: AEJ0269

Prepared: 10/6/2021

Prep Method: WAD Cyanide Distillation

Analyst: CMH

Blank (AEJ0269-BLK1)

Cyanide (weak acid dissociable)	ND	0.0068	0.010	mg/L							10/08/21	
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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno
General Chemistry Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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SM 4500-CN I - Quality Control

Batch: AEJ0269

Prepared: 10/6/2021

Prep Method: WAD Cyanide Distillation

Analyst: CMH

Blank Spike (AEJ0269-BS1)

Cyanide (weak acid dissociable)	0.10	0.0068	0.010	mg/L	0.10		101	80-120			10/08/21	
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Blank Spike Dup (AEJ0269-BSD1)

Cyanide (weak acid dissociable)	0.097	0.0068	0.010	mg/L	0.10		97	80-120	4	20	10/08/21	
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Matrix Spike (AEJ0269-MS1), Source: VEI0572-01

Cyanide (weak acid dissociable)	0.090	0.0068	0.010	mg/L	0.10	ND	90	80-120			10/08/21	
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Matrix Spike Dup (AEJ0269-MSD1), Source: VEI0572-01

Cyanide (weak acid dissociable)	0.10	0.0068	0.010	mg/L	0.10	ND	104	80-120	15	20	10/08/21	
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SM 5220D - Quality Control

Batch: AEJ0351

Prepared: 10/7/2021

Prep Method: Method Specific Preparation

Analyst: SEK

Blank (AEJ0351-BLK1)

Chemical Oxygen Demand	ND		15	mg/L							10/07/21	
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Blank Spike (AEJ0351-BS1)

Chemical Oxygen Demand	100		30	mg/L	100	ND	100	80-120			10/07/21	
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Blank Spike Dup (AEJ0351-BSD1)

Chemical Oxygen Demand	110		30	mg/L	100	ND	105	80-120	6	20	10/07/21	
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Matrix Spike (AEJ0351-MS1), Source: AEI3146-04

Chemical Oxygen Demand	120		30	mg/L	100	ND	117	80-120			10/07/21	
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Matrix Spike Dup (AEJ0351-MSD1), Source: AEI3146-04

Chemical Oxygen Demand	110		30	mg/L	100	ND	107	80-120	9	20	10/07/21	
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SM 5310C - Quality Control

Batch: AEJ0333

Prepared: 10/7/2021

Prep Method: Method Specific Preparation

Analyst: KDF

Blank (AEJ0333-BLK1)

Total Organic Carbon	ND	0.085	0.20	mg/L							10/07/21	
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Blank Spike (AEJ0333-BS1)

Total Organic Carbon	10	0.085	0.20	mg/L	10		103	80-120			10/07/21	
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Blank Spike Dup (AEJ0333-BSD1)

Total Organic Carbon	10	0.085	0.20	mg/L	10		103	80-120	0	20	10/07/21	
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Matrix Spike (AEJ0333-MS1), Source: AEJ0016-02

Total Organic Carbon	11	0.085	0.20	mg/L	10	0.37	103	80-120			10/07/21	
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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno
General Chemistry Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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SM 5310C - Quality Control

Batch: AEJ0333

Prepared: 10/7/2021

Prep Method: Method Specific Preparation

Analyst: KDF

Matrix Spike (AEJ0333-MS2), Source: AEJ0016-06

Total Organic Carbon	11	0.085	0.20	mg/L	10	0.96	104	80-120			10/07/21	
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Matrix Spike Dup (AEJ0333-MSD1), Source: AEJ0016-02

Total Organic Carbon	11	0.085	0.20	mg/L	10	0.37	105	80-120	2	20	10/07/21	
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Matrix Spike Dup (AEJ0333-MSD2), Source: AEJ0016-06

Total Organic Carbon	11	0.085	0.20	mg/L	10	0.96	105	80-120	1	20	10/07/21	
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BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 1664B - Quality Control

Batch: AEJ0071

Prepared: 10/1/2021

Prep Method: EPA 1664

Analyst: AMR

Blank (AEJ0071-BLK1)

Total Oil & Grease	ND	1.5	5.0	mg/L							10/03/21	
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Blank Spike (AEJ0071-BS1)

Total Oil & Grease	36	1.5	5.0	mg/L	40		91	78-114			10/03/21	
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Blank Spike Dup (AEJ0071-BSD1)

Total Oil & Grease	36	1.5	5.0	mg/L	40		90	78-114	2	18	10/03/21	
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Matrix Spike (AEJ0071-MS1), Source: AEI2428-02

Total Oil & Grease	22	1.5	5.0	mg/L	41	ND	54	78-114			10/03/21	MS1.0 Low
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EPA 608.3 - Quality Control

Batch: AEJ0155

Prepared: 10/5/2021

Prep Method: EPA 3510C

Analyst: PNN

Blank (AEJ0155-BLK1)

4,4'-DDD	ND		0.0050	ug/L							10/05/21	
4,4'-DDE	ND		0.0050	ug/L							10/05/21	
4,4'-DDT	ND		0.0050	ug/L							10/05/21	
Aldrin	ND		0.0050	ug/L							10/05/21	
alpha-BHC	ND		0.0050	ug/L							10/05/21	
alpha-Chlordane	ND		0.010	ug/L							10/05/21	
Aroclor-1016	ND		0.50	ug/L							10/05/21	
Aroclor-1221	ND		0.50	ug/L							10/05/21	
Aroclor-1232	ND		0.50	ug/L							10/05/21	
Aroclor-1242	ND		0.50	ug/L							10/05/21	
Aroclor-1248	ND		0.50	ug/L							10/05/21	
Aroclor-1254	ND		0.50	ug/L							10/05/21	
Aroclor-1260	ND		0.50	ug/L							10/05/21	
beta-BHC	ND		0.0050	ug/L							10/05/21	
Chlordane (Technical)	ND		0.10	ug/L							10/05/21	
delta-BHC	ND		0.0050	ug/L							10/05/21	
Dieldrin	ND		0.0050	ug/L							10/05/21	
Endosulfan I	ND		0.0050	ug/L							10/05/21	
Endosulfan II	ND		0.0050	ug/L							10/05/21	
Endosulfan Sulfate	ND		0.0050	ug/L							10/05/21	
Endrin	ND		0.0050	ug/L							10/05/21	
Endrin Aldehyde	ND		0.0050	ug/L							10/05/21	
gamma-Chlordane	ND		0.010	ug/L							10/05/21	
Heptachlor	ND		0.0050	ug/L							10/05/21	
Heptachlor Epoxide	ND		0.0050	ug/L							10/05/21	
Lindane	ND		0.0050	ug/L							10/05/21	
Toxaphene	ND		0.10	ug/L							10/05/21	
Surrogate: TCMX	0.15				0.15		102	26-144			10/05/21	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno
Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 608.3 - Quality Control
Batch: AEJ0155
Prepared: 10/5/2021
Prep Method: EPA 3510C
Analyst: PNN
Blank Spike (AEJ0155-BS1)

4,4'-DDD	0.049	0.0050	ug/L	0.040	ND	123	50-150	10/05/21
4,4'-DDE	0.044	0.0050	ug/L	0.040	ND	109	50-150	10/05/21
4,4'-DDT	0.046	0.0050	ug/L	0.040	ND	115	50-150	10/05/21
Aldrin	0.045	0.0050	ug/L	0.040	ND	113	50-150	10/05/21
alpha-BHC	0.047	0.0050	ug/L	0.040	ND	118	50-150	10/05/21
alpha-Chlordane	0.046	0.010	ug/L	0.040	ND	114	50-150	10/05/21
beta-BHC	0.050	0.0050	ug/L	0.040	ND	126	50-150	10/05/21
delta-BHC	0.046	0.0050	ug/L	0.040	ND	114	50-150	10/05/21
Dieldrin	0.047	0.0050	ug/L	0.040	ND	117	50-150	10/05/21
Endosulfan I	0.046	0.0050	ug/L	0.040	ND	114	50-150	10/05/21
Endosulfan II	0.049	0.0050	ug/L	0.040	ND	121	50-150	10/05/21
Endosulfan Sulfate	0.044	0.0050	ug/L	0.040	ND	110	50-150	10/05/21
Endrin	0.049	0.0050	ug/L	0.040	ND	122	50-150	10/05/21
Endrin Aldehyde	0.051	0.0050	ug/L	0.040	ND	126	50-150	10/05/21
gamma-Chlordane	0.047	0.010	ug/L	0.040	ND	118	50-150	10/05/21
Heptachlor	0.046	0.0050	ug/L	0.040	ND	114	50-150	10/05/21
Heptachlor Epoxide	0.046	0.0050	ug/L	0.040	ND	116	50-150	10/05/21
Lindane	0.048	0.0050	ug/L	0.040	ND	121	50-150	10/05/21
Surrogate: TCMX	0.16			0.15		108	50-150	10/05/21

Blank Spike (AEJ0155-BS2)

Toxaphene	0.049	0.10	ug/L	0.080	ND	62	50-150	10/05/21
Surrogate: TCMX	0.13			0.15		89	50-150	10/05/21

Blank Spike (AEJ0155-BS3)

Aroclor-1016	0.81	0.50	ug/L	0.80	ND	101	50-150	10/05/21
Aroclor-1260	0.65	0.50	ug/L	0.80	ND	82	50-150	10/05/21
Surrogate: TCMX	0.14			0.15		95	50-150	10/05/21

Matrix Spike (AEJ0155-MS1), Source: VEI0572-01

4,4'-DDD	0.048	0.0050	ug/L	0.040	ND	121	50-150	10/05/21
4,4'-DDE	0.048	0.0050	ug/L	0.040	ND	120	50-150	10/05/21
4,4'-DDT	0.050	0.0050	ug/L	0.040	ND	124	50-150	10/05/21
Aldrin	0.047	0.0050	ug/L	0.040	ND	117	50-150	10/05/21
alpha-BHC	0.047	0.0050	ug/L	0.040	ND	118	50-150	10/05/21
alpha-Chlordane	0.047	0.010	ug/L	0.040	ND	117	50-150	10/05/21
beta-BHC	0.051	0.0050	ug/L	0.040	ND	128	50-150	10/05/21
delta-BHC	0.047	0.0050	ug/L	0.040	ND	116	50-150	10/05/21
Dieldrin	0.047	0.0050	ug/L	0.040	ND	118	50-150	10/05/21
Endosulfan I	0.047	0.0050	ug/L	0.040	ND	117	50-150	10/05/21
Endosulfan II	0.048	0.0050	ug/L	0.040	ND	119	50-150	10/05/21
Endosulfan Sulfate	0.048	0.0050	ug/L	0.040	ND	120	50-150	10/05/21
Endrin	0.049	0.0050	ug/L	0.040	ND	123	50-150	10/05/21

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno
Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 608.3 - Quality Control
Batch: AEJ0155
Prepared: 10/5/2021
Prep Method: EPA 3510C
Analyst: PNN
Matrix Spike (AEJ0155-MS1), Source: VEI0572-01

Endrin Aldehyde	0.050	0.0050	ug/L	0.040	ND	125	50-150				10/05/21	
gamma-Chlordane	0.047	0.010	ug/L	0.040	ND	117	50-150				10/05/21	
Heptachlor	0.047	0.0050	ug/L	0.040	ND	116	50-150				10/05/21	
Heptachlor Epoxide	0.056	0.0050	ug/L	0.040	ND	140	50-150				10/05/21	
Lindane	0.050	0.0050	ug/L	0.040	ND	124	50-150				10/05/21	
Surrogate: TCMX	0.16			0.15		108	50-150				10/05/21	

Matrix Spike Dup (AEJ0155-MSD1), Source: VEI0572-01

4,4'-DDD	0.046	0.0050	ug/L	0.040	ND	115	50-150	6	20		10/05/21	
4,4'-DDE	0.045	0.0050	ug/L	0.040	ND	112	50-150	7	20		10/05/21	
4,4'-DDT	0.046	0.0050	ug/L	0.040	ND	117	50-150	7	20		10/05/21	
Aldrin	0.044	0.0050	ug/L	0.040	ND	110	50-150	7	20		10/05/21	
alpha-BHC	0.046	0.0050	ug/L	0.040	ND	115	50-150	4	20		10/05/21	
alpha-Chlordane	0.043	0.010	ug/L	0.040	ND	108	50-150	9	20		10/05/21	
beta-BHC	0.048	0.0050	ug/L	0.040	ND	122	50-150	6	20		10/05/21	
delta-BHC	0.044	0.0050	ug/L	0.040	ND	110	50-150	7	20		10/05/21	
Dieldrin	0.045	0.0050	ug/L	0.040	ND	113	50-150	5	20		10/05/21	
Endosulfan I	0.043	0.0050	ug/L	0.040	ND	108	50-150	9	20		10/05/21	
Endosulfan II	0.045	0.0050	ug/L	0.040	ND	113	50-150	6	20		10/05/21	
Endosulfan Sulfate	0.045	0.0050	ug/L	0.040	ND	113	50-150	7	20		10/05/21	
Endrin	0.047	0.0050	ug/L	0.040	ND	119	50-150	5	20		10/05/21	
Endrin Aldehyde	0.047	0.0050	ug/L	0.040	ND	119	50-150	5	20		10/05/21	
gamma-Chlordane	0.044	0.010	ug/L	0.040	ND	112	50-150	6	20		10/05/21	
Heptachlor	0.044	0.0050	ug/L	0.040	ND	110	50-150	7	20		10/05/21	
Heptachlor Epoxide	0.051	0.0050	ug/L	0.040	ND	128	50-150	10	20		10/05/21	
Lindane	0.047	0.0050	ug/L	0.040	ND	118	50-150	5	20		10/05/21	
Surrogate: TCMX	0.15			0.15		100	50-150				10/05/21	

EPA 624.1 - Quality Control
Batch: AEJ0162
Prepared: 10/4/2021
Prep Method: no prep-volatiles
Analyst: AMN
Blank (AEJ0162-BLK1)

1,1,1-Trichloroethane	ND	0.50	ug/L								10/04/21	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L								10/04/21	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	ug/L								10/04/21	
1,1,2-Trichloroethane	ND	0.50	ug/L								10/04/21	
1,1-Dichloroethane	ND	0.50	ug/L								10/04/21	
1,1-Dichloroethene	ND	0.50	ug/L								10/04/21	
1,2-Dibromoethane (EDB)	ND	0.50	ug/L								10/04/21	
1,2-Dichlorobenzene	ND	0.50	ug/L								10/04/21	
1,2-Dichloroethane	ND	0.50	ug/L								10/04/21	
1,2-Dichloropropane	ND	0.50	ug/L								10/04/21	

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 624.1 - Quality Control

Batch: AEJ0162

Prepared: 10/4/2021

Prep Method: no prep-volatiles

Analyst: AMN

Blank (AEJ0162-BLK1)

1,3-Dichlorobenzene	ND	0.50	ug/L								10/04/21	
1,4-Dichlorobenzene	ND	0.50	ug/L								10/04/21	
2-Chloroethyl vinyl ether	ND	1.0	ug/L								10/04/21	
2-Hexanone	ND	2.0	ug/L								10/04/21	
4-Methyl-2-pentanone	ND	2.0	ug/L								10/04/21	
Acetone	ND	5.0	ug/L								10/04/21	
Acrolein	ND	2.0	ug/L								10/04/21	
Acrylonitrile	ND	2.0	ug/L								10/04/21	
Benzene	ND	0.50	ug/L								10/04/21	
Bromodichloromethane	ND	0.50	ug/L								10/04/21	
Bromoform	ND	0.50	ug/L								10/04/21	
Bromomethane	ND	1.0	ug/L								10/04/21	
Carbon disulfide	ND	5.0	ug/L								10/04/21	
Carbon Tetrachloride	ND	0.50	ug/L								10/04/21	
Chlorobenzene	ND	0.50	ug/L								10/04/21	B2.0
Chloroethane	ND	0.50	ug/L								10/04/21	
Chloroform	ND	0.50	ug/L								10/04/21	
Chloromethane	ND	0.50	ug/L								10/04/21	
cis-1,2-Dichloroethene	ND	0.50	ug/L								10/04/21	
cis-1,3-Dichloropropene	ND	0.50	ug/L								10/04/21	
Dibromochloromethane	ND	0.50	ug/L								10/04/21	
Dichloromethane	ND	0.50	ug/L								10/04/21	
Ethylbenzene	ND	0.50	ug/L								10/04/21	
p-Isopropyltoluene	ND	2.0	ug/L								10/04/21	
m,p-Xylenes	ND	0.50	ug/L								10/04/21	
Methyl-t-butyl ether	ND	0.50	ug/L								10/04/21	
o-Xylene	ND	0.50	ug/L								10/04/21	
Styrene	ND	0.50	ug/L								10/04/21	
Tetrachloroethene (PCE)	ND	0.50	ug/L								10/04/21	
Toluene	ND	0.50	ug/L								10/04/21	
trans-1,2-Dichloroethene	ND	0.50	ug/L								10/04/21	
trans-1,3-Dichloropropene	ND	0.50	ug/L								10/04/21	
Trichloroethene (TCE)	ND	0.50	ug/L								10/04/21	
Trichlorofluoromethane	ND	0.50	ug/L								10/04/21	
Vinyl Chloride	ND	0.50	ug/L								10/04/21	
Surrogate: 1,2-Dichloroethane-d4	58				50		115	70-130			10/04/21	
Surrogate: Bromofluorobenzene	50				50		100	70-130			10/04/21	
Surrogate: Toluene-d8	44				50		88	70-130			10/04/21	

Blank Spike (AEJ0162-BS1)

1,1,1-Trichloroethane	12	0.50	ug/L	10	ND	115	52-162				10/04/21	
1,1,2,2-Tetrachloroethane	9.7	0.50	ug/L	10	ND	97	46-157				10/04/21	
1,1,2-Trichloro-1,2,2-trifluoroethane	12	0.50	ug/L	10	ND	117	59-161				10/04/21	

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 624.1 - Quality Control

Batch: AEJ0162

Prepared: 10/4/2021

Prep Method: no prep-volatiles

Analyst: AMN

Blank Spike (AEJ0162-BS1)

1,1,2-Trichloroethane	10		0.50	ug/L	10	ND	104	52-150			10/04/21	
1,1-Dichloroethane	11		0.50	ug/L	10	ND	113	59-155			10/04/21	
1,1-Dichloroethene	12		0.50	ug/L	10	ND	116	10-234			10/04/21	
1,2-Dibromoethane (EDB)	10		0.50	ug/L	10	ND	100	77-125			10/04/21	
1,2-Dichlorobenzene	9.4		0.50	ug/L	10	ND	94	18-190			10/04/21	
1,2-Dichloroethane	11		0.50	ug/L	10	ND	114	49-155			10/04/21	
1,2-Dichloropropane	11		0.50	ug/L	10	ND	112	10-210			10/04/21	
1,3-Dichlorobenzene	9.5		0.50	ug/L	10	ND	95	59-156			10/04/21	
1,4-Dichlorobenzene	9.6		0.50	ug/L	10	ND	96	18-190			10/04/21	
2-Chloroethyl vinyl ether	12		1.0	ug/L	10	ND	115	10-305			10/04/21	
2-Hexanone	9.4		2.0	ug/L	10	ND	94	62-141			10/04/21	
4-Methyl-2-pentanone	11		2.0	ug/L	10	ND	109	72-134			10/04/21	
Acetone	11		5.0	ug/L	10	ND	107	49-165			10/04/21	
Acrolein	120		2.0	ug/L	100	ND	123	44-144			10/04/21	
Acrylonitrile	11		2.0	ug/L	10	ND	111	54-140			10/04/21	
Benzene	12		0.50	ug/L	10	ND	116	37-151			10/04/21	
Bromodichloromethane	11		0.50	ug/L	10	ND	113	80-127			10/04/21	
Bromoform	10		0.50	ug/L	10	ND	104	45-169			10/04/21	
Bromomethane	12		1.0	ug/L	10	ND	120	10-242			10/04/21	
Carbon disulfide	11		5.0	ug/L	10	ND	111	78-140			10/04/21	
Carbon Tetrachloride	12		0.50	ug/L	10	ND	116	70-140			10/04/21	
Chlorobenzene	9.6		0.50	ug/L	10	ND	96	37-160			10/04/21	
Chloroethane	12		0.50	ug/L	10	ND	119	14-230			10/04/21	
Chloroform	11		0.50	ug/L	10	ND	106	51-138			10/04/21	
Chloromethane	11		0.50	ug/L	10	ND	108	10-273			10/04/21	
cis-1,2-Dichloroethene	11		0.50	ug/L	10	ND	112	77-132			10/04/21	
cis-1,3-Dichloropropene	11		0.50	ug/L	10	ND	109	10-227			10/04/21	
Dibromochloromethane	10		0.50	ug/L	10	ND	101	53-149			10/04/21	
Dichloromethane	11		0.50	ug/L	10	ND	111	10-221			10/04/21	
Ethylbenzene	9.7		0.50	ug/L	10	ND	97	37-162			10/04/21	
p-Isopropyltoluene	8.6		2.0	ug/L	10	ND	86	50-150			10/04/21	
m,p-Xylenes	20		0.50	ug/L	20	ND	99	76-123			10/04/21	
Methyl-t-butyl ether	22		0.50	ug/L	20	ND	109	76-133			10/04/21	
o-Xylene	9.5		0.50	ug/L	10	ND	95	84-121			10/04/21	
Styrene	9.3		0.50	ug/L	10	ND	93	79-124			10/04/21	
Tetrachloroethene (PCE)	9.9		0.50	ug/L	10	ND	99	64-148			10/04/21	
Toluene	9.9		0.50	ug/L	10	ND	99	47-150			10/04/21	
trans-1,2-Dichloroethene	11		0.50	ug/L	10	ND	114	54-156			10/04/21	
trans-1,3-Dichloropropene	9.9		0.50	ug/L	10	ND	99	17-183			10/04/21	
Trichloroethene (TCE)	11		0.50	ug/L	10	ND	114	71-157			10/04/21	
Trichlorofluoromethane	12		0.50	ug/L	10	ND	117	17-181			10/04/21	
Vinyl Chloride	11		0.50	ug/L	10	ND	108	10-251			10/04/21	
Surrogate: 1,2-Dichloroethane-d4	51				50		101	70-130			10/04/21	

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 624.1 - Quality Control

Batch: AEJ0162

Prepared: 10/4/2021

Prep Method: no prep-volatiles

Analyst: AMN

Blank Spike (AEJ0162-BS1)

Surrogate: Bromofluorobenzene	50				50		101	70-130			10/04/21	
Surrogate: Toluene-d8	48				50		96	70-130			10/04/21	

Blank Spike Dup (AEJ0162-BSD1)

1,1,1-Trichloroethane	12		0.50	ug/L	10	ND	117	52-162	1	30	10/04/21	
1,1,2,2-Tetrachloroethane	9.9		0.50	ug/L	10	ND	99	46-157	2	30	10/04/21	
1,1,2-Trichloro-1,2,2-trifluoroethane	12		0.50	ug/L	10	ND	121	59-161	3	30	10/04/21	
1,1,2-Trichloroethane	10		0.50	ug/L	10	ND	104	52-150	0	30	10/04/21	
1,1-Dichloroethane	12		0.50	ug/L	10	ND	115	59-155	2	30	10/04/21	
1,1-Dichloroethene	12		0.50	ug/L	10	ND	119	10-234	3	30	10/04/21	
1,2-Dibromoethane (EDB)	10		0.50	ug/L	10	ND	101	77-125	1	30	10/04/21	
1,2-Dichlorobenzene	9.4		0.50	ug/L	10	ND	94	18-190	1	30	10/04/21	
1,2-Dichloroethane	11		0.50	ug/L	10	ND	115	49-155	1	30	10/04/21	
1,2-Dichloropropane	11		0.50	ug/L	10	ND	114	10-210	2	30	10/04/21	
1,3-Dichlorobenzene	9.5		0.50	ug/L	10	ND	95	59-156	1	30	10/04/21	
1,4-Dichlorobenzene	9.6		0.50	ug/L	10	ND	96	18-190	0	30	10/04/21	
2-Chloroethyl vinyl ether	8.2		1.0	ug/L	10	ND	82	10-305	34	30	10/04/21	BS3.0
2-Hexanone	10		2.0	ug/L	10	ND	101	62-141	7	30	10/04/21	
4-Methyl-2-pentanone	11		2.0	ug/L	10	ND	114	72-134	4	30	10/04/21	
Acetone	9.9		5.0	ug/L	10	ND	99	49-165	7	30	10/04/21	
Acrolein	87		2.0	ug/L	100	ND	87	44-144	34	30	10/04/21	BS3.0
Acrylonitrile	11		2.0	ug/L	10	ND	113	54-140	2	30	10/04/21	
Benzene	12		0.50	ug/L	10	ND	118	37-151	2	30	10/04/21	
Bromodichloromethane	12		0.50	ug/L	10	ND	116	80-127	3	30	10/04/21	
Bromoform	11		0.50	ug/L	10	ND	108	45-169	3	30	10/04/21	
Bromomethane	12		1.0	ug/L	10	ND	120	10-242	0	30	10/04/21	
Carbon disulfide	12		5.0	ug/L	10	ND	118	78-140	6	30	10/04/21	
Carbon Tetrachloride	12		0.50	ug/L	10	ND	120	70-140	4	30	10/04/21	
Chlorobenzene	10		0.50	ug/L	10	ND	101	37-160	5	30	10/04/21	
Chloroethane	12		0.50	ug/L	10	ND	119	14-230	0	30	10/04/21	
Chloroform	11		0.50	ug/L	10	ND	108	51-138	2	30	10/04/21	
Chloromethane	11		0.50	ug/L	10	ND	112	10-273	4	30	10/04/21	
cis-1,2-Dichloroethene	11		0.50	ug/L	10	ND	114	77-132	2	30	10/04/21	
cis-1,3-Dichloropropene	11		0.50	ug/L	10	ND	113	10-227	4	30	10/04/21	
Dibromochloromethane	11		0.50	ug/L	10	ND	105	53-149	4	30	10/04/21	
Dichloromethane	11		0.50	ug/L	10	ND	113	10-221	2	30	10/04/21	
Ethylbenzene	9.8		0.50	ug/L	10	ND	98	37-162	2	30	10/04/21	
p-Isopropyltoluene	9.0		2.0	ug/L	10	ND	90	50-150	4	30	10/04/21	
m,p-Xylenes	20		0.50	ug/L	20	ND	100	76-123	1	30	10/04/21	
Methyl-t-butyl ether	22		0.50	ug/L	20	ND	112	76-133	3	30	10/04/21	
o-Xylene	9.7		0.50	ug/L	10	ND	97	84-121	2	30	10/04/21	
Styrene	9.4		0.50	ug/L	10	ND	94	79-124	1	30	10/04/21	
Tetrachloroethene (PCE)	10		0.50	ug/L	10	ND	101	64-148	2	30	10/04/21	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno
Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 624.1 - Quality Control
Batch: AEJ0162

Prepared: 10/4/2021

Prep Method: no prep-volatiles

Analyst: AMN

Blank Spike Dup (AEJ0162-BSD1)

Toluene	10		0.50	ug/L	10	ND	100	47-150	1	30	10/04/21	
trans-1,2-Dichloroethene	12		0.50	ug/L	10	ND	117	54-156	3	30	10/04/21	
trans-1,3-Dichloropropene	10		0.50	ug/L	10	ND	103	17-183	4	30	10/04/21	
Trichloroethene (TCE)	11		0.50	ug/L	10	ND	113	71-157	1	30	10/04/21	
Trichlorofluoromethane	12		0.50	ug/L	10	ND	120	17-181	3	30	10/04/21	
Vinyl Chloride	12		0.50	ug/L	10	ND	118	10-251	9	30	10/04/21	
Surrogate: 1,2-Dichloroethane-d4	54				50		107	70-130			10/04/21	
Surrogate: Bromofluorobenzene	50				50		100	70-130			10/04/21	
Surrogate: Toluene-d8	48				50		96	70-130			10/04/21	

Matrix Spike (AEJ0162-MS1), Source: SEI0488-09

1,1,1-Trichloroethane	13		0.50	ug/L	10	ND	134	52-162			10/04/21	
1,1,2,2-Tetrachloroethane	9.9		0.50	ug/L	10	ND	99	46-157			10/04/21	
1,1,2-Trichloro-1,2,2-trifluoroethane	15		0.50	ug/L	10	ND	146	59-161			10/04/21	
1,1,2-Trichloroethane	11		0.50	ug/L	10	ND	106	52-150			10/04/21	
1,1-Dichloroethane	14		0.50	ug/L	10	ND	131	59-155			10/04/21	
1,1-Dichloroethene	14		0.50	ug/L	10	ND	141	10-234			10/04/21	
1,2-Dibromoethane (EDB)	9.9		0.50	ug/L	10	ND	99	77-125			10/04/21	
1,2-Dichlorobenzene	9.4		0.50	ug/L	10	ND	94	18-190			10/04/21	
1,2-Dichloroethane	13		0.50	ug/L	10	ND	128	49-155			10/04/21	
1,2-Dichloropropane	13		0.50	ug/L	10	ND	126	10-210			10/04/21	
1,3-Dichlorobenzene	10		0.50	ug/L	10	ND	100	59-156			10/04/21	
1,4-Dichlorobenzene	10		0.50	ug/L	10	ND	101	18-190			10/04/21	
2-Hexanone	9.4		2.0	ug/L	10	ND	94	62-141			10/04/21	
4-Methyl-2-pentanone	11		2.0	ug/L	10	ND	107	72-134			10/04/21	
Acetone	10		5.0	ug/L	10	ND	103	49-165			10/04/21	
Acrylonitrile	11		2.0	ug/L	10	ND	114	54-140			10/04/21	
Benzene	13		0.50	ug/L	10	ND	133	37-151			10/04/21	
Bromodichloromethane	13		0.50	ug/L	10	ND	126	80-127			10/04/21	
Bromoform	11		0.50	ug/L	10	ND	107	45-169			10/04/21	
Bromomethane	11		1.0	ug/L	10	ND	109	10-242			10/04/21	
Carbon disulfide	14		5.0	ug/L	10	ND	140	78-140			10/04/21	
Carbon Tetrachloride	13		0.50	ug/L	10	ND	135	70-140			10/04/21	
Chlorobenzene	11		0.50	ug/L	10	ND	107	37-160			10/04/21	
Chloroethane	14		0.50	ug/L	10	ND	139	14-230			10/04/21	
Chloroform	12		0.50	ug/L	10	ND	121	51-138			10/04/21	
Chloromethane	12		0.50	ug/L	10	ND	121	10-273			10/04/21	
cis-1,2-Dichloroethene	16		0.50	ug/L	10	3.4	127	77-132			10/04/21	
cis-1,3-Dichloropropene	12		0.50	ug/L	10	ND	117	10-227			10/04/21	
Dibromochloromethane	10		0.50	ug/L	10	ND	103	53-149			10/04/21	
Dichloromethane	13		0.50	ug/L	10	ND	130	10-221			10/04/21	
Ethylbenzene	10		0.50	ug/L	10	ND	103	37-162			10/04/21	
p-Isopropyltoluene	9.0		2.0	ug/L	10	ND	90	50-150			10/04/21	

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 624.1 - Quality Control

Batch: AEJ0162

Prepared: 10/4/2021

Prep Method: no prep-volatiles

Analyst: AMN

Matrix Spike (AEJ0162-MS1), Source: SEI0488-09

m,p-Xylenes	21	0.50	ug/L	20	ND	106	76-123	10/04/21
Methyl-t-butyl ether	20	0.50	ug/L	20	ND	101	76-133	10/04/21
o-Xylene	10	0.50	ug/L	10	ND	101	84-121	10/04/21
Styrene	9.9	0.50	ug/L	10	ND	99	79-124	10/04/21
Tetrachloroethene (PCE)	11	0.50	ug/L	10	0.57	107	64-148	10/04/21
Toluene	11	0.50	ug/L	10	ND	108	47-150	10/04/21
trans-1,2-Dichloroethene	14	0.50	ug/L	10	ND	138	54-156	10/04/21
trans-1,3-Dichloropropene	10	0.50	ug/L	10	ND	103	17-183	10/04/21
Trichloroethene (TCE)	14	0.50	ug/L	10	1.3	123	71-157	10/04/21
Trichlorofluoromethane	14	0.50	ug/L	10	ND	136	17-181	10/04/21
Vinyl Chloride	14	0.50	ug/L	10	ND	139	10-251	10/04/21
Surrogate: 1,2-Dichloroethane-d4	56			50		112	70-130	10/04/21
Surrogate: Bromofluorobenzene	52			50		104	70-130	10/04/21
Surrogate: Toluene-d8	47			50		93	70-130	10/04/21

EPA 625.1 - Quality Control

Batch: AEJ0099

Prepared: 10/4/2021

Prep Method: EPA 3520C

Analyst: YNV

Blank (AEJ0099-BLK1)

1,2,4-Trichlorobenzene	ND	0.60	ug/L					10/07/21
1,2-Diphenylhydrazine (as Azobenzene)	ND	20	ug/L					10/07/21
2,2'-oxybis(1-chloropropane)	(2) ND	0.60	ug/L					10/07/21
2,4,6-Trichlorophenol	ND	4.0	ug/L					10/07/21
2,4-Dichlorophenol	ND	1.0	ug/L					10/07/21
2,4-Dimethylphenol	ND	1.0	ug/L					10/07/21
2,4-Dinitrophenol	ND	2.0	ug/L					10/07/21
2,4-Dinitrotoluene	ND	0.40	ug/L					10/07/21
2,6-Dinitrotoluene	ND	0.40	ug/L					10/07/21
2-Chloronaphthalene	ND	0.60	ug/L					10/07/21
2-Chlorophenol	ND	2.0	ug/L					10/07/21
2-Nitrophenol	ND	1.0	ug/L					10/07/21
3,3-Dichlorobenzidine	ND	1.0	ug/L					10/07/21
4,6-Dinitro-2-methylphenol	ND	2.0	ug/L					10/07/21
4-Bromophenyl phenyl ether	ND	0.40	ug/L					10/07/21
4-Chloro-3-methylphenol	ND	2.0	ug/L					10/07/21
4-Chlorophenyl phenyl ether	ND	0.50	ug/L					10/07/21
4-Nitrophenol	ND	1.0	ug/L					10/07/21
Acenaphthene	ND	0.40	ug/L					10/07/21
Acenaphthylene	ND	0.60	ug/L					10/07/21
Anthracene	ND	0.60	ug/L					10/07/21
Benzidine	ND	24	ug/L					10/07/21 B2.0
Benzo(a)anthracene	ND	0.60	ug/L					10/07/21

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 625.1 - Quality Control

Batch: AEJ0099

Prepared: 10/4/2021

Prep Method: EPA 3520C

Analyst: YNV

Blank (AEJ0099-BLK1)

Benzo(a)pyrene	ND		1.0	ug/L							10/07/21	
Benzo(b)fluoranthene	ND		1.6	ug/L							10/07/21	
Benzo(g,h,i)perylene	ND		1.0	ug/L							10/07/21	
Benzo(k)fluoranthene	ND		1.6	ug/L							10/07/21	
Bis(2-chloroethoxy)methane	ND		21	ug/L							10/07/21	
Bis(2-chloroethyl) ether	ND		1.0	ug/L							10/07/21	
Bis(2-ethylhexyl) phthalate	ND		0.50	ug/L							10/07/21	
Butyl benzyl phthalate	ND		0.60	ug/L							10/07/21	
Chrysene	ND		0.60	ug/L							10/07/21	
Dibenzo(a,h)anthracene	ND		1.6	ug/L							10/07/21	
Diethyl phthalate	ND		7.6	ug/L							10/07/21	
Dimethyl phthalate	ND		6.4	ug/L							10/07/21	
Di-n-butyl phthalate	ND		1.0	ug/L							10/07/21	
Di-n-octyl phthalate	ND		0.60	ug/L							10/07/21	
Fluoranthene	ND		0.60	ug/L							10/07/21	
Fluorene	ND		0.60	ug/L							10/07/21	
Hexachlorobenzene	ND		0.60	ug/L							10/07/21	
Hexachlorobutadiene	ND		1.0	ug/L							10/07/21	
Hexachlorocyclopentadiene	ND		1.0	ug/L							10/07/21	
Hexachloroethane	ND		1.0	ug/L							10/07/21	
Indeno(1,2,3-cd)pyrene	ND		1.0	ug/L							10/07/21	
Isophorone	ND		1.0	ug/L							10/07/21	
Naphthalene	ND		0.60	ug/L							10/07/21	
Nitrobenzene	ND		1.0	ug/L							10/07/21	
N-Nitrosodimethylamine (NDMA)	ND		4.0	ug/L							10/07/21	
N-Nitrosodi-n-propylamine (NDPA)	ND		1.0	ug/L							10/07/21	
N-Nitrosodiphenylamine (as DPA)	ND		1.0	ug/L							10/07/21	
Pentachlorophenol	ND		1.0	ug/L							10/07/21	
Phenanthrene	ND		0.60	ug/L							10/07/21	
Phenol	ND		4.0	ug/L							10/07/21	
Pyrene	ND		0.60	ug/L							10/07/21	
Surrogate: 2,4,6-Tribromophenol	5.8				5.0		117	53-200			10/07/21	
Surrogate: 2-Fluorobiphenyl	4.4				5.0		89	40-127			10/07/21	
Surrogate: 2-Fluorophenol	4.3				5.0		85	42-123			10/07/21	
Surrogate: Nitrobenzene-d5	4.9				5.0		97	15-200			10/07/21	
Surrogate: Phenol-d6	4.6				5.0		93	10-200			10/07/21	
Surrogate: p-Terphenyl-d14	4.9				5.0		97	50-150			10/07/21	

Blank Spike (AEJ0099-BS1)

1,2,4-Trichlorobenzene	4.0		0.60	ug/L	5.0	ND	80	44-142			10/07/21	
1,2-Diphenylhydrazine (as Azobenzene)	4.7		20	ug/L	5.0	ND	94	30-130			10/07/21	
2,2'-oxybis(1-chloropropane)	(2) 4.5		0.60	ug/L	5.0	ND	91	36-166			10/07/21	
2,4,6-Trichlorophenol	4.6		4.0	ug/L	5.0	ND	92	37-144			10/07/21	
2,4-Dichlorophenol	4.5		1.0	ug/L	5.0	ND	89	39-135			10/07/21	

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 625.1 - Quality Control

Batch: AEJ0099

Prepared: 10/4/2021

Prep Method: EPA 3520C

Analyst: YNV

Blank Spike (AEJ0099-BS1)

2,4-Dimethylphenol	4.2		1.0	ug/L	5.0	ND	83	32-120			10/07/21	
2,4-Dinitrophenol	4.4		2.0	ug/L	5.0	ND	87	10-191			10/07/21	
2,4-Dinitrotoluene	5.3		0.40	ug/L	5.0	ND	106	39-139			10/07/21	
2,6-Dinitrotoluene	5.1		0.40	ug/L	5.0	ND	102	50-158			10/07/21	
2-Chloronaphthalene	4.5		0.60	ug/L	5.0	ND	91	60-120			10/07/21	
2-Chlorophenol	4.3		2.0	ug/L	5.0	ND	86	23-134			10/07/21	
2-Nitrophenol	4.7		1.0	ug/L	5.0	ND	93	29-182			10/07/21	
3,3-Dichlorobenzidine	26		1.0	ug/L	20	ND	131	10-200			10/07/21	
4,6-Dinitro-2-methylphenol	4.6		2.0	ug/L	5.0	ND	92	10-181			10/07/21	
4-Bromophenyl phenyl ether	4.7		0.40	ug/L	5.0	ND	94	53-127			10/07/21	
4-Chloro-3-methylphenol	4.7		2.0	ug/L	5.0	ND	94	22-147			10/07/21	
4-Chlorophenyl phenyl ether	4.6		0.50	ug/L	5.0	ND	93	25-158			10/07/21	
4-Nitrophenol	4.6		1.0	ug/L	5.0	ND	92	10-132			10/07/21	
Acenaphthene	0.085		0.40	ug/L	0.10	ND	85	47-145			10/07/21	
Acenaphthylene	0.084		0.60	ug/L	0.10	ND	84	33-145			10/07/21	
Anthracene	0.084		0.60	ug/L	0.10	ND	84	27-133			10/07/21	
Benzidine	13		24	ug/L	20	ND	63	10-200			10/07/21	
Benzo(a)anthracene	0.11		0.60	ug/L	0.10	ND	108	33-143			10/07/21	
Benzo(a)pyrene	0.088		1.0	ug/L	0.10	ND	88	17-163			10/07/21	
Benzo(b)fluoranthene	0.089		1.6	ug/L	0.10	ND	89	24-159			10/07/21	
Benzo(g,h,i)perylene	0.083		1.0	ug/L	0.10	ND	83	10-200			10/07/21	
Benzo(k)fluoranthene	0.088		1.6	ug/L	0.10	ND	88	11-162			10/07/21	
Bis(2-chloroethoxy)methane	4.7		21	ug/L	5.0	ND	93	33-184			10/07/21	
Bis(2-chloroethyl) ether	4.7		1.0	ug/L	5.0	ND	94	12-158			10/07/21	
Bis(2-ethylhexyl) phthalate	4.9		0.50	ug/L	5.0	ND	98	8-158			10/07/21	
Butyl benzyl phthalate	3.3		0.60	ug/L	5.0	ND	67	10-152			10/07/21	
Chrysene	0.081		0.60	ug/L	0.10	ND	81	17-168			10/07/21	
Dibenzo(a,h)anthracene	0.088		1.6	ug/L	0.10	ND	88	10-200			10/07/21	
Diethyl phthalate	3.3		7.6	ug/L	5.0	ND	66	10-120			10/07/21	
Dimethyl phthalate	1.9		6.4	ug/L	5.0	ND	39	10-120			10/07/21	
Di-n-butyl phthalate	4.3		1.0	ug/L	5.0	ND	85	10-120			10/07/21	
Di-n-octyl phthalate	5.1		0.60	ug/L	5.0	ND	101	10-146			10/07/21	
Fluoranthene	0.088		0.60	ug/L	0.10	ND	88	26-137			10/07/21	
Fluorene	0.084		0.60	ug/L	0.10	ND	84	59-121			10/07/21	
Hexachlorobenzene	4.5		0.60	ug/L	5.0	ND	91	10-152			10/07/21	
Hexachlorobutadiene	3.4		1.0	ug/L	5.0	ND	67	24-120			10/07/21	
Hexachlorocyclopentadiene	3.5		1.0	ug/L	5.0	ND	71	10-130			10/07/21	
Hexachloroethane	3.3		1.0	ug/L	5.0	ND	67	40-120			10/07/21	
Indeno(1,2,3-cd)pyrene	0.087		1.0	ug/L	0.10	ND	87	10-171			10/07/21	
Isophorone	4.7		1.0	ug/L	5.0	ND	93	21-196			10/07/21	
Naphthalene	0.081		0.60	ug/L	0.10	ND	81	21-133			10/07/21	
Nitrobenzene	4.6		1.0	ug/L	5.0	ND	93	35-180			10/07/21	
N-Nitrosodimethylamine (NDMA)	4.0		4.0	ug/L	5.0	ND	80	10-130			10/07/21	

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 625.1 - Quality Control

Batch: AEJ0099

Prepared: 10/4/2021

Prep Method: EPA 3520C

Analyst: YNV

Blank Spike (AEJ0099-BS1)

N-Nitrosodi-n-propylamine (NDPA)	4.8		1.0	ug/L	5.0	ND	95	10-200			10/07/21	
N-Nitrosodiphenylamine (as DPA)	5.4		1.0	ug/L	5.0	ND	109	10-130			10/07/21	
Pentachlorophenol	4.5		1.0	ug/L	5.0	ND	91	14-176			10/07/21	
Phenanthrene	0.090		0.60	ug/L	0.10	ND	90	54-120			10/07/21	
Phenol	4.3		4.0	ug/L	5.0	ND	86	10-120			10/07/21	
Pyrene	0.087		0.60	ug/L	0.10	ND	87	52-120			10/07/21	
Surrogate: 2,4,6-Tribromophenol	6.4				5.0		128	53-200			10/07/21	
Surrogate: 2-Fluorobiphenyl	4.6				5.0		92	40-127			10/07/21	
Surrogate: 2-Fluorophenol	4.2				5.0		85	42-123			10/07/21	
Surrogate: Nitrobenzene-d5	4.7				5.0		93	15-200			10/07/21	
Surrogate: Phenol-d6	4.6				5.0		92	10-200			10/07/21	
Surrogate: p-Terphenyl-d14	4.7				5.0		94	50-150			10/07/21	

Matrix Spike (AEJ0099-MS1), Source: AEI2963-01

1,2,4-Trichlorobenzene	4.1		0.60	ug/L	5.0	ND	83	44-142			10/07/21	
1,2-Diphenylhydrazine (as Azobenzene)	4.6		20	ug/L	5.0	ND	93	30-130			10/07/21	
2,2'-oxybis(1-chloropropane) ⁽²⁾	4.4		0.60	ug/L	5.0	ND	89	36-166			10/07/21	
2,4,6-Trichlorophenol	4.7		4.0	ug/L	5.0	ND	94	37-144			10/07/21	
2,4-Dichlorophenol	4.6		1.0	ug/L	5.0	ND	92	39-135			10/07/21	
2,4-Dimethylphenol	4.6		1.0	ug/L	5.0	ND	91	32-120			10/07/21	
2,4-Dinitrophenol	4.8		2.0	ug/L	5.0	ND	96	10-191			10/07/21	
2,4-Dinitrotoluene	5.3		0.40	ug/L	5.0	ND	105	39-139			10/07/21	
2,6-Dinitrotoluene	5.2		0.40	ug/L	5.0	ND	103	50-158			10/07/21	
2-Chloronaphthalene	4.5		0.60	ug/L	5.0	ND	89	60-120			10/07/21	
2-Chlorophenol	4.3		2.0	ug/L	5.0	ND	87	23-134			10/07/21	
2-Nitrophenol	4.8		1.0	ug/L	5.0	ND	96	29-182			10/07/21	
3,3-Dichlorobenzidine	16		1.0	ug/L	20	ND	79	10-200			10/07/21	
4,6-Dinitro-2-methylphenol	4.7		2.0	ug/L	5.0	ND	94	10-181			10/07/21	
4-Bromophenyl phenyl ether	4.8		0.40	ug/L	5.0	ND	96	53-127			10/07/21	
4-Chloro-3-methylphenol	4.9		2.0	ug/L	5.0	ND	98	22-147			10/07/21	
4-Chlorophenyl phenyl ether	4.7		0.50	ug/L	5.0	ND	93	25-158			10/07/21	
4-Nitrophenol	5.0		1.0	ug/L	5.0	ND	99	10-132			10/07/21	
Acenaphthene	0.092		0.40	ug/L	0.10	ND	92	47-145			10/07/21	
Acenaphthylene	0.086		0.60	ug/L	0.10	ND	85	33-145			10/07/21	
Anthracene	0.089		0.60	ug/L	0.10	ND	88	27-133			10/07/21	
Benzidine	ND		24	ug/L	20	ND	0	10-200			10/07/21	MS1.0 Low
Benzo(a)anthracene	0.10		0.60	ug/L	0.10	ND	100	33-143			10/07/21	
Benzo(a)pyrene	0.091		1.0	ug/L	0.10	ND	91	17-163			10/07/21	
Benzo(b)fluoranthene	0.091		1.6	ug/L	0.10	ND	90	24-159			10/07/21	
Benzo(g,h,i)perylene	0.072		1.0	ug/L	0.10	ND	72	10-200			10/07/21	
Benzo(k)fluoranthene	0.088		1.6	ug/L	0.10	ND	88	11-162			10/07/21	
Bis(2-chloroethoxy)methane	4.8		21	ug/L	5.0	ND	95	33-184			10/07/21	
Bis(2-chloroethyl) ether	4.7		1.0	ug/L	5.0	ND	93	12-158			10/07/21	
Bis(2-ethylhexyl) phthalate	5.0		0.50	ug/L	5.0	ND	99	8-158			10/07/21	

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 625.1 - Quality Control

Batch: AEJ0099

Prepared: 10/4/2021

Prep Method: EPA 3520C

Analyst: YNV

Matrix Spike (AEJ0099-MS1), Source: AEI2963-01

Butyl benzyl phthalate	2.9	0.60	ug/L	5.0	ND	58	10-152				10/07/21	
Chrysene	0.083	0.60	ug/L	0.10	ND	82	17-168				10/07/21	
Dibenzo(a,h)anthracene	0.080	1.6	ug/L	0.10	ND	80	10-200				10/07/21	
Diethyl phthalate	2.3	7.6	ug/L	5.0	ND	46	10-120				10/07/21	
Dimethyl phthalate	1.1	6.4	ug/L	5.0	ND	21	10-120				10/07/21	
Di-n-butyl phthalate	3.9	1.0	ug/L	5.0	ND	78	10-120				10/07/21	
Di-n-octyl phthalate	5.1	0.60	ug/L	5.0	ND	102	10-146				10/07/21	
Fluoranthene	0.093	0.60	ug/L	0.10	ND	93	26-137				10/07/21	
Fluorene	0.093	0.60	ug/L	0.10	ND	82	59-121				10/07/21	
Hexachlorobenzene	4.7	0.60	ug/L	5.0	ND	93	10-152				10/07/21	
Hexachlorobutadiene	3.7	1.0	ug/L	5.0	ND	74	24-120				10/07/21	
Hexachlorocyclopentadiene	3.4	1.0	ug/L	5.0	ND	68	10-130				10/07/21	
Hexachloroethane	3.5	1.0	ug/L	5.0	ND	69	40-120				10/07/21	
Indeno(1,2,3-cd)pyrene	0.079	1.0	ug/L	0.10	ND	79	10-171				10/07/21	
Isophorone	4.7	1.0	ug/L	5.0	ND	94	21-196				10/07/21	
Naphthalene	0.092	0.60	ug/L	0.10	ND	80	21-133				10/07/21	
Nitrobenzene	4.7	1.0	ug/L	5.0	ND	94	35-180				10/07/21	
N-Nitrosodimethylamine (NDMA)	4.0	4.0	ug/L	5.0	ND	79	10-130				10/07/21	
N-Nitrosodi-n-propylamine (NDPA)	4.9	1.0	ug/L	5.0	ND	97	10-200				10/07/21	
N-Nitrosodiphenylamine (as DPA)	5.4	1.0	ug/L	5.0	ND	108	10-130				10/07/21	
Pentachlorophenol	4.9	1.0	ug/L	5.0	ND	98	14-176				10/07/21	
Phenanthrene	0.11	0.60	ug/L	0.10	ND	89	54-120				10/07/21	
Phenol	4.4	4.0	ug/L	5.0	ND	87	10-120				10/07/21	
Pyrene	0.089	0.60	ug/L	0.10	ND	89	52-120				10/07/21	
Surrogate: 2,4,6-Tribromophenol	6.6			5.0		132	53-200				10/07/21	
Surrogate: 2-Fluorobiphenyl	4.6			5.0		92	40-127				10/07/21	
Surrogate: 2-Fluorophenol	4.1			5.0		82	42-123				10/07/21	
Surrogate: Nitrobenzene-d5	4.8			5.0		95	15-200				10/07/21	
Surrogate: Phenol-d6	4.7			5.0		93	10-200				10/07/21	
Surrogate: p-Terphenyl-d14	4.8			5.0		95	50-150				10/07/21	

Matrix Spike Dup (AEJ0099-MSD1), Source: AEI2963-01

1,2,4-Trichlorobenzene	4.2	0.60	ug/L	5.0	ND	83	44-142	1	30		10/07/21	
1,2-Diphenylhydrazine (as Azobenzene)	4.7	20	ug/L	5.0	ND	93	30-130	1	30		10/07/21	
2,2'-oxybis(1-chloropropane)	(2) 4.6	0.60	ug/L	5.0	ND	91	36-166	3	30		10/07/21	
2,4,6-Trichlorophenol	4.9	4.0	ug/L	5.0	ND	98	37-144	4	30		10/07/21	
2,4-Dichlorophenol	4.6	1.0	ug/L	5.0	ND	92	39-135	0	30		10/07/21	
2,4-Dimethylphenol	4.6	1.0	ug/L	5.0	ND	91	32-120	0	30		10/07/21	
2,4-Dinitrophenol	4.7	2.0	ug/L	5.0	ND	93	10-191	3	30		10/07/21	
2,4-Dinitrotoluene	5.3	0.40	ug/L	5.0	ND	105	39-139	0	30		10/07/21	
2,6-Dinitrotoluene	5.2	0.40	ug/L	5.0	ND	103	50-158	0	30		10/07/21	
2-Chloronaphthalene	4.6	0.60	ug/L	5.0	ND	92	60-120	3	30		10/07/21	
2-Chlorophenol	4.5	2.0	ug/L	5.0	ND	90	23-134	4	30		10/07/21	
2-Nitrophenol	4.8	1.0	ug/L	5.0	ND	96	29-182	0	30		10/07/21	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 625.1 - Quality Control

Batch: AEJ0099

Prepared: 10/4/2021

Prep Method: EPA 3520C

Analyst: YNV

Matrix Spike Dup (AEJ0099-MSD1), Source: AEI2963-01

3,3-Dichlorobenzidine	16		1.0	ug/L	20	ND	78	10-200	1	30	10/07/21	
4,6-Dinitro-2-methylphenol	4.7		2.0	ug/L	5.0	ND	93	10-181	1	30	10/07/21	
4-Bromophenyl phenyl ether	4.7		0.40	ug/L	5.0	ND	94	53-127	2	30	10/07/21	
4-Chloro-3-methylphenol	5.0		2.0	ug/L	5.0	ND	98	22-147	1	30	10/07/21	
4-Chlorophenyl phenyl ether	4.7		0.50	ug/L	5.0	ND	93	25-158	1	30	10/07/21	
4-Nitrophenol	5.0		1.0	ug/L	5.0	ND	100	10-132	1	30	10/07/21	
Acenaphthene	0.094		0.40	ug/L	0.10	ND	93	47-145	2	30	10/07/21	
Acenaphthylene	0.085		0.60	ug/L	0.10	ND	84	33-145	1	30	10/07/21	
Anthracene	0.088		0.60	ug/L	0.10	ND	87	27-133	1	30	10/07/21	
Benzidine	ND		24	ug/L	20	ND	0	10-200		30	10/07/21	MS1.0 Low
Benzo(a)anthracene	0.10		0.60	ug/L	0.10	ND	101	33-143	1	30	10/07/21	
Benzo(a)pyrene	0.093		1.0	ug/L	0.10	ND	92	17-163	2	30	10/07/21	
Benzo(b)fluoranthene	0.094		1.6	ug/L	0.10	ND	93	24-159	4	30	10/07/21	
Benzo(g,h,i)perylene	0.069		1.0	ug/L	0.10	ND	69	10-200	4	30	10/07/21	
Benzo(k)fluoranthene	0.091		1.6	ug/L	0.10	ND	90	11-162	3	30	10/07/21	
Bis(2-chloroethoxy)methane	4.8		21	ug/L	5.0	ND	94	33-184	1	30	10/07/21	
Bis(2-chloroethyl) ether	4.9		1.0	ug/L	5.0	ND	97	12-158	4	30	10/07/21	
Bis(2-ethylhexyl) phthalate	5.0		0.50	ug/L	5.0	ND	98	8-158	0	30	10/07/21	
Butyl benzyl phthalate	3.2		0.60	ug/L	5.0	ND	64	10-152	11	30	10/07/21	
Chrysene	0.083		0.60	ug/L	0.10	ND	82	17-168	0	30	10/07/21	
Dibenzo(a,h)anthracene	0.078		1.6	ug/L	0.10	ND	77	10-200	3	30	10/07/21	
Diethyl phthalate	2.7		7.6	ug/L	5.0	ND	53	10-120	13	30	10/07/21	
Dimethyl phthalate	1.3		6.4	ug/L	5.0	ND	25	10-120	18	30	10/07/21	
Di-n-butyl phthalate	4.1		1.0	ug/L	5.0	ND	80	10-120	3	30	10/07/21	
Di-n-octyl phthalate	5.2		0.60	ug/L	5.0	ND	102	10-146	1	30	10/07/21	
Fluoranthene	0.094		0.60	ug/L	0.10	ND	94	26-137	1	30	10/07/21	
Fluorene	0.095		0.60	ug/L	0.10	ND	83	59-121	2	30	10/07/21	
Hexachlorobenzene	4.7		0.60	ug/L	5.0	ND	92	10-152	0	30	10/07/21	
Hexachlorobutadiene	3.8		1.0	ug/L	5.0	ND	76	24-120	2	30	10/07/21	
Hexachlorocyclopentadiene	3.6		1.0	ug/L	5.0	ND	71	10-130	4	30	10/07/21	
Hexachloroethane	3.7		1.0	ug/L	5.0	ND	74	40-120	7	30	10/07/21	
Indeno(1,2,3-cd)pyrene	0.077		1.0	ug/L	0.10	ND	77	10-171	2	30	10/07/21	
Isophorone	4.8		1.0	ug/L	5.0	ND	95	21-196	2	30	10/07/21	
Naphthalene	0.091		0.60	ug/L	0.10	ND	79	21-133	2	30	10/07/21	
Nitrobenzene	4.8		1.0	ug/L	5.0	ND	95	35-180	2	30	10/07/21	
N-Nitrosodimethylamine (NDMA)	4.2		4.0	ug/L	5.0	ND	84	10-130	7	30	10/07/21	
N-Nitrosodi-n-propylamine (NDPA)	5.0		1.0	ug/L	5.0	ND	100	10-200	3	30	10/07/21	
N-Nitrosodiphenylamine (as DPA)	5.5		1.0	ug/L	5.0	ND	109	10-130	1	30	10/07/21	
Pentachlorophenol	4.9		1.0	ug/L	5.0	ND	98	14-176	0	30	10/07/21	
Phenanthrene	0.11		0.60	ug/L	0.10	ND	88	54-120	1	30	10/07/21	
Phenol	4.5		4.0	ug/L	5.0	ND	90	10-120	3	30	10/07/21	
Pyrene	0.090		0.60	ug/L	0.10	ND	89	52-120	1	30	10/07/21	
Surrogate: 2,4,6-Tribromophenol	6.5				5.0		129	53-200			10/07/21	

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno
Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 625.1 - Quality Control
Batch: AEJ0099
Prepared: 10/4/2021
Prep Method: EPA 3520C
Analyst: YNV
Matrix Spike Dup (AEJ0099-MSD1), Source: AEI2963-01

Surrogate: 2-Fluorobiphenyl	4.6				5.0		91	40-127			10/07/21	
Surrogate: 2-Fluorophenol	4.4				5.0		88	42-123			10/07/21	
Surrogate: Nitrobenzene-d5	4.8				5.0		95	15-200			10/07/21	
Surrogate: Phenol-d6	4.9				5.0		97	10-200			10/07/21	
Surrogate: p-Terphenyl-d14	4.8				5.0		95	50-150			10/07/21	

EPA 8260B - Quality Control
Batch: AEJ0162
Prepared: 10/4/2021
Prep Method: no prep-volatiles
Analyst: AMN
Blank (AEJ0162-BLK1)

Benzene	ND	0.20	0.50	ug/L							10/04/21	
Ethylbenzene	ND	0.29	0.50	ug/L							10/04/21	
m,p-Xylenes	ND	0.35	0.50	ug/L							10/04/21	
o-Xylene	ND	0.22	0.50	ug/L							10/04/21	
Toluene	ND	0.14	0.50	ug/L							10/04/21	
Surrogate: 1,2-Dichloroethane-d4	57				50		115	70-130			10/04/21	
Surrogate: Bromofluorobenzene	52				50		104	70-130			10/04/21	
Surrogate: Toluene-d8	43				50		85	70-130			10/04/21	

Blank Spike (AEJ0162-BS1)

Benzene	12	0.20	0.50	ug/L	10		116	80-123			10/04/21	
Ethylbenzene	9.7	0.29	0.50	ug/L	10		97	80-121			10/04/21	
m,p-Xylenes	20	0.35	0.50	ug/L	20		99	80-116			10/04/21	
o-Xylene	9.5	0.22	0.50	ug/L	10		95	80-123			10/04/21	
Toluene	9.9	0.14	0.50	ug/L	10		99	80-122			10/04/21	
Surrogate: 1,2-Dichloroethane-d4	52				50		104	70-130			10/04/21	
Surrogate: Bromofluorobenzene	49				50		98	70-130			10/04/21	
Surrogate: Toluene-d8	47				50		95	70-130			10/04/21	

Blank Spike Dup (AEJ0162-BSD1)

Benzene	12	0.20	0.50	ug/L	10		118	80-123	2	30	10/04/21	
Ethylbenzene	9.8	0.29	0.50	ug/L	10		98	80-121	2	30	10/04/21	
m,p-Xylenes	20	0.35	0.50	ug/L	20		100	80-116	1	30	10/04/21	
o-Xylene	9.7	0.22	0.50	ug/L	10		97	80-123	2	30	10/04/21	
Toluene	10	0.14	0.50	ug/L	10		100	80-122	1	30	10/04/21	
Surrogate: 1,2-Dichloroethane-d4	52				50		104	70-130			10/04/21	
Surrogate: Bromofluorobenzene	53				50		105	70-130			10/04/21	
Surrogate: Toluene-d8	48				50		96	70-130			10/04/21	

Matrix Spike (AEJ0162-MS1), Source: SEI0488-09

Benzene	13	0.20	0.50	ug/L	10	ND	133	78-136			10/04/21	
Ethylbenzene	10	0.29	0.50	ug/L	10	ND	103	80-131			10/04/21	
m,p-Xylenes	21	0.35	0.50	ug/L	20	ND	106	76-125			10/04/21	
o-Xylene	10	0.22	0.50	ug/L	10	ND	101	68-137			10/04/21	

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VEI0572 FINAL 10132021 1530

BSK Associates Laboratory Fresno
Organics Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 8260B - Quality Control
Batch: AEJ0162

Prepared: 10/4/2021

Prep Method: no prep-volatiles

Analyst: AMN

Matrix Spike (AEJ0162-MS1), Source: SEI0488-09

Toluene	11	0.14	0.50	ug/L	10	ND	108	28-194			10/04/21	
Surrogate: 1,2-Dichloroethane-d4	56				50		112	70-130			10/04/21	
Surrogate: Bromofluorobenzene	52				50		104	70-130			10/04/21	
Surrogate: Toluene-d8	47				50		93	70-130			10/04/21	

NWTPH-Gx - Quality Control
Batch: AEJ0184

Prepared: 10/5/2021

Prep Method: no prep-volatiles

Analyst: AMN

Blank (AEJ0184-BLK1)

TPH as Gasoline	ND		50	ug/L							10/05/21	
Surrogate: 1,2-Dichloroethane-d4	56				50		111	50-150			10/05/21	

Blank Spike (AEJ0184-BS1)

TPH as Gasoline	270		50	ug/L	250	ND	109	70-130			10/05/21	
Surrogate: 1,2-Dichloroethane-d4	56				50		112	50-150			10/05/21	

Blank Spike Dup (AEJ0184-BSD1)

TPH as Gasoline	250		50	ug/L	250	ND	98	70-130	10	20	10/05/21	
Surrogate: 1,2-Dichloroethane-d4	52				50		104	50-150			10/05/21	

Matrix Spike (AEJ0184-MS1), Source: VEI0572-01

TPH as Gasoline	380		50	ug/L	250	91	116	70-130			10/05/21	
Surrogate: 1,2-Dichloroethane-d4	51				50		102	50-150			10/05/21	

BSK Associates Vancouver
General Chemistry Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 300.0 - Quality Control
Batch: VEI0116

Prepared: 9/29/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Blank (VEI0116-BLK1)

Fluoride	ND	0.0072	0.20	mg/L							09/29/21	
Chloride	ND		20	mg/L							09/29/21	
Nitrite as N	ND	0.028	0.10	mg/L							09/29/21	
Nitrate as N	ND	0.0079	0.50	mg/L							09/29/21	

Blank Spike (VEI0116-BS1)

Fluoride	0.72	0.0072	0.20	mg/L	0.75		95	90-110			09/29/21	
Chloride	6.7		20	mg/L	7.0	ND	96	90-110			09/29/21	
Nitrite as N	3.1	0.028	0.10	mg/L	3.0		102	90-110			09/29/21	
Nitrate as N	2.9	0.0079	0.50	mg/L	3.0		97	90-110			09/29/21	

Matrix Spike (VEI0116-MS1), Source: VEI0609-01

Fluoride	0.47	0.0072	0.20	mg/L	0.50	0.011	91	80-120			09/29/21	
Chloride	5.7		20	mg/L	5.0	ND	92	80-120			09/29/21	
Nitrite as N	3.2	0.028	0.10	mg/L	3.0	ND	107	80-120			09/29/21	
Nitrate as N	3.3	0.0079	0.50	mg/L	3.0	0.29	99	80-120			09/29/21	

Matrix Spike Dup (VEI0116-MSD1), Source: VEI0609-01

Fluoride	0.47	0.0072	0.20	mg/L	0.50	0.011	91	80-120	0	20	09/29/21	
Chloride	5.7		20	mg/L	5.0	ND	91	80-120	1	20	09/29/21	
Nitrite as N	3.1	0.028	0.10	mg/L	3.0	ND	104	80-120	3	20	09/29/21	
Nitrate as N	3.2	0.0079	0.50	mg/L	3.0	0.29	96	80-120	3	20	09/29/21	

EPA 365.3 - Quality Control
Batch: VEJ0004

Prepared: 10/1/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Blank (VEJ0004-BLK1)

Phosphorus	ND	0.0042	0.010	mg/L							10/02/21	
Phosphorus - Dissolved (1)	ND		0.010	mg/L							10/02/21	

Blank Spike (VEJ0004-BS1)

Phosphorus	0.60	0.0042	0.010	mg/L	0.60		100	90-110			10/02/21	
Phosphorus - Dissolved (1)	0.60		0.010	mg/L	0.60	ND	100	90-110			10/02/21	

Duplicate (VEJ0004-DUP1), Source: VEI0457-01

Phosphorus	0.67	0.0042	0.010	mg/L		0.70			5		10/02/21	
Phosphorus - Dissolved (1)	0.67		0.010	mg/L		0.70			5		10/02/21	

Matrix Spike (VEJ0004-MS1), Source: VEI0457-02

Phosphorus	0.54	0.0042	0.010	mg/L	0.10	0.44	99	80-120			10/02/21	
Phosphorus - Dissolved (1)	0.54		0.010	mg/L	0.10	0.44	99	80-120			10/02/21	

Matrix Spike Dup (VEJ0004-MSD1), Source: VEI0457-02

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

VEI0572 FINAL 10132021 1530

BSK Associates Vancouver
General Chemistry Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 365.3 - Quality Control
Batch: VEJ0004

Prepared: 10/1/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Matrix Spike Dup (VEJ0004-MSD1), Source: VEI0457-02

Phosphorus	0.54	0.0042	0.010	mg/L	0.10	0.44	104	80-120	1	10	10/02/21	
Phosphorus - Dissolved (1)	0.54		0.010	mg/L	0.10	0.44	104	80-120	1	10	10/02/21	

SM 2120B - Quality Control
Batch: VEI0120

Prepared: 9/30/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Blank (VEI0120-BLK1)

Color, Apparent	ND		15	CU							09/30/21	
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Duplicate (VEI0120-DUP1), Source: VEI0572-01

Color, Apparent	ND		15	CU		ND				20	09/30/21	
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SM 2320B - Quality Control
Batch: VEJ0022

Prepared: 10/6/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Blank (VEJ0022-BLK1)

Alkalinity as CaCO3	ND		5.0	mg/L							10/06/21	
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Blank Spike (VEJ0022-BS1)

Alkalinity as CaCO3	230		5.0	mg/L	240	ND	94	80-120			10/06/21	
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Duplicate (VEJ0022-DUP1), Source: VEI0562-01

Alkalinity as CaCO3	110		5.0	mg/L		120			2	10	10/06/21	
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SM 2510B - Quality Control
Batch: VEJ0024

Prepared: 10/6/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Blank (VEJ0024-BLK1)

Conductivity @ 25C	ND		70	umhos/cm							10/06/21	
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Blank Spike (VEJ0024-BS1)

Conductivity @ 25C	280		70	umhos/cm	280	ND	99	90-110			10/06/21	
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Duplicate (VEJ0024-DUP1), Source: VEI0563-01

Conductivity @ 25C	ND		70	umhos/cm		ND				20	10/06/21	
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SM 2540C - Quality Control
Batch: VEJ0011

Prepared: 10/5/2021

Prep Method: Method Specific Preparation

Analyst: PYA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

VEI0572 FINAL 10132021 1530

BSK Associates Vancouver
General Chemistry Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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SM 2540C - Quality Control
Batch: VEJ0011

Prepared: 10/5/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Blank (VEJ0011-BLK1)

Total Dissolved Solids	ND		100	mg/L							10/10/21	
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Blank Spike (VEJ0011-BS1)

Total Dissolved Solids	260		100	mg/L	270	ND	97	70-130			10/10/21	
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Duplicate (VEJ0011-DUP1), Source: VEI0572-01

Total Dissolved Solids	1000		100	mg/L		1000			1	10	10/10/21	
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SM 2540D - Quality Control
Batch: VEI0123

Prepared: 10/1/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Blank (VEI0123-BLK1)

Total Suspended Solids	ND		2.0	mg/L							10/05/21	
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Duplicate (VEI0123-DUP1), Source: VEI0591-01

Total Suspended Solids	50		2.0	mg/L		50			0	10	10/05/21	
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Duplicate (VEI0123-DUP2), Source: VEI0616-01

Total Suspended Solids	150		2.0	mg/L		140			4	10	10/05/21	
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SM 4500-CI G - Quality Control
Batch: VEI0115

Prepared: 9/29/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Blank (VEI0115-BLK1)

Chlorine, Free Residual (1)	ND		0.10	mg/L							09/29/21	
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Blank Spike (VEI0115-BS1)

Chlorine, Free Residual (1)	0.28		0.10	mg/L	0.28	ND	100	80-120			09/29/21	
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Duplicate (VEI0115-DUP1), Source: VEI0572-01

Chlorine, Free Residual (1)	ND		0.10	mg/L		ND			20		09/29/21	
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SM 4500-H+ B - Quality Control
Batch: VEI0120

Prepared: 9/30/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Blank (VEI0120-BLK1)

Color pH (1)	5.99			pH Units							09/30/21	
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Duplicate (VEI0120-DUP1), Source: VEI0572-01

Color pH (1)	8.67			pH Units		8.65			0		09/30/21	
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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

VEI0572 FINAL 10132021 1530

BSK Associates Vancouver
General Chemistry Quality Control Report

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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SM 4500-H+ B - Quality Control
Batch: VEI0121

Prepared: 9/30/2021

Prep Method: Method Specific Preparation

Analyst: PYA

Duplicate (VEI0121-DUP1), Source: VEI0562-01

pH (1)	7.3		pH Units	7.3		0	20	09/30/21
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Duplicate (VEI0121-DUP2), Source: VEI0647-01

pH (1)	7.8		pH Units	7.8		0	20	09/30/21
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SM 5210B - Quality Control
Batch: VEI0110

Prepared: 9/29/2021

Prep Method: Method Specific Preparation

Analyst: EMB

Blank (VEI0110-BLK1)

Biochemical Oxygen Demand	ND	1.0	mg/L					10/04/21
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Blank Spike (VEI0110-BS1)

Biochemical Oxygen Demand	290	1.0	mg/L	200	ND	148	85-115	10/04/21	BS1.1	High
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Duplicate (VEI0110-DUP1), Source: VEI0591-01

Biochemical Oxygen Demand	340	100	mg/L	320		6	10	10/04/21	BS1.1
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SM 5210B - Quality Control
Batch: VEI0111

Prepared: 9/29/2021

Prep Method: Method Specific Preparation

Analyst: CMWI

Blank (VEI0111-BLK1)

Biochemical Oxygen Demand - Dissolved (1)	ND	1.0	mg/L					10/04/21
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Blank Spike (VEI0111-BS1)

Biochemical Oxygen Demand - Dissolved (1)	250	1.0	mg/L	33	ND	760	85-115	10/04/21	BS	High
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Duplicate (VEI0111-DUP1), Source: VEI0572-01

Biochemical Oxygen Demand - Dissolved (1)	ND	1.0	mg/L	ND		10	10/04/21	BS1.0
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Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Field tests are outside the scope of laboratory accreditation and there is no certification available for field testing.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.
- (2) - Formerly known as Bis(2-Chloroisopropyl) ether.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected below MRL/MDL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	PicoCuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit	U:	The analyte was not detected at or above the reported sample quantitation limit.

Please see the individual Subcontract Lab's report for applicable certifications.

BSK is not accredited under the NELAP program for the following parameters:

Salinity, Practical

Certificate of Analysis

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
Los Angeles CSD	9254479	NELAP certified	4021-018
State of Nevada	CA000792022-1	State of Oregon - NELAP	4021-018
EPA - UCMR4	CA00079	State of Washington	C997-21a

Sacramento

State of California - ELAP	2435
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San Bernardino

State of California - ELAP	2993	Los Angeles CSD	9254478
NELAP certified	4119-006	State of Oregon - NELAP	4119-006

Vancouver

NELAP certified	WA100008-014	State of Oregon - NELAP	WA100008-014
State of Washington	C824-21		



2517 E. Evergreen Blvd.
Vancouver, WA 98661
P 360.750.0055
F 360.750.0057
www.bskassociates.com

Page 1 of 3

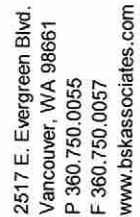
Turnaround Time Request
☐ Standard - 10 business days
☒ Rush (Surcharge may apply)
Date needed: 10/13/21

VEI0572 clark3067 09/28/2021



10

Company/Client Name: Clark PUD - River Road Generating Facility		Report Attention: Marjorie Brice Additional cc's:		Temp (C): 52 IR#: 52		Invoice To:		Phone: 360-992-3067	
Address: 5201 NW Lower River Road		City: Vancouver		State: WA		Zip: 98660		E-mail: On File	
Project #:		Project #:		Reporting Options: <input checked="" type="checkbox"/> Trace (J-flag) <input type="checkbox"/> E-mail <input type="checkbox"/> Mail (fee will apply)		DOH Source/Source ID:		County:	
Priority Pollutants		Compliance: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> WA <input type="checkbox"/> OR <input type="checkbox"/> System/PWS ID:		DOH Source/Source ID:		County:		DOH Source/Source ID:	
Sample Name (Printed/Signature): Debra Karlsson/ <i>Debra</i>		Sample Composition: <input type="checkbox"/> Single Source <input type="checkbox"/> **Blended <input type="checkbox"/> **Composite		Sample Taken: <input type="checkbox"/> Before Treatment <input type="checkbox"/> After Treatment		Group (WA only): <input type="checkbox"/> A <input type="checkbox"/> B		SO=Solid	
Water System Name:		Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water		Matrix: <input type="checkbox"/> WW		Comments:		# of cont.	
Sample Description/Location:		Date		Time		Matrix*		Comments	
Outfall 002		9/28/21		1359		WW			
Trp Blank -		9/28/21							
X #1-16.5c									
#2-18.9c									
#3-18.3c									
#4-13.2c									
#5-16.1c									
Receipt Conditions in Vancouver:		Temp:		Received Via:		UPS		WALK-IN	
Relinquished by: (Signature and Printed Name) <i>D. Karlsson/Debra</i>		Company: BSK		Date: 9/28/21		Time: 1402		FED EX	
Relinquished by: (Signature and Printed Name)		Company:		Date:		Time:		Received by: (Signature and Printed Name)	
Relinquished by: (Signature and Printed Name)		Company:		Date:		Time:		Received for Lab by: (Signature and Printed Name) <i>Debra Karlsson</i>	
Payment Received at Delivery:		Check / Card / Cash		Date:		Amount:		PIA#:	
Shipping Method: Wet		USPS		UPS		GSO		Alaskan Airlines	
Cooling Method: None		Blue		None		FED EX		Courier:	
Payment for services rendered as noted herein are due in full within 30 days from the date invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf		Custody Seal: Y(N)		Chilling Process Begun: Y(N)		Init.		Courier:	

Page 2 of 3

Turnaround Time Request Standard - 10 business days Rush (Surcharge may apply) Date needed: 10/13/21	<input type="checkbox"/> <input checked="" type="checkbox"/>
--	---

VEI0572	clark3067	09/28/2021
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10

[illegible]

Page 3 of 3

<input type="checkbox"/>	Turnaround Time Request Standard - 10 business days Rush (Surcharge may apply) Date needed: 10/13/21
--------------------------	--

VEI0572 clark3067 09/28/2021 10

[illegible]

Sample Integrity



10

BSK Bottles: Yes No Page ____ of ____

COC Info		Yes <u>No</u> NA		Were correct containers and preservatives received for the tests requested?		Yes <u>No</u> NA	
Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 8^{\circ}\text{C}$		<u>Yes</u> No NA		Were there bubbles in the VOA vials? (Volatiles Only)		<u>Yes</u> No NA	
If samples were taken today, is there evidence that chilling has begun?		<u>Yes</u> No NA		Was a sufficient amount of sample received?		<u>Yes</u> No	
Did all bottles arrive unbroken and intact?		<u>Yes</u> No		Do samples have a hold time <72 hours?		<u>Yes</u> No	
Did all bottle labels agree with COC?		<u>Yes</u> No		Was PM notified of discrepancies? PM: _____ By/Time: _____		<u>Yes</u> No <u>NA</u>	
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?		<u>Yes</u> No NA					
250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)		Checks	1	2			
Bacti Na ₂ S ₂ O ₃		—	1B7C				
None (P) White Cap		—					
Cr6 (P) Lt. Green Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ DW		Cl, pH > 8					
Cr6 (P) Pink Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ WW		pH 9.3-9.7	1A				
Cr6 (P) Black Label/Blue Cap NH ₄ OH(NH ₄) ₂ SO ₄ 7199 ***24 HOUR HOLD TIME***		pH 9.0-9.5	—				
HNO ₃ (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label		—	2B				
H ₂ SO ₄ (P) or (AG) Yellow Cap/Label		pH < 2	3B 1A				
NaOH (P) Green Cap		Cl, pH > 10	3A				
NaOH + ZnAc (P)		pH > 9					
Dissolved Oxygen 300ml (g)		—	1				
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		—	15C 1V				
HCl (AG) Lt. Blue Label O&G, Diesel		—	4C				
Ascorbic, EDTA, KH ₂ Ct (AG) Pink Label 525		—					
Na ₂ O ₃ S 250mL (AG) Neon Green Label 515		—					
Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549		—					
Na ₂ S ₂ O ₃ (AG) Blue Label 548, THM, 524		—					
Na ₂ S ₂ O ₃ (CG) Blue Label 504, 505, 547		—					
Na ₂ S ₂ O ₃ + MCAA (CG) Orange Label 531		pH < 3					
NH ₄ Cl (AG) Purple Label 552		—					
EDA (AG) Brown Label DBPs		—					
HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624		—	6V	2V			
Buffer pH 4 (CG)		—	1V				
H ₃ PO ₄ (CG) Salmon Label		—	3V				
Other:		—	2				
Asbestos 1Liter Plastic w/ Foil		—					
Low Level Hg / Metals Double Baggie		—					
Bottled Water		—					
Clear Glass 250mL / 500mL / 1 Liter		—					
Soil Tube Brass / Steel / Plastic		—					
Tedlar Bag / Plastic Bag		—					
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials	
	S P			S P			
Comments	S P			S P			

Labeled by: _____ @ _____



SAMPLE TRANSIT ORDER

VEI0572

Debra Karlsson



Receipt temp @ FAL: 3.6 Thermometer/ IR Gun ID: 53

SENDING LABORATORY:

BSK Associates Vancouver
2517 E. Evergreen Blvd.
Vancouver, WA 98661
360-750-0055 (Main)
360-750-0057 (FAX)

Project Manager: Debra Karlsson

E-mail: dkarlsson@bskassociates.com

RECEIVING LABORATORY:

BSK Associates Laboratory Fresno
1414 Stanislaus St
Fresno, CA 93706
559-497-2888 (Main)
559-485-6935 (FAX)

Turnaround (Days): Standard

QC Deliverables: I Std III IV

Client: Clark PUD - River Road Generating Facility

Sample ID	Samp Desc	Sample Date
VEI0572-01	Outfall 002	09/28/2021 13:59
Lab Matrix: Water		
Analysis:		
COD, Chemical Oxygen Demand		
EPA 624.1 - 2-chloroethyl vinyl ether		
EPA 624.1 - Acrolein and Acrylonitrile		
EPA 624.1 - Extended List		
NW, TPH-Gx		
Salinity		
Temperature		
Ammonia, CFA		
Cyanide, Total		
Cyanide, WAD		
EPA 608.3 - Caltex		
EPA 625.1, WA - Short List		
EPA 8260B - BTEX		
Oil & Grease by EPA 1664B		
TOC, Total Organic Carbon		
TKN (Low Level)		
		Tra
		trace
		trace
		trace
		Trace
		trace
		Trace
		trace
		trace 0.300 mg/L
VEI0572-02	Trip Blank	09/27/2021 00:00
Lab Matrix: Water		
Analysis:		
EPA 8260B - BTEX		
		trace

Containers Included

VEI0572-01	AA	1 250mL P / H2SO4 ✓
VEI0572-01	AB	1 250mL P / NaOH ✓
VEI0572-01	AC	1 250mL P / NaOH ✓
VEI0572-01	AD	1 1L AG / None ✓
VEI0572-01	AE	1 1L AG / None ✓
VEI0572-01	AF	1 1L AG / None ✓
VEI0572-01	AG	1 1L AG / None ✓
VEI0572-01	AH	1 1L AG / None ✓
VEI0572-01	AI	1 1L AG / None ✓
VEI0572-01	AJ	1 1L AG / None ✓
VEI0572-01	AK	1 1L AG / None ✓
VEI0572-01	AL	1 40mL VOA / None ✓
VEI0572-01	AM	1 1L AG / HCl ✓
VEI0572-01	AN	1 1L AG / HCl ✓
VEI0572-01	AO	1 1L AG / HCl ✓
VEI0572-01	AP	1 40mL VOA / HCL ✓
VEI0572-01	AQ	1 40mL VOA / HCL ✓
VEI0572-01	AR	1 40mL VOA / HCL ✓
VEI0572-01	AS	1 40mL VOA / HCL ✓
VEI0572-01	AT	1 40mL VOA / HCL ✓
VEI0572-01	AU	1 40mL VOA / HCL ✓
VEI0572-01	AV	1 40mL VOA / PH4-5 Buffer ✓
VEI0572-01	AW	1 40mL VOA / H3PO4 ✓
VEI0572-01	AX	1 40mL VOA / H3PO4 ✓
VEI0572-01	AY	1 40mL VOA / H3PO4 ✓
VEI0572-01	AZ	1 1L AG / None ✓
VEI0572-01	BA	1 250mL P / H2SO4 ✓
VEI0572-01	BB	1 250mL AG / H2SO4 ✓
VEI0572-01	BD	1 40mL VOA / HCL ✓
VEI0572-01	X	1 500mL P / HNO3 ✓
VEI0572-02	A	40mL VOA / HCL ✓
VEI0572-02	B	40mL VOA / HCL ✓

Released By

Date

Received By

Date

Released By

Date

Received By

Date

SAMPLE TRANSIT INTEGRITY

VEI0572

PM: Debra Karlsson

09/28/2021

clark3067

10

BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 8^{\circ}\text{C}$		<u>Yes</u> No NA		Were correct containers and preservatives received for the tests requested?		<u>Yes</u> No NA	
	Did all bottles arrive unbroken and intact?		<u>Yes</u> No		Bubbles Present VOAs (524.2/TCP/TTHM)?		Yes No <u>NA</u>	
	Was a sufficient amount of sample received?		<u>Yes</u> No		TB Received? (Check Method Below)		Yes No <u>NA</u>	
	Do samples have a hold time < 72 hours?		Yes <u>No</u>		Was PM notified of discrepancies?		Yes No <u>NA</u>	
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?		Yes No <u>NA</u>		PM: By/Time:			
Bottles Received "----" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)		Checks	Passed?	1	2		
	Bacti Na ₂ S ₂ O ₃		---	---				
	None (P) White Cap		---	---				
	Cr6 (P) Lt. Green Label/Blue Cap NH ₄ OH(NH ₄)SO ₄ DW		Cl, pH > 8	P F				
	Cr6 (P) Pink Label/Blue Cap NH ₄ OH(NH ₄)SO ₄ WW		pH 9.3 - 9.7	P F				
	Cr6 (P) Black Label/Blue Cap NH ₄ OH(NH ₄)SO ₄ 7199 ***24 HOUR HOLD TIME***		pH 9.0 - 9.5	P F				
	HNO ₃ (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label		---	---	IB			
	H ₂ SO ₄ (P) or (AG) Yellow Cap/Label		pH < 2	<u>(P)</u> F	2A, 1A			
	NaOH (P) Green Cap		Cl, pH > 10	<u>(P)</u> F	2A			
	NaOH + ZnAc (P)		pH > 9	P F				
	Dissolved Oxygen 300ml (g)		---	---				
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		---	---	9C			
	HCl (AG) Lt. Blue Label O&G, Diesel, TCP		---	---	3C			
	Ascorbic, EDTA, KH ₂ Ct (AG) Pink Label 525		---	---				
	Na ₂ SO ₃ 250ml (AG) Neon Green Label 515		---	---				
	Na ₂ S ₂ O ₃ 1 Liter (Brown P) 549		---	---				
	Na ₂ S ₂ O ₃ (AG) Blue Label 548, THM, 524		---	---				
	Na ₂ S ₂ O ₃ (CG) Blue Label 504, 505, 547		---	---				
	Na ₂ S ₂ O ₃ + MCAA (CG) Orange Label 531		pH < 3	P F				
	NH ₄ Cl (AG) Purple Label 552		---	---				
	EDA (AG) Brown Label DBPs		---	---				
	HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624		---	---	7C 2V TB			
	Buffer pH 4 (CG)		---	---	1V			
	H ₃ PO ₄ (CG) Salmon Label		---	---	3V			
	250mL P / Trizma 531.1		---	---				
	Other: <u>log w/nore</u>				1V			
	Asbestos 1L (P) w/Foil / LL Metals Bottle		---	---				
Bottled Water		---	---					
Clear Glass 250ml / 500ml / 1 Liter		---	---					
Solids: Brass / Steel / Plastic Bag		---	---					
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials		
	S P			S P				
Comments	✓ Indicates Blanks Received 504 _____ 524.2 _____ TCP _____ TTHM _____ 537 _____ 8260/624 _____							

Labels

Checked by: MR @ 1700 Scanned by: MR @ _____ Paged by: _____ @ _____

RUSH



SAMPLE TRANSIT ORDER

VEI0572

Debra Karlsson

BI/BSK

Receipt temp @ FAL: 310Thermometer/ IR Gun ID: 65SENDING LABORATORY:

BSK Associates Vancouver
2517 E. Evergreen Blvd.
Vancouver, WA 98661
360-750-0055 (Main)
360-750-0057 (FAX)

Project Manager: Debra Karlsson
E-mail: dkarlsson@bskassociates.com

RECEIVING LABORATORY:

BSK Associates Laboratory Fresno
1414 Stanislaus St
Fresno, CA 93706
559-497-2888 (Main)
559-485-6935 (FAX)

Turnaround (Days): Standard
QC Deliverables: I Std III IV

Client: Clark PUD - River Road Generating Facility

Sample ID	Samp Desc	Comments	Sample Date
VEI0572-01	Outfall 002	Client Matrix Waste Water	09/28/2021 13:59
Lab Matrix: Water			
<u>Analysis:</u>			
COD, Chemical Oxygen Demand		Shipped 09.29.2021	
EPA 624.1 - 2-chloroethyl vinyl ether		Shipped 09.29.2021	
EPA 624.1 - Acrolein and Acrylonitrile		Shipped 09.29.2021	
EPA 624.1 - Extended List		Shipped 09.29.2021	
NW, TPH-Gx		Shipped 09.29.2021	
Salinity		Shipped 09.29.2021	
Temperature		Shipped 09.29.2021	
Ammonia, CFA		Shipped 09.29.2021 - Trace	
Cyanide, Total		Shipped 09.29.2021 - trace	
Cyanide, WAD		Shipped 09.29.2021 - trace	
EPA 608.3 - Caltox		Shipped 09.29.2021 - trace	
EPA 625.1, WA - Short List		Shipped 09.30.2021 - Trace	
EPA 8260B - BTEX		Shipped 09.30.2021 - Trace	
Oil & Grease by EPA 1664B		Shipped 09.30.2021 - Trace	
TOC, Total Organic Carbon		Shipped 09.30.2021 - Trace	
TKN (Low Level)		Shipped 09.30.2021 - Trace 0.300 mg/L	
Hex Chrom, DW Dissolved, EPA 218.7		Trace, 1.2 ug/L RL	
VEI0572-02	Trip Blank	Client Matrix Water	09/27/2021 00:00
Lab Matrix: Water			
<u>Analysis:</u>			
EPA 8260B - BTEX		Shipped 09.29.2021 - trace	

→ Only this one, please preserve at FAL,
VAL bottles are expired

* split into HexChrom DW - DW

Containers Included

VEI0572-01	AA	250mL P / H₂SO₄
VEI0572-01	AB	250mL P / NaOH
VEI0572-01	AC	250mL P / NaOH
VEI0572-01	AD	1L AG / None
VEI0572-01	AE	1L AG / None
VEI0572-01	AF	1L AG / None
VEI0572-01	AG	1L AG / None
VEI0572-01	AH	1L AG / None
VEI0572-01	AI	1L AG / None
VEI0572-01	AJ	1L AG / None
VEI0572-01	AK	1L AG / None
VEI0572-01	AL	40mL VOA / None
VEI0572-01	AM	1L AG / HCl
VEI0572-01	AN	1L AG / HCl
VEI0572-01	AO	1L AG / HCl
VEI0572-01	AP	40mL VOA / HCL
VEI0572-01	AQ	40mL VOA / HCL
VEI0572-01	AR	40mL VOA / HCL
VEI0572-01	AS	40mL VOA / HCL
VEI0572-01	AT	40mL VOA / HCL
VEI0572-01	AU	40mL VOA / HCL
VEI0572-01	AV	40mL VOA / PH4-5 Buffer
VEI0572-01	AW	40mL VOA / H ₃ PO ₄
VEI0572-01	AX	40mL VOA / H ₃ PO ₄
VEI0572-01	AY	40mL VOA / H ₃ PO ₄
VEI0572-01	AZ	1L AG / None
VEI0572-01	BA	250mL P / H ₂ SO ₄
VEI0572-01	BB	250mL AG / H ₂ SO ₄
VEI0572-01	BD	40mL VOA / HCL
VEI0572-01	X	500mL P / HNO ₃
VEI0572-02	A	40mL VOA / HCL
VEI0572-02	B	40mL VOA / HCL

VEI0572-01 W

500mL / None (Filtered)

only this bottle

Released By

Date SEP 30 2021

Received By

Date

Released By

Date

Received By

Date

SAMPLE TRANSIT INTEGRITY

PM: Debra Karlsson

VEI0572

09/28/2021

clark3067

10



BSK Bottles: Yes No Page 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 8^{\circ}\text{C}$	<u>Yes</u> No NA	Were correct containers and preservatives received for the tests requested?	<u>Yes</u> No NA		
	Did all bottles arrive unbroken and intact?	<u>Yes</u> No	Bubbles Present VOAs (524.2/TCP/TTHM)?	Yes No <u>NA</u>		
	Was a sufficient amount of sample received?	<u>Yes</u> No	TB Received? (Check Method Below)	Yes No <u>NA</u>		
	Do samples have a hold time < 72 hours?	Yes <u>No</u>	Was PM notified of discrepancies?	Yes No <u>NA</u>		
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No <u>NA</u>	PM: By/Time:			
Bottles Received "----" means preservation/chlorine checks are either N/A or are performed in the lab	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?			
	Bacti Na2S2O3	---	---			
	None (P) White Cap	---	---			
	Cr6 (P) Lt. Green Label/Blue Cap NH4OH(NH4)SO4 DW	Cl, pH > 8	<u>P</u> F	1A		
	Cr6 (P) Pink Label/Blue Cap NH4OH(NH4)SO4 WW	pH 9.3 - 9.7	P F			
	Cr6 (P) Black Label/Blue Cap NH4OH(NH4)SO4 7199 ***24 HOUR HOLD TIME***	pH 9.0 - 9.5	P F			
	HNO3 (P) Red Cap or HCl (P) Purple Cap/Lt. Blue Label	---	---			
	H2SO4 (P) or (AG) Yellow Cap/Label	pH < 2	P F			
	NaOH (P) Green Cap	Cl, pH > 10	P F			
	NaOH + ZnAc (P)	pH > 9	P F			
	Dissolved Oxygen 300ml (g)	---	---			
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	---	---			
	HCl (AG) Lt. Blue Label O&G, Diesel, TCP	---	---			
	Ascorbic, EDTA, KH2Ct (AG) Pink Label 525	---	---			
	Na2SO3 250ml (AG) Neon Green Label 515	---	---			
	Na2S2O3 1 Liter (Brown P) 549	---	---			
	Na2S2O3 (AG) Blue Label 548, THM, 524	---	---			
	Na2S2O3 (CG) Blue Label 504, 505, 547	---	---			
	Na2S2O3 + MCAA (CG) Orange Label 531	pH < 3	P F			
	NH4Cl (AG) Purple Label 552	---	---			
	EDA (AG) Brown Label DBPs	---	---			
	HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624	---	---			
	Buffer pH 4 (CG)	---	---			
	H3PO4 (CG) Salmon Label	---	---			
	250mL P / Trizma 531.1	---	---			
	Other:					
	Asbestos 1L (P) w/Foil / LL Metals Bottle	---	---			
Bottled Water	---	---				
Clear Glass 250ml / 500ml / 1 Liter	---	---				
Solids: Brass / Steel / Plastic Bag	---	---				
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials
	<u>SP</u> <u>250p</u>	<u>CR6</u>	<u>09/10/21 14:30</u>	S P		
Comments	<div> <div>✓ Indicates Blanks Received</div> <div> 504 _____ 524.2 _____ TCP _____ TTHM _____ 537 _____ 8260/624 _____ </div> </div>					

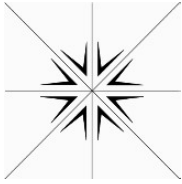
Labels

Checked by: [Signature] @ 13:30

Scanned by: [Signature] @

RUSH

Paged by: _____ @



Specialty Analytical

9011 SE Jannsen Rd
Clackamas, OR 97015
TEL: (503) 607-1331

Website: www.specialtyanalytical.com

October 07, 2021

Debra Karlsson
BSK Associates
1414 Stanislaus Street
Frenso, CA 93706
TEL: (559) 497-2888
FAX (559) 485-6935

RE: VEI0572

Order No.: 2109248

Dear Debra Karlsson:

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Marty French
Lab Director

Specialty Analytical

WO#: 2109248

Date Reported: 10/7/2021

CLIENT: BSK Associates
Project: VEI0572
Lab ID: 2109248-001
Client Sample ID VEI0572-01

Collection Date: 9/27/2021

Matrix: WASTE WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX - RBC						
Diesel	ND	0.0832		mg/L	1	10/5/2021 6:35:00 AM
Lube Oil	ND	0.312		mg/L	1	10/5/2021 6:35:00 AM
Surr: o-Terphenyl	99.1	50 - 150		%Rec	1	10/5/2021 6:35:00 AM
DISSOLVED OXYGEN						
Oxygen, Dissolved	7.99	0.200		mg/L	1	9/28/2021 4:20:00 PM
FREE CYANIDE						
Cyanide, Free	ND	0.00500		mg/L	1	10/6/2021 11:25:37 AM
PHENOLICS						
Phenolics, Total Recoverable	ND	0.0500		mg/L	1	10/7/2021 1:03:00 PM
SULFIDE						
Sulfide (As S)	1.60	1.00		mg/L	1	9/29/2021 11:27:04 AM

QC SUMMARY REPORT

WO#: 2109248
10/7/2021

Specialty Analytical

Client: BSK Associates
Project: VEI0572

TestCode: CN_FREE_W

Sample ID	ICV-R42165	SampType:	ICV	TestCode:	CN_FREE_W	Units:	mg/L	Prep Date:	RunNo:	42165			
Client ID:	ICV	Batch ID:	R42165	TestNo:	OIA-1677_FR			Analysis Date:	10/6/2021	SeqNo:	540589		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Free		0.0494		0.00500	0.05000	0	98.9	90	110				

Sample ID	MB-R42165	SampType:	MBLK	TestCode:	CN_FREE_W	Units:	mg/L	Prep Date:	RunNo:	42165			
Client ID:	PBW	Batch ID:	R42165	TestNo:	OIA-1677_FR			Analysis Date:	10/6/2021	SeqNo:	540591		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Free		ND		0.00500									

Sample ID	LCS-R42165	SampType:	LCS	TestCode:	CN_FREE_W	Units:	mg/L	Prep Date:	RunNo:	42165			
Client ID:	LCSW	Batch ID:	R42165	TestNo:	OIA-1677_FR			Analysis Date:	10/6/2021	SeqNo:	540592		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Free		0.0920		0.00500	0.1000	0	92.0	80	120				

Sample ID	2109223-004HMS	SampType:	MS	TestCode:	CN_FREE_W	Units:	mg/L	Prep Date:	RunNo:	42165			
Client ID:	BatchQC	Batch ID:	R42165	TestNo:	OIA-1677_FR			Analysis Date:	10/6/2021	SeqNo:	540594		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Free		0.0493		0.00500	0.05000	0	98.6	75	125				

QC SUMMARY REPORT

WO#: 2109248
10/7/2021

Specialty Analytical

Client: BSK Associates
Project: VEI0572

TestCode: CN_FREE_W

Sample ID	2109223-004HMS	SampType: MS	TestCode: CN_FREE_W	Units: mg/L	Prep Date:	RunNo: 42165
Client ID:	BatchQC	Batch ID: R42165	TestNo: OIA-1677_FR		Analysis Date: 10/6/2021	SeqNo: 540594
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Sample ID	2109223-004HMSD	SampType: MSD	TestCode: CN_FREE_W	Units: mg/L	Prep Date:	RunNo: 42165
Client ID:	BatchQC	Batch ID: R42165	TestNo: OIA-1677_FR		Analysis Date: 10/6/2021	SeqNo: 540595
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Cyanide, Free		0.0492	0.00500	0.05000	0	98.5 75 125 0.04931 0.136 20

Sample ID	CCV-R42165	SampType: CCV	TestCode: CN_FREE_W	Units: mg/L	Prep Date:	RunNo: 42165
Client ID:	CCV	Batch ID: R42165	TestNo: OIA-1677_FR		Analysis Date: 10/6/2021	SeqNo: 540597
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Cyanide, Free		0.0997	0.00500	0.1000	0	99.7 90 110

Sample ID	CCB-R42165	SampType: CCB	TestCode: CN_FREE_W	Units: mg/L	Prep Date:	RunNo: 42165
Client ID:	CCB	Batch ID: R42165	TestNo: OIA-1677_FR		Analysis Date: 10/6/2021	SeqNo: 540598
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Cyanide, Free		ND	0.00500			

QC SUMMARY REPORT

WO#: 2109248
10/7/2021

Specialty Analytical

Client: BSK Associates
Project: VEI0572

TestCode: NWTPHDXLL_W

Sample ID	CCV-3	SampType: CCV	TestCode: NWTPHDXLL	Units: mg/L	Prep Date:	RunNo: 42145						
Client ID:	CCV	Batch ID: 18609	TestNo: NWTPH-Dx	SW 3510C	Analysis Date: 10/5/2021	SeqNo: 540291						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-18609	SampType: MBLK	TestCode: NWTPHDXLL	Units: mg/L	Prep Date: 10/1/2021	RunNo: 42145						
Client ID:	PBW	Batch ID: 18609	TestNo: NWTPH-Dx	SW 3510C	Analysis Date: 10/5/2021	SeqNo: 540292						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	LCS-18609	SampType: LCS	TestCode: NWTPHDXLL	Units: mg/L	Prep Date: 10/1/2021	RunNo: 42145					
Client ID: LCSW	Batch ID: 18609	TestNo: NWTPH-Dx	SW 3510C	Analysis Date: 10/5/2021	SeqNo: 540293						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1.05	0.0800	1.000	0	105	60.7	121				
Lube Oil	1.05	0.300	1.000	0	105	64	126				

QC SUMMARY REPORT

WO#: 2109248
10/7/2021

Specialty Analytical

Client: BSK Associates
Project: VEI0572

TestCode: NWTPHDXLL_W

Sample ID	LCSD-18609	SampType:	LCSD	TestCode:	NWTPHDXLL	Units:	mg/L	Prep Date:	10/1/2021	RunNo:	42145		
Client ID:	LCSS02	Batch ID:	18609	TestNo:	NWTPH-Dx	SW	3510C	Analysis Date:	10/5/2021	SeqNo:	540294		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel		1.11		0.0800	1.000	0	111	60.7	121	1.050	5.19	20	
Lube Oil		1.09		0.300	1.000	0	109	64	126	1.052	3.55	20	

Sample ID	CCV-6	SampType: CCV	TestCode: NWTPHDXLL	Units: mg/L	Prep Date:	RunNo: 42145						
Client ID:	CCV	Batch ID: 18609	TestNo: NWTPH-Dx	SW 3510C	Analysis Date: 10/5/2021	SeqNo: 540579						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel		8.76	0.0800	8.000	0	110	85	115				
Lube Oil		3.73	0.300	4.000	0	93.4	85	115				

QC SUMMARY REPORT

WO#: 2109248
10/7/2021

Specialty Analytical

Client: BSK Associates
Project: VEI0572

TestCode: PHENOLICS_W

Sample ID	LCS-R42194	SampType:	LCS	TestCode:	PHENOLICS_	Units:	mg/L	Prep Date:	RunNo:	42194			
Client ID:	LCSW	Batch ID:	R42194	TestNo:	E420.1			Analysis Date:	SeqNo:	540861			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics, Total Recoverable		0.812		0.0500	0.7500	0	108	90	110				

Sample ID	MB-R42194	SampType:	MBLK	TestCode:	PHENOLICS_	Units:	mg/L	Prep Date:	RunNo:	42194			
Client ID:	PBW	Batch ID:	R42194	TestNo:	E420.1			Analysis Date:	SeqNo:	540862			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics, Total Recoverable		ND		0.0500									

Sample ID	2109248-001EMS	SampType:	MS	TestCode:	PHENOLICS_	Units:	mg/L	Prep Date:	RunNo:	42194			
Client ID:	VEI0572-01	Batch ID:	R42194	TestNo:	E420.1			Analysis Date:	SeqNo:	540865			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics, Total Recoverable		0.236		0.0500	0.2500	0	94.4	75	125				

Sample ID	2109248-001EMSD	SampType:	MSD	TestCode:	PHENOLICS_	Units:	mg/L	Prep Date:	RunNo:	42194			
Client ID:	VEI0572-01	Batch ID:	R42194	TestNo:	E420.1			Analysis Date:	SeqNo:	540866			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics, Total Recoverable		0.229		0.0500	0.2500	0	91.8	75	125	0.2361	2.87	20	

QC SUMMARY REPORT

WO#: 2109248
10/7/2021

Specialty Analytical

Client: BSK Associates
Project: VEI0572

TestCode: PHENOLICS_W

Sample ID	2109248-001EMSD	SampType: MSD	TestCode: PHENOLICS_	Units: mg/L	Prep Date:	RunNo: 42194						
Client ID:	VEI0572-01	Batch ID: R42194	TestNo: E420.1		Analysis Date: 10/7/2021	SeqNo: 540866						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	CCV-R42194	SampType: CCV	TestCode: PHENOLICS_	Units: mg/L	Prep Date:	RunNo: 42194						
Client ID:	CCV	Batch ID: R42194	TestNo: E420.1		Analysis Date: 10/7/2021	SeqNo: 540867						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Phenolics, Total Recoverable 0.798 0.0500 0.7500 0 106 90 110

QC SUMMARY REPORT

WO#: 2109248
10/7/2021

Specialty Analytical

Client: BSK Associates
Project: VEI0572

TestCode: SULFIDE_W

Sample ID	MB-R42067	SampType: MBLK	TestCode: SULFIDE_W	Units: mg/L	Prep Date:	RunNo: 42067						
Client ID:	PBW	Batch ID: R42067	TestNo: SM4500-S2 F		Analysis Date: 9/29/2021	SeqNo: 539419						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	LCS-R42067	SampType: LCS	TestCode: SULFIDE_W	Units: mg/L	Prep Date:	RunNo: 42067						
Client ID: LCSW	Batch ID: R42067		TestNo: SM4500-S2 F		Analysis Date: 9/29/2021	SeqNo: 539420						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide (As S)		106	1.00	100.0	0	106	85	115				

Sample ID	LCSD-R42067	SampType:	LCSD	TestCode:	SULFIDE_W	Units:	mg/L	Prep Date:	RunNo:	42067			
Client ID:	LCSS02	Batch ID:	R42067	TestNo:	SM4500-S2 F			Analysis Date:	9/29/2021	SeqNo:	539421		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide (As S)		102		1.00	100.0	0	102	85	115	105.6	3.47	20	



Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Name BSK_ASSOCIATES

Work Order Number 2109248

RcptNo: 1

Date and Time Receive 9/28/2021 4:02:16 PM

Received by Mandy Wehe

Completed by

Reviewed by:

Completed Date:

9/28/2021

Reviewed Date:

9/29/2021 8:50:48 AM

Carrier name Client

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present	<input type="checkbox"/>
Are matrices correctly identified on Chain of custody?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Is it clear what analyses were requested?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present	<input checked="" type="checkbox"/>
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Were correct preservatives used and noted?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA	<input type="checkbox"/>
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Were container labels complete (ID, Pres, Date)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Was an attempt made to cool the samples?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA	<input type="checkbox"/>
All samples received at a temp. of > 0° C to 6.0° C?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA	<input type="checkbox"/>
Response when temperature is outside of range:				
Preservative added to bottles:				
Sample Temp. taken and recorded upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	To 5.4 °	
Water - Were bubbles absent in VOC vials?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No Vials	<input checked="" type="checkbox"/>
Water - Was there Chlorine Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA	<input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA	<input type="checkbox"/>
Are Samples considered acceptable?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Custody Seals present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
Traffic Report or Packing Lists present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
Airbill or Sticker?	Air Bill <input type="checkbox"/>	Sticker <input type="checkbox"/>	Not Present	<input checked="" type="checkbox"/>
Airbill No:				
Sample Tags Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
Sample Tags Listed on COC?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
Tag Numbers:				
Sample Condition?	Intact <input checked="" type="checkbox"/>	Broken <input type="checkbox"/>	Leaking	<input type="checkbox"/>

Case Number:

SDG:

SAS:

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below



Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Contacted? ☐ Yes ☒ No ☐ NA Person Contacted: _____ Comments: _____
Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person: _____
Client Instructions: _____
Date Contacted: _____ Contacted By: _____
Regarding: _____
CorrectiveAction: _____



SUBCONTRACT ORDER

VEI0572

2109248

SENDING LABORATORY:

BSK Associates Vancouver
2517 E. Evergreen Blvd.
Vancouver, WA 98661
Phone: 360-750-0055
Fax: 360-750-0057
Project Manager: Debra Karlsson
E-mail: dkarlsson@bskassociates.com

RECEIVING LABORATORY:

Specialty Analytical
9011 SE Jannsen Road
Clackamas, OR 97015
Phone: (503) 607-1331
Fax: -
Turnaround (Days): Standard
QC Deliverables: I Std III IV

Due by
9/10/21
OK 9/28/21

Sample ID	Samp Desc	Comments	Sample Date
VEI0572-01	Outfall 002	Client Matrix Waste Water	09/27/2021 00:00
Lab Matrix: Water			

Analysis:

EXT-Miscellaneous 2

EXT-Phenolics

EXT-Sulfide

V-DO, Dissolved Oxygen

V-EXT-NWTPH-Dx

Free Cyanide
trace, 50 ug/L RL,
200 ug/L RL,

Containers Included

VEI0572-01	A	Other
VEI0572-01	B	250mL P / NaOH
VEI0572-01	C	1L AG / None
VEI0572-01	D	1L AG / None
VEI0572-01	E	300mL CG DO Bottle

VEI0572-01

1L AG / HCL

OK
9/28/21

5.4% ice
content

Released By

Date

Received By

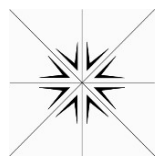
Date

Released By

Date

Received By

Date



Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

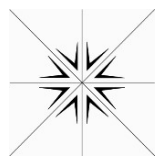
Definition Only

WO#: 2109248
Date: 10/7/2021

Definitions:

KEY TO FLAGS

- A: This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was qualified against gasoline calibration standards.
- A1: This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was qualified against diesel calibration standards.
- A2: This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was qualified against lube oil calibration standards.
- A3: The results was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- A4: The product appears to be aged or degraded.
- B: The blank exhibited a positive result greater than the reporting limit for this compound.
- CN: See Case Narrative.
- E: Result exceeds the calibration range for this compound. The result should be considered an estimate.
- F: The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- FS: Follow-up testing is suggested.
- G: Result may be biased high due to biogenic interferences. Clean up is recommended.
- H: Sample was analyzed outside recommended holding time.
- HT: ☐ At client's request, samples was analyzed outside of recommended holding time.
- HP: Sample was analyzed outside recommended holding time due to VOA having pH >2.
- J: The results for this analyte is between the MDL and the PQL and should be considered an
-



Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Definition Only

WO#: 2109248
Date: 10/7/2021

Definitions:

estimated concentration.

K: Diesel result is biased high due to amount of Oil contained in the sample.

L: Diesel result is biased high due to amount of Gasoline contained in the sample.

M: Oil result is biased high due to amount of Diesel contained in the sample.

N Gasoline result is biased high due to amount of Diesel contained in the sample.

MC: Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.

MI Result is outside control limits due to matrix interference.

NH: Sample matrix is non-homogeneous

MSA: Value determined by Method of Standard Addition.

O: Laboratory Control Standard (LCS) exceeded laboratory control limits but meets CCV criteria. Data meets EPA requirements.

Q: Detection levels elevated due to sample matrix.

R: RPD control limits were exceeded

RF Duplicate failed due to result being at or near the method-reporting limit.

RP: Matrix spike values exceed established QC limits; post digestion spike is in control.

S: Recovery is outside control limits.

SC: CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.

SL: LCS exceeded recovery control limits, but associated MS/MSD passing. Data meets EPA requirements.



CERES Analytical Laboratory, Inc.

4919 Windplay Dr, Suite 1, El Dorado Hills, CA 95762



October 10, 2021

Ceres ID: 14667

BSK Associates
2517 E. Evergreen Blvd.
Vancouver, WA 98661

The following report contains the results for the one waste water sample received on September 30, 2021. This sample was analyzed for tetra through octa chlorinated dioxins and dibenzofurans by EPA method 1613B. Routine turn-around time was provided for this work.

This work was authorized under your Subcontract Order # VEI0572.

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

<u>Ceres Sample ID:</u>	<u>Sample ID</u>	<u>Date Received</u>	<u>Collection Date</u> <u>&Time</u>
14667-001	Outfall 002	9/30/2021	9/28/2021 13:59
	VEI0572-01		

Section II: Data Summary



EPA Method 1613B

Quality Assurance Sample Method Blank Project ID: VEI0572	QC Batch #: 2486 Matrix: Waste Water Sample Size: 1.000 L	Date Received: NA Date Extracted: 10/5/2021 Date Analyzed: 10/8/2021
--	--	---

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 4.78	0.887	5.00		13C-2378-TCDD	107	25-164	
12378-PeCDD	DL= 14.0	2.56	25.0		13C-12378-PeCDD	96.3	25-181	
123478-HxCDD	DL= 12.8	3.08	25.0		13C-123478-HxCDD	79.6	32-141	
123678-HxCDD	DL= 11.9	5.29	25.0		13C-123678-HxCDD	82.0	28-130	
123789-HxCDD	DL= 12.4	13.1	25.0		13C-1234678-HpCDD	75.0	23-140	
1234678-HpCDD	DL= 9.65	5.15	25.0		13C-OCDD	50.0	17-157	
OCDD	DL= 34.0	8.50	50.0		13C-2378-TCDF	114	24-169	
2,3,7,8-TCDF	DL= 4.68	0.733	5.00		13C-12378-PeCDF	121	24-185	
12378-PeCDF	DL= 13.4	2.96	25.0		13C-23478-PeCDF	111	21-178	
23478-PeCDF	DL= 11.2	5.40	25.0		13C-123478-HxCDF	118	26-152	
123478-HxCDF	DL= 8.53	3.93	25.0		13C-123678-HxCDF	123	26-123	
123678-HxCDF	DL= 8.29	2.94	25.0		13C-234678-HxCDF	120	28-136	
234678-HxCDF	DL= 8.63	4.32	25.0		13C-123789-HxCDF	90.2	29-147	
123789-HxCDF	DL= 14.1	4.70	25.0		13C-1234678-HpCDF	97.9	28-143	
1234678-HpCDF	DL= 8.80	4.24	25.0		13C-1234789-HpCDF	79.4	26-138	
1234789-HpCDF	DL= 13.3	5.74	25.0					
OCDF	DL= 12.6	11.7	50.0					
Totals	Conc. (pg/L)	EMPC			CRS			
Total TCDD	DL= 4.78				37Cl4-2378-TCDD	125	35-197	
Total PeCDD	DL= 14.0							
Total HxCDD	DL= 12.8							
Total HpCDD	DL= 9.65							
Total TCDF	DL= 4.68							
Total PeCDF	DL= 13.4							
Total HxCDF	DL= 14.1							
Total HpCDF	DL= 13.3							

DL - Signifies Non-Detect (ND<) sample specific detection limit.

EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.

(a) - Lower control limit - Upper control limit

(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b): 0.0 pg/L

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Quality Assurance Sample Ongoing Precision and Recovery	QC Batch #: 2486 Matrix: Waste Water Sample Size: 1.000 L	Date Received: NA Date Extracted: 10/5/2021 Date Analyzed: 10/8/2021
Project ID: VEI0572		

Analyte	Conc. (ng/mL)	Limits (a)	Labeled Standards	% Rec.	Limits (a)
2,3,7,8-TCDD	9.63	6.7-15.8	13C-2378-TCDD	108	20-175
12378-PeCDD	60.7	35-71	13C-12378-PeCDD	91.2	21-227
123478-HxCDD	60.6	35-82	13C-123478-HxCDD	73.2	21-193
123678-HxCDD	54.8	38-67	13C-123678-HxCDD	90.4	25-163
123789-HxCDD	49.3	32-81	13C-1234678-HpCDD	96.4	26-166
1234678-HpCDD	64.1	35-70	13C-OCDD	63.2	13-198
OCDD	119	78-144	13C-2378-TCDF	129	22-152
2,3,7,8-TCDF	12.5	7.5-15.8	13C-12378-PeCDF	118	21-192
12378-PeCDF	54.4	40-67	13C-23478-PeCDF	115	13-328
23478-PeCDF	59.0	34-80	13C-123478-HxCDF	105	19-202
123478-HxCDF	45.9	36-67	13C-123678-HxCDF	129	21-159
123678-HxCDF	42.2	42-65	13C-234678-HxCDF	117	22-176
234678-HxCDF	41.0	35-78	13C-123789-HxCDF	102	17-205
123789-HxCDF	43.2	39-65	13C-1234678-HpCDF	100	21-158
1234678-HpCDF	44.4	41-61	13C-1234789-HpCDF	92.7	20-186
1234789-HpCDF	44.5	39-69			
OCDF	122	63-170			
			CRS		
			37Cl4-2378-TCDD	120	31-191
			(a) Limits based on method acceptance criteria.		

Analyst: JMH

Reviewed by: BS



EPA Method 1613B

Client Sample ID: Outfall 002 VEI0572-01		
Project ID: VEI0572	Ceres Sample ID: 14667-001	Date Received: 9/30/2021
Date Collected: 9/28/2021	QC Batch #: 2486	Date Extracted: 10/5/2021
Time Collected: 13:59	Matrix: Waste Water	Date Analyzed: 10/8/2021
	Sample Size: 1.014 L	

Analyte	Conc. (pg/L)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 3.19	0.887	4.93		13C-2378-TCDD	52.7	25-164	
12378-PeCDD	DL= 4.19	2.56	24.7		13C-12378-PeCDD	71.4	25-181	
123478-HxCDD	DL= 14.4	3.08	24.7		13C-123478-HxCDD	60.7	32-141	
123678-HxCDD	DL= 14.5	5.29	24.7		13C-123678-HxCDD	81.5	28-130	
123789-HxCDD	DL= 14.4	13.1	24.7		13C-1234678-HpCDD	48.9	23-140	
1234678-HpCDD	DL= 17.3	5.15	24.7		13C-OCDD	31.6	17-157	
OCDD	DL= 16.5	8.50	49.3		13C-2378-TCDF	71.2	24-169	
2,3,7,8-TCDF	DL= 4.12	0.733	4.93		13C-12378-PeCDF	77.3	24-185	
12378-PeCDF	DL= 7.03	2.96	24.7		13C-23478-PeCDF	66.7	21-178	
23478-PeCDF	DL= 6.47	5.40	24.7		13C-123478-HxCDF	83.3	26-152	
123478-HxCDF	DL= 6.79	3.93	24.7		13C-123678-HxCDF	106	26-123	
123678-HxCDF	DL= 6.26	2.94	24.7		13C-234678-HxCDF	94.9	28-136	
234678-HxCDF	DL= 7.11	4.32	24.7		13C-123789-HxCDF	80.7	29-147	
123789-HxCDF	DL= 11.3	4.70	24.7		13C-1234678-HpCDF	55.1	28-143	
1234678-HpCDF	DL= 11.2	4.24	24.7		13C-1234789-HpCDF	59.8	26-138	
1234789-HpCDF	DL= 16.0	5.74	24.7					
OCDF	DL= 27.6	11.7	49.3					
Totals	Conc. (pg/L)	EMPC			CRS			
Total TCDD	DL= 3.19				37CI4-2378-TCDD	103	35-197	
Total PeCDD	DL= 4.19							
Total HxCDD	DL= 14.5							
Total HpCDD	DL= 17.3							
Total TCDF	DL= 4.12							
Total PeCDF	DL= 7.03							
Total HxCDF	DL= 11.3							
Total HpCDF	DL= 16.0							

DL - Signifies Non-Detect (ND<) sample specific detection limit.
 EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
 (a) - Lower control limit - Upper control limit
 (b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b): 0.0 pg/L

Analyst: JMH

Reviewed by: BS

Section VI: Sample Tracking



SUBCONTRACT ORDER

VEI0572

SENDING LABORATORY:

BSK Associates Vancouver
2517 E. Evergreen Blvd.
Vancouver, WA 98661
Phone: 360-750-0055
Fax: 360-750-0057
Project Manager: Debra Karlsson
E-mail: dkarlsson@bskassociates.com

RECEIVING LABORATORY:

Ceres Analytical Laboratory, Inc
4919 Windplay Drive, Suite 1
El Dorado Hills, CA 95762
Phone : (916) 932-5011
Fax: -
Turnaround (Days): Standard
QC Deliverables: I Std III IV

Sample ID	Samp Desc	Comments	Sample Date
VEI0572-01	Outfall 002	Client Matrix Waste Water	09/28/2021 13:59
Lab Matrix: Water			
<u>Analysis:</u>			
EXT-Dioxin-WW matrix, EPA 1613 2,3,7,8-TCDD		trace, 5.0 pg/L RL	
<u>Containers Included</u>			
VEI0572-01	K	1L AG / None	

Released By

Date

Received By

Date

Released By

Date

Received By

Date

Page 1 of 1

Page 67 of 97

Page 8 of 10

Sample Receipt Check List Logged by: J (initials)

Ceres ID: <u>14667</u>	Date/Time: <u>9/30/21 10:20</u>
Client Project ID: <u>VEI 0572</u>	Received Temp: <u>6.1</u> °C Acceptable: <u>Y</u> / N
Chain of Custody Relinquished by signed?	<u>Y</u> / N
Chain of Custody Received by signed?	<u>Y</u> / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	<u>NA</u>
Unlabeled / Illegible Samples	<u>Y</u> / N
Proper Containers:	<u>Y</u> / N
Preservation Acceptable (Chemical or <u>Temperature</u>)?	<u>Y</u> / N
Drinking Water, Sodium Thiosulfate present? Residual Cl?	Y / <u>N</u> / NA Y / <u>N</u>
Aqueous sample pH: <u>7</u>	
List COC discrepancies:	
<u>J 9/30/21</u>	
List Damaged Samples:	
<u>J 9/30/21</u>	

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Monday, October 11, 2021

Debra Karlsson
BSK Associates
2517 E Evergreen Blvd
Vancouver, WA 98661

RE: A111202 - Outfall 002 - VEI0572

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A111202, which was received by the laboratory on 9/28/2021 at 4:33:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	0.3 degC
-----------	----------

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

BSK Associates

2517 E Evergreen Blvd
Vancouver, WA 98661

Project: Outfall 002

Project Number: VEI0572

Project Manager: Debra Karlsson

Report ID:

A111202 - 10 11 21 1343

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VEI0572-01	A111202-01	Water	09/28/21 13:59	09/28/21 16:33

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darrell Auvil, Client Services Manager

Page 71 of 97

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**BSK Associates**2517 E Evergreen Blvd
Vancouver, WA 98661Project: **Outfall 002**Project Number: **VEI0572**Project Manager: **Debra Karlsson****Report ID:****A111202 - 10 11 21 1343****ANALYTICAL SAMPLE RESULTS****Low Level Mercury by Cold Vapor Atomic Fluorescence (CVAf) by EPA 1631E**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
VEI0572-01 (A111202-01)				Matrix: Water		Batch: 21J0141		
Mercury	2.74	---	1.00	ng/L	1	10/07/21 16:46	EPA 1631E-LL	

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

BSK Associates

2517 E Evergreen Blvd

Vancouver, WA 98661

Project: **Outfall 002**Project Number: **VEI0572**Project Manager: **Debra Karlsson****Report ID:****A111202 - 10 11 21 1343**

QUALITY CONTROL (QC) SAMPLE RESULTS

Low Level Mercury by Cold Vapor Atomic Fluorescence (CVAF) by EPA 1631E

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0141 - 1631E Mercury (H2O)						Water						
Blank (21J0141-BLK1)			Prepared: 10/06/21 18:00 Analyzed: 10/07/21 16:26									
EPA 1631E-LL												
Mercury	ND	---	1.00	ng/L	1	---	---	---	---	---	---	
Blank (21J0141-BLK2)			Prepared: 10/06/21 18:00 Analyzed: 10/07/21 16:31									
EPA 1631E-LL												
Mercury	ND	---	1.00	ng/L	1	---	---	---	---	---	---	
Blank (21J0141-BLK3)			Prepared: 10/06/21 18:00 Analyzed: 10/07/21 16:36									
EPA 1631E-LL												
Mercury	ND	---	1.00	ng/L	1	---	---	---	---	---	---	
LCS (21J0141-BS1)			Prepared: 10/06/21 18:00 Analyzed: 10/07/21 16:41									
EPA 1631E-LL												
Mercury	8.78	---	1.00	ng/L	1	8.00	---	110	80-120%	---	---	
Matrix Spike (21J0141-MS1)			Prepared: 10/06/21 18:00 Analyzed: 10/07/21 16:51									
QC Source Sample: VEI0572-01 (A111202-01)												
EPA 1631E-LL												
Mercury	10.9	---	1.00	ng/L	1	8.00	2.74	103	75-125%	---	---	
Matrix Spike Dup (21J0141-MSD1)			Prepared: 10/06/21 18:00 Analyzed: 10/07/21 16:56									
QC Source Sample: VEI0572-01 (A111202-01)												
EPA 1631E-LL												
Mercury	10.5	---	1.00	ng/L	1	8.00	2.74	97	75-125%	4	24%	

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Vancouver, WA 98661

Project: **Outfall 002**

Project Number: **VEI0572**

Project Manager: **Debra Karlsson**

Report ID:

A111202 - 10 11 21 1343

SAMPLE PREPARATION INFORMATION

Low Level Mercury by Cold Vapor Atomic Fluoresence (CVAF) by EPA 1631E

Prep: 1631E Mercury (H2O)

Lab Number		Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 21J0141</u>								
A111202-01		Water	EPA 1631E-LL	09/28/21 13:59	10/06/21 18:00	20mL/20mL	20mL/20mL	1.00

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Darrell Auvil, Client Services Manager

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Vancouver, WA 98661

Project: Outfall 002

Project Number: VEI0572

Project Manager: Debra Karlsson

Report ID:

A111202 - 10 11 21 1343

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

There are No Qualifiers on Sample or QC Data for this report

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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Vancouver, WA 98661

Project: **Outfall 002**

Project Number: **VEI0572**

Project Manager: **Debra Karlsson**

Report ID:

A111202 - 10 11 21 1343

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.
ND Analyte NOT DETECTED at or above the detection or reporting limit.
NR Result Not Reported
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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Project: **Outfall 002**

Project Number: **VEI0572**

Project Manager: **Debra Karlsson**

Report ID:

A111202 - 10 11 21 1343

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

BSK Associates

2517 E Evergreen Blvd
Vancouver, WA 98661

Project: **Outfall 002**

Project Number: **VEI0572**

Project Manager: **Debra Karlsson**

Report ID:

A111202 - 10 11 21 1343

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -

EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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Vancouver, WA 98661

Project: **Outfall 002**

Project Number: **VEI0572**

Project Manager: **Debra Karlsson**

Report ID:

A111202 - 10 11 21 1343



SUBCONTRACT ORDER

VEI0572

A111202

SENDING LABORATORY:

BSK Associates Vancouver
2517 E. Evergreen Blvd.
Vancouver, WA 98661
Phone: 360-750-0055
Fax: 360-750-0057
Project Manager: Debra Karlsson
E-mail: dkarlsson@bskassociates.com

RECEIVING LABORATORY:

Apex Laboratories
12232 SW Garden Place
Tigard, WA 97223
Phone: (503) 718-2323
Fax: (503) 718-0333
Turnaround (Days): Standard
QC Deliverables: I Std III IV

Sample ID	Samp Desc	Comments	Sample Date
VEI0572-01	Outfall 002	Client Matrix Waste Water	09/21/2021 13:59
Lab Matrix: Water			20
Analysis:			
EXT-Miscellaneous		Mercury by 1631E, Trace	
Containers Included			
VEI0572-01	M	Other	

Released By

Date

Received By

Date

Released By

Date

Received By

Date

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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ORELAP ID: OR100062

BSK Associates

2517 E Evergreen Blvd

Vancouver, WA 98661

Project: Outfall 002Project Number: VEI0572Project Manager: Debra Karlsson

Report ID:

A111202 - 10 11 21 1343

APEX LABS COOLER RECEIPT FORM

Client: BSK Associates Element WO#: A1 I1202Project/Project #: Subcontract

Delivery Info:

Date/time received: 9/28/21 @ 16:33 By: TAGDelivered by: Apex ☐ Client ☒ ESS ☐ FedEx ☐ UPS ☐ Swift ☐ Senvoy ☐ SDS ☐ Other ☐Cooler Inspection Date/time inspected: 9/28/21 @ 16:33 By: TAGChain of Custody included? Yes ☒ No ☐ Custody seals? Yes ☐ No ☒Signed/dated by client? Yes ☒ No ☐Signed/dated by Apex? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>0.3</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐Sample Inspection: Date/time inspected: 9/29/21 @ 1546 By: MASAll samples intact? Yes ☒ No ☐ Comments:Bottle labels/COCs agree? Yes ☒ No ☐ Comments: NO sample date or time on analysis bottle. Field Blank + Trip Blank not labeled - baggedCOC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:Do VOA vials have visible headspace? Yes ☐ No ☐ NA ☒

Comments:

Water samples: pH checked: Yes ☐ No ☐ NA ☒ pH appropriate? Yes ☐ No ☐ NA ☒

Comments:

Additional information: in a set together.

Labeled by:

MAS

Witness:

[Signature]

Cooler Inspected by:

MAS

Apex Laboratories

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[Signature]

Darrell Auvil, Client Services Manager

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1620 S Walnut St - Burlington, WA 98233 - 800.755.9295 • 360.757.1400
Bellingham, WA *Microbiology (b)*
805 Orchard Dr Ste 4 - Bellingham, WA 98225 - 360.715.1212

Portland, OR *Microbiology/Chemistry (c)*
9150 SW Pioneer Ct Ste W - Wilsonville, OR 97070 - 503.682.7802
Corvallis, OR *Microbiology/Chemistry (d)*
1100 NE Circle Blvd, Ste 130 - Corvallis, OR 97330 - 541.753.4946
Bend, OR *Microbiology (e)*
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

October 13, 2021

Page 1 of 1

Debbie Karlsson
BSK Associates
2517 East Evergreen Blvd
Vancouver, WA 98661
RE: 21-37100 - VEI0572

Dear Debbie Karlsson,

Your project: VEI0572, was received on Wednesday September 29, 2021.

All samples were analyzed within the accepted holding times and were appropriately preserved and analyzed according to approved analytical protocols, unless noted in the data or QC reports. The quality control data was within laboratory acceptance limits, unless specified in the data or QC reports.

If you have questions phone us at 800 755-9295.

Respectfully

A handwritten signature in blue ink, reading "Lawrence J Henderson". The signature is fluid and cursive, with the first name "Lawrence" and last name "Henderson" clearly legible.

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Enclosures: Data Report
QC Reports
Chain of Custody



Burlington, WA Corporate Laboratory (a)
1620 S Walnut St - Burlington, WA 98233 - 800.755.9295 • 360.757.1400
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Bend, OR Microbiology (e)
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

Page 1 of 1

Data Report

Client Name: BSK Associates
2517 East Evergreen Blvd
Vancouver, WA 98661

Reference Number: **21-37100**
Project: VEI0572

Report Date: 10/13/21

Date Received: 9/29/21
Approved by: anp,bj,bsp
Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Sample Description: VEI0572-01 Outfall 002								Matrix WW	Sample Date: 9/28/21 1:59 pm			
Lab Number: 71456		Sample Comment:							Collected By:			
CAS ID#	Parameter	Result	PQL	MDL	Units	DF	Method	Lab	Analyzed	Analyst	Batch	Comment
7440-70-2	CALCIUM	123	0.5	0.035	mg/L	1.0	200.7/TR	a	10/8/21	ANP	200.7_211008B	
7439-95-4	MAGNESIUM	48.2	0.5	0.006	mg/L	1.0	200.7/TR	a	10/8/21	ANP	200.7_211008B	
7439-96-5	MANGANESE	ND	0.001	0.0008	mg/L	1.0	200.7/TR	a	10/8/21	ANP	200.7_211008B	
7440-42-8	BORON	0.078	0.05	0.010	mg/L	1.0	200.7/TR	a	10/8/21	ANP	200.7_211008B	
7439-89-6	IRON	ND	0.050	0.018	mg/L	1.0	200.7/TR	a	10/8/21	ANP	200.7_211008B	
7429-90-5	ALUMINUM	ND	0.010	0.01	mg/L	1.0	200.7/TR	a	10/8/21	ANP	200.7_211008B	
7440-31-5	TIN	ND	0.001	0.0001	mg/L	1.0	200.8/TR	a	10/12/21	BJ	200.8_211012SN2	
7440-41-7	BERYLLIUM	ND	0.0003	0.00012	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-47-3	CHROMIUM	0.0011	0.001	0.00036	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-02-0	NICKEL	0.0057	0.0005	0.0001	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-50-8	COPPER	0.0010	0.002	7.30E-05	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-66-6	ZINC	0.0022	0.0025	0.00079	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-38-2	ARSENIC	0.0088	0.0005	0.0005	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7782-49-2	SELENIUM	0.0017	0.001	0.00022	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-22-4	SILVER	ND	0.0002	0.0002	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-36-0	ANTIMONY	ND	0.001	0.0004	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-43-9	CADMIUM	ND	0.00025	9.00E-05	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-39-3	BARIUM	0.0274	0.001	0.00011	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7439-92-1	LEAD	ND	0.0005	9.10E-05	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-48-4	COBALT	0.0003 J	0.001	0.00013	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7439-98-7	MOLYBDENUM	0.0021	0.001	0.0005	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-28-0	THALLIUM	ND	0.0001	0.0001	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7440-32-6	TITANIUM	0.0241	0.001	0.0005	mg/L	1.0	200.8/TR	a	10/8/21	BJ	200.8_211008B2	
7439-97-6	MERCURY	ND	0.0002	5.10E-05	mg/L	1.0	245.1	a	10/4/21	TJB	245.1_211004	
14808-79-8	SULFATE	340	0.2	0.025	mg/L	1.0	300.0	a	9/30/21	BJ	IC05_210929A	

Notes:

ND = Not detected above the listed practical quantitation limit (PQL) or not above the Method Detection Limit (MDL), if requested.
PQL = Practical Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
D.F. = Dilution Factor

If you have any questions concerning this report contact us at the above phone number.

Form: cRslt_2.rpt



Burlington, WA Corporate Laboratory (a)
1620 S Walnut St - Burlington, WA 98233 - 800.755.9295 • 360.757.1400
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Bend, OR Microbiology (e)
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WSDOE Lab C567

DATA REPORT

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Client Name: BSK Associates
2517 East Evergreen Blvd
Vancouver, WA 98661

Reference Number: **21-37100**
Project: VEI0572

Lab Number: 71456
Field ID: VEI0572-01
Sample Description: Outfall 002
Matrix: Wastewater
Sample Date: 9/28/21
Extraction Date: 10/4/21
Extraction Method: 3510C

Report Date: 10/13/21
Date Analyzed: 10/4/21
Analyst: NML
Analytical Method: 625.1
Batch: 625_211004
Approved By: hy

Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

CAS	Compound	RESULT	Flag	UNITS	Lab QL	MDL	D.F.	Lab	COMMENT
Base/Neutral Extractables									
108-60-1	BIS(2-CHLORO-1-METHYLETHYL)ETHE R	ND		ug/L	0.4	0.06	1.00	a	
Ecology Priority Toxic Chemicals									
56-49-5	3-METHYL CHOLANTHRENE	ND		ug/L	1	0.4	1.00	a	
205-82-3	BENZO(J)FLUORANTHENE	ND		ug/L	1	0.4	1.00	a	unresolved w/ Benzo(B)Fluoranthene
189-55-9	BENZO(R,S,T)PENTAPHENE	ND		ug/L	1	0.3	1.00	a	
192-65-4	DIBENZO(A,E)PYRENE	ND		ug/L	1	0.5	1.00	a	
226-36-8	DIBENZO(A,H)ACRIDINE	ND		ug/L	1	0.4	1.00	a	
189-64-0	DIBENZO(A,H)PYRENE	ND		ug/L	1	0.3	1.00	a	
224-42-0	DIBENZO(A,J)ACRIDINE	ND		ug/L	1	0.4	1.00	a	
198-55-0	PERYLENE	ND		ug/L	1	0.6	1.00	a	

Notes:

Flags are data qualifiers. If there are data qualifiers on your report definitions can be found on an accompanying sheet.

ND - indicates the compound was not detected above the PQL or MDL.

Lab QL = Laboratory Quantitation Limit is the lowest level that can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions.

Permit QL = Quantitation Limit required by permit (listed in Appendix A) or other regulatory requirement.

D.F. - Dilution Factor.

If you have any questions concerning this report contact us at the above phone number.

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SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number: **21-37100**

Report Date: 10/13/21

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier Type	QC Comment
Calibration Check									
200.7_211008B	2 ALUMINUM	0.997	1	mg/L	200.7	100	90-110	CAL	
	2 BORON	1	1	mg/L	200.7	100	90-110	CAL	
	2 CALCIUM	10.6	11	mg/L	200.7	96	90-110	CAL	
	2 IRON	1.04	1	mg/L	200.7	104	90-110	CAL	
	2 MAGNESIUM	10.6	11	mg/L	200.7	96	90-110	CAL	
	2 MANGANESE	0.988	1	mg/L	200.7	99	90-110	CAL	
200.8_211008B2	0 ANTIMONY	0.00101	0.001	mg/L	200.8	101	80-120	CAL	
	0 ARSENIC	0.00098	0.001	mg/L	200.8	98	80-120	CAL	
	0 BARIUM	0.00102	0.001	mg/L	200.8	102	80-120	CAL	
	0 BERYLLIUM	0.00102	0.001	mg/L	200.8	102	80-120	CAL	
	0 CADMIUM	0.00098	0.001	mg/L	200.8	98	80-120	CAL	
	0 CHROMIUM	0.00103	0.001	mg/L	200.8	103	80-120	CAL	
	0 COBALT	0.00104	0.001	mg/L	200.8	104	80-120	CAL	
	0 COPPER	0.00097	0.001	mg/L	200.8	97	80-120	CAL	
	0 LEAD	0.00097	0.001	mg/L	200.8	97	80-120	CAL	
	0 MOLYBDENUM	0.00105	0.001	mg/L	200.8	105	80-120	CAL	
	0 NICKEL	0.00105	0.001	mg/L	200.8	105	80-120	CAL	
	0 SELENIUM	0.00096	0.001	mg/L	200.8	96	80-120	CAL	
	0 SILVER	0.00084	0.001	mg/L	200.8	84	80-120	CAL	
	0 THALLIUM	0.00098	0.001	mg/L	200.8	98	80-120	CAL	
	0 TITANIUM	0.00108	0.001	mg/L	200.8	108	80-120	CAL	
	0 ZINC	0.00104	0.001	mg/L	200.8	104	80-120	CAL	
200.8_211012SN	0 TIN	0.000954	0.001	mg/L	200.8	95	80-120	CAL	
245.1_211004	0 MERCURY	0.002	0.002	mg/L	245.1	100	95-105	CAL	
IC05_210929A	0 SULFATE	1.94	2	mg/L	300.0	97	90-110	CAL	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QCIndependent4.rpt



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number: **21-37100**

Report Date: 10/13/21

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier	QC Type	Comment
Laboratory Fortified Blank										
200.7_211008B	2 ALUMINUM	0.251	0.25	mg/L	200.7	100	85-115		LFB	
	2 BORON	0.242	0.25	mg/L	200.7	97	85-115		LFB	
	2 CALCIUM	6.19	6.5	mg/L	200.7	95	85-115		LFB	
	2 IRON	0.251	0.25	mg/L	200.7	100	85-115		LFB	
	2 MAGNESIUM	6.23	6.5	mg/L	200.7	96	85-115		LFB	
	2 MANGANESE	0.25	0.25	mg/L	200.7	100	85-115		LFB	
200.8_211008B2	0 ANTIMONY	0.0124	0.0125	mg/L	200.8	99	85-115		LFB	
	0 ARSENIC	0.0128	0.0125	mg/L	200.8	102	85-115		LFB	
	0 BARIUM	0.0133	0.0125	mg/L	200.8	106	85-115		LFB	
	0 BERYLLIUM	0.0135	0.0125	mg/L	200.8	108	85-115		LFB	
	0 CADMIUM	0.0135	0.0125	mg/L	200.8	108	85-115		LFB	
	0 CHROMIUM	0.261	0.25	mg/L	200.8	104	85-115		LFB	
	0 COBALT	0.0139	0.0125	mg/L	200.8	111	85-115		LFB	
	0 COPPER	0.0125	0.0125	mg/L	200.8	100	85-115		LFB	
	0 LEAD	0.0128	0.0125	mg/L	200.8	102	85-115		LFB	
	0 MOLYBDENUM	0.0127	0.0125	mg/L	200.8	102	85-115		LFB	
	0 NICKEL	0.258	0.25	mg/L	200.8	103	85-115		LFB	
	0 SELENIUM	0.0134	0.0125	mg/L	200.8	107	85-115		LFB	
	0 SILVER	0.125	0.125	mg/L	200.8	100	85-115		LFB	
	0 THALLIUM	0.0125	0.0125	mg/L	200.8	100	85-115		LFB	
	0 TITANIUM	0.0128	0.0125	mg/L	200.8	102	85-115		LFB	
	0 ZINC	0.272	0.25	mg/L	200.8	109	85-115		LFB	
200.8_211012SN	0 TIN	0.00148	0.0015	mg/L	200.8	99	85-115		LFB	
245.1_211004	0 MERCURY	0.00165	0.00167	mg/L	245.1	99	85-115		LFB	
625_211004	0 2 - FLUOROBIPHENYL (Surr)	80		%	625.1		53-140		LFB	
	0 2 - FLUOROPHENOL (Surr)	64		%	625.1		29-140		LFB	
	0 2,4,6 - TRIBROMOPHENOL (Surr)	89		%	625.1		39-140		LFB	
	0 d5-NITROBENZENE (Surr)	98		%	625.1		50-140		LFB	
	0 d5-PHENOL (Surr)	44		%	625.1		23-140		LFB	
	0 p-TERPHENYL-d14 (Surr)	85		%	625.1		60-140		LFB	
	0 BIS(2-CHLORO-1-METHYLETHYL)ETHER	10.3	10	ug/L	625.1	103	63-139		LFB	
	0 3-METHYL CHOLANTHRENE	9.6	10	ug/L	625.1	96	57-119		LFB	
	0 BENZO(J)FLUORANTHENE	20.7	20	ug/L	625.1	104	42-140		LFB	
	0 BENZO(R,S,T)PENTAPHENE	4.7	10	ug/L	625.1	47	1-172		LFB	
	0 DIBENZO(A,E)PYRENE	4.2	10	ug/L	625.1	42	1-199		LFB	
	0 DIBENZO(A,H)ACRIDINE	10.7	10	ug/L	625.1	107	60-131		LFB	
	0 DIBENZO(A,H)PYRENE	3.0	10	ug/L	625.1	30	4-160		LFB	
	0 DIBENZO(A,J)ACRIDINE	11.1	10	ug/L	625.1	111	55-136		LFB	
	0 PERYLENE	10.5	10	ug/L	625.1	105	57-125		LFB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QCIndependent4.rpt



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number: **21-37100**

Report Date: 10/13/21

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier	QC Type	Comment
Laboratory Reagent Blank										
200.7_211008B	0 ALUMINUM	ND		mg/L	200.7		0-0		LRB	
	0 BORON	ND		mg/L	200.7		0-0		LRB	
	0 CALCIUM	ND		mg/L	200.7		0-0		LRB	
	0 IRON	ND		mg/L	200.7		0-0		LRB	
	0 MAGNESIUM	ND		mg/L	200.7		0-0		LRB	
	0 MANGANESE	ND		mg/L	200.7		0-0		LRB	
200.8_211008B2	0 ANTIMONY	ND		mg/L	200.8		0-0		LRB	
	0 ARSENIC	ND		mg/L	200.8		0-0		LRB	
	0 BARIUM	ND		mg/L	200.8		0-0		LRB	
	0 BERYLLIUM	ND		mg/L	200.8		0-0		LRB	
	0 CADMIUM	ND		mg/L	200.8		0-0		LRB	
	0 CHROMIUM	ND		mg/L	200.8		0-0		LRB	
	0 COBALT	ND		mg/L	200.8		0-0		LRB	
	0 COPPER	ND		mg/L	200.8		0-0		LRB	
	0 LEAD	ND		mg/L	200.8		0-0		LRB	
	0 MOLYBDENUM	ND		mg/L	200.8		0-0		LRB	
	0 NICKEL	ND		mg/L	200.8		0-0		LRB	
	0 SELENIUM	ND		mg/L	200.8		0-0		LRB	
	0 SILVER	ND		mg/L	200.8		0-0		LRB	
	0 THALLIUM	ND		mg/L	200.8		0-0		LRB	
	0 TITANIUM	ND		mg/L	200.8		0-0		LRB	
	0 ZINC	ND		mg/L	200.8		0-0		LRB	
200.8_211012SN	0 TIN	ND		mg/L	200.8		0-0		LRB	
245.1_211004	0 MERCURY	ND		mg/L	245.1		0-0		LRB	
IC05_210929A	0 SULFATE	ND		mg/L	300.0		0-0		LRB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QCIndependent4.rpt



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number: **21-37100**

Report Date: 10/13/21

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier	QC Type	Comment
Method Blank										
200.7_211008B	0 ALUMINIUM	ND		mg/L	200.7		0-0		MB	
	0 BORON	ND		mg/L	200.7		0-0		MB	
	0 CALCIUM	ND		mg/L	200.7		0-0		MB	
	0 IRON	ND		mg/L	200.7		0-0		MB	
	0 MAGNESIUM	ND		mg/L	200.7		0-0		MB	
	0 MANGANESE	ND		mg/L	200.7		0-0		MB	
200.8_211008B2	0 ANTIMONY	ND		mg/L	200.8		0-0		MB	
	0 ARSENIC	ND		mg/L	200.8		0-0		MB	
	0 BARIUM	ND		mg/L	200.8		0-0		MB	
	0 BERYLLIUM	ND		mg/L	200.8		0-0		MB	
	0 CADMIUM	ND		mg/L	200.8		0-0		MB	
	0 CHROMIUM	0.0419		mg/L	200.8		0-0		MB	
	0 COBALT	0.0004		mg/L	200.8		0-0		MB	
	0 COPPER	0.0012		mg/L	200.8		0-0		MB	
	0 LEAD	ND		mg/L	200.8		0-0		MB	
	0 MOLYBDENUM	0.0008		mg/L	200.8		0-0		MB	
	0 NICKEL	0.0157		mg/L	200.8		0-0		MB	
	0 SELENIUM	ND		mg/L	200.8		0-0		MB	
	0 SILVER	ND		mg/L	200.8		0-0		MB	
	0 THALLIUM	ND		mg/L	200.8		0-0		MB	
	0 TITANIUM	ND		mg/L	200.8		0-0		MB	
	0 ZINC	0.0166		mg/L	200.8		0-0		MB	
200.8_211012SN	0 TIN	ND		mg/L	200.8		0-0		MB	
625_211004	0 2 - FLUOROBIPHENYL (Surr)	68		%	625.1		53-140		MB	
	0 2 - FLUOROPHENOL (Surr)	47		%	625.1		29-140		MB	
	0 2,4,6 - TRIBROMOPHENOL (Surr)	72		%	625.1		39-140		MB	
	0 d5-NITROBENZENE (Surr)	76		%	625.1		50-140		MB	
	0 d5-PHENOL (Surr)	34		%	625.1		23-140		MB	
	0 p-TERPHENYL-d14 (Surr)	80		%	625.1		60-140		MB	
	0 BIS(2-CHLORO-1-METHYLETHYL)ETHER	ND		ug/L	625.1		0-0		MB	
	0 3-METHYL CHOLANTHRENE	ND		ug/L	625.1		0-0		MB	
	0 BENZO(J)FLUORANTHENE	ND		ug/L	625.1		0-0		MB	
	0 BENZO(R,S,T)PENTAPHENE	ND		ug/L	625.1		0-0		MB	
	0 DIBENZO(A,E)PYRENE	ND		ug/L	625.1		0-0		MB	
	0 DIBENZO(A,H)ACRIDINE	ND		ug/L	625.1		0-0		MB	
	0 DIBENZO(A,H)PYRENE	ND		ug/L	625.1		0-0		MB	
	0 DIBENZO(A,J)ACRIDINE	ND		ug/L	625.1		0-0		MB	
	0 PERYLENE	ND		ug/L	625.1		0-0		MB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QCIndependent4.rpt



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Reference Number: **21-37100**

Report Date: 10/13/21

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier Type	QC Comment
Quality Control Sample									
200.7_211008B	0 ALUMINUM	1.96	2	mg/L	200.7	98	95-105	QCS	
	0 BORON	1.96	2	mg/L	200.7	98	95-105	QCS	
	0 CALCIUM	1.93	2	mg/L	200.7	97	95-105	QCS	
	0 IRON	2.09	2	mg/L	200.7	105	95-105	QCS	
	0 MAGNESIUM	1.91	2	mg/L	200.7	96	95-105	QCS	
	0 MANGANESE	1.96	2	mg/L	200.7	98	95-105	QCS	
	1 CALCIUM	19.3	20	mg/L	200.7	97	95-105	QCS	
	1 MAGNESIUM	20.9	20	mg/L	200.7	105	95-105	QCS	
200.8_211008B2	0 ANTIMONY	0.0387	0.04	mg/L	200.8	97	90-110	QCS	
	0 ARSENIC	0.04	0.04	mg/L	200.8	100	90-110	QCS	
	0 BARIUM	0.04	0.04	mg/L	200.8	100	90-110	QCS	
	0 BERYLLIUM	0.0421	0.04	mg/L	200.8	105	90-110	QCS	
	0 CADMIUM	0.0412	0.04	mg/L	200.8	103	90-110	QCS	
	0 CHROMIUM	0.0415	0.04	mg/L	200.8	104	90-110	QCS	
	0 COBALT	0.0418	0.04	mg/L	200.8	105	90-110	QCS	
	0 COPPER	0.0418	0.04	mg/L	200.8	105	90-110	QCS	
	0 LEAD	0.0405	0.04	mg/L	200.8	101	90-110	QCS	
	0 MOLYBDENUM	0.0413	0.04	mg/L	200.8	103	90-110	QCS	
	0 NICKEL	0.0427	0.04	mg/L	200.8	107	90-110	QCS	
	0 SELENIUM	0.0404	0.04	mg/L	200.8	101	90-110	QCS	
	0 SILVER	0.0202	0.02	mg/L	200.8	101	90-110	QCS	
	0 THALLIUM	0.0398	0.04	mg/L	200.8	100	90-110	QCS	
	0 TITANIUM	0.0407	0.04	mg/L	200.8	102	90-110	QCS	
	0 ZINC	0.0423	0.04	mg/L	200.8	106	90-110	QCS	
200.8_211012SN	0 TIN	0.00136	0.0015	mg/L	200.8	91	90-110	QCS	
245.1_211004	0 MERCURY	0.00246	0.00248	mg/L	245.1	99	90-110	QCS	
IC05_210929A	0 SULFATE	31.5	30	mg/L	300.0	105	90-110	QCS	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QCIndependent4.rpt



SAMPLE DEPENDENT QUALITY CONTROL REPORT

Duplicate, Matrix Spike/Matrix Spike Duplicate and Confirmation Result Report

Duplicate

Batch	Sample	Analyte	Result	Duplicate Result	Units	%RPD	Limits	QC Qualifier	Type	Comments
200.7_211008B										
7429-90-5	71061	ALUMINUM	0.025	0.025	mg/L	0.0	0-20		DUP	
7440-42-8	71061	BORON	0.013	0.013	mg/L	0.0	0-20		DUP	
7439-89-6	71061	IRON	nd	ND	mg/L	NA	0-20		DUP	
7439-96-5	71061	MANGANESE	nd	ND	mg/L	NA	0-20		DUP	
7429-90-5	71456	ALUMINUM	ND	ND	mg/L	NA	0-20		DUP	
7440-42-8	71456	BORON	0.078	0.080	mg/L	2.5	0-20		DUP	
7440-70-2	71456	CALCIUM	123	124	mg/L	0.8	0-20		DUP	
7439-89-6	71456	IRON	ND	ND	mg/L	NA	0-20		DUP	
7439-95-4	71456	MAGNESIUM	48.2	48.4	mg/L	0.4	0-20		DUP	
7439-96-5	71456	MANGANESE	ND	ND	mg/L	NA	0-20		DUP	
200.8_211008B2										
7440-36-0	71061	ANTIMONY	0.0005	0.0003	mg/L	50.0	0-20	IEV	DUP	
7440-38-2	71061	ARSENIC	ND	ND	mg/L	NA	0-20		DUP	
7440-39-3	71061	BARIUM	0.0067	0.0068	mg/L	1.5	0-20		DUP	
7440-41-7	71061	BERYLLIUM	ND	ND	mg/L	NA	0-20		DUP	
7440-43-9	71061	CADMIUM	ND	ND	mg/L	NA	0-20		DUP	
7440-47-3	71061	CHROMIUM	0.0004	0.0004	mg/L	0.0	0-20		DUP	
7440-48-4	71061	COBALT	ND	ND	mg/L	NA	0-20		DUP	
7440-50-8	71061	COPPER	0.0120	0.0116	mg/L	3.4	0-20		DUP	
7439-92-1	71061	LEAD	0.00025	0.00023	mg/L	8.3	0-20		DUP	
7439-98-7	71061	MOLYBDENUM	ND	ND	mg/L	NA	0-20		DUP	
7440-02-0	71061	NICKEL	ND	ND	mg/L	NA	0-20		DUP	
7782-49-2	71061	SELENIUM	ND	ND	mg/L	NA	0-20		DUP	
7440-22-4	71061	SILVER	ND	ND	mg/L	NA	0-20		DUP	
7440-28-0	71061	THALLIUM	ND	ND	mg/L	NA	0-20		DUP	
7440-66-6	71061	ZINC	0.0034	0.0031	mg/L	9.2	0-20		DUP	
7440-36-0	71456	ANTIMONY	ND	ND	mg/L	NA	0-20		DUP	

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of an analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QC Dependent.rpt

Duplicate

Batch	Sample	Analyte	Result	Duplicate Result	Units	%RPD	Limits	QC Qualifier	Type	Comments
7440-38-2	71456	ARSENIC	0.0088	0.0085	mg/L	3.5	0-20		DUP	
7440-39-3	71456	BARIUM	0.0274	0.0268	mg/L	2.2	0-20		DUP	
7440-41-7	71456	BERYLLIUM	ND	ND	mg/L	NA	0-20		DUP	
7440-43-9	71456	CADMIUM	ND	ND	mg/L	NA	0-20		DUP	
7440-47-3	71456	CHROMIUM	0.0011	0.0011	mg/L	0.0	0-20		DUP	
7440-48-4	71456	COBALT	0.0003	0.00035	mg/L	15.4	0-20		DUP	
7440-50-8	71456	COPPER	0.0010	0.0007	mg/L	35.3	0-20	IEV	DUP	
7439-92-1	71456	LEAD	ND	ND	mg/L	NA	0-20		DUP	
7439-98-7	71456	MOLYBDENUM	0.0021	0.0020	mg/L	4.9	0-20		DUP	
7440-02-0	71456	NICKEL	0.0057	0.0052	mg/L	9.2	0-20		DUP	
7782-49-2	71456	SELENIUM	0.0017	0.0013	mg/L	26.7	0-20	IM	DUP	
7440-22-4	71456	SILVER	ND	ND	mg/L	NA	0-20		DUP	
7440-28-0	71456	THALLIUM	ND	ND	mg/L	NA	0-20		DUP	
7440-32-6	71456	TITANIUM	0.0241	0.0231	mg/L	4.2	0-20		DUP	
7440-66-6	71456	ZINC	0.0022	0.0028	mg/L	24.0	0-20	IM	DUP	
7440-50-8	71799	COPPER	23.3	23.7	ug/L	1.7	0-20		DUP	
7439-92-1	71799	LEAD	0.8	0.8	ug/L	0.0	0-20		DUP	
7440-66-6	71799	ZINC	8.3	8.2	ug/L	1.2	0-20		DUP	
200.8_211012SN2										
7440-31-5	71456	TIN	ND	ND	mg/L	NA	0-20		DUP	
IC05_210929A										
14808-79-8	71453	SULFATE	ND	ND	mg/L	NA	0-20		DUP	

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of an analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QC Dependent.rpt

Laboratory Fortified Matrix (MS)

Batch/CAS	Sample	Analyte	Result	Spike Result	Duplicate	Conc	Units	Percent Recovery		Limits*	%RPD	Limits*	QC		
					Spike Result			MS	MSD				Qualifier	Type	Comments
200.7_211008B															
7429-90-5	71061	ALUMINUM	0.025	0.272		0.25	mg/L	99		70-130	NA	0-20		LFM	
7440-42-8	71061	BORON	0.013	0.257		0.25	mg/L	98		70-130	NA	0-20		LFM	
7439-89-6	71061	IRON	0.003	0.255		0.25	mg/L	101		70-130	NA	0-20		LFM	
7439-96-5	71061	MANGANESE	ND	0.249		0.25	mg/L	100		70-130	NA	0-20		LFM	
7429-90-5	71456	ALUMINUM	ND	0.268		0.25	mg/L	107		70-130	NA	0-20		LFM	
7440-42-8	71456	BORON	0.078	0.342		0.25	mg/L	106		70-130	NA	0-20		LFM	
7440-70-2	71456	CALCIUM	123	129		6.50	mg/L	92		70-130	NA	0-20		LFM	
7439-89-6	71456	IRON	ND	0.272		0.25	mg/L	109		70-130	NA	0-20		LFM	
7439-95-4	71456	MAGNESIUM	48.2	53.7		6.50	mg/L	85		70-130	NA	0-20		LFM	
7439-96-5	71456	MANGANESE	ND	0.250		0.25	mg/L	100		70-130	NA	0-20		LFM	
200.8_211008B2															
7440-36-0	71061	ANTIMONY	0.0005	0.0127		0.0125	mg/L	98		70-130	NA	0-20		LFM	
7440-38-2	71061	ARSENIC	ND	0.0129		0.0125	mg/L	103		70-130	NA	0-20		LFM	
7440-39-3	71061	BARIUM	0.0067	0.0196		0.0125	mg/L	103		70-130	NA	0-20		LFM	
7440-41-7	71061	BERYLLIUM	ND	0.0138		0.0125	mg/L	110		70-130	NA	0-20		LFM	
7440-43-9	71061	CADMIUM	ND	0.0134		0.0125	mg/L	107		70-130	NA	0-20		LFM	
7440-47-3	71061	CHROMIUM	0.0004	0.0138		0.0125	mg/L	107		70-130	NA	0-20		LFM	
7440-48-4	71061	COBALT	ND	0.0137		0.0125	mg/L	110		70-130	NA	0-20		LFM	
7440-50-8	71061	COPPER	0.0120	0.0250		0.0125	mg/L	104		70-130	NA	0-20		LFM	
7439-92-1	71061	LEAD	0.00025	0.0130		0.0125	mg/L	102		70-130	NA	0-20		LFM	
7439-98-7	71061	MOLYBDENUM	ND	0.0129		0.0125	mg/L	103		70-130	NA	0-20		LFM	
7440-02-0	71061	NICKEL	ND	0.0155		0.0125	mg/L	124		70-130	NA	0-20		LFM	
7782-49-2	71061	SELENIUM	ND	0.0132		0.0125	mg/L	106		70-130	NA	0-20		LFM	
7440-22-4	71061	SILVER	ND	0.0046		0.00625	mg/L	74		70-130	NA	0-20		LFM	
7440-28-0	71061	THALLIUM	ND	0.0123		0.0125	mg/L	98		70-130	NA	0-20		LFM	
7440-66-6	71061	ZINC	0.0034	0.0198		0.0125	mg/L	131		70-130	NA	0-20	INH	LFM	
7440-36-0	71456	ANTIMONY	ND	0.0117		0.0125	mg/L	94		70-130	NA	0-20		LFM	
7440-38-2	71456	ARSENIC	0.0088	0.0219		0.0125	mg/L	105		70-130	NA	0-20		LFM	
7440-39-3	71456	BARIUM	0.0274	0.0399		0.0125	mg/L	100		70-130	NA	0-20		LFM	
7440-41-7	71456	BERYLLIUM	ND	0.0137		0.0125	mg/L	110		70-130	NA	0-20		LFM	
7440-43-9	71456	CADMIUM	ND	0.0133		0.0125	mg/L	106		70-130	NA	0-20		LFM	
7440-47-3	71456	CHROMIUM	0.0011	0.0129		0.0125	mg/L	94		70-130	NA	0-20		LFM	
7440-48-4	71456	COBALT	0.0003	0.0122		0.0125	mg/L	95		70-130	NA	0-20		LFM	
7440-50-8	71456	COPPER	0.0010	0.0131		0.0125	mg/L	97		70-130	NA	0-20		LFM	
7439-92-1	71456	LEAD	ND	0.0122		0.0125	mg/L	98		70-130	NA	0-20		LFM	

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of an analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QC Dependent.rpt

Laboratory Fortified Matrix (MS)

Batch/CAS	Sample	Analyte	Result	Spike Result	Duplicate Spike Result	Conc	Units	Percent Recovery		Limits*	%RPD	Limits*	QC		
								MS	MSD				Qualifier	Type	Comments
7439-98-7	71456	MOLYBDENUM	0.0021	0.0154		0.0125	mg/L	106		70-130	NA	0-20		LFM	
7440-02-0	71456	NICKEL	0.0057	0.0170		0.0125	mg/L	90		70-130	NA	0-20		LFM	
7782-49-2	71456	SELENIUM	0.0017	0.0148		0.0125	mg/L	105		70-130	NA	0-20		LFM	
7440-22-4	71456	SILVER	ND	0.001		0.00625	mg/L	16		70-130	NA	0-20	IM	LFM	
7440-28-0	71456	THALLIUM	ND	0.0122		0.0125	mg/L	98		70-130	NA	0-20		LFM	
7440-32-6	71456	TITANIUM	0.0241	0.0349		0.0125	mg/L	86		70-130	NA	0-20		LFM	
7440-66-6	71456	ZINC	0.0022	0.0153		0.0125	mg/L	105		70-130	NA	0-20		LFM	
7440-50-8	71799	COPPER	23.3	37.6		12.5	ug/L	114		70-130	NA	0-20		LFM	
7439-92-1	71799	LEAD	0.8	13.8		12.5	ug/L	104		70-130	NA	0-20		LFM	
7440-66-6	71799	ZINC	8.3	22.7		12.5	ug/L	115		70-130	NA	0-20		LFM	
200.8_211012SN2															
7440-31-5	71456	TIN	ND	0.0052		0.0075	mg/L	69		70-130	NA	0-0	IM	LFM	
245.1_211004															
7439-97-6	70160	MERCURY	ND	0.00166	0.00151	0.00167	mg/L	99	90	70-130	9.5	0-20		LFM	
7439-97-6	70471	MERCURY	ND	0.00165	0.00163	0.00167	mg/L	99	98	70-130	1.2	0-20		LFM	
625_211004															
321-60-8	71456	2 - FLUOROBIPHENYL (Surr)	87	77	86		%		NA	53-140	NA	0-20		LFM	
367-12-4	71456	2 - FLUOROPHENOL (Surr)	62	52	63		%		NA	29-140	NA	0-20		LFM	
118-79-6	71456	2,4,6 - TRIBROMOPHENOL (Surr)	91	86	91		%		NA	39-140	NA	0-20		LFM	
98-95-3	71456	d5-NITROBENZENE (Surr)	94	78	94		%		NA	50-140	NA	0-20		LFM	
108-95-2	71456	d5-PHENOL (Surr)	39	37	45		%		NA	23-140	NA	0-20		LFM	
1718-51-0	71456	p-TERPHENYL-d14 (Surr)	86	82	83		%		NA	60-140	NA	0-20		LFM	
56-49-5	71456	3-METHYL CHOLANTHRENE	ND	9.2	9.5	10	ug/L	92	95	5-125	3.2	0-40		LFM	
205-82-3	71456	BENZO(J)FLUORANTHENE	ND	19.7	19.9	20	ug/L	99	100	21-123	1.0	0-40		LFM	
189-55-9	71456	BENZO(R,S,T)PENTAPHENE	ND	6.1	6.4	10	ug/L	61	64	1-156	4.8	0-40		LFM	
108-60-1	71456	BIS(2-CHLORO-1-METHYLETHYL)ETHENE	8.3	10.1	10	ug/L		83	101	36-166	19.6	0-76		LFM	
192-65-4	71456	DIBENZO(A,E)PYRENE	ND	5.3	5.5	10	ug/L	53	55	1-154	3.7	0-40		LFM	
226-36-8	71456	DIBENZO(A,H)ACRIDINE	ND	10.3	10.7	10	ug/L	103	107	25-133	3.8	0-40		LFM	
189-64-0	71456	DIBENZO(A,H)PYRENE	ND	3.9	4.0	10	ug/L	39	40	4-160	2.5	0-40		LFM	
224-42-0	71456	DIBENZO(A,J)ACRIDINE	ND	10.6	10.9	10	ug/L	106	109	31-139	2.8	0-40		LFM	
198-55-0	71456	PERYLENE	ND	9.9	10.1	10	ug/L	99	101	18-114	2.0	0-40		LFM	
IC05_210929A															
14808-79-8	71453	SULFATE	ND	1.96		2.00	mg/L	98		90-110	NA	0-20		LFM	

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NA = Indicates %RPD could not be calculated

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FORM: QC Dependent.rpt



QUALITY CONTROL REPORT SURROGATE REPORT

Reference Number: 21-37100
Report Date: 10/13/21

Lab No	Analyte	Result	Qualifier	Units	Method	Limit
625_211004	2,4,6 - TRIBROMOPHENOL (Surr)	91		%	625.1	
71456	2 - FLUOROBIPHENYL (Surr)	87		%		
	2 - FLUOROPHENOL (Surr)	62		%		
	d5-PHENOL (Surr)	39		%		
	p-TERPHENYL-d14 (Surr)	86		%		
	d5-NITROBENZENE (Surr)	94		%		

***Notation:**

A surrogate is a pure compound added to a sample in the laboratory just before processing so that the overall efficiency of a meA surrogate is a pure compound added to a sample in the sample. The Acceptance Limits (or Control Limits) approximate a 99% confidence interval around the mean recovery.

Qualifier Definitions

Reference Number: 21-37100

Report Date: 10/13/21

Qualifier	Definition
IEV	Acceptance criteria do not apply to estimated values
IM	Matrix induced bias assumed
INH	The sample was non-homogeneous
IS	The ratio of the spike concentration to sample background was too low to meet performance criteria
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable. Matrix bias indicated.

Note: Some qualifier definitions found on this page may pertain to results or QC data which are not printed with this report.



SUBCONTRACT ORDER

VEI0572

21-37100
71456SENDING LABORATORY:

BSK Associates Vancouver
2517 E. Evergreen Blvd.
Vancouver, WA 98661
Phone: 360-750-0055
Fax: 360-750-0057
Project Manager: Debra Karlsson
E-mail: dkarlsson@bskassociates.com

RECEIVING LABORATORY:

Edge Analytical
1620 South Walnut Street
Burlington, WA 98233
Phone : (800) 755-9295
Fax: -
Turnaround (Days): Standard
QC Deliverables: I Std III IV

Sample ID	Samp Desc	Comments	Sample Date
VEI0572-01	Outfall 002	Client Matrix Waste Water	09/28/2021 13:59
Lab Matrix: Water			
<u>Analysis:</u>			
Aluminum, WW ICPMS		trace, 10 ug/L RL	
Antimony, WW ICPMS		trace	
Arsenic, WW ICPMS		trace	
Barium, WW ICPMS		trace, 2.0 ug/L RL	
Beryllium, WW ICPMS		trace	
Boron, WW ICPMS		trace, 10 ug/L RL	
Cadmium, WW ICPMS		trace	
Calcium, WW ICP		trace, 200 ug/L as CaCO ₃	
Chromium, WW ICPMS		trace	
Cobalt, WW ICPMS		trace, 0.25 ug/L RL	
Copper, WW ICPMS		trace	
EXT-EPA 625		Trace, List attached	
Hex Chrom, EPA 218.6		trace	
Hexavalent Chromium, Dissolved		trace, 1.2 ug/L RL	
Iron, WW ICP		trace, 50 ug/L RL	
Lead, WW ICPMS		trace	
Magnesium, WW ICP		trace, 200 ug/L as CaCO ₃	
Manganese, WW ICPMS		trace, 50 ug/L RL	
Mercury, WW CVAA		trace	
Molybdenum, WW ICPMS		trace, 0.5 ug/L RL	
Nickel, WW ICPMS		trace	
Selenium, WW ICPMS		trace	
Silver, WW ICPMS		trace	
Sulfate		trace, 200 ug/L RL,	
Thallium, WW ICPMS		trace	
Tin, WW ICP		trace 1.5 ppb	
Titanium, WW ICP		trace 2.5 ppb	
Zinc, WW ICPMS		trace	

Containers Included

VEI0572-01	F	500mL P / HNO ₃
VEI0572-01	G	1L AG / None
VEI0572-01	H	1L AG / None
VEI0572-01	I	1L AG / None
VEI0572-01	J	250mL P / NH ₄ OH(NH ₄) ₂ SO ₄

UPS 9/29/21 0945

KD 1.3



SUBCONTRACT ORDER

VEI0572

Released By

Date

Received By

Date

Released By

Date

Received By

Date

Sandy Skrabut

From: Debra Karlsson <dkarlsson@bskassociates.com>
Sent: Thursday, September 30, 2021 10:13 AM
To: Sandy Skrabut; lab
Cc: Amaury J. Ferrer
Subject: BSK WO VEI0572

21-37100
71456

Good morning,

The Analytes for the EPA625 that we are needing for WO VEI0572 are below.

+ SURVS - V-NB-ds
ds-phen
246-TBPHN
2-FBPHNXL
P-TBPHNXL-diy
2-FPHNOL

25-BXA	Benzo(j)fluoranthene	625	1	ug/L	\$420.00	14 Days	3 one Liter BI
25-410	Bis(2-chloroisopropyl) eth	625	0.4	ug/L			
29	Dibenzo (a,h)acridine	625PBT	1	ug/L			
25-419	Dibenzo (a,j)acridine	625PBT	1	ug/L			
25-418	Dibenzo (a,e)pyrene	625PBT	1	ug/L			
25-422	Dibenzo (a,h)pyrene	625PBT	1	ug/L			
25-423	3-Methyl Cholanthrene	625PBT	1	ug/L			
25-420	Perylene	625PBT	1	ug/L			
25-421							

My last day with BSK Associates is Thursday, September 30, 2021. Moving forward please contact Elizabeth Bunker, Vancouver Lab Director, @ ebunker@bskassociate.com or Amaury Ferrer, Project Coordinator, @ aferrer@bskassociates.com.

Thank you,

Debbie Karlsson

Project Manager
BSK Associates
2517 E. Evergreen Blvd, Vancouver, WA 98661
P: 360.750.0055 X401
C: 360.844.0681



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