



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Glycols Analysis in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A31BH1-1	17A10BH1-2	17A10BH1-3	17A2BH1-1	17A2BH1-2	17A2BH1-3	17A2BH1-4	17A2BH2-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-23	2017-09-23	2017-09-23	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24
Parameter	Unit	G / S	RDL	8774122	8774137	8774139	8774140	8774141	8774142	8774143	8774144
Propylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Monoethylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Diethylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Triethylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Tetraethylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Surrogate	Unit	Acceptable Limits									
Heptanol	%	50-150		94	95	102	100	91	100	100	97
		SAMPLE DESCRIPTION:		17A2BH2-2	17A2BH3-1	17A2BH3-2	17A2BHDUP1	17A3BH1-2	17A3BH1-3	17A3BH2-2	17A3BH2-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-25	2017-09-25
Parameter	Unit	G / S	RDL	8774145	8774146	8774147	8774148	8774152	8774153	8774155	8774156
Propylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Monoethylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Diethylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Triethylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Tetraethylene Glycol	mg/kg		10	<10	<10	<10	<10	<10	<10	<10	<10
Surrogate	Unit	Acceptable Limits									
Heptanol	%	50-150		98	97	99	106	101	99	99	100

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AGAT Laboratories

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AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Glycols Analysis in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A3BH4-1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2017-09-25
Parameter	Unit	G / S	RDL	8774158
Propylene Glycol	mg/kg		10	<10
Monoethylene Glycol	mg/kg		10	<10
Diethylene Glycol	mg/kg		10	<10
Triethylene Glycol	mg/kg		10	<10
Tetraethylene Glycol	mg/kg		10	<10
Surrogate	Unit	Acceptable Limits		
Heptanol	%	50-150		96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8774122-8774158 Analysis by GC/FID.

Results are based on the dry weight of the sample.

Analysis performed at AGAT Calgary.

Certified By:



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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Phenolic Compounds in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A2BH1-3	17A2BH2-1	17A2BH3-2	17A2BHDUP1	17A3BH1-2	17A3BH1-3	17A3BH2-2	17A3BH2-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-25	2017-09-25
Parameter	Unit	G / S	RDL	8774142	8774144	8774147	8774148	8774152	8774153	8774155	8774156
Phenol	mg/kg		0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	0.065	<0.0012
4-Nitrophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
m&p-Cresol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.641	0.027
o-Cresol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Chlorophenol	mg/kg		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
2,4-Dinitrophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Nitrophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,4-Dimethylphenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,6-Dichlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Chloro-3-methylphenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,4-Dichlorophenol	mg/kg		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
4,6-Dinitro-2-methylphenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,3,6-Trichlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,3,4-Trichlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,4,6-Trichlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,4,5-Trichlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,3,5-Trichlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3,4,5-Trichlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,3,4,6-Tetrachlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,3,5,6-Tetrachlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,3,4,5-Tetrachlorophenol	mg/kg		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Pentachlorophenol	mg/kg		0.005	0.113	<0.005	<0.005	0.132	<0.005	<0.005	<0.005	<0.005
Surrogate	Unit	Acceptable Limits									
2-Fluorophenol	%		50-150	103	105	101	104	103	103	106	101
2,4,6-Tribromophenol	%		50-150	80	80	87	50	85	83	80	81

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SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Phenolic Compounds in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A3BH2-4	17A3BH4-1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2017-09-25	2017-09-25
Parameter	Unit	G / S	RDL	8774157	8774158
Phenol	mg/kg		0.0012	<0.0012	0.257
4-Nitrophenol	mg/kg		0.005	<0.005	<0.005
m&p-Cresol	mg/kg		0.005	2.08	<0.005
o-Cresol	mg/kg		0.005	<0.005	<0.005
2-Chlorophenol	mg/kg		0.002	<0.002	<0.002
2,4-Dinitrophenol	mg/kg		0.005	<0.005	<0.005
2-Nitrophenol	mg/kg		0.005	<0.005	<0.005
2,4-Dimethylphenol	mg/kg		0.005	<0.005	<0.005
2,6-Dichlorophenol	mg/kg		0.005	<0.005	<0.005
4-Chloro-3-methylphenol	mg/kg		0.005	<0.005	<0.005
2,4-Dichlorophenol	mg/kg		0.002	<0.002	<0.002
4,6-Dinitro-2-methylphenol	mg/kg		0.005	<0.005	<0.005
2,3,6-Trichlorophenol	mg/kg		0.005	<0.005	<0.005
2,3,4-Trichlorophenol	mg/kg		0.005	<0.005	<0.005
2,4,6-Trichlorophenol	mg/kg		0.005	<0.005	<0.005
2,4,5-Trichlorophenol	mg/kg		0.005	<0.005	<0.005
2,3,5-Trichlorophenol	mg/kg		0.005	<0.005	<0.005
3,4,5-Trichlorophenol	mg/kg		0.005	<0.005	<0.005
2,3,4,6-Tetrachlorophenol	mg/kg		0.005	<0.005	<0.005
2,3,5,6-Tetrachlorophenol	mg/kg		0.005	<0.005	<0.005
2,3,4,5-Tetrachlorophenol	mg/kg		0.005	<0.005	<0.005
Pentachlorophenol	mg/kg		0.005	<0.005	<0.005
Surrogate	Unit	Acceptable Limits			
2-Fluorophenol	%	50-150		99	107
2,4,6-Tribromophenol	%	50-150		94	81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8774142-8774158 Results relate only to the items tested.
Analysis performed at AGAT Calgary.

Certified By:



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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A31BH1-1	17A31BH1-2		17A31BH1-3	17A16BH2-2	17A16BH2-6	17A10BH1-1	17A10BH1-2
		SAMPLE TYPE:		Soil	Soil		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-23	2017-09-23		2017-09-23	2017-09-23	2017-09-23	2017-09-23	2017-09-23
Parameter	Unit	G / S	RDL	8774122	8774124	RDL	8774125	8774128	8774133	8774135	8774137
Naphthalene	µg/g		0.05	<0.05	<0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Methylnaphthalene	µg/g		0.05	<0.05	<0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1-Methylnaphthalene	µg/g		0.05	<0.05	<0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthylene	µg/g		0.05	<0.05	<0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthene	µg/g		0.05	<0.05	<0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	µg/g		0.2	<0.2	<0.2	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/g		0.2	<0.2	<0.2	0.02	<0.02	<0.02	<0.02	<0.02	0.04
Anthracene	µg/g		0.04	<0.04	<0.04	0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoranthene	µg/g		0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	µg/g		0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.03
Benzo(a)anthracene	µg/g		0.03	<0.03	<0.03	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Chrysene	µg/g		0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(j)fluoranthene	µg/g		0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.03	<0.03	<0.03	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dibenzo(a,h)anthracene	µg/g		0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
IACR CCME (Soil)	µg/g		0.6	<0.6	<0.6	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
B[a]P TPE (Soil)	µg/g		0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits									
Naphthalene - d8	%	50-130		76	79		80	76	79	73	78
2-Fluorobiphenyl	%	50-130		80	85		84	82	85	78	76
P-Terphenyl - d14	%	60-130		75	88		82	78	83	89	95

Certified By:



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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A10BH1-3	17A2BH1-1	17A2BH1-2	17A2BH1-3	17A2BH1-4	17A2BH2-1	17A2BH2-2	17A2BH3-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-23	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24
Parameter	Unit	G / S	RDL	8774139	8774140	8774141	8774142	8774143	8774144	8774145	8774146
Naphthalene	µg/g		0.005	<0.005	0.022	0.050	0.011	<0.005	<0.005	<0.005	<0.005
2-Methylnaphthalene	µg/g		0.005	<0.005	0.013	0.095	0.007	<0.005	<0.005	<0.005	<0.005
1-Methylnaphthalene	µg/g		0.005	<0.005	0.010	0.056	0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthylene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/g		0.02	<0.02	0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02
Anthracene	µg/g		0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoranthene	µg/g		0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	µg/g		0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	µg/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dibenzo(a,h)anthracene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
IACR CCME (Soil)	µg/g		0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
B[a]P TPE (Soil)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits									
Naphthalene - d8	%	50-130		89	71	82	69	78	87	67	79
2-Fluorobiphenyl	%	50-130		95	78	79	79	84	75	72	85
P-Terphenyl - d14	%	60-130		85	80	80	87	84	83	80	80

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

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Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A2BH3-2	17A2BHDUP1	17A3BH1-2	17A3BH1-3			17A3BH2-2	17A3BH2-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil			Soil	Soil
		DATE SAMPLED:		2017-09-24	2017-09-24	2017-09-24	2017-09-24			2017-09-25	2017-09-25
Parameter	Unit	G / S	RDL	8774147	8774148	8774152	8774153	RDL		8774155	8774156
Naphthalene	µg/g		0.005	<0.005	0.007	<0.005	<0.005	0.05		0.19	0.005
2-Methylnaphthalene	µg/g		0.005	<0.005	0.005	<0.005	<0.005	0.05		0.40	0.005
1-Methylnaphthalene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	0.05		0.41	0.005
Acenaphthylene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	0.05		<0.05	0.005
Acenaphthene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	0.05		<0.05	0.005
Fluorene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	0.2		<0.2	0.02
Phenanthrene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	0.2		<0.2	0.02
Anthracene	µg/g		0.004	<0.004	<0.004	<0.004	<0.004	0.04		<0.04	0.004
Fluoranthene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	0.01		0.01	0.01
Pyrene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	0.01		0.01	0.01
Benzo(a)anthracene	µg/g		0.03	<0.03	<0.03	<0.03	<0.03	0.03		<0.03	0.03
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.05		<0.05	0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.05		<0.05	0.05
Benzo(j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.05		<0.05	0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.05		<0.05	0.05
Benzo(a)pyrene	µg/g		0.03	<0.03	<0.03	<0.03	<0.03	0.03		<0.03	0.03
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	0.02		<0.02	0.02
Dibenzo(a,h)anthracene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	0.005		<0.005	0.005
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.05		<0.05	0.05
IACR CCME (Soil)	µg/g		0.6	<0.6	<0.6	<0.6	<0.6	0.6		<0.6	0.6
B[a]P TPE (Soil)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.05		<0.05	0.05
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.05		<0.05	0.05
Surrogate	Unit	Acceptable Limits									
Naphthalene - d8	%		50-130	80	68	81	81			78	87
2-Fluorobiphenyl	%		50-130	87	73	87	86			88	95
P-Terphenyl - d14	%		60-130	80	86	82	84			86	91

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A3BH2-4	17A3BH4-1	17A3BH4-2
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2017-09-25	2017-09-25	2017-09-25
Parameter	Unit	G / S	RDL	8774157	8774158	8774159
Naphthalene	µg/g		0.005	0.005	0.061	<0.005
2-Methylnaphthalene	µg/g		0.005	0.074	0.036	<0.005
1-Methylnaphthalene	µg/g		0.005	0.067	0.038	<0.005
Acenaphthylene	µg/g		0.005	<0.005	<0.005	<0.005
Acenaphthene	µg/g		0.005	<0.005	<0.005	<0.005
Fluorene	µg/g		0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/g		0.02	<0.02	0.04	<0.02
Anthracene	µg/g		0.004	<0.004	0.004	<0.004
Fluoranthene	µg/g		0.01	<0.01	0.01	<0.01
Pyrene	µg/g		0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	µg/g		0.03	<0.03	<0.03	<0.03
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.03	<0.03	<0.03	<0.03
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02	<0.02	<0.02
Dibenzo(a,h)anthracene	µg/g		0.005	<0.005	<0.005	<0.005
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05
IACR CCME (Soil)	µg/g		0.6	<0.6	<0.6	<0.6
B[a]P TPE (Soil)	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits				
Naphthalene - d8	%	50-130	85	84	78	
2-Fluorobiphenyl	%	50-130	95	91	70	
P-Terphenyl - d14	%	60-130	106	88	62	

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AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8774122-8774124 Results are based on dry weight of sample.
Soil sample is visibly heterogeneous.
PAH detection limits increased due to sample matrix interference.
8774125-8774153 Results are based on dry weight of sample.
8774155 Results are based on dry weight of sample.
Soil sample is visibly heterogeneous.
PAH detection limits increased due to sample matrix interference.
8774156-8774159 Results are based on dry weight of sample.

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level Extraction

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

SAMPLE DESCRIPTION: 17A3BH4-2

SAMPLE TYPE: Soil

DATE SAMPLED: 2017-09-25

Parameter	Unit	G / S	RDL	
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polychlorinated Biphenyls Analysis - Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION: 17A10BH1-1				17A2BH1-3		17A2BH2-1		17A2BH3-2		17A2BHDUP1	
		SAMPLE TYPE: Soil				Soil		Soil		Soil		Soil	
		DATE SAMPLED: 2017-09-23				2017-09-24		2017-09-24		2017-09-24		2017-09-24	
Parameter	Unit	G / S	RDL	8774135	RDL	8774142	8774144	RDL	8774147	RDL	8774148		
Aroclor 1242	mg/kg		0.05	<0.05	5	<5	<5	0.05	<0.05	5	<5		
Aroclor 1254	mg/kg		0.05	<0.05	5	<5	<5	0.05	<0.05	5	<5		
Aroclor 1260	mg/kg		0.05	<0.05	5	<5	<5	0.05	<0.05	5	<5		
Total Polychlorinated Biphenyls	mg/kg		0.05	<0.05	5	<5	<5	0.05	<0.05	5	<5		
Surrogate	Unit	Acceptable Limits											
Decachlorobiphenyl	%	50-150	50	105	110	70	105						
		SAMPLE DESCRIPTION: 17A3BH1-2				17A3BH2-2		17A3BH2-3		17A3BH4-1			
		SAMPLE TYPE: Soil				Soil		Soil		Soil			
		DATE SAMPLED: 2017-09-24				2017-09-25		2017-09-25		2017-09-25			
Parameter	Unit	G / S	RDL	8774152	RDL	8774155	RDL	8774156	8774158				
Aroclor 1242	mg/kg		0.05	<0.05	5	<5	0.05	<0.05	<0.05				
Aroclor 1254	mg/kg		0.05	<0.05	5	<5	0.05	<0.05	<0.05				
Aroclor 1260	mg/kg		0.05	<0.05	5	<5	0.05	<0.05	<0.05				
Total Polychlorinated Biphenyls	mg/kg		0.05	<0.05	5	<5	0.05	<0.05	<0.05				
Surrogate	Unit	Acceptable Limits											
Decachlorobiphenyl	%	50-150	65	95	75	80							

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AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polychlorinated Biphenyls Analysis - Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8774135 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.

8774142-8774144 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.
Detection limits elevated due to matrix interferences.

8774147 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.

8774148 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.
Detection limits elevated due to matrix interferences.

8774152 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.

8774155 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.
Detection limits elevated due to matrix interferences.

8774156-8774158 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Volatile Organic Compounds in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A31BH1-1	17A16BH2-2	17A16BH2-6	17A10BH1-1	17A2BH1-1	17A2BH1-2	17A2BH1-3	17A2BH1-4
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-23	2017-09-23	2017-09-23	2017-09-23	2017-09-24	2017-09-24	2017-09-24	2017-09-24
Parameter	Unit	G / S	RDL	8774122	8774128	8774133	8774135	8774140	8774141	8774142	8774143
Chloromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl ether (MTBE)	µg/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Butanone (MEK)	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzene	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.08	<0.02
1,2-Dichloropropane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethene	µg/g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromodichloromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4-Methyl-2-pentanone (MIBK)	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	0.09	<0.05
Dibromochloromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.19	0.08	<0.05
1,1,1,2-Tetrachloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Volatile Organic Compounds in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A31BH1-1	17A16BH2-2	17A16BH2-6	17A10BH1-1	17A2BH1-1	17A2BH1-2	17A2BH1-3	17A2BH1-4
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-23	2017-09-23	2017-09-23	2017-09-23	2017-09-24	2017-09-24	2017-09-24	2017-09-24
Parameter	Unit	G / S	RDL	8774122	8774128	8774133	8774135	8774140	8774141	8774142	8774143
Chlorobenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.31	<0.05
m&p-Xylene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.52	<0.05
Bromoform	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	<0.05
1,3-Dichlorobenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2,4-Trichlorobenzene	µg/g	0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Xylenes	µg/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.6	<0.2
Surrogate	Unit	Acceptable Limits									
Bromofluorobenzene	%	60-140		98	88	89	96	100	91	95	108
Dibromofluoromethane	%	60-140		101	97	102	108	118	106	107	126
Toluene - d8	%	60-140		86	105	106	111	122	110	113	113

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Volatile Organic Compounds in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A2BH2-1	17A2BH2-2	17A2BH3-1	17A2BH3-2	17A2BHDUP1	17A3BH1-2	17A3BH1-3	17A3BH2-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-25
Parameter	Unit	G / S	RDL	8774144	8774145	8774146	8774147	8774148	8774152	8774153	8774155
Chloromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl ether (MTBE)	µg/g	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Butanone (MEK)	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzene	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.07	<0.02	<0.02	0.05
1,2-Dichloropropane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethene	µg/g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Bromodichloromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4-Methyl-2-pentanone (MIBK)	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	0.24
Dibromochloromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Volatile Organic Compounds in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A2BH2-1	17A2BH2-2	17A2BH3-1	17A2BH3-2	17A2BHDUP1	17A3BH1-2	17A3BH1-3	17A3BH2-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-24	2017-09-25
Parameter	Unit	G / S	RDL	8774144	8774145	8774146	8774147	8774148	8774152	8774153	8774155
Chlorobenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.19	<0.05	<0.05	0.40
m&p-Xylene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.86	<0.05	<0.05	0.84
Bromoform	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06
1,1,2,2-Tetrachloroethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	0.37
1,3-Dichlorobenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2,4-Trichlorobenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Xylenes	µg/g	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.9	<0.2	<0.2	1.2
Surrogate	Unit	Acceptable Limits									
Bromofluorobenzene	%	60-140		93	96	88	85	94	85	80	103
Dibromofluoromethane	%	60-140		101	116	107	104	110	107	109	105
Toluene - d8	%	60-140		101	117	105	102	115	105	102	114

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Volatile Organic Compounds in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A3BH2-3		17A3BH2-4		17A3BH4-1	
		SAMPLE TYPE:		Soil		Soil		Soil	
		DATE SAMPLED:		2017-09-25		2017-09-25		2017-09-25	
Parameter	Unit	G / S	RDL	8774156	RDL	8774157	RDL	8774158	
Chloromethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Vinyl Chloride	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Bromomethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Chloroethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Trichlorofluoromethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Acetone	µg/g		0.5	<0.5	1	<1	0.5	<0.5	
1,1-Dichloroethene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Dichloromethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Methyl tert-butyl ether (MTBE)	µg/g		0.1	<0.1	0.2	<0.2	0.1	<0.1	
2-Butanone (MEK)	µg/g		0.5	<0.5	1	<1	0.5	<0.5	
trans-1,2-Dichloroethene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
1,1-Dichloroethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
cis-1,2-Dichloroethene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Chloroform	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
1,2-Dichloroethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
1,1,1-Trichloroethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Carbon Tetrachloride	µg/g		0.02	<0.02	0.04	<0.04	0.02	<0.02	
Benzene	µg/g		0.02	<0.02	0.04	<0.04	0.02	0.09	
1,2-Dichloropropane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Trichloroethene	µg/g		0.01	<0.01	0.02	<0.02	0.01	<0.01	
Bromodichloromethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
trans-1,3-Dichloropropene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
4-Methyl-2-pentanone (MIBK)	µg/g		0.5	<0.5	1	<1	0.5	<0.5	
cis-1,3-Dichloropropene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
1,1,2-Trichloroethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Toluene	µg/g		0.05	<0.05	0.1	<0.1	0.05	0.07	
Dibromochloromethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Ethylene Dibromide	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Tetrachloroethene	µg/g		0.05	<0.05	0.1	<0.1	0.05	0.08	
1,1,1,2-Tetrachloroethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Volatile Organic Compounds in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A3BH2-3		17A3BH2-4		17A3BH4-1	
		SAMPLE TYPE:		Soil		Soil		Soil	
		DATE SAMPLED:		2017-09-25		2017-09-25		2017-09-25	
Parameter	Unit	G / S	RDL	8774156	RDL	8774157	RDL	8774158	
Chlorobenzene	µg/g		0.05	<0.05	0.1	<0.1	0.05	0.07	
Ethylbenzene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
m&p-Xylene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Bromoform	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
Styrene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
1,1,2,2-Tetrachloroethane	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
o-Xylene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
1,3-Dichlorobenzene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
1,4-Dichlorobenzene	µg/g		0.05	<0.05	0.1	<0.1	0.05	<0.05	
1,2-Dichlorobenzene	µg/g		0.05	<0.05	0.1	<0.1	0.05	0.07	
1,2,4-Trichlorobenzene	µg/g		0.05	<0.05	0.1	<0.1	0.05	0.05	
Total Xylenes	µg/g		0.2	<0.2	0.2	<0.2	0.2	<0.2	
Surrogate	Unit	Acceptable Limits							
Bromofluorobenzene	%	60-140		99		87		88	
Dibromofluoromethane	%	60-140		98		96		90	
Toluene - d8	%	60-140		106		99		95	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8774122-8774156 Results are based on dry weight of sample.

8774157 Results are based on dry weight of sample.
VOC/PH detection limits increased due to high sample moisture content.

8774158 Results are based on dry weight of sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
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TEL (778)452-4000
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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Dioxins & Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A2BH2-1		17A2BH3-2		17A3BH1-2		17A3BH2-2	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2017-09-24		2017-09-24		2017-09-24		2017-09-25	
Parameter	Unit	G / S	RDL	8774144	RDL	8774147	RDL	8774152	RDL	8774155	
2,3,7,8-Tetra CDD	ng/kg		0.3	<0.3	0.2	<0.2	0.2	<0.2	0.2	<0.2	
1,2,3,7,8-Penta CDD	ng/kg		0.7	<0.7	0.2	<0.2	0.2	<0.2	0.4	<0.4	
1,2,3,4,7,8-Hexa CDD	ng/kg		0.5	<0.5	0.1	<0.1	0.1	<0.1	0.8	<0.8	
1,2,3,6,7,8-Hexa CDD	ng/kg		0.5	<0.5	0.1	<0.1	0.1	<0.1	0.8	3.3	
1,2,3,7,8,9-Hexa CDD	ng/kg		0.5	1.4	0.1	<0.1	0.1	<0.1	0.9	2.7	
1,2,3,4,6,7,8-Hepta CDD	ng/kg		0.6	23.4	0.1	<0.1	0.1	<0.1	0.6	12.5	
Octa CDD	ng/kg		1	173	0.4	0.5	0.4	<0.4	0.4	34.1	
2,3,7,8-Tetra CDF	ng/kg		0.5	1.4	0.1	<0.1	0.1	<0.1	0.5	2.2	
1,2,3,7,8-Penta CDF	ng/kg		0.6	0.6	0.2	<0.2	0.2	<0.2	0.7	1.9	
2,3,4,7,8-Penta CDF	ng/kg		0.5	1.4	0.1	<0.1	0.1	<0.1	0.7	2.7	
1,2,3,4,7,8-Hexa CDF	ng/kg		0.4	1.5	0.1	<0.1	0.1	<0.1	0.5	2.8	
1,2,3,6,7,8-Hexa CDF	ng/kg		0.4	1.6	0.1	<0.1	0.1	<0.1	0.4	2.2	
2,3,4,6,7,8-Hexa CDF	ng/kg		0.4	2.1	0.1	<0.1	0.1	<0.1	0.7	2.5	
1,2,3,7,8,9-Hexa CDF	ng/kg		0.5	0.5	0.1	<0.1	0.1	<0.1	0.7	1.0	
1,2,3,4,6,7,8-Hepta CDF	ng/kg		0.3	7.1	0.1	<0.1	0.1	<0.1	0.4	12.6	
1,2,3,4,7,8,9-Hepta CDF	ng/kg		0.5	<0.5	0.1	<0.1	0.1	<0.1	0.5	0.8	
Octa CDF	ng/kg		1	3	0.4	0.5	0.2	<0.2	1	10	
Total Tetrachlorodibenzodioxins	ng/kg		0.3	6.9	0.2	<0.2	0.2	<0.2	0.2	8.4	
Total Pentachlorodibenzodioxins	ng/kg		0.7	7.5	0.2	<0.2	0.2	<0.2	0.4	9.8	
Total Hexachlorodibenzodioxins	ng/kg		0.5	19.8	0.1	<0.1	0.1	<0.1	0.8	29.7	
Total Heptachlorodibenzodioxins	ng/kg		0.6	44.3	0.1	<0.1	0.1	<0.1	0.6	25.4	
Total PCDDs	ng/kg		1	252	0.4	<0.4	0.4	<0.4	0.8	107	
Total Tetrachlorodibenzofurans	ng/kg		0.5	22.8	0.1	<0.1	0.1	<0.1	0.5	45.7	
Total Pentachlorodibenzofurans	ng/kg		0.6	15.8	0.2	<0.2	0.2	<0.2	0.7	27.1	
Total Hexachlorodibenzofurans	ng/kg		0.5	17.2	0.1	<0.1	0.1	<0.1	0.7	24.1	
Total Heptachlorodibenzofurans	ng/kg		0.5	11.4	0.1	<0.1	0.1	<0.1	0.5	18.1	
Total PCDFs	ng/kg		1	70	0.4	<0.4	0.2	<0.2	1	125	
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ			0		0		0		0	
1,2,3,7,8-Penta CDD (TEF 1.0)	TEQ			0		0		0		0	
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ			0		0		0		0	

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 17Y266562

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ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Dioxins & Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION:		17A2BH2-1		17A2BH3-2		17A3BH1-2		17A3BH2-2	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2017-09-24		2017-09-24		2017-09-24		2017-09-25	
Parameter	Unit	G / S	RDL	8774144	RDL	8774147	RDL	8774152	RDL	8774155	
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ			0		0		0		0.329	
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	TEQ			0.143		0		0		0.273	
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	TEQ			0.234		0		0		0.125	
Octa CDD (TEF 0.0003)	TEQ			0.0520		0.000147		0		0.0102	
2,3,7,8-Tetra CDF (TEF 0.1)	TEQ			0.145		0		0		0.218	
1,2,3,7,8-Penta CDF (TEF 0.03)	TEQ			0.0185		0		0		0.0574	
2,3,4,7,8-Penta CDF (TEF 0.3)	TEQ			0.416		0		0		0.817	
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	TEQ			0.154		0		0		0.280	
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	TEQ			0.161		0		0		0.224	
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	TEQ			0.207		0		0		0.250	
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	TEQ			0.0506		0		0		0.105	
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	TEQ			0.0706		0		0		0.126	
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	TEQ			0		0		0		0.00765	
Octa CDF (TEF 0.0003)	TEQ			0.000896		0		0		0.00291	
Total PCDDs and PCDFs (TEQ)	TEQ			1.65		0.000147		0		2.82	

Certified By:

[Signature]



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Dioxins & Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION: 17A2BH2-1		17A2BH3-2		17A3BH1-2		17A3BH2-2	
		SAMPLE TYPE: Soil		Soil		Soil		Soil	
		DATE SAMPLED: 2017-09-24		2017-09-24		2017-09-24		2017-09-25	
Surrogate	Unit	Acceptable Limits	8774144	8774147	8774152	8774155			
13C-2378-TCDF	%	30-130	55	63	61	69			
13C-12378-PeCDF	%	30-130	60	69	70	72			
13C-23478-PeCDF	%	30-130	61	71	65	73			
13C-123478-HxCDF	%	30-130	49	61	54	57			
13C-123678-HxCDF	%	30-130	48	60	53	58			
13C-234678-HxCDF	%	30-130	53	63	57	62			
13C-123789-HxCDF	%	30-130	51	58	55	60			
13C-1234678-HpCDF	%	30-130	44	51	47	54			
13C-1234789-HpCDF	%	30-130	43	52	46	43			
13C-2378-TCDD	%	30-130	76	86	83	96			
13C-12378-PeCDD	%	30-130	71	83	80	90			
13C-123478-HxCDD	%	30-130	66	78	70	54			
13C-123678-HxCDD	%	30-130	67	75	73	59			
13C-1234678-HpCDD	%	30-130	52	63	55	50			
13C-OCDD	%	30-130	37	43	37	35			

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Dioxins & Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION: 17A3BH2-3		17A3BH4-1	
		SAMPLE TYPE: Soil		Soil	
		DATE SAMPLED: 2017-09-25		2017-09-25	
Parameter	Unit	G / S	RDL	8774156	RDL 8774158
2,3,7,8-Tetra CDD	ng/kg		0.2	<0.2	0.2
1,2,3,7,8-Penta CDD	ng/kg		0.4	<0.4	0.4
1,2,3,4,7,8-Hexa CDD	ng/kg		0.2	<0.2	0.4
1,2,3,6,7,8-Hexa CDD	ng/kg		0.2	<0.2	0.4
1,2,3,7,8,9-Hexa CDD	ng/kg		0.2	<0.2	0.4
1,2,3,4,6,7,8-Hepta CDD	ng/kg		0.6	<0.6	0.2
Octa CDD	ng/kg		0.4	1.6	0.4
2,3,7,8-Tetra CDF	ng/kg		0.2	<0.2	0.6
1,2,3,7,8-Penta CDF	ng/kg		0.3	<0.3	0.4
2,3,4,7,8-Penta CDF	ng/kg		0.4	<0.4	0.3
1,2,3,4,7,8-Hexa CDF	ng/kg		0.2	<0.2	0.6
1,2,3,6,7,8-Hexa CDF	ng/kg		0.2	<0.2	0.6
2,3,4,6,7,8-Hexa CDF	ng/kg		0.2	<0.2	0.7
1,2,3,7,8,9-Hexa CDF	ng/kg		0.3	<0.3	0.7
1,2,3,4,6,7,8-Hepta CDF	ng/kg		0.1	0.6	0.2
1,2,3,4,7,8,9-Hepta CDF	ng/kg		0.2	<0.2	0.3
Octa CDF	ng/kg		0.8	<0.8	0.4
Total Tetrachlorodibenzodioxins	ng/kg		0.2	<0.2	0.2
Total Pentachlorodibenzodioxins	ng/kg		0.4	<0.4	0.4
Total Hexachlorodibenzodioxins	ng/kg		0.2	0.6	0.4
Total Heptachlorodibenzodioxins	ng/kg		0.6	0.9	0.2
Total PCDDs	ng/kg		0.6	3.6	0.4
Total Tetrachlorodibenzofurans	ng/kg		0.2	1.5	0.6
Total Pentachlorodibenzofurans	ng/kg		0.4	0.6	0.4
Total Hexachlorodibenzofurans	ng/kg		0.3	0.6	0.7
Total Heptachlorodibenzofurans	ng/kg		0.2	0.6	0.3
Total PCDFs	ng/kg		0.8	3.2	0.7
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ		0	0	0
1,2,3,7,8-Penta CDD (TEF 1.0)	TEQ		0	0	0.439
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ		0	0	0.0675

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Dioxins & Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION: 17A3BH2-3		17A3BH4-1	
		SAMPLE TYPE: Soil		Soil	
		DATE SAMPLED: 2017-09-25		2017-09-25	
Parameter	Unit	G / S	RDL		
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ		0		0.214
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	TEQ		0		0.175
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	TEQ		0		0.107
Octa CDD (TEF 0.0003)	TEQ		0.000480		0.00993
2,3,7,8-Tetra CDF (TEF 0.1)	TEQ		0		0
1,2,3,7,8-Penta CDF (TEF 0.03)	TEQ		0		0.0405
2,3,4,7,8-Penta CDF (TEF 0.3)	TEQ		0		0.380
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	TEQ		0		0.153
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	TEQ		0		0.139
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	TEQ		0		0.139
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	TEQ		0		0
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	TEQ		0.00621		0.0851
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	TEQ		0		0
Octa CDF (TEF 0.0003)	TEQ		0		0.00372
Total PCDDs and PCDFs (TEQ)	TEQ		0.00669		1.95

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Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Dioxins & Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION: 17A3BH2-3		17A3BH4-1
		SAMPLE TYPE: Soil		Soil
		DATE SAMPLED: 2017-09-25		2017-09-25
Surrogate	Unit	Acceptable Limits	8774156	8774158
13C-2378-TCDF	%	30-130	63	62
13C-12378-PeCDF	%	30-130	69	67
13C-23478-PeCDF	%	30-130	68	67
13C-123478-HxCDF	%	30-130	58	52
13C-123678-HxCDF	%	30-130	56	51
13C-234678-HxCDF	%	30-130	59	57
13C-123789-HxCDF	%	30-130	58	61
13C-1234678-HpCDF	%	30-130	51	50
13C-1234789-HpCDF	%	30-130	51	43
13C-2378-TCDD	%	30-130	87	85
13C-12378-PeCDD	%	30-130	81	81
13C-123478-HxCDD	%	30-130	73	61
13C-123678-HxCDD	%	30-130	73	69
13C-1234678-HpCDD	%	30-130	62	49
13C-OCDD	%	30-130	46	35

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8774144-8774158 The results were corrected based on the surrogate percent recoveries.
Analysis performed at AGAT Montreal.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Dioxins and Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION: 17A2BH1-3	
		SAMPLE TYPE: Soil	
		DATE SAMPLED: 2017-09-24	
Parameter	Unit	G / S	RDL 8774142
2,3,7,8-Tetra CDD	ng/kg	0.2	<0.2
1,2,3,7,8-Penta CDD	ng/kg	0.3	<0.3
1,2,3,4,7,8-Hexa CDD	ng/kg	0.3	<0.3
1,2,3,6,7,8-Hexa CDD	ng/kg	0.3	<0.3
1,2,3,7,8,9-Hexa CDD	ng/kg	0.2	<0.2
1,2,3,4,6,7,8-Hepta CDD	ng/kg	0.2	59.2
Octa CDD	ng/kg	0.7	188
2,3,7,8-Tetra CDF	ng/kg	0.2	<0.2
1,2,3,7,8-Penta CDF	ng/kg	0.2	<0.2
2,3,4,7,8-Penta CDF	ng/kg	0.1	<0.1
1,2,3,4,7,8-Hexa CDF	ng/kg	0.1	<0.1
1,2,3,6,7,8-Hexa CDF	ng/kg	0.2	3.7
2,3,4,6,7,8-Hexa CDF	ng/kg	0.1	4.1
1,2,3,7,8,9-Hexa CDF	ng/kg	0.2	<0.2
1,2,3,4,6,7,8-Hepta CDF	ng/kg	0.2	11.6
1,2,3,4,7,8,9-Hepta CDF	ng/kg	0.2	<0.2
Octa CDF	ng/kg	0.2	<0.2
Total Tetrachlorodibenzodioxins	ng/kg	0.2	6.7
Total Pentachlorodibenzodioxins	ng/kg	0.3	2.3
Total Hexachlorodibenzodioxins	ng/kg	0.3	12.4
Total Heptachlorodibenzodioxins	ng/kg	0.2	136
Total PCDDs	ng/kg	0.7	346
Total Tetrachlorodibenzofurans	ng/kg	0.2	28.8
Total Pentachlorodibenzofurans	ng/kg	0.2	16.4
Total Hexachlorodibenzofurans	ng/kg	0.2	17.0
Total Heptachlorodibenzofurans	ng/kg	0.2	11.6
Total PCDFs	ng/kg	0.2	73.9
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ		0
1,2,3,7,8-Penta CDD (TEF 1.0)	TEQ		0
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ		0

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

Unit 120, 8600 Glenlyon Parkway
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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Dioxins and Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION: 17A2BH1-3	
		SAMPLE TYPE: Soil	
		DATE SAMPLED: 2017-09-24	
Parameter	Unit	G / S	RDL
			8774142
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ		0
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	TEQ		0
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	TEQ		0.592
Octa CDD (TEF 0.0003)	TEQ		0.0565
2,3,7,8-Tetra CDF (TEF 0.1)	TEQ		0
1,2,3,7,8-Penta CDF (TEF 0.03)	TEQ		0
2,3,4,7,8-Penta CDF (TEF 0.3)	TEQ		0
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	TEQ		0
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	TEQ		0.367
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	TEQ		0.413
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	TEQ		0
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	TEQ		0.116
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	TEQ		0
Octa CDF (TEF 0.0003)	TEQ		0
Total PCDDs and PCDFs (TEQ)	TEQ		1.54

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Dioxins and Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-31

		SAMPLE DESCRIPTION: 17A2BH1-3	
		SAMPLE TYPE: Soil	
		DATE SAMPLED: 2017-09-24	
Surrogate	Unit	Acceptable Limits	8774142
13C-2378-TCDF	%	30-130	59
13C-12378-PeCDF	%	30-130	62
13C-23478-PeCDF	%	30-130	61
13C-123478-HxCDF	%	30-130	53
13C-123678-HxCDF	%	30-130	50
13C-234678-HxCDF	%	30-130	53
13C-123789-HxCDF	%	30-130	53
13C-1234678-HpCDF	%	30-130	41
13C-1234789-HpCDF	%	30-130	48
13C-2378-TCDD	%	30-130	75
13C-12378-PeCDD	%	30-130	65
13C-123478-HxCDD	%	30-130	58
13C-123678-HxCDD	%	30-130	61
13C-1234678-HpCDD	%	30-130	45
13C-OCDD	%	30-130	30

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8774142 The results were corrected based on the surrogate percent recoveries.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Soil Analysis																
RPT Date: Oct 31, 2017				DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

CCME Metals in Soil

Antimony	8779514		0.4	0.4	NA	< 0.1	84%	70%	130%	105%	90%	110%			
Arsenic	8779514		5.6	6.0	6.4%	< 0.1	84%	70%	130%	91%	90%	110%			
Barium	8779514		63.2	57.7	9.1%	< 0.5	85%	70%	130%	101%	90%	110%			
Beryllium	8779514		0.5	0.5	NA	< 0.1	77%	70%	130%	98%	90%	110%			
Cadmium	8779514		0.85	0.76	10.9%	< 0.01	90%	70%	130%	103%	90%	110%			
Chromium	8779514		61	59	3.9%	< 1	89%	70%	130%	105%	90%	110%			
Cobalt	8779514		26.4	25.7	2.9%	< 0.1	90%	70%	130%	104%	90%	110%			
Copper	8779514		115	109	5.3%	< 0.2	92%	70%	130%	102%	90%	110%			
Lead	8779514		2.4	2.3	3.5%	< 0.1	90%	70%	130%	107%	90%	110%			
Mercury	8779514		0.12	0.12	2.5%	< 0.01	81%	70%	130%	92%	90%	110%			
Molybdenum	8779514		1.1	1.0	5.5%	< 0.2	86%	70%	130%	102%	90%	110%			
Nickel	8779514		57.9	54.3	6.4%	< 0.5	98%	70%	130%	103%	90%	110%			
Selenium	8779514		1.1	1.4	25.6%	< 0.1				101%	90%	110%			
Silver	8779514		<0.5	<0.5	NA	< 0.5	100%	70%	130%	106%	90%	110%			
Thallium	8779514		0.1	0.1	NA	< 0.1	92%	70%	130%	102%	90%	110%			
Tin	8779514		0.9	0.8	NA	< 0.2	78%	70%	130%	90%	90%	110%			
Uranium	8779514		0.4	0.4	NA	< 0.2	84%	70%	130%	108%	90%	110%			
Vanadium	8779514		223	214	4.5%	< 1	89%	70%	130%	101%	90%	110%			
Zinc	8779514		89	85	5.1%	< 1	90%	70%	130%	108%	90%	110%			
pH 1:2	8779514		5.50	5.54	0.7%		96%	90%	110%	100%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide in Soil (SAD & WAD)

Cyanide (SAD)	8774122		<0.5	<0.5	NA	< 0.5	97%	70%	130%	105%	90%	110%	100%	80%	120%
Cyanide (WAD)	8774122		<0.5	<0.5	NA	< 0.5	111%	70%	130%	105%	90%	110%	100%	80%	120%

CCME Metals in Soil

Antimony	8788814		0.2	0.2	NA	< 0.1	104%	70%	130%	102%	90%	110%			
Arsenic	8788814		4.4	4.2	6.3%	< 0.1	111%	70%	130%	102%	90%	110%			
Barium	8788814		76.0	69.9	8.3%	< 0.5	102%	70%	130%	109%	90%	110%			
Beryllium	8788814		0.3	0.3	NA	< 0.1	101%	70%	130%	102%	90%	110%			
Cadmium	8788814		0.10	0.09	7.8%	< 0.01	115%	70%	130%	101%	90%	110%			
Chromium	8788814		30	28	8.8%	< 1	113%	70%	130%	105%	90%	110%			
Cobalt	8788814		11.9	11.5	2.7%	< 0.1	119%	70%	130%	106%	90%	110%			
Copper	8788814		29.1	26.9	7.6%	< 0.2	109%	70%	130%	101%	90%	110%			
Lead	8788814		5.4	5.1	5.5%	< 0.1	105%	70%	130%	105%	90%	110%			
Mercury	8788814		0.03	0.02	NA	< 0.01	95%	70%	130%	102%	90%	110%			
Molybdenum	8788814		0.4	0.4	NA	< 0.2	103%	70%	130%	97%	90%	110%			
Nickel	8788814		26.5	25.1	5.6%	< 0.5	117%	70%	130%	100%	90%	110%			
Selenium	8788814		0.2	<0.1	NA	< 0.1				101%	90%	110%			

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Silver	8788814		<0.5	<0.5	NA	< 0.5	117%	70%	130%	101%	90%	110%			
Thallium	8788814		<0.1	<0.1	NA	< 0.1	118%	70%	130%	102%	90%	110%			
Tin	8788814		0.6	0.6	NA	< 0.2	108%	70%	130%	102%	90%	110%			
Uranium	8788814		0.4	0.4	NA	< 0.2	108%	70%	130%	102%	90%	110%			
Vanadium	8788814		71	68	4.9%	< 1	114%	70%	130%	102%	90%	110%			
Zinc	8788814		45	45	0.9%	< 1	114%	70%	130%	104%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME Metals in Soil

Antimony	8779514		0.4	0.3	NA	< 0.1	77%	70%	130%	96%	90%	110%			
Arsenic	8779514		5.6	6.0	6.4%	< 0.1	84%	70%	130%	91%	90%	110%			
Barium	8779514		61.6	55.9	9.5%	< 0.5	74%	70%	130%	96%	90%	110%			
Beryllium	8779514		0.5	0.5	NA	< 0.1	77%	70%	130%	98%	90%	110%			
Cadmium	8779514		0.74	0.67	10.9%	< 0.01	79%	70%	130%	90%	90%	110%			
Chromium	8779514		61	59	3.9%	< 1	89%	70%	130%	105%	90%	110%			
Cobalt	8779514		26.4	25.7	2.9%	< 0.1	90%	70%	130%	104%	90%	110%			
Copper	8779514		115	109	5.3%	< 0.2	92%	70%	130%	102%	90%	110%			
Lead	8779514		2.4	2.3	3.5%	< 0.1	90%	70%	130%	107%	90%	110%			
Mercury	8779514		0.12	0.11	2.5%	< 0.01	79%	70%	130%						
Molybdenum	8779514		1.1	1.0	5.5%	< 0.2	86%	70%	130%	102%	90%	110%			
Nickel	8779514		57.9	54.3	6.4%	< 0.5	98%	70%	130%	103%	90%	110%			
Selenium	8779514		1.1	1.4	25.6%	< 0.1				101%	90%	110%			
Silver	8779514		<0.5	<0.5	NA	< 0.5	88%	70%	130%	93%	90%	110%			
Thallium	8779514		0.1	0.1	NA	< 0.1	92%	70%	130%	102%	90%	110%			
Tin	8779514		0.8	0.8	NA	< 0.2	73%	70%	130%						
Uranium	8779514		0.4	0.4	NA	< 0.2	84%	70%	130%	108%	90%	110%			
Vanadium	8779514		223	214	4.5%	< 1	89%	70%	130%	101%	90%	110%			
Zinc	8779514		89	85	5.1%	< 1	90%	70%	130%	108%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME Metals in Soil

pH 1:2	8788814		5.22	5.25	0.6%		96%	90%	110%	100%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Particle Size by Sieve

Sieve Analysis - 75 microns	8774122	8774122	57	58	1.4%	< 1	100%	80%	120%						

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Certified By:



Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME BTEX/F1-F4 (Soil)

Benzene	67982	8774153	<0.005	<0.005	NA	< 0.005	101%	80%	120%				104%	60%	140%
Toluene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				102%	60%	140%
Ethylbenzene	67982	8774153	<0.01	<0.01	NA	< 0.01	99%	80%	120%				106%	60%	140%
m&p-Xylene	67982	8774153	<0.02	<0.02	NA	< 0.02	99%	80%	120%				108%	60%	140%
o-Xylene	67982	8774153	<0.02	<0.02	NA	< 0.02	100%	80%	120%				106%	60%	140%
F1 (C6-C10)	67982	8774153	<10	<10	NA	< 10									
F1 minus BTEX (C6-C10)	67982	8774153	<10	<10	NA	< 10									
F2 (C10-C16)	67984	8774145	<20	<20	NA	< 20	101%	80%	120%				123%	60%	140%
F3 (C16-C34)	67984	8774145	<20	<20	NA	< 20	111%	80%	120%				98%	60%	140%
F4 (C34-C50)	67984	8774145	<20	<20	NA	< 20	97%	80%	120%				108%	60%	140%
Bromofluorobenzene	67982	8774153	88	88	0.0%		103%	60%	140%				95%	60%	140%
Dibromofluoromethane	67982	8774153	98	101	3.0%		102%	60%	140%				95%	60%	140%
Toluene - d8	67982	8774153	96	100	4.1%		101%	60%	140%				95%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Volatile Organic Compounds in Soil

Chloromethane	67982	8774153	<0.05	<0.05	NA	< 0.05	99%	80%	120%				90%	60%	140%
Vinyl Chloride	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				83%	60%	140%
Bromomethane	67982	8774153	<0.05	<0.05	NA	< 0.05	98%	80%	120%				92%	60%	140%
Chloroethane	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				81%	60%	140%
Trichlorofluoromethane	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				79%	70%	130%
Acetone	67982	8774153	<0.5	<0.5	NA	< 0.5	100%	80%	120%				115%	70%	130%
1,1-Dichloroethene	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				86%	70%	130%
Dichloromethane	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				93%	70%	130%
Methyl tert-butyl ether (MTBE)	67982	8774153	<0.1	<0.1	NA	< 0.1	101%	80%	120%				107%	70%	130%
2-Butanone (MEK)	67982	8774153	<0.5	<0.5	NA	< 0.5	100%	80%	120%				112%	70%	130%
trans-1,2-Dichloroethene	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				92%	70%	130%
1,1-Dichloroethane	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				91%	70%	130%
cis-1,2-Dichloroethene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				90%	70%	130%
Chloroform	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				91%	70%	130%
1,2-Dichloroethane	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				97%	70%	130%
1,1,1-Trichloroethane	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				87%	70%	130%
Carbon Tetrachloride	67982	8774153	<0.02	<0.02	NA	< 0.02	101%	80%	120%				85%	70%	130%
Benzene	67982	8774153	<0.02	<0.02	NA	< 0.02	101%	80%	120%				89%	70%	130%
1,2-Dichloropropane	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				93%	70%	130%
Trichloroethene	67982	8774153	<0.01	<0.01	NA	< 0.01	101%	80%	120%				87%	70%	130%
Bromodichloromethane	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				93%	70%	130%
trans-1,3-Dichloropropene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				84%	60%	140%
4-Methyl-2-pentanone (MIBK)	67982	8774153	<0.5	<0.5	NA	< 0.5	101%	80%	120%				106%	70%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
cis-1,3-Dichloropropene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				83%	60%	140%
1,1,2-Trichloroethane	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				100%	70%	130%
Toluene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				88%	70%	130%
Dibromochloromethane	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				95%	70%	130%
Ethylene Dibromide	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				99%	70%	130%
Tetrachloroethene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				92%	70%	130%
1,1,1,2-Tetrachloroethane	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				102%	70%	130%
Chlorobenzene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				100%	70%	130%
Ethylbenzene	67982	8774153	<0.05	<0.05	NA	< 0.05	102%	80%	120%				94%	70%	130%
m&p-Xylene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				96%	70%	130%
Bromoform	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				107%	70%	130%
Styrene	67982	8774153	<0.05	<0.05	NA	< 0.05	102%	80%	120%				95%	70%	130%
1,1,2,2-Tetrachloroethane	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				116%	70%	130%
o-Xylene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				99%	70%	130%
1,3-Dichlorobenzene	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				87%	70%	130%
1,4-Dichlorobenzene	67982	8774153	<0.05	<0.05	NA	< 0.05	100%	80%	120%				88%	70%	130%
1,2-Dichlorobenzene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				90%	70%	130%
1,2,4-Trichlorobenzene	67982	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				89%	70%	130%
Bromofluorobenzene	67982	8774153	80	80	0.0%		106%	60%	140%				117%	60%	140%
Dibromofluoromethane	67982	8774153	109	109	0.0%		101%	60%	140%				92%	60%	140%
Toluene - d8	67982	8774153	102	101	1.0%		95%	60%	140%				92%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	67984	8774145	<0.005	<0.005	NA	< 0.005	101%	80%	120%				83%	50%	130%
2-Methylnaphthalene	67984	8774145	<0.005	<0.005	NA	< 0.005	98%	80%	120%				81%	50%	130%
1-Methylnaphthalene	67984	8774145	<0.005	<0.005	NA	< 0.005	101%	80%	120%				81%	50%	130%
Acenaphthylene	67984	8774145	<0.005	<0.005	NA	< 0.005	101%	80%	120%				81%	50%	130%
Acenaphthene	67984	8774145	<0.005	<0.005	NA	< 0.005	101%	80%	120%				84%	50%	130%
Fluorene	67984	8774145	<0.02	<0.02	NA	< 0.02	101%	80%	120%				82%	50%	130%
Phenanthrene	67984	8774145	<0.02	<0.02	NA	< 0.02	104%	80%	120%				78%	60%	130%
Anthracene	67984	8774145	<0.004	<0.004	NA	< 0.004	98%	80%	120%				79%	60%	130%
Fluoranthene	67984	8774145	<0.01	<0.01	NA	< 0.01	102%	80%	120%				82%	60%	130%
Pyrene	67984	8774145	<0.01	<0.01	NA	< 0.01	101%	80%	120%				83%	60%	130%
Benzo(a)anthracene	67984	8774145	<0.03	<0.03	NA	< 0.03	101%	80%	120%				88%	60%	130%
Chrysene	67984	8774145	<0.05	<0.05	NA	< 0.05	101%	80%	120%				87%	60%	130%
Benzo(b)fluoranthene	67984	8774145	<0.05	<0.05	NA	< 0.05	103%	80%	120%				88%	60%	130%
Benzo(j)fluoranthene	67984	8774145	<0.05	<0.05	NA	< 0.05	106%	80%	120%				89%	60%	130%
Benzo(k)fluoranthene	67984	8774145	<0.05	<0.05	NA	< 0.05	98%	80%	120%				81%	60%	130%
Benzo(a)pyrene	67984	8774145	<0.03	<0.03	NA	< 0.03	101%	80%	120%				85%	60%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Indeno(1,2,3-c,d)pyrene	67984	8774145	<0.02	<0.02	NA	< 0.02	100%	80%	120%				84%	60%	130%
Dibenzo(a,h)anthracene	67984	8774145	<0.005	<0.005	NA	< 0.005	101%	80%	120%				84%	60%	130%
Benzo(g,h,i)perylene	67984	8774145	<0.05	<0.05	NA	< 0.05	101%	80%	120%				86%	60%	130%
Naphthalene - d8	67984	8774145	67	82	20.1%		101%	80%	120%				89%	50%	130%
2-Fluorobiphenyl	67984	8774145	72	88	20.0%		101%	80%	120%				94%	50%	130%
P-Terphenyl - d14	67984	8774145	80	83	3.7%		102%	80%	120%				95%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME BTEX/F1-F4 (Soil)

F2 (C10-C16)	67988	8774153	<20	<20	NA	< 20	101%	80%	120%				95%	60%	140%
F3 (C16-C34)	67988	8774153	<20	<20	NA	< 20	111%	80%	120%				67%	60%	140%
F4 (C34-C50)	67988	8774153	<20	<20	NA	< 20	97%	80%	120%				80%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME BTEX/F1-F4 (Soil)

Benzene	67987	8774069	<0.005	<0.005	NA	< 0.005	101%	80%	120%				104%	60%	140%
Toluene	67987	8774069	<0.05	<0.05	NA	< 0.05	101%	80%	120%				102%	60%	140%
Ethylbenzene	67987	8774069	<0.01	<0.01	NA	< 0.01	99%	80%	120%				106%	60%	140%
m&p-Xylene	67987	8774069	<0.02	<0.02	NA	< 0.02	99%	80%	120%				108%	60%	140%
o-Xylene	67987	8774069	<0.02	<0.02	NA	< 0.02	100%	80%	120%				106%	60%	140%
F1 (C6-C10)	67987	8774069	<10	<10	NA	< 10									
F1 minus BTEX (C6-C10)	67987	8774069	<10	<10	NA	< 10									
Bromofluorobenzene	67987	8774069	98	104	5.9%		103%	60%	140%				95%	60%	140%
Dibromofluoromethane	67987	8774069	98	94	4.2%		102%	60%	140%				95%	60%	140%
Toluene - d8	67987	8774069	108	107	0.9%		101%	60%	140%				95%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Volatile Organic Compounds in Soil

Chloromethane	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				83%	60%	140%
Vinyl Chloride	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				76%	60%	140%
Bromomethane	67983	8774158	<0.05	<0.05	NA	< 0.05	91%	80%	120%				110%	60%	140%
Chloroethane	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				83%	60%	140%
Trichlorofluoromethane	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				79%	70%	130%
Acetone	67983	8774158	<0.5	<0.5	NA	< 0.5	102%	80%	120%				79%	70%	130%
1,1-Dichloroethene	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				80%	70%	130%
Dichloromethane	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				85%	70%	130%
Methyl tert-butyl ether (MTBE)	67983	8774158	<0.1	<0.1	NA	< 0.1	100%	80%	120%				77%	70%	130%
2-Butanone (MEK)	67983	8774158	<0.5	<0.5	NA	< 0.5	100%	80%	120%				75%	70%	130%
trans-1,2-Dichloroethene	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				84%	70%	130%
1,1-Dichloroethane	67983	8774158	<0.05	<0.05	NA	< 0.05	101%	80%	120%				88%	70%	130%
cis-1,2-Dichloroethene	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				86%	70%	130%



Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Chloroform	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				87%	70%	130%
1,2-Dichloroethane	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				83%	70%	130%
1,1,1-Trichloroethane	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				85%	70%	130%
Carbon Tetrachloride	67983	8774158	<0.02	<0.02	NA	< 0.02	100%	80%	120%				83%	70%	130%
Benzene	67983	8774158	0.09	0.09	NA	< 0.02	100%	80%	120%				88%	70%	130%
1,2-Dichloropropane	67983	8774158	<0.05	<0.05	NA	< 0.05	102%	80%	120%				88%	70%	130%
Trichloroethene	67983	8774158	<0.01	<0.01	NA	< 0.01	100%	80%	120%				87%	70%	130%
Bromodichloromethane	67983	8774158	<0.05	<0.05	NA	< 0.05	101%	80%	120%				85%	70%	130%
trans-1,3-Dichloropropene	67983	8774158	<0.05	<0.05	NA	< 0.05	101%	80%	120%				78%	60%	140%
4-Methyl-2-pentanone (MIBK)	67983	8774158	<0.5	<0.5	NA	< 0.5	101%	80%	120%				72%	70%	130%
cis-1,3-Dichloropropene	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				81%	60%	140%
1,1,2-Trichloroethane	67983	8774158	<0.05	<0.05	NA	< 0.05	101%	80%	120%				80%	70%	130%
Toluene	67983	8774158	0.07	0.07	NA	< 0.05	100%	80%	120%				89%	70%	130%
Dibromochloromethane	67983	8774158	<0.05	<0.05	NA	< 0.05	101%	80%	120%				79%	70%	130%
Ethylene Dibromide	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				79%	70%	130%
Tetrachloroethene	67983	8774158	0.08	0.09	NA	< 0.05	100%	80%	120%				85%	70%	130%
1,1,1,2-Tetrachloroethane	67983	8774158	<0.05	<0.05	NA	< 0.05	102%	80%	120%				82%	70%	130%
Chlorobenzene	67983	8774158	0.07	0.07	NA	< 0.05	100%	80%	120%				86%	70%	130%
Ethylbenzene	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				87%	70%	130%
m&p-Xylene	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				87%	70%	130%
Bromoform	67983	8774158	<0.05	<0.05	NA	< 0.05	101%	80%	120%				73%	70%	130%
Styrene	67983	8774158	<0.05	<0.05	NA	< 0.05	101%	80%	120%				82%	70%	130%
1,1,2,2-Tetrachloroethane	67983	8774158	<0.05	<0.05	NA	< 0.05	102%	80%	120%				84%	70%	130%
o-Xylene	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				87%	70%	130%
1,3-Dichlorobenzene	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				86%	70%	130%
1,4-Dichlorobenzene	67983	8774158	<0.05	<0.05	NA	< 0.05	100%	80%	120%				87%	70%	130%
1,2-Dichlorobenzene	67983	8774158	0.07	0.08	NA	< 0.05	100%	80%	120%				88%	70%	130%
1,2,4-Trichlorobenzene	67983	8774158	0.05	0.06	NA	< 0.05	101%	80%	120%				87%	70%	130%
Bromofluorobenzene	67983	8774158	88	88	0.0%		103%	60%	140%				92%	60%	140%
Dibromofluoromethane	67983	8774158	90	92	2.2%		102%	60%	140%				97%	60%	140%
Toluene - d8	67983	8774158	95	98	3.1%		104%	60%	140%				102%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	67988	8774153	<0.005	<0.005	NA	< 0.005	101%	80%	120%				85%	50%	130%
2-Methylnaphthalene	67988	8774153	<0.005	<0.005	NA	< 0.005	98%	80%	120%				81%	50%	130%
1-Methylnaphthalene	67988	8774153	<0.005	<0.005	NA	< 0.005	101%	80%	120%				84%	50%	130%
Acenaphthylene	67988	8774153	<0.005	<0.005	NA	< 0.005	101%	80%	120%				80%	50%	130%
Acenaphthene	67988	8774153	<0.005	<0.005	NA	< 0.005	101%	80%	120%				87%	50%	130%
Fluorene	67988	8774153	<0.02	<0.02	NA	< 0.02	101%	80%	120%				84%	50%	130%



Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Phenanthrene	67988	8774153	<0.02	<0.02	NA	< 0.02	104%	80%	120%				88%	60%	130%
Anthracene	67988	8774153	<0.004	<0.004	NA	< 0.004	98%	80%	120%				82%	60%	130%
Fluoranthene	67988	8774153	<0.01	<0.01	NA	< 0.01	102%	80%	120%				88%	60%	130%
Pyrene	67988	8774153	<0.01	<0.01	NA	< 0.01	101%	80%	120%				89%	60%	130%
Benzo(a)anthracene	67988	8774153	<0.03	<0.03	NA	< 0.03	101%	80%	120%				95%	60%	130%
Chrysene	67988	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				93%	60%	130%
Benzo(b)fluoranthene	67988	8774153	<0.05	<0.05	NA	< 0.05	103%	80%	120%				90%	60%	130%
Benzo(j)fluoranthene	67988	8774153	<0.05	<0.05	NA	< 0.05	106%	80%	120%				93%	60%	130%
Benzo(k)fluoranthene	67988	8774153	<0.05	<0.05	NA	< 0.05	98%	80%	120%				84%	60%	130%
Benzo(a)pyrene	67988	8774153	<0.03	<0.03	NA	< 0.03	101%	80%	120%				90%	60%	130%
Indeno(1,2,3-c,d)pyrene	67988	8774153	<0.02	<0.02	NA	< 0.02	100%	80%	120%				83%	60%	130%
Dibenzo(a,h)anthracene	67988	8774153	<0.005	<0.005	NA	< 0.005	101%	80%	120%				83%	60%	130%
Benzo(g,h,i)perylene	67988	8774153	<0.05	<0.05	NA	< 0.05	101%	80%	120%				84%	60%	130%
Naphthalene - d8	67988	8774153	81	79	2.5%		101%	80%	120%				92%	50%	130%
2-Fluorobiphenyl	67988	8774153	86	85	1.2%		101%	80%	120%				98%	50%	130%
P-Terphenyl - d14	67988	8774153	84	88	4.7%		102%	80%	120%				101%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

AGAT Western Canada - OC Pesticides (Soil)

Aldrin	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	106%	60%	140%	80%	60%	140%	90%	60%	140%
alpha - BHC	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	89%	60%	140%	82%	60%	140%	82%	60%	140%
gamma-BHC (Lindane)	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	100%	60%	140%	70%	60%	140%	90%	60%	140%
Alpha-Chlordane	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	100%	60%	140%	90%	60%	140%	92%	60%	140%
Gamma-Chlordane	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	100%	60%	140%	88%	60%	140%	90%	60%	140%
Chlordane (Total)	8774152	8774152	< 0.007	< 0.007	NA	< 0.007	100%	60%	140%	89%	60%	140%	91%	60%	140%
DDD (o,p')	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	102%	60%	140%	94%	60%	140%	98%	60%	140%
pp'-DDD	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	104%	60%	140%	84%	60%	140%	88%	60%	140%
DDD (o,p' + p,p')	8774152	8774152	< 0.007	< 0.007	NA	< 0.007	103%	60%	140%	89%	60%	140%	93%	60%	140%
op'-DDE	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	110%	60%	140%	94%	60%	140%	98%	60%	140%
pp'-DDE	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	100%	60%	140%	102%	60%	140%	102%	60%	140%
DDE (Total)	8774152	8774152	< 0.007	< 0.007	NA	< 0.007	105%	60%	140%	98%	60%	140%	100%	60%	140%
op'-DDT	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	106%	60%	140%	104%	60%	140%	104%	60%	140%
pp'- DDT	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	119%	60%	140%	84%	60%	140%	80%	60%	140%
DDT (Total)	8774152	8774152	< 0.007	< 0.007	NA	< 0.007	112%	60%	140%	94%	60%	140%	92%	60%	140%
Endosulfan (I & II)	8774152	8774152	< 0.0013	< 0.0013	NA	< 0.0013	101%	60%	140%	78%	60%	140%	95%	60%	140%
Dieldrin	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	101%	60%	140%	90%	60%	140%	104%	60%	140%
Endrin	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	106%	60%	140%	96%	60%	140%	110%	60%	140%
Heptachlor	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	109%	60%	140%	88%	60%	140%	86%	60%	140%
Heptachlor Epoxide	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	101%	60%	140%	90%	60%	140%	102%	60%	140%
Methoxychlor	8774152	8774152	< 0.005	< 0.005	NA	< 0.005	103%	60%	140%	100%	60%	140%	102%	60%	140%

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Glycols Analysis in Soil

Propylene Glycol	146	8774137	<10	<10	NA	< 10	115%	70%	130%	106%	70%	130%	112%	60%	140%
Monoethylene Glycol	146	8774137	<10	<10	NA	< 10	115%	70%	130%	106%	70%	130%	112%	60%	140%
Diethylene Glycol	146	8774137	<10	<10	NA	< 10	115%	70%	130%	106%	70%	130%	112%	60%	140%
Triethylene Glycol	146	8774137	<10	<10	NA	< 10	109%	70%	130%	102%	70%	130%	107%	60%	140%
Tetraethylene Glycol	146	8774137	<10	<10	NA	< 10	98%	70%	130%	89%	70%	130%	96%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Polychlorinated Biphenyls Analysis - Soil

Aroclor 1242	144	8783999	<0.05	<0.05	NA	< 0.05	126%	70%	130%	93%	70%	130%	80%	50%	150%
Aroclor 1254	144	8783999	<0.05	<0.05	NA	< 0.05	118%	70%	130%	83%	70%	130%	83%	50%	150%
Aroclor 1260	144	8783999	<0.05	<0.05	NA	< 0.05	128%	70%	130%	103%	70%	130%	100%	50%	150%
Total Polychlorinated Biphenyls	144	8783999	<0.05	<0.05	NA	< 0.05	124%	70%	130%	93%	70%	130%	88%	50%	150%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Phenolic Compounds in Soil

Phenol	652	8774142	<0.0012	<0.0012	NA	< 0.0012	95%	80%	120%	104%	70%	130%	103%	60%	140%
4-Nitrophenol	652	8774142	<0.005	<0.005	NA	< 0.005	91%	80%	120%	98%	70%	130%	97%	60%	140%
m&p-Cresol	652	8774142	<0.005	<0.005	NA	< 0.005				101%	70%	130%	101%	60%	140%
o-Cresol	652	8774142	<0.005	<0.005	NA	< 0.005				101%	70%	130%	101%	60%	140%
2-Chlorophenol	652	8774142	<0.002	<0.002	NA	< 0.002	89%	80%	120%	97%	70%	130%	94%	60%	140%
2,4-Dinitrophenol	652	8774142	<0.005	<0.005	NA	< 0.005	94%	80%	120%	102%	70%	130%	103%	60%	140%
2-Nitrophenol	652	8774142	<0.005	<0.005	NA	< 0.005	85%	80%	120%	93%	70%	130%	84%	60%	140%
2,4-Dimethylphenol	652	8774142	<0.005	<0.005	NA	< 0.005	91%	80%	120%	101%	70%	130%	99%	60%	140%
2,6-Dichlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005				100%	70%	130%	96%	60%	140%
4-Chloro-3-methylphenol	652	8774142	<0.005	<0.005	NA	< 0.005	91%	80%	120%	100%	70%	130%	99%	60%	140%
2,4-Dichlorophenol	652	8774142	<0.002	<0.002	NA	< 0.002	90%	80%	120%	99%	70%	130%	94%	60%	140%
4,6-Dinitro-2-methylphenol	652	8774142	<0.005	<0.005	NA	< 0.005	106%	80%	120%	110%	70%	130%	96%	60%	140%
2,3,6-Trichlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005				99%	70%	130%	97%	60%	140%
2,3,4-Trichlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005				101%	70%	130%	92%	60%	140%
2,4,6-Trichlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005	92%	80%	120%	99%	70%	130%	94%	60%	140%
2,4,5-Trichlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005				100%	70%	130%	90%	60%	140%
2,3,5-Trichlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005				99%	70%	130%	89%	60%	140%
3,4,5-Trichlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005				100%	70%	130%	92%	60%	140%
2,3,4,6-Tetrachlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005				104%	70%	130%	101%	60%	140%
2,3,5,6-Tetrachlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005				105%	70%	130%	104%	60%	140%
2,3,4,5-Tetrachlorophenol	652	8774142	<0.005	<0.005	NA	< 0.005				104%	70%	130%	92%	60%	140%
Pentachlorophenol	652	8774142	0.113	0.112	1.0%	< 0.005	94%	80%	120%	104%	70%	130%	101%	60%	140%



Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME BTEX/F1-F4 (Soil)

Benzene	68164	8850176	<0.005	<0.005	NA	< 0.005	100%	80%	120%				100%	60%	140%
Toluene	68164	8850176	<0.05	<0.05	NA	< 0.05	98%	80%	120%				107%	60%	140%
Ethylbenzene	68164	8850176	<0.01	<0.01	NA	< 0.01	99%	80%	120%				108%	60%	140%
m&p-Xylene	68164	8850176	<0.02	<0.02	NA	< 0.02	99%	80%	120%				109%	60%	140%
o-Xylene	68164	8850176	<0.02	<0.02	NA	< 0.02	99%	80%	120%				107%	60%	140%
F1 (C6-C10)	68164	8850176	49	37	NA	< 10									
F1 minus BTEX (C6-C10)	68164	8850176	49	37	NA	< 10									
F2 (C10-C16)	68151	8830021	<20	<20	NA	< 20	97%	80%	120%				131%	60%	140%
F3 (C16-C34)	68151	8830021	<20	<20	NA	< 20	109%	80%	120%				110%	60%	140%
F4 (C34-C50)	68151	8830021	<20	<20	NA	< 20	95%	80%	120%				136%	60%	140%
Bromofluorobenzene	68164	8850176	98	102	4.0%		98%	60%	140%				96%	60%	140%
Dibromofluoromethane	68164	8850176	108	109	0.9%		97%	60%	140%				112%	60%	140%
Toluene - d8	68164	8850176	126	128	1.6%		98%	60%	140%				117%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	68151	8846746	<0.005	<0.005	NA	< 0.005	100%	80%	120%				106%	50%	130%
2-Methylnaphthalene	68151	8846746	<0.005	<0.005	NA	< 0.005	100%	80%	120%				85%	50%	130%
1-Methylnaphthalene	68151	8846746	<0.005	<0.005	NA	< 0.005	101%	80%	120%				98%	50%	130%
Acenaphthylene	68151	8846746	<0.005	<0.005	NA	< 0.005	101%	80%	120%				91%	50%	130%
Acenaphthene	68151	8846746	<0.005	<0.005	NA	< 0.005	101%	80%	120%				103%	50%	130%
Fluorene	68151	8846746	<0.02	<0.02	NA	< 0.02	101%	80%	120%				94%	50%	130%
Phenanthrene	68151	8846746	<0.02	<0.02	NA	< 0.02	96%	80%	120%				76%	60%	130%
Anthracene	68151	8846746	<0.004	<0.004	NA	< 0.004	104%	80%	120%				108%	60%	130%
Fluoranthene	68151	8846746	<0.01	<0.01	NA	< 0.01	100%	80%	120%				97%	60%	130%
Pyrene	68151	8846746	0.17	0.13	26.7%	< 0.01	100%	80%	120%				102%	60%	130%
Benzo(a)anthracene	68151	8846746	<0.03	<0.03	NA	< 0.03	100%	80%	120%				98%	60%	130%
Chrysene	68151	8846746	<0.05	<0.05	NA	< 0.05	101%	80%	120%				102%	60%	130%
Benzo(b)fluoranthene	68151	8846746	<0.05	<0.05	NA	< 0.05	112%	80%	120%				84%	60%	130%
Benzo(j)fluoranthene	68151	8846746	<0.05	<0.05	NA	< 0.05	102%	80%	120%				113%	60%	130%
Benzo(k)fluoranthene	68151	8846746	<0.05	<0.05	NA	< 0.05	89%	80%	120%				84%	60%	130%
Benzo(a)pyrene	68151	8846746	<0.03	<0.03	NA	< 0.03	101%	80%	120%				93%	60%	130%
Indeno(1,2,3-c,d)pyrene	68151	8846746	<0.02	<0.02	NA	< 0.02	100%	80%	120%				105%	60%	130%
Dibenzo(a,h)anthracene	68151	8846746	<0.005	<0.005	NA	< 0.005	101%	80%	120%				102%	60%	130%
Benzo(g,h,i)perylene	68151	8846746	<0.05	<0.05	NA	< 0.05	101%	80%	120%				108%	60%	130%
Naphthalene - d8	68151	8846746	124	111	11.1%		103%	80%	120%				98%	50%	130%
2-Fluorobiphenyl	68151	8846746	96	90	6.5%		102%	80%	120%				97%	50%	130%



Quality Assurance

CLIENT NAME: TETRA TECH EBA

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

SAMPLING SITE:

AGAT WORK ORDER: 17Y266562

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
P-Terphenyl - d14	68151	8846746	116	119	2.6%		101%	80%	120%				99%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

SAMPLING SITE:

AGAT WORK ORDER: 17Y266562

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Ultra Trace Analysis

RPT Date: Oct 31, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dioxins & Furans (Soil, WHO 2005)															
2,3,7,8-Tetra CDD	1	8774147	< 0.2	< 0.2	NA	< 0.2	78%	40%	130%	NA	40%	130%	96%	40%	130%
1,2,3,7,8-Penta CDD	1	8774147	< 0.2	< 0.2	NA	< 0.2	92%	40%	130%	NA	40%	130%	91%	40%	130%
1,2,3,4,7,8-Hexa CDD	1	8774147	< 0.1	< 0.2	NA	< 0.1	90%	40%	130%	NA	40%	130%	92%	40%	130%
1,2,3,6,7,8-Hexa CDD	1	8774147	< 0.1	< 0.2	NA	< 0.1	92%	40%	130%	NA	40%	130%	88%	40%	130%
1,2,3,7,8,9-Hexa CDD	1	8774147	< 0.1	< 0.2	NA	< 0.1	86%	40%	130%	NA	40%	130%	93%	40%	130%
1,2,3,4,6,7,8-Hepta CDD	1	8774147	< 0.1	< 0.1	NA	< 0.1	92%	40%	130%	NA	40%	130%	90%	40%	130%
Octa CDD	1	8774147	0.5	< 0.57	NA	< 0.4	96%	40%	130%	NA	40%	130%	92%	40%	130%
2,3,7,8-Tetra CDF	1	8774147	< 0.1	< 0.1	NA	< 0.1	91%	40%	130%	NA	40%	130%	88%	40%	130%
1,2,3,7,8-Penta CDF	1	8774147	< 0.2	< 0.2	NA	< 0.2	92%	40%	130%	NA	40%	130%	91%	40%	130%
2,3,4,7,8-Penta CDF	1	8774147	< 0.1	< 0.1	NA	< 0.1	93%	40%	130%	NA	40%	130%	91%	40%	130%
1,2,3,4,7,8-Hexa CDF	1	8774147	< 0.1	< 0.1	NA	< 0.1	97%	40%	130%	NA	40%	130%	95%	40%	130%
1,2,3,6,7,8-Hexa CDF	1	8774147	< 0.1	< 0.1	NA	< 0.1	93%	40%	130%	NA	40%	130%	90%	40%	130%
2,3,4,6,7,8-Hexa CDF	1	8774147	< 0.1	< 0.1	NA	< 0.1	95%	40%	130%	NA	40%	130%	98%	40%	130%
1,2,3,7,8,9-Hexa CDF	1	8774147	< 0.1	< 0.2	NA	< 0.1	98%	40%	130%	NA	40%	130%	96%	40%	130%
1,2,3,4,6,7,8-Hepta CDF	1	8774147	< 0.1	< 0.1	NA	< 0.1	96%	40%	130%	NA	40%	130%	97%	40%	130%
1,2,3,4,7,8,9-Hepta CDF	1	8774147	< 0.1	< 0.1	NA	< 0.1	99%	40%	130%	NA	40%	130%	94%	40%	130%
Octa CDF	1	8774147	0.5	0.5	0.0%	< 0.2	85%	40%	130%	NA	40%	130%	82%	40%	130%

Certified By:



Method Summary

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Arsenic	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Barium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Beryllium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cadmium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Chromium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cobalt	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Copper	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Lead	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Mercury	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Molybdenum	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Nickel	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Selenium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Silver	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Thallium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Tin	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Uranium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Vanadium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Zinc	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
pH 1:2	INOR-181-6031	BC MOE Lab Manual B (pH, Electrometric, Soil)	PH METER
Cyanide (SAD)	LAB-181-4013, INOR-181-6010	Modified from EPA 9013A and EPA 335.3	CONTINUOUS FLOW ANALYZER
Cyanide (WAD)	LAB-181-4013, INOR-181-6010	Modified from EPA 9013A and EPA 335.3	CONTINUOUS FLOW ANALYZER
Sieve Analysis - 75 microns	SOIL 0540; SOIL 0110	KROETSCH 2007; SHEPPARD 2007	SIEVE

Method Summary

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
alpha - BHC	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
gamma-BHC (Lindane)	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Alpha-Chlordane	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Gamma-Chlordane	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Chlordane (Total)	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
DDD (o,p')	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
pp'-DDD	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
DDD (o,p' + p,p')	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
op'-DDE	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
pp'-DDE	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
DDE (Total)	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
op'-DDT	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
pp'- DDT	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
DDT (Total)	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Endosulfan (I & II)	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Dieldrin	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Endrin	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Heptachlor	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Methoxychlor	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Moisture Content		MOE E3139	BALANCE
TCMX	ORG-91-5112	EPA SW-846 3541 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	EPA SW - 846 3541/8081	GC/ECD
Benzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Toluene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Ethylbenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
m&p-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
o-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
F1 (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F2 (C10-C16)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F3 (C16-C34)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F4 (C34-C50)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
Moisture	INOR-181-6030	SSMA Chapter 70 (2nd Ed)	GRAVIMETRIC
Bromofluorobenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Dibromofluoromethane	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Toluene - d8	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Propylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Monoethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Diethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Triethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Tetraethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Heptanol	TO-1410	EPA SW-846 8015	GC/FID
Phenol	TO-1200	"In house" developed method	HPLC
4-Nitrophenol	TO-1200	"In house" developed method	HPLC
m&p-Cresol	TO-1200	"In house" developed method	HPLC
o-Cresol	TO-1200	"In house" developed method	HPLC
2-Chlorophenol	TO-1200	"In house" developed method	HPLC

Method Summary

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
2,4-Dinitrophenol	TO-1200	"In house" developed method	HPLC
2-Nitrophenol	TO-1200	"In house" developed method	HPLC
2,4-Dimethylphenol	TO-1200	"In house" developed method	HPLC
2,6-Dichlorophenol	TO-1200	"In house" developed method	HPLC
4-Chloro-3-methylphenol	TO-1200	"In house" developed method	HPLC
2,4-Dichlorophenol	TO-1200	"In house" developed method	HPLC
4,6-Dinitro-2-methylphenol	TO-1200	"In house" developed method	HPLC
2,3,6-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,3,4-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,4,6-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,4,5-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,3,5-Trichlorophenol	TO-1200	"In house" developed method	HPLC
3,4,5-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,3,4,6-Tetrachlorophenol	TO-1200	"In house" developed method	HPLC
2,3,5,6-Tetrachlorophenol	TO-1200	"In house" developed method	HPLC
2,3,4,5-Tetrachlorophenol	TO-1200	"In house" developed method	HPLC
Pentachlorophenol	TO-1200	"In house" developed method	HPLC
2-Fluorophenol	TO-1200	"In house" developed method	HPLC
2,4,6-Tribromophenol	TO-1200	"In house" developed method	HPLC
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
1-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dibenzo(a,h)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
IACR CCME (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
B[a]P TPE (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Fluorobiphenyl	ORG-180-5102	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5102	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
Aroclor 1242	TO-0410	EPA SW-846 8082	GC/ECD
Aroclor 1254	TO-0410	EPA SW-846 8082	GC/ECD
Aroclor 1260	TO-0410	EPA SW-846 8082	GC/ECD
Total Polychlorinated Biphenyls	TO-0410	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	TO-0410	EPA SW-846 8082	GC/ECD
Chloromethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Vinyl Chloride	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromomethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Chloroethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Trichlorofluoromethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Acetone	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1-Dichloroethene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dichloromethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Methyl tert-butyl ether (MTBE)	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
2-Butanone (MEK)	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
trans-1,2-Dichloroethene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1-Dichloroethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
cis-1,2-Dichloroethene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Chloroform	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichloroethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,1-Trichloroethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Carbon Tetrachloride	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Benzene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloropropane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Trichloroethene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromodichloromethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
trans-1,3-Dichloropropene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
4-Methyl-2-pentanone (MIBK)	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
cis-1,3-Dichloropropene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,2-Trichloroethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Toluene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dibromochloromethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Ethylene Dibromide	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Tetrachloroethene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,1,2-Tetrachloroethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Chlorobenzene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Ethylbenzene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
m&p-Xylene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromoform	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Styrene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,2,2-Tetrachloroethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
o-Xylene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,3-Dichlorobenzene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,4-Dichlorobenzene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichlorobenzene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2,4-Trichlorobenzene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromofluorobenzene	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dibromofluoromethane	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Toluene - d8	ORG-180-5103	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ultra Trace Analysis			
2,3,7,8-Tetra CDD	HR-151-5400	EPA 1613	HRMS
1,2,3,7,8-Penta CDD	HR-151-5400	EPA 1613	HRMS
1,2,3,4,7,8-Hexa CDD	HR-151-5400	EPA 1613	HRMS
1,2,3,6,7,8-Hexa CDD	HR-151-5400	EPA 1613	HRMS
1,2,3,7,8,9-Hexa CDD	HR-151-5400	EPA 1613	HRMS
1,2,3,4,6,7,8-Hepta CDD	HR-151-5400	EPA 1613	HRMS
Octa CDD	HR-151-5400	EPA 1613	HRMS
2,3,7,8-Tetra CDF	HR-151-5400	EPA 1613	HRMS
1,2,3,7,8-Penta CDF	HR-151-5400	EPA 1613	HRMS
2,3,4,7,8-Penta CDF	HR-151-5400	EPA 1613	HRMS
1,2,3,4,7,8-Hexa CDF	HR-151-5400	EPA 1613	HRMS
1,2,3,6,7,8-Hexa CDF	HR-151-5400	EPA 1613	HRMS
2,3,4,6,7,8-Hexa CDF	HR-151-5400	EPA 1613	HRMS
1,2,3,7,8,9-Hexa CDF	HR-151-5400	EPA 1613	HRMS
1,2,3,4,6,7,8-Hepta CDF	HR-151-5400	EPA 1613	HRMS
1,2,3,4,7,8,9-Hepta CDF	HR-151-5400	EPA 1613	HRMS
Octa CDF	HR-151-5400	EPA 1613	HRMS
Total Tetrachlorodibenzodioxins	HR-151-5400	EPA 1613	HRMS
Total Pentachlorodibenzodioxins	HR-151-5400	EPA 1613	HRMS
Total Hexachlorodibenzodioxins	HR-151-5400	EPA 1613	HRMS
Total Heptachlorodibenzodioxins	HR-151-5400	EPA 1613	HRMS
Total PCDDs	HR-151-5400	EPA 1613	HRMS
Total Tetrachlorodibenzofurans	HR-151-5400	EPA 1613	HRMS
Total Pentachlorodibenzofurans	HR-151-5400	EPA 1613	HRMS
Total Hexachlorodibenzofurans	HR-151-5400	EPA 1613	HRMS
Total Heptachlorodibenzofurans	HR-151-5400	EPA 1613	HRMS
Total PCDFs	HR-151-5400	EPA 1613	HRMS
2,3,7,8-Tetra CDD (TEF 1.0)	HR-151-5400	EPA 1613	HRMS
1,2,3,7,8-Penta CDD (TEF 1.0)	HR-151-5400	EPA 1613	HRMS
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	HR-151-5400	EPA 1613	HRMS
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	HR-151-5400	EPA 1613	HRMS
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	HR-151-5400	EPA 1613	HRMS
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	HR-151-5400	EPA 1613	HRMS
Octa CDD (TEF 0.0003)	HR-151-5400	EPA 1613	HRMS
2,3,7,8-Tetra CDF (TEF 0.1)	HR-151-5400	EPA 1613	HRMS
1,2,3,7,8-Penta CDF (TEF 0.03)	HR-151-5400	EPA 1613	HRMS
2,3,4,7,8-Penta CDF (TEF 0.3)	HR-151-5400	EPA 1613	HRMS
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	HR_151-5400	EPA 1613	HRMS
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	HR-151-5400	EPA 1613	HRMS
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	HR-151-5400	EPA 1613	HRMS
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	HR-151-5400	EPA 1613	HRMS
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	HR-151-5400	EPA 1613	HRMS
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	HR-151-5400	EPA 1613	HRMS
Octa CDF (TEF 0.0003)	HR-151-5400	EPA 1613	HRMS
Total PCDDs and PCDFs (TEQ)	HR-151-5400	EPA 1613	HRMS
13C-2378-TCDF	HR-151-5400	EPA 1613	HRMS
13C-12378-PeCDF	HR-151-5400	EPA 1613	HRMS
13C-23478-PeCDF	HR-151-5400	EPA 1613	HRMS
13C-123478-HxCDF	HR-151-5400	EPA 1613	HRMS

Method Summary

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y266562

PROJECT: 704-ENW.WENW03039-02 Task 002.2.3

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
13C-123678-HxCDF	HR-151-5400	EPA 1613	HRMS
13C-234678-HxCDF	HR-151-5400	EPA 1613	HRMS
13C-123789-HxCDF	HR-151-5400	EPA 1613	HRMS
13C-1234678-HpCDF	HR-151-5400	EPA 1613	HRMS
13C-1234789-HpCDF	HR-151-5400	EPA 1613	HRMS
13C-2378-TCDD	HR-151-5400	EPA 1613	HRMS
13C-12378-PeCDD	HR-151-5400	EPA 1613	HRMS
13C-123478-HxCDD	HR-151-5400	EPA 1613	HRMS
13C-123678-HxCDD	HR-151-5400	EPA 1613	HRMS
13C-1234678-HpCDD	HR-151-5400	EPA 1613	HRMS
13C-OCDD	HR-151-5400	EPA 1613	HRMS



AGAT

Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6
webearth.agatlabs.com

Laboratory Use Only

Arrival Temperature: 6°CAGAT Job Number: 17426562Notes: SEP 29 04:11:44

Chain of Custody Record

P: 778.452.4000 • F: 778.452.4074

Report Information

Company: Tetra Tech
Contact: Ryan Martin/Tania Perzoff
Address: 61 Wasson PI
Whitehorse, YT Y1A 0H7
Phone: 867-668-9221 Fax: _____
AGAT Quote #: _____
Client Project #: 704-ENW.WENW03039-02

Report Information

1. Name: Ryan Martin
Email: ryan.martin@tetrattech.com
2. Name: Jordan Wakefield
Email: jordan.wakefield@tetrattech.com

Report Format

☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included

Requirements (Please Check)

☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL

Schedule 11 (Please Specify) _____

CCME (Please Specify) _____

Other (Please Specify) Test

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/A/E#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	BTEX F1 to F4	VOCs	PAHs	MEALS	GLYCOLS	PCBS	GRAIN SIZE	CYANIDE	TOX	pH	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
<u>871422</u>	<u>17A31BH1-1</u>	<u>SOIL</u>	<u>SEPT 23/17</u>		X	X	X	X	X	X	X	X	X		5			
<u>24</u>	<u>17A31BH1-2</u>				X		X					X	X		5			
<u>15</u>	<u>17A31BH1-3</u>				X		X				X				5			
<u>27</u>	<u>17A16BH2-1</u>														5			
<u>28</u>	<u>17A16BH2-2</u>				X	X	X	X							5			
<u>29</u>	<u>17A16BH2-3</u>														5			
<u>30</u>	<u>17A16BH2-4</u>														5			
<u>32</u>	<u>17A16BH2-5</u>														5			
<u>33</u>	<u>17A16BH2-6</u>				X	X	X	X							5			
<u>34</u>	<u>17A16BH DUPI</u>				X			X							5			
<u>35</u>	<u>17A10BH1-1</u>				X	X	X	X		X	X	X	X		5			

Samples Relinquished By (Print Name and Sign):

Mike Gallo

Date/Time

Sep 23/17

Samples Received By (Print Name and Sign):

Ann De

Date/Time

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Page 1 of 3

V112851



AGAT

Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6
webearth.agatlabs.com

Laboratory Use Only

Arrival Temperature: 6.4
AGAT Job Number: 174266562

Notes:

SEP 29 04:10:44

Chain of Custody Record

P: 778.452.4000 - F: 778.452.4074

Report Information

Company: Tetra Tech
Contact: Ryan Martin/Tania Perzoff
Address: 61 Wasson Pl
Whitehorse, YT Y1A 0H7
Phone: 867-668-9221 Fax: _____
AGAT Quote #: _____
Client Project #: 704-ENW.WENW03039-02

Report Information

1. Name: Ryan Martin
Email: ryan.martin@tetrattech.com
2. Name: Jordan Wakefield
Email: jordan.wakefield@tetrattech.com

Report Format

- ☐ Single
☐ Sample per page
☐ Multiple
☐ Samples per page
☐ Excel Format Included

Requirements (Please Check)

- ☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL

Schedule 11 (Please Specify)

CCME (Please Specify) _____

Other (Please Specify) Tier 1

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/A/E#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	BTEX P1-P4	VOCs	PAHs	METALS	GLYCOLS	PCBS	GRAIN SIZE	TOC	CYANIDE	DIOLINES & FURANS	PICNOLs	PESTICIDES	PH	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
8774137	17A10BH1-2	SOIL	SEP 22/2017		X		X	X											G		
39	17A10BH1-3		SEP 22/2017		X		X	X											G		
40	17A2BH1-1		SEP 24/2017		X	X	X	X	X										G		
41	17A2BH1-2				X	X	X	X	X										G		
42	17A2BH1-3				X	X	X	X	X	X	X	X	X	X	X	X	X		G		
43	17A2BH1-4				X	X	X	X	X										G		
44	17A2BH2-1				X	X	X	X	X	X	X	X	X	X	X	X			G		
45	17A2BH2-2				X	X	X	X	X										G		
46	17A2BH3-1				X	X	X	X	X										G		
47	17A2BH3-2				X	X	X	X	X				X	X	X	X			G		
48	17A2BH DUP1				X	X	X	X	X				X	X	X	X			G		

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Date/Time

Date/Time

Date/Time

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

Date/Time

Date/Time

Page 2 of 3

V112852



Laboratory Use Only

Arrival Temperature: 6°C

AGAT Job Number: 7426562

Notes: SEP 28 01:04

Chain of Custody Record

P: 778.452.4000 • F: 778.452.4074

Report Information

Company: Tetra Tech
Contact: Ryan Martin/Tania Perzoff
Address: 61 Wasson Pl
Whitehorse, YT Y1A 0H7
Phone: 867-668-9221 Fax: _____
AGAT Quote #: _____
Client Project #: 704-ENW.WENW0309-02

Report Information

1. Name: Ryan Martin
Email: ryan.martin@tetrattech.com
2. Name: Jordan Wakefield
Email: jordan.wakefield@tetrattech.com

Report Format

- ☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included

Requirements (Please Check)

- ☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL

Schedule 11 (Please Specify)

CCME (Please Specify) _____

Other (Please Specify) None

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	BTEX	VOCs	PHALs	METALS	GLYCOL	PCBs	GRANULS	TOC	CYNANIDE	DIOXIN	PHENOL	PESTICIDE	pH	EXTRACT	EXTRACT	NUMBER OF	PRESERVED	HAZARDOUS	Hold for: ☐	
877449	17A4BH1-1	SOIL	SEPT 24/17																		5			
50	17A4BH1-2	↓	↓																		5			
51	17A3BH1-1	↓	↓																		6			
52	17A3BH1-2	↓	↓			X	X	X	X	X	X	X	X	X	X	X	X	X	X		6			
53	17A3BH1-3	↓	↓			X	X	X	X			X	X	X	X	X	X				6			
54	17A3BH2-1	SOIL	SEP 25/17			X	X	X	X			X	X		X	X	X				6			
55	17A3BH2-2	↓	↓			X	X	X	X	X	X	X	X	X	X	X	X				6			
56	17A3BH2-3	↓	↓			X	X	X	X	X		X	X	X	X	X	X				6			
57	17A3BH2-4	↓	↓			X	X	X	X			X			X	X	X				7			
58	17A3BH4-1	↓	↓			X	X	X	X	X		X	X	X	X	X					8			
59	17A3BH4-2	↓	↓									X	X	X	X	X					8			
																	X	X		8				

Samples Relinquished By (Print Name and Sign): <u>Mike Gallo</u>	Date/Time: <u>SEP 24/17</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date/Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date/Time: _____	Samples Received By (Print Name and Sign): _____	Date/Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date/Time: _____	Samples Received By (Print Name and Sign): _____	Date/Time: _____

Page 3 of 3

V112853

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech
 Courier: 28704064056 AN ☒ Prepaid ☐ Collect
 Waybill# 28704064056
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 If multiple sites were submitted at once: Yes ☐ No ☐
 Custody Seal Intact: ☒ Yes ☐ No ☐ NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 8

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes ☐ No ☐
 Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*
 Earliest Expiry: _____
 Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
 Legal Samples: Yes No
 International Samples: Yes No
 Tape Sealed: Yes No
 Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 100.6 + 9.92 = 9.6 °C ☒ 2 (Bottle/Jar) _____ + _____ = _____ °C
 3 (Bottle/Jar) _____ + _____ = _____ °C 4 (Bottle/Jar) _____ + _____ = _____ °C
 5 (Bottle/Jar) _____ + _____ = _____ °C 6 (Bottle/Jar) _____ + _____ = _____ °C
 7 (Bottle/Jar) _____ + _____ = _____ °C ☒ 8 (Bottle/Jar) 26 + SE 6.4 = 9.4 °C
 9 (Bottle/Jar) _____ + _____ = _____ °C 10 (Bottle/Jar) _____ + _____ = _____ °C

(If more than 10 coolers are received use another sheet of paper and attach) All sample came out of cooler

LOGISTICS USE ONLY

Workorder No: _____
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Account Project Manager: _____ have they been notified of the above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____
 General Comments: _____



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 174266562

RECEIVING BASICS:

Received From: Novex #2

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 8 Containers: 188

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Sep 23, 2017

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) $5 + 5 + 5 = 5^{\circ}\text{C}$ (2) $6 + 6 + 6 = 6^{\circ}\text{C}$ (3) $6 + 5 + 5 = 5^{\circ}\text{C}$ (4) $5 + 5 + 6 = 5^{\circ}\text{C}$

Was ice or ice pack present: ☒ Yes ☐ No

Integrity Issues:

5) $6 + 6 + 6 = 6$ 6) $5 + 6 + 5 = 5$

7) $6 + 7 + 6 = 6$ 8) $5 + 5 + 5 = 5$

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____

Date and Time: _____

ADDITIONAL NOTES:

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Ryan Martin, Tania Perzoff

PROJECT: 704-ENW.WENW03039-02

AGAT WORK ORDER: 17Y266934

MICROBIOLOGY ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

TRACE ORGANICS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

WATER ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

DATE REPORTED: Oct 16, 2017

PAGES (INCLUDING COVER): 27

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 0°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Total Coliforms and E.Coli by Enzyme Substrate

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-02

		SAMPLE DESCRIPTION:		17A2SW1	17A2SW2	Trip Blank
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8777474	8777477	8777480
Total Coliforms	MPN/100mL	1	29.2	7.5	<1	
Escherichia Coli (E.coli)	MPN/100mL	1	1	<1	<1	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-06

		SAMPLE DESCRIPTION:		17A2SW1	17A2SW2	Trip Blank
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8777474	8777477	8777480
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L	100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L	100	<100	<100	<100	<100
F2 (C10-C16)	µg/L	100	<100	<100	<100	<100
F3 (C16-C34)	µg/L	100	<100	<100	<100	<100
F4 (C34-C50)	µg/L	100	<100	<100	<100	<100
Total Xylenes	ug/L	1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits				
Bromofluorobenzene	%	70-130	92	93	91	
Dibromofluoromethane	%	70-130	104	104	104	
Toluene - d8	%	70-130	99	99	98	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8777474-8777480 The F1 (C6 - C10) fraction is determined by integrating the FID chromatogram from the beginning of the n-C6 peak to the apex of the last n-C10 peak.

The C6 - C10 fraction is calculated from the FID toluene response factor.

Quality control for the calibration follows the guidelines set out in the CCME Contaminated Sites Method for Soils.

The (F1 minus BTEX) has been calculated by subtracting the BTEX concentration from Fraction 1.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Glycols Analysis in Water

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-06

		SAMPLE DESCRIPTION:		17A2SW1	17A2SW2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8777474	8777477
Propylene Glycol	mg/L		10	<10	<10
Monoethylene Glycol	mg/L		10	<10	<10
Diethylene Glycol	mg/L		5	<5	<5
Triethylene Glycol	mg/L		10	<10	<10
Tetraethylene Glycol	mg/L		10	<10	<10
Surrogate	Unit	Acceptable Limits			
Heptanol	%	50-150	95	94	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8777474-8777477 Identification based on retention time relative to standards.

Analysis performed at AGAT Calgary.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Water Low Level

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-04

		SAMPLE DESCRIPTION:		17A2SW1	17A2SW2	Trip Blank
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8777474	8777477	8777480
Naphthalene	µg/L		0.05	<0.05	<0.05	<0.05
Quinoline	µg/L		0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L		0.02	<0.02	<0.02	<0.02
Acenaphthene	µg/L		0.02	<0.02	<0.02	<0.02
Fluorene	µg/L		0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/L		0.04	<0.04	<0.04	<0.04
Anthracene	µg/L		0.01	<0.01	<0.01	<0.01
Acridine	µg/L		0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/L		0.02	<0.02	<0.02	<0.02
Pyrene	µg/L		0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	µg/L		0.01	<0.01	<0.01	<0.01
Chrysene	µg/L		0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L		0.01	<0.01	<0.01	<0.01
Benzo(j)fluoranthene	µg/L		0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	µg/L		0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	µg/L		0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L		0.01	<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	µg/L		0.01	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L		0.01	<0.01	<0.01	<0.01
Benzo(b+j)fluoranthene	µg/L		0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits				
Naphthalene - d8	%	50-130	84	91	83	
2-Fluorobiphenyl	%	50-130	85	93	84	
P-Terphenyl - d14	%	60-130	85	90	90	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polychlorinated Biphenyls Analysis - Water

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-06

		SAMPLE DESCRIPTION:		17A2SW1	17A2SW2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8777474	8777477
Aroclor 1242	µg/L		0.009	<0.009	<0.009
Aroclor 1254	µg/L		0.009	<0.009	<0.009
Aroclor 1260	µg/L		0.009	<0.009	<0.009
Total Polychlorinated Biphenyls	µg/L		0.009	<0.009	<0.009
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	50-150	80	75	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8777474-8777477 Analysis performed at AGAT Calgary.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Anions and Nutrients

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-05

		SAMPLE DESCRIPTION:		17A2SW1	17A2SW2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8777474	8777477
Chloride	mg/L		0.05	0.10	0.09
Nitrate-N	mg/L		0.005	0.138	0.141
Nitrite-N	mg/L		0.005	<0.005	<0.005
Sulphate	mg/L		0.5	3.9	4.0
Fluoride	mg/L		0.02	0.03	0.03
Bromide	mg/L		0.05	<0.05	<0.05
Ammonia-N	mg/L		0.01	<0.01	<0.01
Nitrogen - Total	mg/L		0.05	0.12	0.13
Phosphorus Total	mg/L		0.005	0.006	0.006

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Biochemical Oxygen Demand						
DATE RECEIVED: 2017-09-30				DATE REPORTED: 2017-10-07		
		SAMPLE DESCRIPTION:		17A2SW1	17A2SW2	Trip Blank
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8777474	8777477	8777480
BOD (5 day)	mg/L	4	<4	<4	<4	<4

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

British Columbia CSR - Schedule 6 Total Metals

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-06

Parameter	Unit	SAMPLE DESCRIPTION:		17A2SW1	17A2SW2	Trip Blank
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29	2017-09-29
		G / S	RDL	8777474	8777477	8777480
Aluminum Total	µg/L		5	<5	<5	<5
Antimony Total	µg/L		0.5	<0.5	<0.5	<0.5
Arsenic Total	µg/L		0.1	0.5	0.4	<0.1
Barium Total	µg/L		0.5	44.0	42.5	<0.5
Beryllium Total	µg/L		0.05	<0.05	<0.05	<0.05
Boron Total	µg/L		5	<5	<5	<5
Cadmium Total	µg/L		0.01	<0.01	<0.01	<0.01
Calcium Total	µg/L		50	31000	31400	<50
Chromium Total	µg/L		0.5	<0.5	<0.5	<0.5
Cobalt Total	µg/L		0.05	<0.05	<0.05	<0.05
Copper Total	µg/L		0.5	0.8	0.9	<0.5
Iron Total	µg/L		10	11	<10	<10
Lead Total	µg/L		0.05	<0.05	<0.05	<0.05
Lithium Total	µg/L		0.5	1.2	1.1	<0.5
Magnesium Total	µg/L		50	11200	11200	<50
Manganese Total	µg/L		1	<1	<1	<1
Mercury Total	µg/L		0.01	<0.01	<0.01	<0.01
Molybdenum Total	µg/L		0.1	0.3	0.3	<0.1
Nickel Total	µg/L		0.5	<0.5	<0.5	<0.5
Potassium Total	µg/L		100	559	513	<100
Selenium Total	µg/L		0.5	<0.5	<0.5	<0.5
Silver Total	µg/L		0.02	<0.02	<0.02	<0.02
Sodium Total	µg/L		100	150	155	<100
Thallium Total	µg/L		0.02	<0.02	<0.02	<0.02
Titanium Total	µg/L		1	<1	<1	<1
Uranium Total	µg/L		0.01	0.55	0.56	<0.01
Vanadium Total	µg/L		1	<1	<1	<1
Zinc Total	µg/L		5	<5	<5	<5
Total Hardness (calc)	ug CaCO3/L		100	124000	125000	<100

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

British Columbia CSR - Schedule 6 Total Metals

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-06

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



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AGAT WORK ORDER: 17Y266934

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Cyanide Weak Acid Dissociable (WAD)

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-04

		SAMPLE DESCRIPTION:		17A2SW1	17A2SW2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8777474	8777477
Cyanide (WAD)	mg/L		0.002	<0.002	<0.002

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Cyanide, Strong Acid Dissociable (SAD)

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-04

		SAMPLE DESCRIPTION:		17A2SW1	17A2SW2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8777474	8777477
Cyanide (SAD)	mg/L		0.002	<0.002	<0.002

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Nutrients

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-05

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2017-09-29
Parameter	Unit	G / S	RDL	8777480
Nitrogen - Total	mg/L		0.05	<0.05
Phosphorus Total	mg/L		0.005	0.006

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Physical Tests Package

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-05

Parameter	Unit	SAMPLE DESCRIPTION:		17A2SW1	17A2SW2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29
		G / S	RDL	8777474	8777477
pH	pH units		0.01	7.93	7.92
Electrical Conductivity	uS/cm		1	226	225
Total Dissolved Solids	mg/L		5	130	125
Total Suspended Solids	mg/L		2	5	3
Alkalinity (pH 4.5)	mg CaCO3/L		1	118	117

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8777474-8777477 Literature holding time exceeded for pH analysis.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y266934

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Total Suspended Solids in Water

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-05

SAMPLE DESCRIPTION: Trip Blank

SAMPLE TYPE: Water

DATE SAMPLED: 2017-09-29

Parameter	Unit	G / S	RDL	
Total Suspended Solids	mg/L	2	6	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y266934
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME BTEX/F1-F4 (Water)

Benzene	68027	8777474	<0.5	<0.5	NA	< 0.5	100%	80%	120%				91%	70%	130%
Ethylbenzene	68027	8777474	<0.5	<0.5	NA	< 0.5	99%	80%	120%				92%	70%	130%
Toluene	68027	8777474	<0.5	<0.5	NA	< 0.5	107%	80%	120%				90%	70%	130%
m&p-Xylene	68027	8777474	<0.5	<0.5	NA	< 0.5	99%	80%	120%				93%	70%	130%
o-Xylene	68027	8777474	<0.5	<0.5	NA	< 0.5	99%	80%	120%				93%	70%	130%
F1 (C6-C10)	68027	8777474	<100	<100	NA	< 100									
F1 minus BTEX (C6-C10)	68027	8777474	<100	<100	NA	< 100									
F2 (C10-C16)	67989	W-MS1	6040	6000	0.7%	< 100	103%	80%	120%				85%	70%	130%
F3 (C16-C34)	67989	W-MS1	18900	18600	1.6%	< 100	115%	80%	120%				83%	70%	130%
F4 (C34-C50)	67989	W-MS1	4400	4380	0.5%	< 100	101%	80%	120%				83%	70%	130%
Bromofluorobenzene	68027	8777474	92	92	0.0%		100%	70%	130%				101%	70%	130%
Dibromofluoromethane	68027	8777474	104	103	1.0%		99%	70%	130%				101%	70%	130%
Toluene - d8	68027	8777474	99	98	1.0%		104%	70%	130%				96%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Water Low Level

Naphthalene	67989	W-MS1	0.47	0.45	4.3%	< 0.05	100%	80%	120%				98%	50%	130%
Quinoline	67989	W-MS1	0.4	0.5	NA	< 0.1	100%	80%	120%				98%	50%	130%
Acenaphthylene	67989	W-MS1	0.46	0.45	2.2%	< 0.02	100%	80%	120%				93%	50%	130%
Acenaphthene	67989	W-MS1	0.45	0.45	0.0%	< 0.02	99%	80%	120%				90%	50%	130%
Fluorene	67989	W-MS1	0.49	0.47	4.2%	< 0.02	100%	80%	120%				98%	50%	130%
Phenanthrene	67989	W-MS1	0.46	0.42	9.1%	< 0.04	100%	80%	120%				94%	60%	130%
Anthracene	67989	W-MS1	0.47	0.44	6.6%	< 0.01	101%	80%	120%				95%	60%	130%
Acridine	67989	W-MS1	0.48	0.51	6.1%	< 0.05	99%	80%	120%				96%	50%	130%
Fluoranthene	67989	W-MS1	0.47	0.43	8.9%	< 0.02	101%	80%	120%				96%	60%	130%
Pyrene	67989	W-MS1	0.50	0.45	10.5%	< 0.02	101%	80%	120%				100%	60%	130%
Benzo(a)anthracene	67989	W-MS1	0.44	0.44	0.0%	< 0.01	101%	80%	120%				90%	60%	130%
Chrysene	67989	W-MS1	0.48	0.47	2.1%	< 0.01	101%	80%	120%				98%	60%	130%
Benzo(b)fluoranthene	67989	W-MS1	0.44	0.45	2.2%	< 0.01	94%	80%	120%				89%	60%	130%
Benzo(j)fluoranthene	67989	W-MS1	0.49	0.47	4.2%	< 0.01	100%	80%	120%				98%	60%	130%
Benzo(k)fluoranthene	67989	W-MS1	0.44	0.44	0.0%	< 0.01	107%	80%	120%				89%	60%	130%
Benzo(a)pyrene	67989	W-MS1	0.46	0.45	2.2%	< 0.01	102%	80%	120%				93%	60%	130%
Indeno(1,2,3-c,d)pyrene	67989	W-MS1	0.43	0.43	0.0%	< 0.01	100%	80%	120%				88%	60%	130%
Dibenzo(a,h)anthracene	67989	W-MS1	0.44	0.40	9.5%	< 0.01	100%	80%	120%				88%	60%	130%
Benzo(g,h,i)perylene	67989	W-MS1	0.45	0.46	2.2%	< 0.01	100%	80%	120%				91%	60%	130%
Naphthalene - d8	67989	W-MS1	95	87	8.8%		101%	80%	120%				95%	50%	130%
2-Fluorobiphenyl	67989	W-MS1	99	90	9.5%		101%	80%	120%				99%	50%	130%
P-Terphenyl - d14	67989	W-MS1	102	87	15.9%		101%	80%	120%				102%	60%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y266934
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polychlorinated Biphenyls Analysis - Water

Aroclor 1242	143	8773621	<0.009	<0.009	NA	< 0.009	94%	70%	130%	95%	70%	130%	133%	50%	150%
Aroclor 1254	143	8773621	<0.009	<0.009	NA	< 0.009	112%	70%	130%	125%	70%	130%	143%	50%	150%
Aroclor 1260	143	8773621	<0.009	<0.009	NA	< 0.009	126%	70%	130%	117%	70%	130%	138%	50%	150%
Total Polychlorinated Biphenyls	143	8773621	<0.009	<0.009	NA	< 0.009	111%	70%	130%	112%	70%	130%	138%	50%	150%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Glycols Analysis in Water

Propylene Glycol	145	8779187	<10	<10	NA	< 10	110%	70%	130%	119%	70%	130%	95%	60%	140%
Monoethylene Glycol	145	8779187	<10	<10	NA	< 10	112%	70%	130%	121%	70%	130%	95%	60%	140%
Diethylene Glycol	145	8779187	<5	<5	NA	< 5	110%	70%	130%	120%	70%	130%	94%	60%	140%
Triethylene Glycol	145	8779187	<10	<10	NA	< 10	108%	70%	130%	118%	70%	130%	93%	60%	140%
Tetraethylene Glycol	145	8779187	<10	<10	NA	< 10	106%	70%	130%	113%	70%	130%	91%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y266934
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Water Analysis															
RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

British Columbia CSR - Schedule 6 Total Metals

Aluminum Total	8777588		29	27	7.1%	< 5	90%	85%	115%	91%	90%	110%
Antimony Total	8777588		<0.5	<0.5	NA	< 0.5	90%	85%	115%	103%	90%	110%
Arsenic Total	8777588		1.6	1.4	13.3%	< 0.1	90%	85%	115%	101%	90%	110%
Barium Total	8777588		25.6	22.5	12.7%	< 0.5	90%	85%	115%	109%	90%	110%
Beryllium Total	8777588		<0.05	<0.05	NA	< 0.05	102%	85%	115%	103%	90%	110%
Boron Total	8777588		53	55	3.7%	< 5	111%	85%	115%	102%	90%	110%
Cadmium Total	8777588		<0.01	<0.01	NA	< 0.01	92%	85%	115%	98%	90%	110%
Calcium Total	8777588		121000	120000	0.6%	< 50	101%	85%	115%	103%	90%	110%
Chromium Total	8777588		<0.5	<0.5	NA	< 0.5	108%	85%	115%	103%	90%	110%
Cobalt Total	8777588		<0.05	<0.05	NA	< 0.05	111%	85%	115%	106%	90%	110%
Copper Total	8777588		0.9	0.7	NA	< 0.5	111%	85%	115%	107%	90%	110%
Iron Total	8777588		34	29	NA	< 10	114%	85%	115%	103%	90%	110%
Lead Total	8777588		<0.05	<0.05	NA	< 0.05	109%	85%	115%	97%	90%	110%
Lithium Total	8777588		6.4	5.5	14.8%	< 0.5				107%	90%	110%
Magnesium Total	8777588		33600	33500	0.3%	< 50	109%	85%	115%	104%	90%	110%
Manganese Total	8777588		1	1	NA	< 1	112%	85%	115%	105%	90%	110%
Mercury Total	8781451		<0.01	<0.01	NA	< 0.01	99%	85%	115%	100%	90%	110%
Molybdenum Total	8777588		1.3	1.2	6.6%	< 0.1	97%	85%	115%	99%	90%	110%
Nickel Total	8777588		<0.5	<0.5	NA	< 0.5	110%	85%	115%	106%	90%	110%
Potassium Total	8777588		769	770	0.1%	< 100	97%	85%	115%	92%	90%	110%
Selenium Total	8777588		<0.5	<0.5	NA	< 0.5	91%	85%	115%	97%	90%	110%
Silver Total	8777588		<0.02	<0.02	NA	< 0.02				91%	90%	110%
Sodium Total	8777588		2290	2290	0.0%	< 100	101%	85%	115%	96%	90%	110%
Thallium Total	8777588		0.04	0.02	NA	< 0.02	97%	85%	115%	95%	90%	110%
Titanium Total	8777588		1	1	NA	< 1				100%	90%	110%
Uranium Total	8777588		1.10	1.05	4.1%	< 0.01	97%	85%	115%	92%	90%	110%
Vanadium Total	8777588		<1	<1	NA	< 1	109%	85%	115%	106%	90%	110%
Zinc Total	8777588		<5	<5	NA	< 5	102%	85%	115%	105%	90%	110%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Biochemical Oxygen Demand

BOD (5 day)	8777175		<4	<4	NA	< 4	77%	70%	130%	99%	85%	115%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide Weak Acid Dissociable (WAD)

Cyanide (WAD)	8771101		0.007	0.007	NA	< 0.002	111%	70%	130%	105%	90%	110%	110%	80%	120%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide, Strong Acid Dissociable (SAD)

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y266934
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Water Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Cyanide (SAD)	8771101		0.014	0.015	6.9%	< 0.002	105%	85%	115%	90%	90%	110%	100%	80%	120%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Anions and Nutrients

Chloride	8777474	8777474	0.10	0.09	NA	< 0.05	105%	90%	110%	100%	90%	110%			
Nitrate-N	8777474	8777474	0.138	0.138	0.6%	< 0.005	100%	90%	110%	100%	90%	110%			
Nitrite-N	8777474	8777474	<0.005	<0.005	NA	< 0.005				102%	90%	110%			
Sulphate	8777474	8777474	3.9	3.9	0.5%	< 0.5	98%	90%	110%	104%	90%	110%			
Fluoride	8777474	8777474	0.03	0.03	NA	< 0.02	99%	85%	115%	99%	90%	110%			
Bromide	8777474	8777474	<0.05	<0.05	NA	< 0.05	106%	85%	115%	104%	90%	110%			
Ammonia-N	8771570		<0.01	<0.01	NA	< 0.01	102%	85%	115%	98%	90%	110%			
Nitrogen - Total	8777249		0.97	0.97	0.3%	< 0.05	89%	85%	115%	104%	90%	110%			
Phosphorus Total	8773187		0.040	0.041	2.5%	< 0.005	100%	85%	115%	99%	90%	110%	84%	80%	120%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Physical Tests Package

pH	8777247		7.83	7.92	1.1%		100%	95%	105%						
Electrical Conductivity	8777247		976	975	0.1%	< 1	96%	90%	110%						
Total Dissolved Solids	8772993		272	258	5.7%	< 5				110%	85%	115%			
Total Suspended Solids	8772993		3	3	NA	< 2				108%	80%	120%			
Alkalinity (pH 4.5)	8777247		174	174	0.1%	< 1	90%	90%	110%						

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:



Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y266934
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Total Coliforms	MIC-181-7004	SM 9223B	INCUBATOR
Escherichia Coli (E.coli)	MIC-181-7004	SM 9223B	INCUBATOR

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y266934
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Ethylbenzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Toluene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
m&p-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
o-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
F1 (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F2 (C10-C16)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F3 (C16-C34)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F4 (C34-C50)	ORG-180-5134	CCME Tier 1 Method	GC/FID
Bromofluorobenzene			GC/MS
Dibromofluoromethane			GC/MS
Toluene - d8			GC/MS
Propylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Monoethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Diethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Triethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Tetraethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Heptanol	TO-1410	EPA SW-846 8015	GC/FID
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Quinoline	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acridine	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y266934
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dibenzo(a,h)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8			GC/MS
2-Fluorobiphenyl	ORG-180-5133	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Aroclor 1242	TO-0400	EPA SW-846 8082	GC/ECD
Aroclor 1254	TO-0400	EPA SW-846 8082	GC/ECD
Aroclor 1260	TO-0400	EPA SW-846 8082	GC/ECD
Total Polychlorinated Biphenyls	TO-0400	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	TO-0400	EPA SW-846 8082	GC/ECD

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y266934
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Chloride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia-N	INOR-181-6001	Modified from SM 4500-NH3 G	CONTINUOUS FLOW ANALYZER
Nitrogen - Total	INOR-181-6006	Modified from SM 4500-N	COMBUSTION
Phosphorus Total	INOR-181-6011	Modified from SM 4500-P B&E	SPECTROPHOTOMETER
BOD (5 day)	INOR-181-6032	Modified from SM 5210 B	PC TITRATE
Aluminum Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Antimony Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Arsenic Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Barium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Beryllium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Boron Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Cadmium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Calcium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Chromium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Cobalt Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Copper Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Iron Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Lead Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Lithium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Magnesium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Manganese Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Mercury Total	MET-181-6103	Modified from EPA 245.7	CV/AA
Molybdenum Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Nickel Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Potassium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Selenium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Silver Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y266934
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Sodium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Thallium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Titanium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Uranium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Vanadium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Zinc Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Cyanide (WAD)	INOR-181-6010	EPA 335.3	CONTINUOUS FLOW ANALYZER
Cyanide (SAD)	INOR-181-6010	EPA 335.3	CONTINUOUS FLOW ANALYZER
pH	INOR-181-6000	Modified from SM 4500-H+	PH METER
Electrical Conductivity	INOR-181-6000	Modified from SM 2510 B	PC TITRATE
Total Dissolved Solids	INOR-181-6007	SM 2540 C, D & E	GRAVIMETRIC
Total Suspended Solids	INOR-181-6007	SM 2540 C, D & E	GRAVIMETRIC
Alkalinity (pH 4.5)	INOR-181-6000	Modified from SM 2320 B	PC TITRATE



120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6
webearth.agatlabs.com

Arrival Temperature: 0°C
AGAT Job Number: 1742669361

SEP 30 1994

P: 778.452.4000 • F: 778.452.4074

V112767



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 174266934

RECEIVING BASICS:

Received From: Narex #1

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 2

Containers: 46

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Sept 29, 2012

ALREADY EXCEEDED?

Yes

☒ No

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 0 + 0 + 1 = 0 °C (2) 0 + 0 + 0 = 0 °C (3) ____ + ____ + ____ = ____ °C (4) ____ + ____ + ____ = ____ °C

Was ice or ice pack present: ☒ Yes ☐ No

Integrity Issues:

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____

Date and Time: _____

ADDITIONAL NOTES:

Not Frozen

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech
 Courier: Air North Prepaid Collect
 Waybill# 287 04064104
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 If multiple sites were submitted at once: Yes No
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 2

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No
 Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*
 Earliest Expiry: _____
 Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
 Legal Samples: Yes No
 International Samples: Yes No
 Tape Sealed: Yes No
 Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 8.1 + 7.4 + 6.9 + 7.5 °C 2 (Bottle/Jar) 6.8 + 7.1 + 5.9 + 6.6 °C
 3 (Bottle/Jar) _____ + _____ + _____ + _____ °C 4 (Bottle/Jar) _____ + _____ + _____ + _____ °C
 5 (Bottle/Jar) _____ + _____ + _____ + _____ °C 6 (Bottle/Jar) _____ + _____ + _____ + _____ °C
 7 (Bottle/Jar) _____ + _____ + _____ + _____ °C 8 (Bottle/Jar) _____ + _____ + _____ + _____ °C
 9 (Bottle/Jar) _____ + _____ + _____ + _____ °C 10 (Bottle/Jar) _____ + _____ + _____ + _____ °C
 (If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Account Project Manager: _____ have they been notified of the above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____
 General Comments: _____

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Ryan Martin, Tania Perzoff

PROJECT: 704-ENW.WENW03039-02

AGAT WORK ORDER: 17Y267721

SOIL ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

TRACE ORGANICS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

DATE REPORTED: Oct 31, 2017

PAGES (INCLUDING COVER): 15

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 4°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y267721

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-10

		SAMPLE DESCRIPTION:		17A18SS1		17A18SS2		17A19SS1		17A19SS2	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2017-09-24		2017-09-24		2017-09-24		2017-09-24	
Parameter	Unit	G / S	RDL	8783443	RDL	8783447	RDL	8783451	RDL	8783452	
Antimony	µg/g		0.1	0.5	0.1	1.3	0.1	0.9	0.1	0.6	
Arsenic	µg/g		0.1	10.4	0.1	15.3	0.1	41.6	0.1	35.8	
Barium	µg/g		0.5	53.0	0.5	386	0.5	184	0.5	145	
Beryllium	µg/g		0.1	1.3	0.1	1.4	0.1	2.1	0.1	0.8	
Cadmium	µg/g		0.01	0.61	0.01	2.77	0.01	2.74	0.01	0.54	
Chromium	µg/g		1	11	1	23	1	16	1	18	
Cobalt	µg/g		0.1	26.7	0.1	19.7	0.1	28.2	0.1	15.8	
Copper	µg/g		1.0	2460	0.2	944	1.0	1540	0.2	467	
Lead	µg/g		0.1	5.0	0.1	14.9	0.1	9.2	0.1	14.3	
Mercury	µg/g		0.01	1.15	0.01	3.42	0.01	2.68	0.01	1.32	
Molybdenum	µg/g		0.2	2.7	0.2	5.7	0.2	3.2	0.2	2.3	
Nickel	µg/g		0.5	11.5	0.5	25.9	0.5	44.5	0.5	37.0	
Selenium	µg/g		0.1	5.9	0.1	3.1	0.1	5.4	0.1	2.3	
Silver	µg/g		0.5	0.9	0.5	0.7	0.5	1.3	0.5	<0.5	
Thallium	µg/g		0.1	0.2	0.1	0.4	0.1	0.4	0.1	0.1	
Tin	µg/g		0.2	2.5	0.2	3.4	0.2	2.5	0.2	0.6	
Uranium	µg/g		0.2	3.6	0.2	2.9	0.2	2.1	0.2	2.4	
Vanadium	µg/g		1	16	1	40	1	20	1	17	
Zinc	µg/g		1	115	1	342	1	120	1	140	
pH 1:2	pH units		0.05	6.91	0.05	7.40	0.05	6.88	0.05	7.45	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8783443-8783452 Results are based on the dry weight of the sample

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y267721

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Cyanide in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-13

		SAMPLE DESCRIPTION:		17A18SS1	17A18SS2		17A19SS1		17A19SS2
		SAMPLE TYPE:		Soil	Soil		Soil		Soil
		DATE SAMPLED:		2017-09-24	2017-09-24		2017-09-24		2017-09-24
Parameter	Unit	G / S	RDL	8783443	8783447	RDL	8783451	RDL	8783452
Cyanide (SAD)	µg/g		0.5	<0.5	<0.5	5	8	0.5	<0.5
Cyanide (WAD)	µg/g		0.5	<0.5	<0.5	5	<5	0.5	<0.5

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8783452 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y267721

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-30

		SAMPLE DESCRIPTION:		17A18SS1	17A18SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2017-09-24	2017-09-24
Parameter	Unit	G / S	RDL	8783443	8783447
Benzene	µg/g		0.005	<0.005	<0.005
Toluene	µg/g		0.05	<0.05	<0.05
Ethylbenzene	µg/g		0.01	<0.01	<0.01
m&p-Xylene	µg/g		0.02	<0.02	<0.02
o-Xylene	µg/g		0.02	<0.02	<0.02
F1 (C6-C10)	µg/g		10	<10	<10
F1 minus BTEX (C6-C10)	µg/g		10	<10	<10
F2 (C10-C16)	µg/g		20	<20	<20
F3 (C16-C34)	µg/g		20	23	857
F4 (C34-C50)	µg/g		20	<20	549
Moisture	%		0.5	10.0	14.5
Total Xylenes	µg/g		0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits			
Bromofluorobenzene	%	60-140	83	84	
Dibromofluoromethane	%	60-140	106	112	
Toluene - d8	%	60-140	110	114	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8783443-8783447 Results are based on the dry weight of the sample.

The C6-C10 (F1) fraction is calculated using toluene response factor.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Soil sample is visibly heterogeneous.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y267721

PROJECT: 704-ENW.WENW03039-02

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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-15

		SAMPLE DESCRIPTION:		17A18SS1	17A18SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2017-09-24	2017-09-24
Parameter	Unit	G / S	RDL	8783443	8783447
Naphthalene	µg/g		0.005	<0.005	<0.005
2-Methylnaphthalene	µg/g		0.005	<0.005	<0.005
1-Methylnaphthalene	µg/g		0.005	<0.005	<0.005
Acenaphthylene	µg/g		0.005	<0.005	<0.005
Acenaphthene	µg/g		0.005	<0.005	<0.005
Fluorene	µg/g		0.02	<0.02	<0.02
Phenanthrene	µg/g		0.02	0.05	<0.02
Anthracene	µg/g		0.004	0.008	<0.004
Fluoranthene	µg/g		0.01	0.07	<0.01
Pyrene	µg/g		0.01	0.05	0.01
Benzo(a)anthracene	µg/g		0.03	<0.03	<0.03
Chrysene	µg/g		0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05
Benzo(j)fluoranthene	µg/g		0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.03	<0.03	<0.03
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02	<0.02
Dibenzo(a,h)anthracene	µg/g		0.005	<0.005	<0.005
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05
IACR CCME (Soil)	µg/g		0.6	<0.6	<0.6
B[a]P TPE (Soil)	µg/g		0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits			
Naphthalene - d8	%	50-130	85	78	
2-Fluorobiphenyl	%	50-130	91	85	
P-Terphenyl - d14	%	60-130	93	93	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8783443-8783447 Results are based on dry weight of sample.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y267721

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polychlorinated Biphenyls Analysis - Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-10

		SAMPLE DESCRIPTION:		17A18SS1		17A18SS2
		SAMPLE TYPE:		Soil		Soil
		DATE SAMPLED:		2017-09-24		2017-09-24
Parameter	Unit	G / S	RDL	8783443	RDL	8783447
Aroclor 1242	mg/kg		5	<5	0.05	<0.05
Aroclor 1254	mg/kg		5	<5	0.05	<0.05
Aroclor 1260	mg/kg		5	<5	0.05	<0.05
Total Polychlorinated Biphenyls	mg/kg		5	<5	0.05	<0.05
Surrogate	Unit	Acceptable Limits				
Decachlorobiphenyl	%	50-150		115		90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8783443 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.
Detection limits elevated due to matrix interferences.

8783447 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267721
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Soil Analysis															
RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME Metals in Soil

Antimony	8785548		0.8	0.7	7.3%	< 0.1	101%	70%	130%	97%	90%	110%			
Arsenic	8785548		19.9	19.2	3.7%	< 0.1	113%	70%	130%	108%	90%	110%			
Barium	8785548		233	231	0.9%	< 0.5	96%	70%	130%	104%	90%	110%			
Beryllium	8785548		0.5	0.5	1.2%	< 0.1	92%	70%	130%	101%	90%	110%			
Cadmium	8785548		0.45	0.46	3.0%	< 0.01	103%	70%	130%	101%	90%	110%			
Chromium	8785548		69	66	3.1%	< 1	111%	70%	130%	100%	90%	110%			
Cobalt	8785548		27.6	26.5	4.2%	< 0.1	99%	70%	130%	95%	90%	110%			
Copper	8785548		80.2	77.1	4.0%	< 0.2	107%	70%	130%	101%	90%	110%			
Lead	8785548		12.7	12.8	0.6%	< 0.1	99%	70%	130%	102%	90%	110%			
Mercury	8785548		0.04	0.04	NA	< 0.01	87%	70%	130%	92%	90%	110%			
Molybdenum	8785548		1.8	1.8	0.9%	< 0.2	103%	70%	130%	102%	90%	110%			
Nickel	8785548		113	111	1.7%	< 0.5	108%	70%	130%	100%	90%	110%			
Selenium	8785548		0.6	0.5	18.2%	< 0.1				105%	90%	110%			
Silver	8785548		<0.5	<0.5	NA	< 0.5	117%	70%	130%	100%	90%	110%			
Thallium	8785548		0.3	0.3	NA	< 0.1	118%	70%	130%	100%	90%	110%			
Tin	8785548		0.7	0.7	NA	< 0.2	98%	70%	130%	93%	90%	110%			
Uranium	8785548		1.9	1.9	0.0%	< 0.2	101%	70%	130%	99%	90%	110%			
Vanadium	8785548		79	77	2.9%	< 1	112%	70%	130%	100%	90%	110%			
Zinc	8785548		130	123	5.3%	< 1	113%	70%	130%	105%	90%	110%			
pH 1:2	8785548		7.59	7.62	0.4%		96%	90%	110%	100%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide in Soil

Cyanide (SAD)	8783447		<0.5	<0.5	NA	< 0.5	103%	70%	130%	98%	90%	110%			
Cyanide (WAD)	8783447		<0.5	<0.5	NA	< 0.5	103%	70%	130%	104%	90%	110%	80%	80%	120%

Certified By:



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267721
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Polychlorinated Biphenyls Analysis - Soil

Aroclor 1242	144	8783999	<0.05	<0.05	NA	< 0.05	126%	70%	130%	93%	70%	130%	80%	50%	150%
Aroclor 1254	144	8783999	<0.05	<0.05	NA	< 0.05	118%	70%	130%	83%	70%	130%	83%	50%	150%
Aroclor 1260	144	8783999	<0.05	<0.05	NA	< 0.05	128%	70%	130%	103%	70%	130%	100%	50%	150%
Total Polychlorinated Biphenyls	144	8783999	<0.05	<0.05	NA	< 0.05	124%	70%	130%	93%	70%	130%	88%	50%	150%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

CCME BTEX/F1-F4 (Soil)

Benzene	68172	8829984	<0.005	<0.005	NA	< 0.005	101%	80%	120%				101%	60%	140%
Toluene	68172	8829984	<0.05	<0.05	NA	< 0.05	101%	80%	120%				111%	60%	140%
Ethylbenzene	68172	8829984	<0.01	<0.01	NA	< 0.01	99%	80%	120%				110%	60%	140%
m&p-Xylene	68172	8829984	<0.02	<0.02	NA	< 0.02	99%	80%	120%				114%	60%	140%
o-Xylene	68172	8829984	<0.02	<0.02	NA	< 0.02	99%	80%	120%				109%	60%	140%
F1 (C6-C10)	68172	8829984	<10	<10	NA	< 10									
F1 minus BTEX (C6-C10)	68172	8829984	<10	<10	NA	< 10									
F2 (C10-C16)	68032	8799513	72	85	NA	< 20	101%	80%	120%				103%	60%	140%
F3 (C16-C34)	68032	8799513	3520	4120	15.7%	< 20	110%	80%	120%				103%	60%	140%
F4 (C34-C50)	68032	8799513	1590	1890	17.2%	< 20	95%	80%	120%				83%	60%	140%
Bromofluorobenzene	68172	8829984	92	89	3.3%		99%	60%	140%				88%	60%	140%
Dibromofluoromethane	68172	8829984	122	119	2.5%		100%	60%	140%				109%	60%	140%
Toluene - d8	68172	8829984	124	124	0.0%		100%	60%	140%				114%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	68032	8799513	<0.005	<0.005	NA	< 0.005	101%	80%	120%				95%	50%	130%
2-Methylnaphthalene	68032	8799513	<0.005	<0.005	NA	< 0.005	101%	80%	120%				86%	50%	130%
1-Methylnaphthalene	68032	8799513	<0.005	<0.005	NA	< 0.005	101%	80%	120%				91%	50%	130%
Acenaphthylene	68032	8799513	<0.005	<0.005	NA	< 0.005	101%	80%	120%				88%	50%	130%
Acenaphthene	68032	8799513	<0.005	<0.005	NA	< 0.005	102%	80%	120%				97%	50%	130%
Fluorene	68032	8799513	<0.02	<0.02	NA	< 0.02	101%	80%	120%				92%	50%	130%
Phenanthrene	68032	8799513	<0.02	<0.02	NA	< 0.02	99%	80%	120%				81%	60%	130%
Anthracene	68032	8799513	<0.004	<0.004	NA	< 0.004	102%	80%	120%				96%	60%	130%
Fluoranthene	68032	8799513	<0.01	<0.01	NA	< 0.01	101%	80%	120%				91%	60%	130%
Pyrene	68032	8799513	0.01	0.01	NA	< 0.01	101%	80%	120%				94%	60%	130%
Benzo(a)anthracene	68032	8799513	<0.03	<0.03	NA	< 0.03	101%	80%	120%				90%	60%	130%
Chrysene	68032	8799513	<0.05	<0.05	NA	< 0.05	101%	80%	120%				93%	60%	130%
Benzo(b)fluoranthene	68032	8799513	<0.05	<0.05	NA	< 0.05	98%	80%	120%				93%	60%	130%
Benzo(j)fluoranthene	68032	8799513	<0.05	<0.05	NA	< 0.05	96%	80%	120%				103%	60%	130%
Benzo(k)fluoranthene	68032	8799513	<0.05	<0.05	NA	< 0.05	109%	80%	120%				106%	60%	130%
Benzo(a)pyrene	68032	8799513	<0.03	<0.03	NA	< 0.03	106%	80%	120%				89%	60%	130%
Indeno(1,2,3-c,d)pyrene	68032	8799513	<0.02	<0.02	NA	< 0.02	101%	80%	120%				99%	60%	130%



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267721
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dibenzo(a,h)anthracene	68032	8799513	<0.005	<0.005	NA	< 0.005	101%	80%	120%				99%	60%	130%
Benzo(g,h,i)perylene	68032	8799513	<0.05	<0.05	NA	< 0.05	101%	80%	120%				98%	60%	130%
Naphthalene - d8	68032	8799513	65	73	11.6%		103%	80%	120%				105%	50%	130%
2-Fluorobiphenyl	68032	8799513	68	78	13.7%		106%	80%	120%				100%	50%	130%
P-Terphenyl - d14	68032	8799513	84	85	1.2%		106%	80%	120%				101%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:



Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267721
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Arsenic	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Barium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Beryllium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cadmium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Chromium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cobalt	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Copper	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Lead	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Mercury	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Molybdenum	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Nickel	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Selenium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Silver	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Thallium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Tin	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Uranium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Vanadium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Zinc	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
pH 1:2	INOR-181-6031	BC MOE Lab Manual B (pH, Electrometric, Soil)	PH METER
Cyanide (SAD)	LAB-181-4013, INOR-181-6010	Modified from EPA 9013A and EPA 335.3	CONTINUOUS FLOW ANALYZER
Cyanide (WAD)	LAB-181-4013, INOR-181-6010	Modified from EPA 9013A and EPA 335.3	CONTINUOUS FLOW ANALYZER

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267721
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Toluene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Ethylbenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
m&p-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
o-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
F1 (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F2 (C10-C16)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F3 (C16-C34)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F4 (C34-C50)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
Moisture	INOR-181-6030	SSMA Chapter 70 (2nd Ed)	GRAVIMETRIC
Bromofluorobenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Dibromofluoromethane	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Toluene - d8	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
1-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267721
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
IACR CCME (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
B[a]P TPE (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Fluorobiphenyl	ORG-180-5102	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5102	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
Aroclor 1242	TO-0410	EPA SW-846 8082	GC/ECD
Aroclor 1254	TO-0410	EPA SW-846 8082	GC/ECD
Aroclor 1260	TO-0410	EPA SW-846 8082	GC/ECD
Total Polychlorinated Biphenyls	TO-0410	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	TO-0410	EPA SW-846 8082	GC/ECD



120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6
webearth.agatlabs.com

Laboratory Use Only

Arrival Temperature: 4C
AGAT Job Number: 17Y26772

Notes:

SEP 29 AM 3:01:16

Chain of Custody Record

P: 778.452.4000 • F: 778.452.4074

Report Information

Company: Tetra Tech

Contact: Ryan Martin/Tania Perzoff

Address: 61 Wasson Pl
Whitehorse, YT Y1A 0H7

Phone: 867-668-9221 Fax: _____

AGAT Quote #: _____

Client Project #: 704-ENW.WENW03039-02

Report Information

1. Name:	Ryan Martin
Email:	ryan.martin@tetrattech.com
2. Name:	Jordan Wakefield
Email:	jordan.wakefield@tetrattech.com

Report Format

- ☐ Single Sample per page
- ☐ Multiple Samples per page
- ☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ **BC CSR Soil**

- ☐ AL
- ☐ IL
- ☐ PL
- ☐ CL
- ☐ RL

☐ **BC CSR - Water**

- ☐ DW
- ☐ AW
- ☐ IW
- ☐ LW

Schedule 11 (Please Specify)

CCME (Please Specify)

Other (Please Specify) Tier 1 / CEMC SEARCH

[illegible]

Sample Relinquished By (Print Name and Sign): Mike Gallo [Signature]

Date/Time
Sep 24/17

Samples Received By (Print Name and Sign):

Date/Time

Sample Retained By (Print Name and Sign)

Date/Time	

Samples Received By (Print Name and Sign):	

Date/Time

Samples Relinquished By (Print Name and Sign)

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Received By (Print Name and Sign):

Date/Time

Page 1 of 1

V112866

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech
 Courier: 28704064056 A.N. ☒ Prepaid ☐ Collect
 Waybill# 28704064056
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 If multiple sites were submitted at once: Yes ☐ No ☐
 Custody Seal Intact: ☒ Yes ☐ No ☐ NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 8

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes ☐ No ☐
 Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*
 Earliest Expiry: _____
 Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
 Legal Samples: Yes No
 International Samples: Yes No
 Tape Sealed: Yes No
 Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 10.6 + 9.2 = 9.6 °C ☒ 2 (Bottle/Jar) _____ + _____ = _____ °C
 3 (Bottle/Jar) _____ + _____ = _____ °C 4 (Bottle/Jar) _____ + _____ = _____ °C
 5 (Bottle/Jar) _____ + _____ = _____ °C 6 (Bottle/Jar) _____ + _____ = _____ °C
 7 (Bottle/Jar) _____ + _____ = _____ °C ☒ 8 (Bottle/Jar) 26 + 58 = 9.4 °C
 9 (Bottle/Jar) _____ + _____ = _____ °C 10 (Bottle/Jar) _____ + _____ = _____ °C

(If more than 10 coolers are received use another sheet of paper and attach) All sample came out of cooler

LOGISTICS USE ONLY

Workorder No: _____
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Account Project Manager: _____ have they been notified of the above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____
 General Comments: _____



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 174267721

RECEIVING BASICS:

Received From: Novex #3

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 8 Containers: 10

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Sep 24, 2017

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) $5 + 5 + 5 = 5^{\circ}\text{C}$ (2) $6 + 6 + 6 = 6^{\circ}\text{C}$ (3) $6 + 5 + 5 = 5^{\circ}\text{C}$ (4) $5 + 5 + 6 = 5^{\circ}\text{C}$

Was ice or ice pack present:

☒ Yes ☐ No

Integrity Issues:

5) $6 + 6 + 6 = 6$ 6) $5 + 6 + 5 = 5$

7) $6 + 7 + 6 = 6$ 8) $5 + 5 + 5 = 5$

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____

Date and Time: _____

ADDITIONAL NOTES:

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Ryan Martin, Tania Perzoff

PROJECT: 704-ENW.WENW03039-02

AGAT WORK ORDER: 17Y267738

SOIL ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

TRACE ORGANICS REVIEWED BY: Angela Bond, Technical Reviewer

DATE REPORTED: Oct 16, 2017

PAGES (INCLUDING COVER): 17

VERSION*: 2

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 2: Sample receipt temperature 6°C.

Version 2 issued on October 31, 2017 to report additional BTEX F1-F4 and PAH analysis on 17A23BH6-2 as requested by Jordan Wakefield of Tetra Tech. Version 2 is an amendment to version 1.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y267738

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-16

		SAMPLE DESCRIPTION:		17A1BH2-2	17A1BH3-1	17A1BH3-2	17A23BH6-1	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	
		DATE SAMPLED:		2017-09-26	2017-09-26	2017-09-26	2017-09-26	
Parameter	Unit	G / S	RDL	8783542	8783546	8783551	RDL	8783554
Antimony	µg/g		0.1	0.2	0.4	0.4	0.1	0.5
Arsenic	µg/g		0.1	3.8	8.9	5.4	0.1	18.9
Barium	µg/g		0.5	14.2	50.5	45.0	0.5	93.2
Beryllium	µg/g		0.1	3.0	1.3	3.1	0.1	0.6
Cadmium	µg/g		0.01	0.35	1.94	2.29	0.01	0.79
Chromium	µg/g		1	12	10	14	1	17
Cobalt	µg/g		0.1	13.1	43.1	21.2	0.1	8.6
Copper	µg/g		1.0	1340	3480	2910	0.2	50.8
Lead	µg/g		0.1	2.4	4.4	6.7	0.1	13.8
Mercury	µg/g		0.01	0.74	2.15	2.89	0.01	0.74
Molybdenum	µg/g		0.2	0.6	1.5	2.5	0.2	2.0
Nickel	µg/g		0.5	9.5	8.2	9.0	0.5	27.7
Selenium	µg/g		0.1	2.5	6.0	4.6	0.1	0.8
Silver	µg/g		0.5	0.7	1.8	1.6	0.5	<0.5
Thallium	µg/g		0.1	0.2	1.1	0.5	0.1	0.2
Tin	µg/g		0.2	3.9	8.8	8.2	0.2	0.7
Uranium	µg/g		0.2	1.1	2.8	2.1	0.2	1.1
Vanadium	µg/g		1	12	19	14	1	34
Zinc	µg/g		1	67	269	258	1	114
pH 1:2	pH units		0.05	7.50	7.26	7.48	0.05	7.62

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8783542-8783554 Results are based on the dry weight of the sample

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y267738

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-16

		SAMPLE DESCRIPTION:		17A1BH2-2	17A1BH3-1	17A1BH3-2	17A23BH6-1	17A23BH6-2	17A23BH7-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-26	2017-09-26	2017-09-26	2017-09-26	2017-09-26	2017-09-26
Parameter	Unit	G / S	RDL	8783542	8783546	8783551	8783554	8783555	8783558
Benzene	µg/g	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
m&p-Xylene	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
o-Xylene	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
F1 (C6-C10)	µg/g	10	<10	<10	<10	<10	<10	<10	<10
F1 minus BTEX (C6-C10)	µg/g	10	<10	<10	<10	<10	<10	<10	<10
F2 (C10-C16)	µg/g	20	<20	94	33	248	<20	<20	<20
F3 (C16-C34)	µg/g	20	<20	58	107	100	<20	25	<20
F4 (C34-C50)	µg/g	20	<20	<20	20	<20	<20	<20	<20
Moisture	%	0.5	6.88	10.7	15.3	2.35	4.04	3.82	
Total Xylenes	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits							
Bromofluorobenzene	%	60-140	85	128	121	126	89	82	
Dibromofluoromethane	%	60-140	110	130	130	121	113	126	
Toluene - d8	%	60-140	98	125	125	130	112	108	

Certified By:

Angela Bond



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y267738

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8783542-8783554 Results are based on the dry weight of the sample.

The C6-C10 (F1) fraction is calculated using toluene response factor.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Soil sample is visibly heterogeneous.

8783555 Results are based on the dry weight of the sample.

The C6-C10 (F1) fraction is calculated using toluene response factor.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

8783558 Results are based on the dry weight of the sample.

The C6-C10 (F1) fraction is calculated using toluene response factor.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y267738

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-16

Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y267738

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2017-09-29

DATE REPORTED: 2017-10-16

		SAMPLE DESCRIPTION:		17A1BH2-2	17A1BH3-1	17A1BH3-2	17A23BH6-1	17A23BH6-2	17A23BH7-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-26	2017-09-26	2017-09-26	2017-09-26	2017-09-26	2017-09-26
Parameter	Unit	G / S	RDL	8783542	8783546	8783551	8783554	8783555	8783558
Naphthalene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Methylnaphthalene	µg/g		0.005	<0.005	0.037	0.018	<0.005	<0.005	<0.005
1-Methylnaphthalene	µg/g		0.005	<0.005	0.039	0.009	<0.005	<0.005	<0.005
Acenaphthylene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Acenaphthene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Fluorene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/g		0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02
Anthracene	µg/g		0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoranthene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	µg/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dibenzo(a,h)anthracene	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
IACR CCME (Soil)	µg/g		0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
B[a]P TPE (Soil)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits							
Naphthalene - d8	%	50-130		78	68	74	86	80	78
2-Fluorobiphenyl	%	50-130		84	77	82	91	77	84
P-Terphenyl - d14	%	60-130		82	81	80	85	92	84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8783542-8783558 Results are based on dry weight of sample.

Certified By:

Angela Bond

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267738
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Soil Analysis															
RPT Date: Oct 16, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
CCME Metals in Soil															
Antimony	8785548		0.8	0.7	7.3%	< 0.1	101%	70%	130%	97%	90%	110%			
Arsenic	8785548		19.9	19.2	3.7%	< 0.1	113%	70%	130%	108%	90%	110%			
Barium	8785548		233	231	0.9%	< 0.5	96%	70%	130%	104%	90%	110%			
Beryllium	8785548		0.5	0.5	1.2%	< 0.1	92%	70%	130%	101%	90%	110%			
Cadmium	8785548		0.45	0.46	3.0%	< 0.01	103%	70%	130%	101%	90%	110%			
Chromium	8785548		69	66	3.1%	< 1	111%	70%	130%	100%	90%	110%			
Cobalt	8785548		27.6	26.5	4.2%	< 0.1	99%	70%	130%	95%	90%	110%			
Copper	8785548		80.2	77.1	4.0%	< 0.2	107%	70%	130%	101%	90%	110%			
Lead	8785548		12.7	12.8	0.6%	< 0.1	99%	70%	130%	102%	90%	110%			
Mercury	8785548		0.04	0.04	NA	< 0.01	87%	70%	130%	92%	90%	110%			
Molybdenum	8785548		1.8	1.8	0.9%	< 0.2	103%	70%	130%	102%	90%	110%			
Nickel	8785548		113	111	1.7%	< 0.5	108%	70%	130%	100%	90%	110%			
Selenium	8785548		0.6	0.5	18.2%	< 0.1				105%	90%	110%			
Silver	8785548		<0.5	<0.5	NA	< 0.5	117%	70%	130%	100%	90%	110%			
Thallium	8785548		0.3	0.3	NA	< 0.1	118%	70%	130%	100%	90%	110%			
Tin	8785548		0.7	0.7	NA	< 0.2	98%	70%	130%	93%	90%	110%			
Uranium	8785548		1.9	1.9	0.0%	< 0.2	101%	70%	130%	99%	90%	110%			
Vanadium	8785548		79	77	2.9%	< 1	112%	70%	130%	100%	90%	110%			
Zinc	8785548		130	123	5.3%	< 1	113%	70%	130%	105%	90%	110%			
pH 1:2	8785548		7.59	7.62	0.4%		96%	90%	110%	100%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:





Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267738
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 16, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME BTEX/F1-F4 (Soil)

Benzene	68017	8784953	<0.005	<0.005	NA	< 0.005	102%	80%	120%				108%	60%	140%
Toluene	68017	8784953	<0.05	<0.05	NA	< 0.05	98%	80%	120%				115%	60%	140%
Ethylbenzene	68017	8784953	0.08	0.08	0.0%	< 0.01	99%	80%	120%				111%	60%	140%
m&p-Xylene	68017	8784953	0.41	0.43	4.8%	< 0.02	98%	80%	120%				113%	60%	140%
o-Xylene	68017	8784953	0.15	0.14	6.9%	< 0.02	99%	80%	120%				110%	60%	140%
F1 (C6-C10)	68017	8784953	<10	<10	NA	< 10									
F1 minus BTEX (C6-C10)	68017	8784953	<10	<10	NA	< 10									
F2 (C10-C16)	68018	8783518	<20	<20	NA	< 20	101%	80%	120%				95%	60%	140%
F3 (C16-C34)	68018	8783518	<20	<20	NA	< 20	112%	80%	120%				99%	60%	140%
F4 (C34-C50)	68018	8783518	<20	<20	NA	< 20	97%	80%	120%				90%	60%	140%
Bromofluorobenzene	68017	8784953	95	100	5.1%		100%	60%	140%				91%	60%	140%
Dibromofluoromethane	68017	8784953	85	122	35.7%		100%	60%	140%				100%	60%	140%
Toluene - d8	68017	8784953	105	111	5.6%		99%	60%	140%				98%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	68018	8783518	<0.005	<0.005	NA	< 0.005	101%	80%	120%				98%	50%	130%
2-Methylnaphthalene	68018	8783518	<0.005	<0.005	NA	< 0.005	101%	80%	120%				89%	50%	130%
1-Methylnaphthalene	68018	8783518	<0.005	<0.005	NA	< 0.005	101%	80%	120%				95%	50%	130%
Acenaphthylene	68018	8783518	<0.005	<0.005	NA	< 0.005	101%	80%	120%				89%	50%	130%
Acenaphthene	68018	8783518	<0.005	<0.005	NA	< 0.005	101%	80%	120%				100%	50%	130%
Fluorene	68018	8783518	<0.02	<0.02	NA	< 0.02	101%	80%	120%				94%	50%	130%
Phenanthrene	68018	8783518	<0.02	<0.02	NA	< 0.02	98%	80%	120%				71%	60%	130%
Anthracene	68018	8783518	<0.004	<0.004	NA	< 0.004	104%	80%	120%				108%	60%	130%
Fluoranthene	68018	8783518	<0.01	<0.01	NA	< 0.01	101%	80%	120%				93%	60%	130%
Pyrene	68018	8783518	<0.01	<0.01	NA	< 0.01	101%	80%	120%				96%	60%	130%
Benzo(a)anthracene	68018	8783518	<0.03	<0.03	NA	< 0.03	101%	80%	120%				89%	60%	130%
Chrysene	68018	8783518	<0.05	<0.05	NA	< 0.05	101%	80%	120%				98%	60%	130%
Benzo(b)fluoranthene	68018	8783518	<0.05	<0.05	NA	< 0.05	98%	80%	120%				79%	60%	130%
Benzo(j)fluoranthene	68018	8783518	<0.05	<0.05	NA	< 0.05	99%	80%	120%				105%	60%	130%
Benzo(k)fluoranthene	68018	8783518	<0.05	<0.05	NA	< 0.05	108%	80%	120%				85%	60%	130%
Benzo(a)pyrene	68018	8783518	<0.03	<0.03	NA	< 0.03	102%	80%	120%				100%	60%	130%
Indeno(1,2,3-c,d)pyrene	68018	8783518	<0.02	<0.02	NA	< 0.02	101%	80%	120%				85%	60%	130%
Dibenzo(a,h)anthracene	68018	8783518	<0.005	<0.005	NA	< 0.005	101%	80%	120%				80%	60%	130%
Benzo(g,h,i)perylene	68018	8783518	<0.05	<0.05	NA	< 0.05	101%	80%	120%				95%	60%	130%
Naphthalene - d8	68018	8783518	78	74	5.3%		102%	80%	120%				97%	50%	130%
2-Fluorobiphenyl	68018	8783518	87	81	7.1%		101%	80%	120%				96%	50%	130%
P-Terphenyl - d14	68018	8783518	90	71	23.6%		100%	80%	120%				97%	60%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267738
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 16, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME BTEX/F1-F4 (Soil)

Benzene	68164	8850176	<0.005	<0.005	NA	< 0.005	100%	80%	120%				100%	60%	140%
Toluene	68164	8850176	<0.05	<0.05	NA	< 0.05	98%	80%	120%				107%	60%	140%
Ethylbenzene	68164	8850176	<0.01	<0.01	NA	< 0.01	99%	80%	120%				108%	60%	140%
m&p-Xylene	68164	8850176	<0.02	<0.02	NA	< 0.02	99%	80%	120%				109%	60%	140%
o-Xylene	68164	8850176	<0.02	<0.02	NA	< 0.02	99%	80%	120%				107%	60%	140%
F1 (C6-C10)	68164	8850176	49	37	NA	< 10									
F1 minus BTEX (C6-C10)	68164	8850176	49	37	NA	< 10									
F2 (C10-C16)	68151	8830021	<20	<20	NA	< 20	97%	80%	120%				131%	60%	140%
F3 (C16-C34)	68151	8830021	<20	<20	NA	< 20	109%	80%	120%				110%	60%	140%
F4 (C34-C50)	68151	8830021	<20	<20	NA	< 20	95%	80%	120%				136%	60%	140%
Bromofluorobenzene	68164	8850176	98	102	4.0%		98%	60%	140%				96%	60%	140%
Dibromofluoromethane	68164	8850176	108	109	0.9%		97%	60%	140%				112%	60%	140%
Toluene - d8	68164	8850176	126	128	1.6%		98%	60%	140%				117%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	68151	8846746	<0.005	<0.005	NA	< 0.005	100%	80%	120%				106%	50%	130%
2-Methylnaphthalene	68151	8846746	<0.005	<0.005	NA	< 0.005	100%	80%	120%				85%	50%	130%
1-Methylnaphthalene	68151	8846746	<0.005	<0.005	NA	< 0.005	101%	80%	120%				98%	50%	130%
Acenaphthylene	68151	8846746	<0.005	<0.005	NA	< 0.005	101%	80%	120%				91%	50%	130%
Acenaphthene	68151	8846746	<0.005	<0.005	NA	< 0.005	101%	80%	120%				103%	50%	130%
Fluorene	68151	8846746	<0.02	<0.02	NA	< 0.02	101%	80%	120%				94%	50%	130%
Phenanthrene	68151	8846746	<0.02	<0.02	NA	< 0.02	96%	80%	120%				76%	60%	130%
Anthracene	68151	8846746	<0.004	<0.004	NA	< 0.004	104%	80%	120%				108%	60%	130%
Fluoranthene	68151	8846746	<0.01	<0.01	NA	< 0.01	100%	80%	120%				97%	60%	130%
Pyrene	68151	8846746	0.17	0.13	26.7%	< 0.01	100%	80%	120%				102%	60%	130%
Benzo(a)anthracene	68151	8846746	<0.03	<0.03	NA	< 0.03	100%	80%	120%				98%	60%	130%
Chrysene	68151	8846746	<0.05	<0.05	NA	< 0.05	101%	80%	120%				102%	60%	130%
Benzo(b)fluoranthene	68151	8846746	<0.05	<0.05	NA	< 0.05	112%	80%	120%				84%	60%	130%
Benzo(j)fluoranthene	68151	8846746	<0.05	<0.05	NA	< 0.05	102%	80%	120%				113%	60%	130%
Benzo(k)fluoranthene	68151	8846746	<0.05	<0.05	NA	< 0.05	89%	80%	120%				84%	60%	130%
Benzo(a)pyrene	68151	8846746	<0.03	<0.03	NA	< 0.03	101%	80%	120%				93%	60%	130%
Indeno(1,2,3-c,d)pyrene	68151	8846746	<0.02	<0.02	NA	< 0.02	100%	80%	120%				105%	60%	130%
Dibenzo(a,h)anthracene	68151	8846746	<0.005	<0.005	NA	< 0.005	101%	80%	120%				102%	60%	130%
Benzo(g,h,i)perylene	68151	8846746	<0.05	<0.05	NA	< 0.05	101%	80%	120%				108%	60%	130%
Naphthalene - d8	68151	8846746	124	111	11.1%		103%	80%	120%				98%	50%	130%
2-Fluorobiphenyl	68151	8846746	96	90	6.5%		102%	80%	120%				97%	50%	130%



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267738
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 16, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
P-Terphenyl - d14	68151	8846746	116	119	2.6%		101%	80%	120%				99%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:



Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:AGAT WORK ORDER: 17Y267738
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Arsenic	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Barium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Beryllium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cadmium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Chromium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cobalt	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Copper	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Lead	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Mercury	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Molybdenum	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Nickel	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Selenium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Silver	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Thallium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Tin	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Uranium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Vanadium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Zinc	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
pH 1:2	INOR-181-6031	BC MOE Lab Manual B (pH, Electrometric, Soil)	PH METER

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267738
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Toluene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Ethylbenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
m&p-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
o-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
F1 (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F2 (C10-C16)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F3 (C16-C34)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F4 (C34-C50)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
Moisture	INOR-181-6030	SSMA Chapter 70 (2nd Ed)	GRAVIMETRIC
Bromofluorobenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Dibromofluoromethane	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Toluene - d8	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
1-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267738
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
IACR CCME (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
B[a]P TPE (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Fluorobiphenyl	ORG-180-5102	Modified from BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5102	Modified from BCMOE Lab Manual Section D (PAH)	GC/MS



AGAT

Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6
webearth.agatlabs.com

Laboratory Use Only

Arrival Temperature: 6°C
AGAT Job Number: 17Y267738

Notes: SEP 25 09:10:44

Chain of Custody Record

P: 778.452.4000 • F: 778.452.4074

Report Information

Company: Tetra Tech
Contact: Ryan Martin/Tania Perzoff
Address: 61 Wasson Pl
Whitehorse, YT Y1A 0H7
Phone: 867-668-9221 Fax: _____
AGAT Quote #: _____
Client Project #: 704-ENW.WENW03039-02

Report Information

1. Name: Ryan Martin
Email: ryan.martin@tetratech.com
2. Name: Jordan Wakefield
Email: jordan.wakefield@tetratech.com
Mike.gallo@tetratech.com

Requirements (Please Check)

☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL

Schedule 11 (Please Specify) Tier 1
CCME (Please Specify) _____
Other (Please Specify) _____

Report Format

☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days
Rush TAT ☐ Day 2 - 100%
☐ Day 3 - 50%
☐ Day 4 - 25%

Date Required: _____
PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	PHIL-F4 BTEX	PAHs	Metals	PHIL-EXTRACT & HOLD PHIL-F4	EXTRACT & HOLD PHIL-F4	GRAIN SIZE ANALYSIS	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
<u>8783540</u>	<u>17A1BH2-1</u>	<u>SOIL</u>	<u>SEP 25 / 2017</u>								5			
<u>42</u>	<u>17A1BH2-2</u>				X	X	X				5			
<u>45</u>	<u>17A1BH2-3</u>							X	X		5			
<u>46</u>	<u>17A1BH3-1</u>				X	X	X				5			
<u>51</u>	<u>17A1BH3-2</u>				X	X	X				5			
<u>53</u>	<u>17A1BH3-3</u>										5			
<u>54</u>	<u>17A23BH6-1</u>				X	X	X				5			
<u>55</u>	<u>17A23BH6-2</u>							X	X		5			
<u>57</u>	<u>17A23BH7-1</u>							X	X		5			
<u>58</u>	<u>17A23BH7-2</u>				X	X					5			
	<u>17A19HA1-1</u>	<u>SOIL</u>	<u>SEP 25 / 2017</u>							X	1			

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Date/Time

Date/Time

Date/Time

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

Date/Time

Date/Time

Page 1 of 2

V112867

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

SEP 29 04:03:00

Chain of Custody Record

P: 778.452.4000 • F: 778.452.4074

Report Information

Company: Tetra Tech

Contact: Ryan Martin/Tania Perzoff

Address: 61 Wasson Pl
Whitehorse, YT Y1A 0H7

Phone: 867-668-9221 Fax: _____

AGAT Quote #: _____

Client Project #: 704-ENW.WENW03039-02

Report Information

1. Name:	Ryan Martin
Email:	ryan.martin@tetrattech.com
2. Name:	Jordan Wakefield
Email:	jordan.wakefield@tetrattech.com

Requirements (Please Check)

☐ **BC CSR Soil**

- ☐ AL
- ☐ IL
- ☐ PL
- ☐ CL
- ☐ RI

☐ **BC CSR - Water**

- ☐ DW
- ☐ AW
- ☐ IW
- ☐ LW

Schedule 11 (Please Specify)

CCME (Please Specify)

Other (Please Specify) Tire

Report Format

☐ Single Sample per page

☐ Multiple Samples per page

☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

[illegible]

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign): Mike Gallo

Samples Relinquished By (Print Name and Sign):

Date/Time

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...
10/11/2023	...	...	...
10/12/2023	...	...	...
10/13/2023	...	...	...
10/14/2023	...	...	...
10/15/2023	...	...	...
10/16/2023	...	...	...
10/17/2023	...	...	...
10/18/2023	...	...	...
10/19/2023	...	...	...
10/20/2023	...	...	...
10/21/2023	...	...	...
10/22/2023	...	...	...
10/23/2023	...	...	...
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10/25/2023	...	...	...
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10/27/2023	...	...	...
10/28/2023	...	...	...
10/29/2023	...	...	...
10/30/2023	...	...	...
10/31/2023	...	...	...

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

	Date/Time
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Date/Time

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V112868



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech
Courier: 28704064056 AN ☒ Prepaid ☐ Collect
Waybill# 28704064056
Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
If multiple sites were submitted at once: Yes ☐ No ☐
Custody Seal Intact: ☒ Yes ☐ No ☐ NA
TAT: <24hr 24-48hr 48-72hr Reg Other _____
Cooler Quantity: 8

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes ☐ No ☐

Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO₄ , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*

Earliest Expiry: _____

Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____

Legal Samples: Yes No

International Samples: Yes No

Tape Sealed: Yes No

Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 10.6.9.92 = 9.6 °C ☒ 2 (Bottle/Jar) _____ °C
3 (Bottle/Jar) _____ °C 4 (Bottle/Jar) _____ °C
5 (Bottle/Jar) _____ °C 6 (Bottle/Jar) _____ °C
7 (Bottle/Jar) _____ °C ☒ 8 (Bottle/Jar) 26 + SE + 6.4 = 9.4 °C
9 (Bottle/Jar) _____ °C 10 (Bottle/Jar) _____ °C

(If more than 10 coolers are received use another sheet of paper and attach) All sample came out of cooler

LOGISTICS USE ONLY

Workorder No: _____

Samples Damaged: Yes No If YES why?

No Bubble Wrap Frozen Courier

Other: _____

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date/Time: _____

CPM Initial _____

General Comments: _____

* Subcontracted Analysis (See CPM)



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 174267738

RECEIVING BASICS:

Received From: Novex

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 8 Containers: 60

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Spt 26, 2017

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 5 + 5 + 5 = 5 °C (2) 6 + 6 + 6 = 6 °C (3) 6 + 5 + 5 = 5 °C (4) 4 + 5 + 6 = 5 °C

Was ice or ice pack present: ☒ Yes ☐ No

Integrity Issues:

5) 6 + 6 + 6 = 6 6) 5 + 6 + 5 = 5
7) 6 + 7 + 6 = 6 8) 4 + 3 + 5 = 4

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Ryan Martin, Tania Perzoff

PROJECT: 704-ENW.WENW03039-02

AGAT WORK ORDER: 17Y267774

TRACE ORGANICS REVIEWED BY: Angela Bond, Technical Reviewer

DATE REPORTED: Oct 16, 2017

PAGES (INCLUDING COVER): 9

VERSION*: 2

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 2: Sample receipt temperature 0°C.

Version 2 issued on October 31, 2017 to report additional BTEX F1-F4 analysis for 17A43BH1-2 as requested by Jordan Wakefield of Tetra Tech.
Version 2 is an amendment to version 1.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 17Y267774

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-16

		SAMPLE DESCRIPTION:		17A43BH1-1	17A43BH1-2	17A17BH4-1	17A17BHDUP3	17BBH01-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-09-27	2017-09-27	2017-09-28	2017-09-28	2017-09-28
Parameter	Unit	G / S	RDL	8783870	8783875	8783877	8783878	8784080
Benzene	µg/g	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
m&p-Xylene	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
o-Xylene	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
F1 (C6-C10)	µg/g	10	<10	<10	<10	<10	<10	<10
F1 minus BTEX (C6-C10)	µg/g	10	<10	<10	<10	<10	<10	<10
F2 (C10-C16)	µg/g	20	22	<20	37	23	<20	
F3 (C16-C34)	µg/g	20	467	438	3390	1440	154	
F4 (C34-C50)	µg/g	20	210	212	963	454	102	
Moisture	%	0.5	2.8	3.4	7.1	4.3	13.1	
Total Xylenes	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Surrogate	Unit	Acceptable Limits						
Bromofluorobenzene	%	60-140	123	88	116	122	127	
Dibromofluoromethane	%	60-140	120	112	116	118	128	
Toluene - d8	%	60-140	126	115	119	125	127	

Certified By:

Angela Bond



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y267774

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8783870 Results are based on the dry weight of the sample.
The C6-C10 (F1) fraction is calculated using toluene response factor.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

8783875 Results are based on the dry weight of the sample.
The C6-C10 (F1) fraction is calculated using toluene response factor.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.

8783877-8784080 Results are based on the dry weight of the sample.
The C6-C10 (F1) fraction is calculated using toluene response factor.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.

Certified By:

Angela Bond



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y267774

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2017-09-30

DATE REPORTED: 2017-10-16

Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267774
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 16, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME BTEX/F1-F4 (Soil)

Benzene	68017	8784953	<0.005	<0.005	NA	< 0.005	102%	80%	120%				108%	60%	140%
Toluene	68017	8784953	<0.05	<0.05	NA	< 0.05	98%	80%	120%				115%	60%	140%
Ethylbenzene	68017	8784953	0.08	0.08	0.0%	< 0.01	99%	80%	120%				111%	60%	140%
m&p-Xylene	68017	8784953	0.41	0.43	4.8%	< 0.02	98%	80%	120%				113%	60%	140%
o-Xylene	68017	8784953	0.15	0.14	6.9%	< 0.02	99%	80%	120%				110%	60%	140%
F1 (C6-C10)	68017	8784953	<10	<10	NA	< 10									
F1 minus BTEX (C6-C10)	68017	8784953	<10	<10	NA	< 10									
F2 (C10-C16)	68011	8795647	25	23	NA	< 20	101%	80%	120%				125%	60%	140%
F3 (C16-C34)	68011	8795647	114	104	9.2%	< 20	112%	80%	120%				132%	60%	140%
F4 (C34-C50)	68011	8795647	31	26	NA	< 20	97%	80%	120%				130%	60%	140%
Bromofluorobenzene	68017	8784953	95	100	5.1%		100%	60%	140%				91%	60%	140%
Dibromofluoromethane	68017	8784953	85	122	35.7%		100%	60%	140%				100%	60%	140%
Toluene - d8	68017	8784953	105	111	5.6%		99%	60%	140%				98%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME BTEX/F1-F4 (Soil)

Benzene	68164	8850176	<0.005	<0.005	NA	< 0.005	100%	80%	120%				100%	60%	140%
Toluene	68164	8850176	<0.05	<0.05	NA	< 0.05	98%	80%	120%				107%	60%	140%
Ethylbenzene	68164	8850176	<0.01	<0.01	NA	< 0.01	99%	80%	120%				108%	60%	140%
m&p-Xylene	68164	8850176	<0.02	<0.02	NA	< 0.02	99%	80%	120%				109%	60%	140%
o-Xylene	68164	8850176	<0.02	<0.02	NA	< 0.02	99%	80%	120%				107%	60%	140%
F1 (C6-C10)	68164	8850176	49	37	NA	< 10									
F1 minus BTEX (C6-C10)	68164	8850176	49	37	NA	< 10									
F2 (C10-C16)	68151	8830021	<20	<20	NA	< 20	97%	80%	120%				131%	60%	140%
F3 (C16-C34)	68151	8830021	<20	<20	NA	< 20	109%	80%	120%				110%	60%	140%
F4 (C34-C50)	68151	8830021	<20	<20	NA	< 20	95%	80%	120%				136%	60%	140%
Bromofluorobenzene	68164	8850176	98	102	4.0%		98%	60%	140%				96%	60%	140%
Dibromofluoromethane	68164	8850176	108	109	0.9%		97%	60%	140%				112%	60%	140%
Toluene - d8	68164	8850176	126	128	1.6%		98%	60%	140%				117%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:





Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y267774
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Toluene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Ethylbenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
m&p-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
o-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
F1 (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F2 (C10-C16)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F3 (C16-C34)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F4 (C34-C50)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
Moisture	INOR-181-6030	SSMA Chapter 70 (2nd Ed)	GRAVIMETRIC
Bromofluorobenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Dibromofluoromethane	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Toluene - d8	ORG-180-5100	EPA SW-846 8260-S	GC/MS

Chain of Custody Record

P: 778.452.4000 • F: 778.452.4074

Report Information

Company: **Tetra Tech**

Contact: **Ryan Martin/Tania Perzoff**

Address: **61 Wasson Pl**
Whitehorse, YT Y1A 0H7

Phone: **867-668-9221** Fax: _____

AGAT Quote #: _____

Client Project #: **704-ENW.WENW03039-02**

Choice to

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Report Information

1. Name: Ryan Martin
Email: ryan.martin@tetrattech.com

2. Name: Jordan Wakefield
Email: jordan.wakefield@tetrattech.com

Mike.Gallo@tetrattech.com

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 11 (Please Specify)

CCME (Please Specify)

Other (Please Specify) Therapy

Report Format

- ☐ Single Sample per page
- ☐ Multiple Samples per page
- ☐ Excel Format included

Laboratory Use Only

Arrival Temperature: 43/17 06
ACFT Job Number: 172677
Notes: BBH

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

[illegible]

Samples Relinquished By (Print Name and Sign): Mike Gallo [Signature]

Date/Time
Sept 23/17

Samples Received By (Print Name and Sign): Yusef

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2019	...	...	...
10/11/2019	...	...	...
10/12/2019	...	...	...
10/13/2019	...	...	...
10/14/2019	...	...	...
10/15/2019	...	...	...
10/16/2019	...	...	...
10/17/2019	...	...	...
10/18/2019	...	...	...
10/19/2019	...	...	...
10/20/2019	...	...	...
10/21/2019	...	...	...
10/22/2019	...	...	...
10/23/2019	...	...	...
10/24/2019	...	...	...
10/25/2019	...	...	...
10/26/2019	...	...	...
10/27/2019	...	...	...
10/28/2019	...	...	...
10/29/2019	...	...	...
10/30/2019	...	...	...
10/31/2019	...	...	...

Samples Received By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2019	...	...	...

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):	

Date/Time

Page 1 of 1

V112869



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech
Courier: Air North Prepaid Collect
Waybill# 287 04064104
Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
If multiple sites were submitted at once: Yes No
Custody Seal Intact: ☒ Yes No NA
TAT: <24hr 24-48hr 48-72hr Reg Other _____
Cooler Quantity: 2

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No
Inorganic Tests (Please Circle): Mibi, BOD, Nitrate/Nitrite, Turbidity, Microtox, Ortho PO4, Tedlar Bag, Residual Chlorine, Chlorophyll*, Chloroamines*
Earliest Expiry: _____
Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
Legal Samples: Yes No
International Samples: Yes No
Tape Sealed: Yes No
Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 8.1 + 7.4 + 6.9 = 7.5 °C 2 (Bottle/Jar) 6.9 + 7.1 + 5.9 = 6.6 °C
3 (Bottle/Jar) _____ + _____ + _____ = _____ °C 4 (Bottle/Jar) _____ + _____ + _____ = _____ °C
5 (Bottle/Jar) _____ + _____ + _____ = _____ °C 6 (Bottle/Jar) _____ + _____ + _____ = _____ °C
7 (Bottle/Jar) _____ + _____ + _____ = _____ °C 8 (Bottle/Jar) _____ + _____ + _____ = _____ °C
9 (Bottle/Jar) _____ + _____ + _____ = _____ °C 10 (Bottle/Jar) _____ + _____ + _____ = _____ °C
(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____
Samples Damaged: Yes No If YES why?
No Bubble Wrap Frozen Courier
Other: _____
Account Project Manager: _____ have they been notified of the above issues: Yes No
Whom spoken to: _____ Date/Time: _____
CPM Initial _____
General Comments: _____



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 174267774

RECEIVING BASICS:

Received From: Norex #4

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 2 Containers: 35

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Sep 27, 2017

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 0 + 0 + 1 = 0 °C (2) 0 + 0 + 0 = 0 °C (3) ____ + ____ + ____ = ____ °C (4) ____ + ____ + ____ = ____ °C

Was ice or ice pack present: ☒ Yes ☐ No

Integrity Issues:

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

Not Frozen

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Ryan Martin, Tania Perzoff

PROJECT: 704-ENW.WENW03039-02

AGAT WORK ORDER: 17Y268658

MICROBIOLOGY ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

TRACE ORGANICS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

WATER ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

DATE REPORTED: Oct 26, 2017

PAGES (INCLUDING COVER): 20

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 1°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268658

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Total Coliforms and E.Coli by Enzyme Substrate

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-06

		SAMPLE DESCRIPTION:		17A8SW1	17A8SW2	17A8SW3	17A8SWDUP1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791074	8791097	8791098	8791099
Total Coliforms	MPN/100mL	1	57.3	68.3	222	79.4	
Escherichia Coli (E.coli)	MPN/100mL	1	<1	2	<1	<1	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8791074-8791099 Literature holding time exceeded for Total Coliforms and E.Coli analysis.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268658

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-18

		SAMPLE DESCRIPTION:		17A8SW1	17A8SW2	17A8SW3	17A8SWDUP1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791074	8791097	8791098	8791099
Benzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L		100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L		100	<100	<100	<100	<100
F2 (C10-C16)	µg/L		100	<100	<100	<100	<100
F3 (C16-C34)	µg/L		100	<100	<100	<100	<100
F4 (C34-C50)	µg/L		100	<100	<100	<100	<100
Total Xylenes	ug/L		1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits					
Bromofluorobenzene	%		70-130	94	98	93	90
Dibromofluoromethane	%		70-130	112	120	114	112
Toluene - d8	%		70-130	98	105	101	96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791074-8791099 The F1 (C6 - C10) fraction is determined by integrating the FID chromatogram from the beginning of the n-C6 peak to the apex of the last n-C10 peak.

The C6 - C10 fraction is calculated from the FID toluene response factor.

Quality control for the calibration follows the guidelines set out in the CCME Contaminated Sites Method for Soils.

The (F1 minus BTEX) has been calculated by subtracting the BTEX concentration from Fraction 1.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268658

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Water Low Level

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-10

		SAMPLE DESCRIPTION:		17A8SW1	17A8SW2	17A8SW3	17A8SWDUP1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791074	8791097	8791098	8791099
Naphthalene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Quinoline	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acridine	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b+j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits					
Naphthalene - d8	%	50-130	89	90	99	91	
2-Fluorobiphenyl	%	50-130	91	92	101	93	
P-Terphenyl - d14	%	60-130	85	88	93	92	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268658

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Anions and Nutrients

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-14

		SAMPLE DESCRIPTION:		17A8SW1	17A8SW2	17A8SW3	17A8SWDUP1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791074	8791097	8791098	8791099
Chloride	mg/L	0.05	12.2	12.2	12.3	12.3	
Nitrate-N	mg/L	0.005	0.520	0.538	0.539	0.533	
Nitrite-N	mg/L	0.005	0.006	0.006	0.007	0.006	
Sulphate	mg/L	50	655	653	667	660	
Fluoride	mg/L	0.02	3.03	3.04	3.07	3.04	
Bromide	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	
Nitrogen - Total	mg/L	0.05	0.78	0.71	0.75	0.72	
Phosphorus Total	mg/L	0.005	0.008	0.008	0.009	0.009	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791074-8791099 Due to matrix interferences sample was diluted for Anions analysis, detection limits have been adjusted accordingly.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268658

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

British Columbia CSR - Schedule 6 Total Metals

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17A8SW1	17A8SW2	17A8SW3	17A8SWDUP1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791074	8791097	8791098	8791099
Aluminum Total	µg/L	5	39	53	71	34	
Antimony Total	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	
Arsenic Total	µg/L	0.1	0.5	0.7	0.7	0.8	
Barium Total	µg/L	0.5	9.5	9.5	9.0	7.7	
Beryllium Total	µg/L	5	<5	<5	<5	<5	
Boron Total	µg/L	500	1520	1730	1090	981	
Cadmium Total	µg/L	0.01	0.03	0.04	0.04	0.04	
Calcium Total	µg/L	50	200000	200000	206000	201000	
Chromium Total	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	
Cobalt Total	µg/L	0.05	0.46	0.50	0.54	0.50	
Copper Total	µg/L	0.5	1.5	1.4	1.7	1.3	
Iron Total	µg/L	10	1500	1790	2950	2120	
Lead Total	µg/L	0.05	0.07	0.09	0.11	0.06	
Lithium Total	µg/L	50	1240	1320	1020	818	
Magnesium Total	µg/L	50	37500	37600	38800	37800	
Manganese Total	µg/L	1	727	738	845	797	
Mercury Total	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	
Molybdenum Total	µg/L	0.1	2.7	2.4	2.5	2.5	
Nickel Total	µg/L	0.5	1.2	1.0	0.9	0.9	
Potassium Total	µg/L	100	3550	3610	3670	3660	
Selenium Total	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	
Silver Total	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	
Sodium Total	µg/L	100	77300	77700	79700	78400	
Thallium Total	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	
Titanium Total	µg/L	1	3	4	5	3	
Uranium Total	µg/L	0.01	11.1	9.39	8.86	8.61	
Vanadium Total	µg/L	1	<1	<1	<1	<1	
Zinc Total	µg/L	5	14	16	25	20	
Total Hardness (calc)	ug CaCO3/L	100	654000	654000	674000	658000	

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268658

PROJECT: 704-ENW.WENW03039-02

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Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

British Columbia CSR - Schedule 6 Total Metals

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791074-8791099 Due to matrix interferences sample was diluted for metals analysis, detection limits have been adjusted accordingly.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268658

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Physical Tests Package

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-10

		SAMPLE DESCRIPTION:		17A8SW1	17A8SW2	17A8SW3	17A8SWDUP1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791074	8791097	8791098	8791099
pH	pH units	0.01	8.01	8.04	8.08	8.07	
Electrical Conductivity	uS/cm	1	1420	1420	1450	1430	
Total Dissolved Solids	mg/L	5	1090	1080	1090	1100	
Alkalinity (pH 4.5)	mg CaCO3/L	1	125	123	126	127	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791074-8791099 Literature holding time exceeded for pH analysis.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268658
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Polyaromatic Hydrocarbons in Water Low Level

Naphthalene	68020	W-MS1	0.43	0.45	4.5%	< 0.05	101%	80%	120%				90%	50%	130%
Quinoline	68020	W-MS1	0.4	0.4	NA	< 0.1	100%	80%	120%				86%	50%	130%
Acenaphthylene	68020	W-MS1	0.43	0.44	2.3%	< 0.02	101%	80%	120%				86%	50%	130%
Acenaphthene	68020	W-MS1	0.47	0.49	4.2%	< 0.02	101%	80%	120%				95%	50%	130%
Fluorene	68020	W-MS1	0.44	0.46	4.4%	< 0.02	101%	80%	120%				90%	50%	130%
Phenanthrene	68020	W-MS1	0.42	0.41	2.4%	< 0.04	100%	80%	120%				88%	60%	130%
Anthracene	68020	W-MS1	0.46	0.48	4.3%	< 0.01	102%	80%	120%				93%	60%	130%
Acridine	68020	W-MS1	0.45	0.48	6.5%	< 0.05	101%	80%	120%				91%	50%	130%
Fluoranthene	68020	W-MS1	0.43	0.45	4.5%	< 0.02	101%	80%	120%				88%	60%	130%
Pyrene	68020	W-MS1	0.44	0.46	4.4%	< 0.02	101%	80%	120%				90%	60%	130%
Benzo(a)anthracene	68020	W-MS1	0.40	0.44	9.5%	< 0.01	101%	80%	120%				81%	60%	130%
Chrysene	68020	W-MS1	0.45	0.49	8.5%	< 0.01	102%	80%	120%				91%	60%	130%
Benzo(b)fluoranthene	68020	W-MS1	0.42	0.39	7.4%	< 0.01	103%	80%	120%				84%	60%	130%
Benzo(j)fluoranthene	68020	W-MS1	0.48	0.48	0.0%	< 0.01	101%	80%	120%				96%	60%	130%
Benzo(k)fluoranthene	68020	W-MS1	0.39	0.48	20.7%	< 0.01	98%	80%	120%				78%	60%	130%
Benzo(a)pyrene	68020	W-MS1	0.40	0.43	7.2%	< 0.01	104%	80%	120%				82%	60%	130%
Indeno(1,2,3-c,d)pyrene	68020	W-MS1	0.40	0.43	7.2%	< 0.01	101%	80%	120%				81%	60%	130%
Dibenzo(a,h)anthracene	68020	W-MS1	0.40	0.40	0.0%	< 0.01	101%	80%	120%				81%	60%	130%
Benzo(g,h,i)perylene	68020	W-MS1	0.45	0.48	6.5%	< 0.01	101%	80%	120%				90%	60%	130%
Naphthalene - d8	68020	W-MS1	96	94	2.1%		102%	80%	120%				97%	50%	130%
2-Fluorobiphenyl	68020	W-MS1	98	95	3.1%		102%	80%	120%				98%	50%	130%
P-Terphenyl - d14	68020	W-MS1	101	99	2.0%		100%	80%	120%				101%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME BTEX/F1-F4 (Water)

Benzene	68135	8797142	<0.5	<0.5	NA	< 0.5	96%	80%	120%				92%	70%	130%
Ethylbenzene	68135	8797142	<0.5	<0.5	NA	< 0.5	94%	80%	120%				89%	70%	130%
Toluene	68135	8797142	<0.5	<0.5	NA	< 0.5	94%	80%	120%				88%	70%	130%
m&p-Xylene	68135	8797142	<0.5	<0.5	NA	< 0.5	92%	80%	120%				87%	70%	130%
o-Xylene	68135	8797142	<0.5	<0.5	NA	< 0.5	92%	80%	120%				87%	70%	130%
F1 (C6-C10)	68135	8797142	<100	<100	NA	< 100									
F1 minus BTEX (C6-C10)	68135	8797142	<100	<100	NA	< 100									
F2 (C10-C16)	68020	W-MS1	6720	7010	4.2%	< 100	102%	80%	120%				92%	70%	130%
F3 (C16-C34)	68020	W-MS1	21200	22200	4.6%	< 100	114%	80%	120%				93%	70%	130%
F4 (C34-C50)	68020	W-MS1	4910	5200	5.7%	< 100	99%	80%	120%				91%	70%	130%
Bromofluorobenzene	68135	8797142	98	97	1.0%		97%	70%	130%				97%	70%	130%
Dibromofluoromethane	68135	8797142	104	104	0.0%		99%	70%	130%				98%	70%	130%
Toluene - d8	68135	8797142	101	101	0.0%		98%	70%	130%				98%	70%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268658
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By: _____



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268658
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Water Analysis															
RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

British Columbia CSR - Schedule 6 Total Metals

Aluminum Total	8791136		647	652	0.8%	< 5	88%	85%	115%	96%	90%	110%
Antimony Total	8791136		<0.5	<0.5	NA	< 0.5	111%	85%	115%	102%	90%	110%
Arsenic Total	8791136		0.2	0.2	NA	< 0.1	107%	85%	115%	99%	90%	110%
Barium Total	8791136		19.9	18.8	5.3%	< 0.5	99%	85%	115%	96%	90%	110%
Beryllium Total	8791136		<0.05	<0.05	NA	< 0.05	104%	85%	115%	106%	90%	110%
Boron Total	8791136		<5	<5	NA	< 5	103%	85%	115%	97%	90%	110%
Cadmium Total	8791136		0.01	0.01	NA	< 0.01	99%	85%	115%	100%	90%	110%
Calcium Total	8791136		4860	4850	0.1%	< 50	100%	85%	115%	99%	90%	110%
Chromium Total	8791136		<0.5	0.8	NA	< 0.5	108%	85%	115%	103%	90%	110%
Cobalt Total	8791136		0.32	0.33	2.7%	< 0.05	109%	85%	115%	109%	90%	110%
Copper Total	8791136		1.1	1.3	NA	< 0.5	99%	85%	115%	93%	90%	110%
Iron Total	8791136		500	498	0.5%	< 10	109%	85%	115%	96%	90%	110%
Lead Total	8791136		0.27	0.28	4.3%	< 0.05	102%	85%	115%	92%	90%	110%
Lithium Total	8791136		<0.5	<0.5	NA	< 0.5				103%	90%	110%
Magnesium Total	8791136		651	652	0.2%	< 50	110%	85%	115%	100%	90%	110%
Manganese Total	8791136		58	58	0.1%	< 1	110%	85%	115%	100%	90%	110%
Mercury Total	8791074 8791074		<0.01	<0.01	NA	< 0.01	102%	85%	115%	97%	90%	110%
Molybdenum Total	8791136		0.8	0.9	8.8%	< 0.1	96%	85%	115%	94%	90%	110%
Nickel Total	8791136		0.8	0.8	NA	< 0.5	107%	85%	115%	101%	90%	110%
Potassium Total	8791136		256	230	NA	< 100	96%	85%	115%	97%	90%	110%
Selenium Total	8791136		<0.5	<0.5	NA	< 0.5	96%	85%	115%	95%	90%	110%
Silver Total	8791136		<0.02	<0.02	NA	< 0.02				98%	90%	110%
Sodium Total	8791136		1510	1500	1.1%	< 100	101%	85%	115%	97%	90%	110%
Thallium Total	8791136		0.03	<0.02	NA	< 0.02	97%	85%	115%	100%	90%	110%
Titanium Total	8791136		4	3	NA	< 1				90%	90%	110%
Uranium Total	8791136		0.01	0.01	NA	< 0.01	97%	85%	115%	93%	90%	110%
Vanadium Total	8791136		2	2	NA	< 1	108%	85%	115%	105%	90%	110%
Zinc Total	8791136		<5	<5	NA	< 5	95%	85%	115%	101%	90%	110%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Anions and Nutrients

Chloride	8789071		2.45	2.44	0.6%	< 0.05	104%	90%	110%	100%	90%	110%
Nitrate-N	8789071		0.039	0.037	6.6%	< 0.005	98%	90%	110%	98%	90%	110%
Nitrite-N	8789071		<0.005	<0.005	NA	< 0.005				103%	90%	110%
Sulphate	8791097 8791097		653	652	0.1%	< 0.5	101%	90%	110%	106%	90%	110%
Fluoride	8789071		0.06	0.06	NA	< 0.02	100%	85%	115%	99%	90%	110%
Bromide	8789071		<0.05	<0.05	NA	< 0.05	105%	85%	115%	103%	90%	110%
Nitrogen - Total	8791074 8791074		0.78	0.73	6.5%	< 0.05	101%	85%	115%	108%	90%	110%
Phosphorus Total	8788392		0.089	0.089	0.0%	< 0.005	97%	85%	115%	94%	90%	110%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268658
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Water Analysis (Continued)

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Physical Tests Package

pH	8791005	7.69	7.76	0.9%		100%	95%	105%							
Electrical Conductivity	8791005	299	301	0.7%	< 1	94%	90%	110%							
Total Dissolved Solids	8791005	148	162	9.7%	< 5					90%	85%	115%			
Alkalinity (pH 4.5)	8791005	79	80	0.4%	< 1	90%	90%	110%							

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By: _____



Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268658
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Total Coliforms	MIC-181-7004	SM 9223B	INCUBATOR
Escherichia Coli (E.coli)	MIC-181-7004	SM 9223B	INCUBATOR

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268658
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Ethylbenzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Toluene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
m&p-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
o-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
F1 (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F2 (C10-C16)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F3 (C16-C34)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F4 (C34-C50)	ORG-180-5134	CCME Tier 1 Method	GC/FID
Bromofluorobenzene			GC/MS
Dibromofluoromethane			GC/MS
Toluene - d8			GC/MS
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Quinoline	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acridine	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8			GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268658
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
2-Fluorobiphenyl	ORG-180-5133	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268658
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Chloride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrogen - Total	INOR-181-6006	Modified from SM 4500-N	COMBUSTION
Phosphorus Total	INOR-181-6011	Modified from SM 4500-P B&E	SPECTROPHOTOMETER
Aluminum Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Antimony Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Arsenic Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Barium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Beryllium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Boron Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Cadmium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Calcium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Chromium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Cobalt Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Copper Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Iron Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Lead Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Lithium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Magnesium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Manganese Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Mercury Total	MET-181-6103	Modified from EPA 245.7	CV/AA
Molybdenum Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Nickel Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Potassium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Selenium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Silver Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Sodium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268658
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Thallium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Titanium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Uranium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Vanadium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Zinc Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
pH	INOR-181-6000	Modified from SM 4500-H+	PH METER
Electrical Conductivity	INOR-181-6000	Modified from SM 2510 B	PC TITRATE
Total Dissolved Solids	INOR-181-6007	SM 2540 C, D & E	GRAVIMETRIC
Alkalinity (pH 4.5)	INOR-181-6000	Modified from SM 2320 B	PC TITRATE



webearth.agatlabs.com

1°C
1742 68658

00750v8188

Chain of Custody Record

P: 778.452.4000 • F: 778.452.4074

Report Information

Company: Tetra Tech

Contact: Ryan Martin/Tania Perzoff

Address: 61 Wasson Pl
Whitehorse, YT Y1A 0H7

Phone: 867-668-9221 Fax: _____

AGAT Quote #: _____

Client Project #: 704-ENW.WENW03039-02

Report Information

1. Name:	Ryan Martin
Email:	ryan.martin@tetrattech.com
2. Name:	Jordan Wakefield
Email:	jordan.wakefield@tetrattech.com

Requirements (Please Check)

☐ **BC CSR Soll**

- ☐ AL
- ☐ IL
- ☐ PL
- ☐ CL
- ☐ RL

☐ **BC CSR - Water**

- ☐ DW
- ☐ AW
- ☐ IW
- ☐ LW

Schedule 11 (Please Specify)

CCME (Please Specify) CCME LANE

Other (Please Specify) Turn Page

Report Format

- ☐ Single Sample per page
- ☐ Multiple Samples per page
- ☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%
 ☐ Day 3 - 50%
 ☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

[illegible]



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 17426 8658

RECEIVING BASICS:

Received From: NOVEX #2

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 10 Containers: 44

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Oct 23, 2017

ALREADY EXCEEDED? ☒ Yes ☐ No

Hold time exceeded for Micro.

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 0 + 0 + 0 = 0 °C (2) 1 + 1 + 2 = 1 °C (3) 2 + 1 + 1 = 1 °C (4) 0 + 0 + 0 = 0 °C

Was ice or ice pack present:

☒ Yes ☐ No

Integrity Issues:

5) 0 + 1 + 0 = 0 °C

6) 1 + 1 + 1 = 1 °C

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____

Date and Time: _____

ADDITIONAL NOTES:

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetrattech
 Courier: Air North Prepaid Collect
 Waybill# 28704064130
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 If multiple sites were submitted at once: Yes No
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 6

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No
 Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*
 Earliest Expiry: _____
 Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
 Legal Samples: Yes No
 International Samples: Yes No
 Tape Sealed: Yes No
 Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 7.8+6.8+7.1=7.2°C 2 (Bottle/Jar) 7.7+7.5+6.8=7.3°C
 3 (Bottle/Jar) 7.7+7.6+6.9=7.4°C 4 (Bottle/Jar) 7.4+6.7+6.5=6.8°C
 5 (Bottle/Jar) 7.5+7.6+7.8=7.6°C 6 (Bottle/Jar) 6.8+6.9+7.2=6.9°C
 7 (Bottle/Jar) _____°C 8 (Bottle/Jar) _____°C
 9 (Bottle/Jar) _____°C 10 (Bottle/Jar) _____°C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Account Project Manager: _____ have they been notified of the above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____
 General Comments: _____

* Subcontracted Analysis (See CPM)

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Ryan Martin

PROJECT: 704-ENW.WENW03039-02

AGAT WORK ORDER: 17Y268688

TRACE ORGANICS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

WATER ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

DATE REPORTED: Oct 26, 2017

PAGES (INCLUDING COVER): 44

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 1°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin

SAMPLING SITE:

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-22

		SAMPLE DESCRIPTION:		OLMW2	17DUPLICATE2	RMW2	RMW3	RMW4	RMW7	RMW8	GH12-5
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791169	8791170	8791174	8791177	8791179	8791181	8791183	8791184
Benzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F2 (C10-C16)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F4 (C34-C50)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
Total Xylenes	ug/L		1	<1	<1	<1	<1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits									
Bromofluorobenzene	%		70-130	111	120	112	113	104	120	106	111
Dibromofluoromethane	%		70-130	81	92	78	82	84	74	88	77
Toluene - d8	%		70-130	104	101	87	102	88	94	88	109

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-22

		SAMPLE DESCRIPTION:		17A3MW1	NLMW1	NLMW3	S4-42	S4-13
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-02	2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791188	8791189	8791190	8791193	8791201
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100
F2 (C10-C16)	µg/L	100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	µg/L	100	<100	<100	<100	<100	<100	<100
F4 (C34-C50)	µg/L	100	<100	<100	<100	<100	<100	<100
Total Xylenes	ug/L	1	<1	<1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits						
Bromofluorobenzene	%	70-130	116	95	104	106	103	
Dibromofluoromethane	%	70-130	93	74	78	80	74	
Toluene - d8	%	70-130	102	72	97	99	91	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791169-8791201 The F1 (C6 - C10) fraction is determined by integrating the FID chromatogram from the beginning of the n-C6 peak to the apex of the last n-C10 peak.

The C6 - C10 fraction is calculated from the FID toluene response factor.

Quality control for the calibration follows the guidelines set out in the CCME Contaminated Sites Method for Soils.

The (F1 minus BTEX) has been calculated by subtracting the BTEX concentration from Fraction 1.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

CCME F2-F4 (Water)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-13

		SAMPLE DESCRIPTION:		17BMW01	MW13-01
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791186	8791187
F2 (C10-C16)	µg/L		100	<100	<100
F3 (C16-C34)	µg/L		100	<100	<100
F4 (C34-C50)	µg/L		100	<100	<100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791186-8791187 The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Glycols Analysis in Water

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-11

		SAMPLE DESCRIPTION:		RMW2	RMW3	RMW4	RMW7	RMW8	17A3MW1	NLMW1	NLMW3
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791174	8791177	8791179	8791181	8791183	8791188	8791189	8791190
Propylene Glycol	mg/L		10	<10	<10	<10	<10	<10	<10	<10	<10
Monoethylene Glycol	mg/L		10	<10	<10	<10	<10	<10	<10	<10	<10
Diethylene Glycol	mg/L		5	<5	<5	<5	<5	<5	<5	<5	<5
Triethylene Glycol	mg/L		10	<10	<10	<10	<10	<10	<10	<10	<10
Tetraethylene Glycol	mg/L		10	<10	<10	<10	<10	<10	<10	<10	<10
Surrogate	Unit	Acceptable Limits									
Heptanol	%	50-150		90	102	101	99	107	115	110	109
		SAMPLE DESCRIPTION:		S4-42	S4-13						
		SAMPLE TYPE:		Water	Water						
		DATE SAMPLED:		2017-10-02	2017-10-02						
Parameter	Unit	G / S	RDL	8791193	8791201						
Propylene Glycol	mg/L		10	<10	<10						
Monoethylene Glycol	mg/L		10	<10	<10						
Diethylene Glycol	mg/L		5	<5	<5						
Triethylene Glycol	mg/L		10	<10	<10						
Tetraethylene Glycol	mg/L		10	<10	<10						
Surrogate	Unit	Acceptable Limits									
Heptanol	%	50-150		110	104						

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791174-8791201 Identification based on retention time relative to standards.
Analysis performed at AGAT Calgary.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin

SAMPLING SITE:

SAMPLED BY:

Nitroaromatics, Nitroamines and Nitrate esters by HPLC - (Water)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-16

		SAMPLE DESCRIPTION:		S4-42	S4-13
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791193	8791201
HMX	µg/L		0.2	<0.2	<0.2
RDX	µg/L		0.03	<0.03	<0.03
1,3,5-Trinitrobenzene	µg/L		0.1	<0.1	<0.1
1,3-Dinitrobenzene	µg/L		0.1	<0.1	<0.1
Nitrobenzene	µg/L		0.1	<0.1	<0.1
3,5-Dinitroaniline	µg/L		0.1	<0.1	<0.1
Nitroglycerin	µg/L		2	<2	<2
Tetryl	µg/L		0.2	<0.2	<0.2
2,4,6-Trinitrotoluene	µg/L		0.1	<0.1	<0.1
2-Amino-4,6-dinitrotoluene	µg/L		0.1	<0.1	<0.1
4-Amino-2,6-dinitrotoluene	µg/L		0.1	<0.1	<0.1
2,4-Dinitrotoluene	µg/L		0.1	<0.1	<0.1
2,6-Dinitrotoluene	µg/L		0.1	<0.1	<0.1
2-Nitrotoluene	µg/L		0.2	<0.2	<0.2
4-Nitrotoluene	µg/L		0.3	<0.3	<0.3
3-Nitrotoluene	µg/L		0.3	<0.3	<0.3
Pentaerythritol tetranitrate (PETN)	µg/L		5	<5	<5
Surrogate	Unit	Acceptable Limits			
1,2-Dinitrobenzene	%	50-150	102	100	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8791193-8791201 Analysis performed at AGAT Calgary.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

OC Pesticides (Water)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-16

		SAMPLE DESCRIPTION:		RMW4	RMW8	17A3MW1	NLMW1	NLMW3
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791179	8791183	8791188	8791189	8791190
Gamma-Hexachlorocyclohexane	µg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	µg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aldrin	µg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor Epoxide	µg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulfan	µg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlordane	µg/L		0.04	<0.04	<0.04	<0.04	<0.04	<0.04
DDE	µg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DDD	µg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	µg/L		0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Dieldrin	µg/L		0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Endrin	µg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	µg/L		0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Hexachlorobenzene	ug/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobutadiene	ug/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloroethane	ug/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits						
TCMX	%	50-140		78	81	91	84	83
Decachlorobiphenyl	%	60-140		109	103	90	109	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791179-8791190 Note: DDT applies to the total of op'DDT and pp'DDT, DDD applies to the total of op'DDD and pp'DDD and DDE applies to the total of op'DDE and pp'DDE. Endosulfan applies to the total of Endosulfan I and Endosulfan II.

Chlordane applies to the total of Alpha-Chlordane and Gamma-Chlordane.

Analysis performed at AGAT Mississauga.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Phenolic Compounds in Water

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17A3MW1	NLMW1	NLMW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791188	8791189	8791190
Phenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
4-Nitrophenol	mg/L		0.005	<0.005	<0.005	<0.005
m&p-Cresol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
o-Cresol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2-Chlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,4-Dinitrophenol	mg/L		0.005	<0.005	<0.005	<0.005
2-Nitrophenol	mg/L		0.005	<0.005	<0.005	<0.005
2,4-Dimethylphenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,6-Dichlorophenol	mg/L		0.0001	<0.0001	<0.0001	<0.0001
4-Chloro-3-methylphenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,4-Dichlorophenol	mg/L		0.0001	<0.0001	<0.0001	<0.0001
4,6-Dinitro-2-methylphenol	mg/L		0.005	<0.005	<0.005	<0.005
2,3,6-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,3,4-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,4,6-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,4,5-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,3,5-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
3,4,5-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,3,4,6-Tetrachlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,3,5,6-Tetrachlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
2,3,4,5-Tetrachlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005
Pentachlorophenol	mg/L		0.0004	<0.0004	<0.0004	<0.0004
Surrogate	Unit	Acceptable Limits				
2-Fluorophenol	%	50-150	103	103	102	
2,4,6-Tribromophenol	%	50-150	97.1	96.6	95.8	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791188-8791190 Results relate only to the items tested.

Analysis performed at AGAT Calgary.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Polyaromatic Hydrocarbons in Water Low Level

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		OLMW2	17DUPLICATE2	RMW2	RMW3	RMW4	RMW7	RMW8	GH12-5
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791169	8791170	8791174	8791177	8791179	8791181	8791183	8791184
Naphthalene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Quinoline	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acridine	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b+j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits									
Naphthalene - d8	%	50-130		91	88	93	88	94	94	95	95
2-Fluorobiphenyl	%	50-130		93	85	93	88	96	95	96	95
P-Terphenyl - d14	%	60-130		89	81	86	92	99	92	93	66

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Polyaromatic Hydrocarbons in Water Low Level

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17BMW01	MW13-01	17A3MW1	NLMW1	NLMW3	S4-42	S4-13
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-02	2017-10-02	2017-10-02	2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791186	8791187	8791188	8791189	8791190	8791193	8791201
Naphthalene	µg/L	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Quinoline	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acridine	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b+j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits								
Naphthalene - d8	%	50-130	88	90	88	95	92	99	96	
2-Fluorobiphenyl	%	50-130	91	90	89	94	93	99	96	
P-Terphenyl - d14	%	60-130	90	97	NA	88	97	104	93	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8791188 p-Terphenyl-d14 surrogate recovery does not meet acceptance criteria due to sample matrix interference.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Polychlorinated Biphenyls Analysis - Water

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-11

		SAMPLE DESCRIPTION:		RMW2	RMW3	RMW4	RMW7	RMW8	17A3MW1	NLMW1	NLMW3
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791174	8791177	8791179	8791181	8791183	8791188	8791189	8791190
Aroclor 1242	µg/L		0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Aroclor 1254	µg/L		0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Aroclor 1260	µg/L		0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Total Polychlorinated Biphenyls	µg/L		0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Surrogate	Unit	Acceptable Limits									
Decachlorobiphenyl	%	50-150		115	120	115	120	105	125	130	135

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8791174-8791190 Analysis performed at AGAT Calgary.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Volatile Organic Compounds in Water

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-23

		SAMPLE DESCRIPTION:		17A3MW1	NLMW1	NLMW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791188	8791189	8791190
Chloromethane	µg/L		1	<1	<1	<1
Vinyl Chloride	µg/L		1	<1	<1	<1
Bromomethane	µg/L		1	<1	<1	<1
Chloroethane	µg/L		1	<1	<1	<1
Trichlorofluoromethane	µg/L		1	<1	<1	<1
Acetone	µg/L		10	<10	<10	<10
1,1-Dichloroethene	µg/L		1	<1	<1	<1
Dichloromethane	µg/L		1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	µg/L		1	<1	<1	<1
2-Butanone (MEK)	µg/L		10	<10	<10	<10
trans-1,2-Dichloroethylene	µg/L		1	<1	<1	<1
1,1-Dichloroethane	µg/L		1	<1	<1	1
cis-1,2-Dichloroethylene	µg/L		1	<1	<1	<1
Chloroform	µg/L		1	<1	<1	<1
1,2-Dichloroethane	µg/L		1	<1	<1	<1
1,1,1-Trichloroethane	µg/L		1	<1	<1	<1
Carbon Tetrachloride	µg/L		0.5	<0.5	<0.5	<0.5
Benzene	µg/L		0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L		1	<1	<1	<1
Trichloroethene	µg/L		1	<1	<1	<1
Bromodichloromethane	µg/L		1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L		1	<1	<1	<1
4-Methyl-2-pentanone (MIBK)	µg/L		10	<10	<10	<10
cis-1,3-Dichloropropene	µg/L		1	<1	<1	<1
1,1,2-Trichloroethane	µg/L		1	<1	<1	<1
Toluene	µg/L		0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L		1	<1	<1	<1
Ethylene Dibromide	µg/L		0.3	<0.3	<0.3	<0.3
Tetrachloroethene	µg/L		1	<1	<1	<1
1,1,1,2-Tetrachloroethane	µg/L		1	<1	<1	<1

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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Burnaby, British Columbia
CANADA V5J 0B6
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FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin

SAMPLING SITE:

SAMPLED BY:

Volatile Organic Compounds in Water

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-23

		SAMPLE DESCRIPTION:		17A3MW1	NLMW1	NLMW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791188	8791189	8791190
Chlorobenzene	µg/L		1	<1	<1	<1
Ethylbenzene	µg/L		0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L		0.5	<0.5	<0.5	<0.5
Bromoform	µg/L		1	<1	<1	<1
Styrene	µg/L		0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	µg/L		0.8	<0.8	<0.8	<0.8
o-Xylene	µg/L		0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	µg/L		0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	µg/L		0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	µg/L		0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	µg/L		1	<1	<1	<1
Total Trihalomethanes	µg/L		2	<2	<2	<2
Total Xylenes	µg/L		1	<1	<1	<1
Surrogate	Unit	Acceptable Limits				
Bromofluorobenzene	%		70-130	88	88	91
Dibromofluoromethane	%		70-130	100	102	109
Toluene - d8	%		70-130	103	104	114

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Anion Scan

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-13

SAMPLE DESCRIPTION:				OLMW2	17DUPLICATE2		RMW2	RMW3		RMW4	RMW7
SAMPLE TYPE:				Water	Water		Water	Water		Water	Water
DATE SAMPLED:				2017-10-02	2017-10-03		2017-10-03	2017-10-03		2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791169	8791170	RDL	8791174	8791177	RDL	8791179	8791181
Chloride	mg/L		0.05	0.20	1.42	0.05	2.20	0.56	0.05	2.60	2.11
Nitrate-N	mg/L		0.005	0.015	0.417	0.005	0.150	0.007	0.005	0.008	0.016
Nitrite-N	mg/L		0.005	<0.005	<0.005	0.005	0.007	<0.005	0.005	<0.005	<0.005
Sulphate	mg/L		0.5	28.9	102	50	726	2140	5	340	782
Fluoride	mg/L		0.02	0.03	0.04	0.02	0.16	0.47	0.02	0.64	0.18
Bromide	mg/L		0.05	<0.05	<0.05	0.05	<0.05	<0.05	0.05	<0.05	<0.05
SAMPLE DESCRIPTION:				RMW8		GH12-5		17BMW01	MW13-01		17A3MW1
SAMPLE TYPE:				Water		Water		Water	Water		Water
DATE SAMPLED:				2017-10-03		2017-10-03		2017-10-02	2017-10-02		2017-10-02
Parameter	Unit	G / S	RDL	8791183	RDL	8791184	RDL	8791186	8791187	RDL	8791188
Chloride	mg/L		0.05	4.95	0.05	1.42	0.05	0.39	0.11	0.05	1.90
Nitrate-N	mg/L		0.005	1.01	0.005	0.405	0.005	0.228	0.140	0.005	0.007
Nitrite-N	mg/L		0.005	<0.005	0.005	<0.005	0.005	<0.005	<0.005	0.005	<0.005
Sulphate	mg/L		5	511	0.5	102	5	189	137	0.5	17.3
Fluoride	mg/L		0.02	0.12	0.02	0.04	0.02	0.20	0.07	0.02	1.05
Bromide	mg/L		0.05	0.05	0.05	<0.05	0.05	<0.05	<0.05	0.05	<0.05
SAMPLE DESCRIPTION:				NLMW1		NLMW3		S4-42		S4-13	
SAMPLE TYPE:				Water		Water		Water		Water	
DATE SAMPLED:				2017-10-02		2017-10-02		2017-10-02		2017-10-02	
Parameter	Unit	G / S	RDL	8791189	RDL	8791190	RDL	8791193	RDL	8791201	
Chloride	mg/L		0.05	15.6	0.05	19.7	0.05	14.3	0.05	0.35	
Nitrate-N	mg/L		0.005	1.23	0.005	0.225	0.005	0.465	0.005	0.299	
Nitrite-N	mg/L		0.005	0.012	0.005	<0.005	0.005	0.009	0.005	<0.005	
Sulphate	mg/L		0.5	54.0	5	297	50	720	0.5	66.3	
Fluoride	mg/L		0.02	1.19	0.02	0.36	0.02	3.49	0.02	0.18	
Bromide	mg/L		0.05	0.08	0.05	0.12	0.05	<0.05	0.05	<0.05	

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Anion Scan

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791174-8791183 Due to matrix interferences sample was diluted for Anions analysis, detection limits have been adjusted accordingly.

8791186-8791187 Due to matrix interferences sample was diluted for Anions analysis, detection limits have been adjusted accordingly.

8791193 Due to matrix interferences sample was diluted for Anions analysis, detection limits have been adjusted accordingly.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

British Columbia CSR - Schedule 6 Total Metals

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

Parameter	Unit	SAMPLE DESCRIPTION:		S4-42		S4-13	
		SAMPLE TYPE:		Water		Water	
		DATE SAMPLED:		2017-10-02		2017-10-02	
		G / S	RDL	8791193	RDL	8791201	
Aluminum Total	µg/L		5	51	5	40	
Antimony Total	µg/L		0.5	<0.5	0.5	<0.5	
Arsenic Total	µg/L		0.1	1.2	0.1	0.3	
Barium Total	µg/L		0.5	6.5	0.5	1.2	
Beryllium Total	µg/L		2.5	<2.5	0.05	<0.05	
Boron Total	µg/L		250	1480	5	11	
Cadmium Total	µg/L		0.01	0.08	0.01	0.03	
Calcium Total	µg/L		50	204000	50	54500	
Chromium Total	µg/L		0.5	<0.5	0.5	<0.5	
Cobalt Total	µg/L		0.05	0.62	0.05	0.11	
Copper Total	µg/L		0.5	17.6	0.5	2.4	
Iron Total	µg/L		10	4080	10	107	
Lead Total	µg/L		0.05	0.07	0.05	0.06	
Lithium Total	µg/L		25	1380	0.5	16.9	
Magnesium Total	µg/L		50	37300	50	12500	
Manganese Total	µg/L		1	1020	1	8	
Mercury Total	µg/L		0.01	<0.01	0.01	<0.01	
Molybdenum Total	µg/L		0.1	4.0	0.1	0.9	
Nickel Total	µg/L		0.5	1.0	0.5	0.6	
Potassium Total	µg/L		100	3840	100	1040	
Selenium Total	µg/L		0.5	<0.5	0.5	<0.5	
Silver Total	µg/L		0.02	<0.02	0.02	<0.02	
Sodium Total	µg/L		100	85600	100	1630	
Thallium Total	µg/L		0.02	<0.02	0.02	<0.02	
Titanium Total	µg/L		1	5	1	3	
Uranium Total	µg/L		0.01	11.5	0.01	3.57	
Vanadium Total	µg/L		1	<1	1	<1	
Zinc Total	µg/L		5	36	5	6	
Total Hardness (calc)	ug CaCO3/L		100	663000	100	188000	

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin

SAMPLING SITE:

SAMPLED BY:

British Columbia CSR - Schedule 6 Total Metals

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791193 Due to matrix interferences sample was diluted for metals analysis, detection limits have been adjusted accordingly.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin

SAMPLING SITE:

SAMPLED BY:

British Columbia CSR- Schedule 6 Dissolved Metals

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		OLMW2	17DUPLICATE2	RMW2	RMW3		RMW4	RMW7	
		SAMPLE TYPE:		Water	Water	Water	Water		Water	Water	
		DATE SAMPLED:		2017-10-02	2017-10-03	2017-10-03	2017-10-03		2017-10-03	2017-10-03	
Parameter	Unit	G / S	RDL	8791169	8791170	8791174	RDL	8791177	RDL	8791179	8791181
Aluminum Dissolved	µg/L		2	5	5	11	2	16	2	6	<2
Antimony Dissolved	µg/L		0.2	<0.2	<0.2	<0.2	0.2	<0.2	0.2	<0.2	<0.2
Arsenic Dissolved	µg/L		0.1	0.6	0.1	1.9	0.1	6.8	0.1	0.3	1.0
Barium Dissolved	µg/L		0.2	178	115	12.5	0.2	25.8	0.2	23.2	11.7
Beryllium Dissolved	µg/L		0.01	<0.01	<0.01	0.02	0.01	0.04	0.01	0.01	<0.01
Boron Dissolved	µg/L		2	<2	7	18	2	16	2	16	20
Cadmium Dissolved	µg/L		0.01	0.05	0.30	0.32	0.01	0.05	0.01	<0.01	0.24
Calcium Dissolved	µg/L		50	114000	78000	211000	250	531000	50	123000	264000
Chromium Dissolved	µg/L		0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5
Cobalt Dissolved	µg/L		0.05	0.20	<0.05	4.39	0.05	0.91	0.05	<0.05	3.05
Copper Dissolved	µg/L		0.2	2.1	0.6	1.4	0.2	1.0	0.2	0.6	<0.2
Iron Dissolved	µg/L		10	102	12	76300	10	87200	10	37700	3190
Lead Dissolved	µg/L		0.05	<0.05	<0.05	0.06	0.05	<0.05	0.05	<0.05	<0.05
Lithium Dissolved	µg/L		0.5	0.7	6.2	28.3	0.5	29.8	0.5	9.3	17.4
Magnesium Dissolved	µg/L		50	24700	16700	59700	50	268000	50	28000	79200
Manganese Dissolved	µg/L		1	46	<1	2540	1	6800	1	1070	1550
Mercury Dissolved	µg/L		0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01
Molybdenum Dissolved	µg/L		0.05	0.20	1.20	0.10	0.05	0.39	0.05	0.36	0.30
Nickel Dissolved	µg/L		0.2	1.1	0.6	4.5	0.2	0.9	0.2	<0.2	4.8
Potassium Dissolved	µg/L		50	797	871	3060	50	8860	50	1950	5910
Selenium Dissolved	µg/L		0.5	<0.5	1.6	<0.5	0.5	<0.5	0.5	<0.5	<0.5
Silver Dissolved	µg/L		0.02	<0.02	<0.02	<0.02	0.02	<0.02	0.02	<0.02	<0.02
Sodium Dissolved	µg/L		50	565	1630	5960	50	7220	50	4040	7880
Thallium Dissolved	µg/L		0.01	0.04	0.02	0.02	0.01	0.02	0.01	<0.01	0.01
Titanium Dissolved	µg/L		0.5	1.3	<0.5	1.1	0.5	2.7	0.5	1.6	0.8
Uranium Dissolved	µg/L		0.01	0.70	3.46	0.60	0.01	1.42	0.01	0.43	4.05
Vanadium Dissolved	µg/L		0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5
Zinc Dissolved	µg/L		2	4	3	21	2	8	2	2	5
Hardness (calc)	ug CaCO3/L		100	386000	264000	773000	100	2430000	100	422000	985000

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

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CANADA V5J 0B6
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FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin

SAMPLING SITE:

SAMPLED BY:

British Columbia CSR- Schedule 6 Dissolved Metals

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		RMW8	GH12-5	17BMW01	MW13-01	17A3MW1	NLMW1	
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-02	2017-10-02	2017-10-02	2017-10-02	
Parameter	Unit	G / S	RDL	8791183	8791184	8791186	8791187	8791188	RDL	8791189
Aluminum Dissolved	µg/L	2	14		3	8	46	9	2	20
Antimony Dissolved	µg/L	0.2	<0.2		<0.2	0.2	<0.2	1.0	0.2	<0.2
Arsenic Dissolved	µg/L	0.1	0.3		0.1	0.3	0.7	2.0	0.1	0.4
Barium Dissolved	µg/L	0.2	26.5		113	15.8	5.3	83.1	0.2	85.8
Beryllium Dissolved	µg/L	0.01	<0.01		<0.01	<0.01	0.01	<0.01	0.01	<0.01
Boron Dissolved	µg/L	2	24		8	8	2	108	2	236
Cadmium Dissolved	µg/L	0.01	0.44		0.32	0.03	<0.01	0.17	0.01	0.37
Calcium Dissolved	µg/L	50	190000		76200	87600	68000	51000	50	83300
Chromium Dissolved	µg/L	0.5	<0.5		<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Cobalt Dissolved	µg/L	0.05	0.10		<0.05	0.51	<0.05	0.47	0.05	0.11
Copper Dissolved	µg/L	0.2	0.7		0.5	1.1	0.9	0.5	0.2	0.7
Iron Dissolved	µg/L	10	77		20	28	98	115	10	56
Lead Dissolved	µg/L	0.05	<0.05		<0.05	<0.05	0.17	0.06	0.05	0.18
Lithium Dissolved	µg/L	0.5	13.3		6.8	20.5	6.9	84.3	1.0	113
Magnesium Dissolved	µg/L	50	61300		16200	15400	13800	12600	50	18900
Manganese Dissolved	µg/L	1	6		<1	138	3	21	1	3
Mercury Dissolved	µg/L	0.01	<0.01		<0.01	<0.01	<0.01	<0.01	0.01	<0.01
Molybdenum Dissolved	µg/L	0.05	0.46		1.18	8.16	2.12	4.59	0.05	1.82
Nickel Dissolved	µg/L	0.2	1.5		0.6	1.7	0.3	1.5	0.2	1.6
Potassium Dissolved	µg/L	50	3880		893	2500	975	1110	50	3240
Selenium Dissolved	µg/L	0.5	0.6		1.6	<0.5	<0.5	<0.5	0.5	<0.5
Silver Dissolved	µg/L	0.02	<0.02		<0.02	<0.02	<0.02	<0.02	0.02	<0.02
Sodium Dissolved	µg/L	50	5900		1670	1650	890	8540	50	18900
Thallium Dissolved	µg/L	0.01	0.01		<0.01	0.02	<0.01	0.01	0.01	0.02
Titanium Dissolved	µg/L	0.5	1.4		<0.5	0.8	2.7	1.3	0.5	1.7
Uranium Dissolved	µg/L	0.01	3.82		3.38	2.55	2.82	2.46	0.01	1.75
Vanadium Dissolved	µg/L	0.5	<0.5		<0.5	<0.5	<0.5	<0.5	0.5	0.5
Zinc Dissolved	µg/L	2	14		3	<2	<2	<2	2	6
Hardness (calc)	ug CaCO3/L	100	727000		257000	282000	227000	179000	100	286000

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin

SAMPLING SITE:

SAMPLED BY:

British Columbia CSR- Schedule 6 Dissolved Metals

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		NLMW3
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2017-10-02
Parameter	Unit	G / S	RDL	8791190
Aluminum Dissolved	µg/L		2	3
Antimony Dissolved	µg/L		0.2	0.5
Arsenic Dissolved	µg/L		0.1	0.3
Barium Dissolved	µg/L		0.2	65.9
Beryllium Dissolved	µg/L		0.01	<0.01
Boron Dissolved	µg/L		2	271
Cadmium Dissolved	µg/L		0.01	0.55
Calcium Dissolved	µg/L		50	162000
Chromium Dissolved	µg/L		0.5	<0.5
Cobalt Dissolved	µg/L		0.05	0.05
Copper Dissolved	µg/L		0.2	2.3
Iron Dissolved	µg/L		10	17
Lead Dissolved	µg/L		0.05	0.07
Lithium Dissolved	µg/L		0.5	31.7
Magnesium Dissolved	µg/L		50	22500
Manganese Dissolved	µg/L		1	1
Mercury Dissolved	µg/L		0.01	<0.01
Molybdenum Dissolved	µg/L		0.05	1.11
Nickel Dissolved	µg/L		0.2	1.5
Potassium Dissolved	µg/L		50	5140
Selenium Dissolved	µg/L		0.5	<0.5
Silver Dissolved	µg/L		0.02	<0.02
Sodium Dissolved	µg/L		50	28400
Thallium Dissolved	µg/L		0.01	0.02
Titanium Dissolved	µg/L		0.5	1.1
Uranium Dissolved	µg/L		0.01	3.08
Vanadium Dissolved	µg/L		0.5	<0.5
Zinc Dissolved	µg/L		2	6
Hardness (calc)	ug CaCO3/L		100	497000

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin

SAMPLING SITE:

SAMPLED BY:

British Columbia CSR- Schedule 6 Dissolved Metals

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-12

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791177 Due to matrix interferences sample was diluted for metals analysis, detection limits have been adjusted accordingly.

8791189 Due to matrix interferences sample was diluted for metals analysis, detection limits have been adjusted accordingly.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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Burnaby, British Columbia
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Cyanide Weak Acid Dissociable (WAD)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-06

		SAMPLE DESCRIPTION:		RMW2	RMW3	RMW4	RMW7	RMW8	17A3MW1	NLMW1	NLMW3
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791174	8791177	8791179	8791181	8791183	8791188	8791189	8791190
Cyanide (WAD)	mg/L	0.002	<0.002	<0.002	<0.002	0.003	<0.002	0.002	<0.002	<0.002	<0.002
		SAMPLE DESCRIPTION:		S4-42	S4-13						
		SAMPLE TYPE:		Water	Water						
		DATE SAMPLED:		2017-10-02	2017-10-02						
Parameter	Unit	G / S	RDL	8791193	8791201						
Cyanide (WAD)	mg/L	0.002	<0.002	<0.002	<0.002						

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Cyanide, Strong Acid Dissociable (SAD)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-06

		SAMPLE DESCRIPTION:		RMW2	RMW3	RMW4	RMW7	RMW8	17A3MW1	NLMW1	NLMW3
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791174	8791177	8791179	8791181	8791183	8791188	8791189	8791190
Cyanide (SAD)	mg/L	0.002	<0.002	0.020	0.003	0.002	0.008	<0.002	<0.002	<0.002	<0.002
		SAMPLE DESCRIPTION:		S4-42	S4-13						
		SAMPLE TYPE:		Water	Water						
		DATE SAMPLED:		2017-10-02	2017-10-02						
Parameter	Unit	G / S	RDL	8791193	8791201						
Cyanide (SAD)	mg/L	0.002	<0.002	<0.002							

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Physical Tests Package

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-10

		SAMPLE DESCRIPTION:		OLMW2	17DUPLICATE2	RMW2	RMW3	RMW4	RMW7	RMW8	GH12-5
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8791169	8791170	8791174	8791177	8791179	8791181	8791183	8791184
pH	pH units	0.01	7.58	7.74	6.68	6.91	6.95	7.40	7.56	7.67	
Electrical Conductivity	uS/cm	1	698	499	1400	3310	817	1630	1270	501	
Total Dissolved Solids	mg/L	5	418	332	1190	3470	628	1380	990	320	
Alkalinity (pH 4.5)	mg CaCO3/L	1	376	165	102	302	111	278	265	166	
		SAMPLE DESCRIPTION:		17BMW01	MW13-01	17A3MW1	NLMW1	NLMW3	S4-42	S4-13	
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	
		DATE SAMPLED:		2017-10-02	2017-10-02	2017-10-02	2017-10-02	2017-10-02	2017-10-02	2017-10-02	
Parameter	Unit	G / S	RDL	8791186	8791187	8791188	8791189	8791190	8791193	8791201	
pH	pH units	0.01	7.54	7.58	7.84	7.77	7.51	7.98	7.94		
Electrical Conductivity	uS/cm	1	559	433	366	574	1010	1540	377		
Total Dissolved Solids	mg/L	5	380	280	198	370	712	1240	230		
Alkalinity (pH 4.5)	mg CaCO3/L	1	107	90	179	233	248	133	131		

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8791169-8791201 Literature holding time exceeded for pH analysis.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y268688

PROJECT: 704-ENW.WENW03039-02

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Burnaby, British Columbia
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin

SAMPLED BY:

Water Analysis - Phenols

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-16

		SAMPLE DESCRIPTION:		17A3MW1	NLMW1	NLMW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-10-02	2017-10-02	2017-10-02
Parameter	Unit	G / S	RDL	8791188	8791189	8791190
Phenols	mg/L			0.002	0.005	0.004
						0.002

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8791188-8791190 Analysis performed by AGAT Calgary.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268688
ATTENTION TO: Ryan Martin
SAMPLED BY:

Trace Organics Analysis

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME BTEX/F1-F4 (Water)

Benzene	68136	8791201	<0.5	<0.5	NA	< 0.5	102%	80%	120%				93%	70%	130%
Ethylbenzene	68136	8791201	<0.5	<0.5	NA	< 0.5	101%	80%	120%				93%	70%	130%
Toluene	68136	8791201	<0.5	<0.5	NA	< 0.5	100%	80%	120%				90%	70%	130%
m&p-Xylene	68136	8791201	<0.5	<0.5	NA	< 0.5	100%	80%	120%				92%	70%	130%
o-Xylene	68136	8791201	<0.5	<0.5	NA	< 0.5	99%	80%	120%				91%	70%	130%
F1 (C6-C10)	68136	8791201	<100	<100	NA	< 100									
F1 minus BTEX (C6-C10)	68136	8791201	<100	<100	NA	< 100									
F2 (C10-C16)	68021	W-MS1	6420	6420	0.0%	< 100	101%	80%	120%				88%	70%	130%
F3 (C16-C34)	68021	W-MS1	20900	19800	5.4%	< 100	110%	80%	120%				92%	70%	130%
F4 (C34-C50)	68021	W-MS1	4660	4480	3.9%	< 100	95%	80%	120%				86%	70%	130%
Bromofluorobenzene	68136	8791201	103	113	9.3%		100%	70%	130%				101%	70%	130%
Dibromofluoromethane	68136	8791201	74	80	7.8%		104%	70%	130%				102%	70%	130%
Toluene - d8	68136	8791201	91	81	11.6%		100%	70%	130%				101%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Water Low Level

Naphthalene	68021	W-MS1	0.45	0.48	6.5%	< 0.05	100%	80%	120%				93%	50%	130%
Quinoline	68021	W-MS1	0.4	0.5	NA	< 0.1	99%	80%	120%				98%	50%	130%
Acenaphthylene	68021	W-MS1	0.43	0.45	4.5%	< 0.02	101%	80%	120%				87%	50%	130%
Acenaphthene	68021	W-MS1	0.49	0.51	4.0%	< 0.02	100%	80%	120%				98%	50%	130%
Fluorene	68021	W-MS1	0.46	0.49	6.3%	< 0.02	101%	80%	120%				93%	50%	130%
Phenanthrene	68021	W-MS1	0.45	0.45	0.0%	< 0.04	100%	80%	120%				92%	60%	130%
Anthracene	68021	W-MS1	0.49	0.47	4.2%	< 0.01	101%	80%	120%				99%	60%	130%
Acridine	68021	W-MS1	0.46	0.46	0.0%	< 0.05	99%	80%	120%				93%	50%	130%
Fluoranthene	68021	W-MS1	0.46	0.45	2.2%	< 0.02	101%	80%	120%				94%	60%	130%
Pyrene	68021	W-MS1	0.49	0.47	4.2%	< 0.02	101%	80%	120%				99%	60%	130%
Benzo(a)anthracene	68021	W-MS1	0.43	0.45	4.5%	< 0.01	101%	80%	120%				86%	60%	130%
Chrysene	68021	W-MS1	0.49	0.51	4.0%	< 0.01	101%	80%	120%				98%	60%	130%
Benzo(b)fluoranthene	68021	W-MS1	0.45	0.46	2.2%	< 0.01	99%	80%	120%				90%	60%	130%
Benzo(j)fluoranthene	68021	W-MS1	0.47	0.49	4.2%	< 0.01	102%	80%	120%				95%	60%	130%
Benzo(k)fluoranthene	68021	W-MS1	0.48	0.46	4.3%	< 0.01	103%	80%	120%				97%	60%	130%
Benzo(a)pyrene	68021	W-MS1	0.42	0.42	0.0%	< 0.01	102%	80%	120%				84%	60%	130%
Indeno(1,2,3-c,d)pyrene	68021	W-MS1	0.40	0.42	4.9%	< 0.01	101%	80%	120%				82%	60%	130%
Dibenzo(a,h)anthracene	68021	W-MS1	0.42	0.40	4.9%	< 0.01	101%	80%	120%				84%	60%	130%
Benzo(g,h,i)perylene	68021	W-MS1	0.45	0.46	2.2%	< 0.01	101%	80%	120%				91%	60%	130%
Naphthalene - d8	68021	W-MS1	100	99	1.0%		102%	80%	120%				100%	50%	130%
2-Fluorobiphenyl	68021	W-MS1	103	102	1.0%		102%	80%	120%				103%	50%	130%
P-Terphenyl - d14	68021	W-MS1	109	100	8.6%		101%	80%	120%				109%	60%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268688
ATTENTION TO: Ryan Martin
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Volatile Organic Compounds in Water

Chloromethane	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				97%	70%	130%
Vinyl Chloride	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				97%	70%	130%
Bromomethane	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				81%	70%	130%
Chloroethane	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				99%	70%	130%
Trichlorofluoromethane	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				96%	70%	130%
Acetone	68139	8791188	<10	<10	NA	< 10	99%	80%	120%						
1,1-Dichloroethene	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				104%	70%	130%
Dichloromethane	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				96%	70%	130%
Methyl tert-butyl ether (MTBE)	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				101%	70%	130%
2-Butanone (MEK)	68139	8791188	<10	<10	NA	< 10	99%	80%	120%						
trans-1,2-Dichloroethylene	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				101%	70%	130%
1,1-Dichloroethane	68139	8791188	<1	<1	NA	< 1	97%	80%	120%				111%	70%	130%
cis-1,2-Dichloroethylene	68139	8791188	<1	<1	NA	< 1	99%	80%	120%				107%	70%	130%
Chloroform	68139	8791188	<1	<1	NA	< 1	98%	80%	120%				108%	70%	130%
1,2-Dichloroethane	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				100%	70%	130%
1,1,1-Trichloroethane	68139	8791188	<1	<1	NA	< 1	99%	80%	120%				104%	70%	130%
Carbon Tetrachloride	68139	8791188	<0.5	<0.5	NA	< 0.5	99%	80%	120%				102%	70%	130%
Benzene	68139	8791188	<0.5	<0.5	NA	< 0.5	98%	80%	120%				110%	70%	130%
1,2-Dichloropropane	68139	8791188	<1	<1	NA	< 1	98%	80%	120%				113%	70%	130%
Trichloroethene	68139	8791188	<1	<1	NA	< 1	98%	80%	120%				110%	70%	130%
Bromodichloromethane	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				102%	70%	130%
trans-1,3-Dichloropropene	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				101%	70%	130%
4-Methyl-2-pentanone (MIBK)	68139	8791188	<10	<10	NA	< 10	100%	80%	120%						
cis-1,3-Dichloropropene	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				102%	70%	130%
1,1,2-Trichloroethane	68139	8791188	<1	<1	NA	< 1	99%	80%	120%				107%	70%	130%
Toluene	68139	8791188	<0.5	<0.5	NA	< 0.5	100%	80%	120%				107%	70%	130%
Dibromochloromethane	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				101%	70%	130%
Ethylene Dibromide	68139	8791188	<0.3	<0.3	NA	< 0.3	99%	80%	120%				106%	70%	130%
Tetrachloroethene	68139	8791188	<1	<1	NA	< 1	100%	80%	120%				82%	70%	130%
1,1,1,2-Tetrachloroethane	68139	8791188	<1	<1	NA	< 1	101%	80%	120%				85%	70%	130%
Chlorobenzene	68139	8791188	<1	<1	NA	< 1	101%	80%	120%				86%	70%	130%
Ethylbenzene	68139	8791188	<0.5	<0.5	NA	< 0.5	101%	80%	120%				88%	70%	130%
m&p-Xylene	68139	8791188	<0.5	<0.5	NA	< 0.5	102%	80%	120%				85%	70%	130%
Bromoform	68139	8791188	<1	<1	NA	< 1	102%	80%	120%				81%	70%	130%
Styrene	68139	8791188	<0.5	<0.5	NA	< 0.5	102%	80%	120%				89%	70%	130%
1,1,2,2-Tetrachloroethane	68139	8791188	<0.8	<0.8	NA	< 0.8	101%	80%	120%				82%	70%	130%
o-Xylene	68139	8791188	<0.5	<0.5	NA	< 0.5	102%	80%	120%				85%	70%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268688
ATTENTION TO: Ryan Martin
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	68139	8791188	<0.5	<0.5	NA	< 0.5	100%	80%	120%				95%	70%	130%
1,4-Dichlorobenzene	68139	8791188	<0.5	<0.5	NA	< 0.5	100%	80%	120%				94%	70%	130%
1,2-Dichlorobenzene	68139	8791188	<0.5	<0.5	NA	< 0.5	101%	80%	120%				96%	70%	130%
1,2,4-Trichlorobenzene	68139	8791188	<1	<1	NA	< 1	101%	80%	120%				97%	70%	130%
Bromofluorobenzene	68139	8791188	88	85	3.5%		115%	70%	130%				104%	70%	130%
Dibromofluoromethane	68139	8791188	100	96	4.1%		88%	70%	130%				108%	70%	130%
Toluene - d8	68139	8791188	103	91	12.4%		94%	70%	130%				115%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Glycols Analysis in Water

Propylene Glycol	147	8794903	<10	<10	NA	< 10	117%	70%	130%	121%	70%	130%	89%	60%	140%
Monoethylene Glycol	147	8794903	<10	<10	NA	< 10	118%	70%	130%	122%	70%	130%	90%	60%	140%
Diethylene Glycol	147	8794903	<5	<5	NA	< 5	118%	70%	130%	123%	70%	130%	90%	60%	140%
Triethylene Glycol	147	8794903	<10	<10	NA	< 10	111%	70%	130%	118%	70%	130%	85%	60%	140%
Tetraethylene Glycol	147	8794903	<10	<10	NA	< 10	94%	70%	130%	101%	70%	130%	70%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Polychlorinated Biphenyls Analysis - Water

Aroclor 1242	145	8791177	<0.009	<0.009	NA	< 0.009	114%	70%	130%	88%	70%	130%	83%	50%	150%
Aroclor 1254	145	8791177	<0.009	<0.009	NA	< 0.009	110%	70%	130%	73%	70%	130%	78%	50%	150%
Aroclor 1260	145	8791177	<0.009	<0.009	NA	< 0.009	122%	70%	130%	75%	70%	130%	75%	50%	150%
Total Polychlorinated Biphenyls	145	8791177	<0.009	<0.009	NA	< 0.009	115%	70%	130%	78%	70%	130%	78%	50%	150%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Phenolic Compounds in Water

Phenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005	97%	80%	120%	102%	70%	130%	101%	60%	140%
4-Nitrophenol	653	8797420	<0.005	<0.005	NA	< 0.005	93%	80%	120%	98%	70%	130%	96%	60%	140%
m&p-Cresol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				99%	70%	130%	99%	60%	140%
o-Cresol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				99%	70%	130%	99%	60%	140%
2-Chlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005	89%	80%	120%	90%	70%	130%	95%	60%	140%
2,4-Dinitrophenol	653	8797420	<0.005	<0.005	NA	< 0.005	95%	80%	120%	100%	70%	130%	101%	60%	140%
2-Nitrophenol	653	8797420	<0.005	<0.005	NA	< 0.005	84%	80%	120%	82%	70%	130%	91%	60%	140%
2,4-Dimethylphenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005	92%	80%	120%	97%	70%	130%	99%	60%	140%
2,6-Dichlorophenol	653	8797420	<0.0001	<0.0001	NA	< 0.0001				94%	70%	130%	99%	60%	140%
4-Chloro-3-methylphenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005	93%	80%	120%	98%	70%	130%	99%	60%	140%
2,4-Dichlorophenol	653	8797420	<0.0001	<0.0001	NA	< 0.0001	91%	80%	120%	93%	70%	130%	97%	60%	140%
4,6-Dinitro-2-methylphenol	653	8797420	<0.005	<0.005	NA	< 0.005	108%	80%	120%	106%	70%	130%	108%	60%	140%
2,3,6-Trichlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				98%	70%	130%	99%	60%	140%
2,3,4-Trichlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				96%	70%	130%	99%	60%	140%
2,4,6-Trichlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005	93%	80%	120%	96%	70%	130%	99%	60%	140%
2,4,5-Trichlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				95%	70%	130%	99%	60%	140%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
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SAMPLING SITE:

AGAT WORK ORDER: 17Y268688
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SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
2,3,5-Trichlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				93%	70%	130%	97%	60%	140%
3,4,5-Trichlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				98%	70%	130%	99%	60%	140%
2,3,4,6-Tetrachlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				101%	70%	130%	100%	60%	140%
2,3,5,6-Tetrachlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				102%	70%	130%	102%	60%	140%
2,3,4,5-Tetrachlorophenol	653	8797420	<0.0005	<0.0005	NA	< 0.0005				101%	70%	130%	102%	60%	140%
Pentachlorophenol	653	8797420	<0.0004	<0.0004	NA	< 0.0004	96%	80%	120%	102%	70%	130%	103%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Nitroaromatics, Nitroamines and Nitrate esters by HPLC - (Water)

HMX	188	8791193	<0.2	<0.2	NA	< 0.2	96%	80%	120%	93%	70%	130%	93%	60%	140%
RDX	188	8791193	<0.03	<0.03	NA	< 0.03	96%	80%	120%	107%	70%	130%	104%	60%	140%
1,3,5-Trinitrobenzene	188	8791193	<0.1	<0.1	NA	< 0.1	105%	80%	120%	96%	70%	130%	96%	60%	140%
1,3-Dinitrobenzene	188	8791193	<0.1	<0.1	NA	< 0.1	90%	80%	120%	103%	70%	130%	104%	60%	140%
Nitrobenzene	188	8791193	<0.1	<0.1	NA	< 0.1	96%	80%	120%	83%	70%	130%	82%	60%	140%
3,5-Dinitroaniline	188	8791193	<0.1	<0.1	NA	< 0.1	98%	80%	120%	109%	70%	130%	110%	60%	140%
Nitroglycerin	188	8791193	<2	<2	NA	< 2	92%	80%	120%	106%	70%	130%	114%	60%	140%
Tetryl	188	8791193	<0.2	<0.2	NA	< 0.2	98%	80%	120%	80%	70%	130%	80%	60%	140%
2,4,6-Trinitrotoluene	188	8791193	<0.1	<0.1	NA	< 0.1	93%	80%	120%	99%	70%	130%	100%	60%	140%
2-Amino-4,6-dinitrotoluene	188	8791193	<0.1	<0.1	NA	< 0.1	100%	80%	120%	104%	70%	130%	104%	60%	140%
4-Amino-2,6-dinitrotoluene	188	8791193	<0.1	<0.1	NA	< 0.1	101%	80%	120%	101%	70%	130%	102%	60%	140%
2,4-Dinitrotoluene	188	8791193	<0.1	<0.1	NA	< 0.1	89%	80%	120%	95%	70%	130%	95%	60%	140%
2,6-Dinitrotoluene	188	8791193	<0.1	<0.1	NA	< 0.1	86%	80%	120%	89%	70%	130%	89%	60%	140%
2-Nitrotoluene	188	8791193	<0.2	<0.2	NA	< 0.2	101%	80%	120%	85%	70%	130%	92%	60%	140%
4-Nitrotoluene	188	8791193	<0.3	<0.3	NA	< 0.3	99%	80%	120%	86%	70%	130%	85%	60%	140%
3-Nitrotoluene	188	8791193	<0.3	<0.3	NA	< 0.3	93%	80%	120%	81%	70%	130%	82%	60%	140%
Pentaerythritol tetranitrate (PETN)	188	8791193	<5	<5	NA	< 5	98%	80%	120%	100%	70%	130%	101%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

OC Pesticides (Water)

Gamma-Hexachlorocyclohexane	TW	< 0.01	< 0.01	NA	< 0.01	96%	50%	140%	85%	50%	140%	70%	50%	140%
Heptachlor	TW	< 0.01	< 0.01	NA	< 0.01	96%	50%	140%	106%	50%	140%	108%	50%	140%
Aldrin	TW	< 0.01	< 0.01	NA	< 0.01	107%	50%	140%	93%	50%	140%	89%	50%	140%
Heptachlor Epoxide	TW	< 0.01	< 0.01	NA	< 0.01	106%	50%	140%	115%	50%	140%	94%	50%	140%
Endosulfan	TW	< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	102%	50%	140%	87%	50%	140%
Chlordane	TW	< 0.04	< 0.04	NA	< 0.04	105%	50%	140%	104%	50%	140%	84%	50%	140%
DDE	TW	< 0.01	< 0.01	NA	< 0.01	111%	50%	140%	105%	50%	140%	95%	50%	140%
DDD	TW	< 0.05	< 0.05	NA	< 0.05	109%	50%	140%	111%	50%	140%	95%	50%	140%
DDT	TW	< 0.04	< 0.04	NA	< 0.04	100%	50%	140%	97%	50%	140%	83%	50%	140%
Dieldrin	TW	< 0.02	< 0.02	NA	< 0.02	105%	50%	140%	117%	50%	140%	98%	50%	140%
Endrin	TW	< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	113%	50%	140%	103%	50%	140%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y268688
ATTENTION TO: Ryan Martin
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Methoxychlor		TW	< 0.04	< 0.04	NA	< 0.04	95%	50%	140%	111%	50%	140%	112%	50%	140%
Hexachlorobenzene		TW	< 0.01	< 0.01	NA	< 0.01	93%	50%	140%	89%	50%	140%	85%	50%	140%
Hexachlorobutadiene		TW	< 0.01	< 0.01	NA	< 0.01	93%	50%	140%	97%	50%	140%	68%	50%	140%
Hexachloroethane		TW	< 0.01	< 0.01	NA	< 0.01	88%	50%	140%	73%	50%	140%	68%	50%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: _____



Quality Assurance

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SAMPLING SITE:

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SAMPLED BY:

Water Analysis															
RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

British Columbia CSR- Schedule 6 Dissolved Metals

Aluminum Dissolved	8791169	8791169	5	5	NA	< 2	97%	90%	110%	106%	90%	110%			
Antimony Dissolved	8791169	8791169	<0.2	<0.2	NA	< 0.2	105%	90%	110%	107%	90%	110%			
Arsenic Dissolved	8791169	8791169	0.6	0.6	2.6%	< 0.1	95%	90%	110%	102%	90%	110%			
Barium Dissolved	8791169	8791169	178	185	3.9%	< 0.2	101%	90%	110%	108%	90%	110%			
Beryllium Dissolved	8791169	8791169	<0.01	<0.01	NA	< 0.01	102%	90%	110%	105%	90%	110%			
Boron Dissolved	8791169	8791169	<2	<2	NA	< 2	91%	90%	110%	105%	90%	110%			
Cadmium Dissolved	8791169	8791169	0.05	0.05	NA	< 0.01	94%	90%	110%	102%	90%	110%			
Calcium Dissolved	8791169	8791169	114000	114000	0.1%	< 50	101%	90%	110%	99%	90%	110%			
Chromium Dissolved	8791169	8791169	<0.5	<0.5	NA	< 0.5	102%	90%	110%	102%	90%	110%			
Cobalt Dissolved	8791169	8791169	0.20	0.18	NA	< 0.05	104%	90%	110%	104%	90%	110%			
Copper Dissolved	8791169	8791169	2.1	2.0	3.3%	< 0.2	110%	90%	110%	106%	90%	110%			
Iron Dissolved	8791169	8791169	102	102	0.0%	< 10	103%	90%	110%	106%	90%	110%			
Lead Dissolved	8791169	8791169	<0.05	<0.05	NA	< 0.05	105%	90%	110%	101%	90%	110%			
Lithium Dissolved	8791169	8791169	0.7	0.6	NA	< 0.5				109%	90%	110%			
Magnesium Dissolved	8791169	8791169	24700	24700	0.0%	< 50	104%	90%	110%	107%	90%	110%			
Manganese Dissolved	8791169	8791169	46	46	0.3%	< 1	105%	90%	110%	107%	90%	110%			
Mercury Dissolved	8791169	8791169	<0.01	<0.01	NA	< 0.01	97%	90%	110%	91%	90%	110%			
Molybdenum Dissolved	8791169	8791169	0.20	0.16	NA	< 0.05	100%	90%	110%	110%	90%	110%			
Nickel Dissolved	8791169	8791169	1.1	1.0	2.1%	< 0.2	106%	90%	110%	105%	90%	110%			
Potassium Dissolved	8791169	8791169	797	798	0.2%	< 50	96%	90%	110%	97%	90%	110%			
Selenium Dissolved	8791169	8791169	<0.5	<0.5	NA	< 0.5	100%	90%	110%	106%	90%	110%			
Silver Dissolved	8791169	8791169	<0.02	<0.02	NA	< 0.02				104%	90%	110%			
Sodium Dissolved	8791169	8791169	565	567	0.5%	< 50	103%	90%	110%	101%	90%	110%			
Thallium Dissolved	8791169	8791169	0.04	0.04	NA	< 0.01	104%	90%	110%	102%	90%	110%			
Titanium Dissolved	8791169	8791169	1.3	1.1	NA	< 0.5				106%	90%	110%			
Uranium Dissolved	8791169	8791169	0.70	0.73	4.3%	< 0.01	98%	90%	110%	99%	90%	110%			
Vanadium Dissolved	8791169	8791169	<0.5	<0.5	NA	< 0.5	101%	90%	110%	105%	90%	110%			
Zinc Dissolved	8791169	8791169	4	3	NA	< 2	104%	90%	110%	106%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Anion Scan

Chloride	8785316		0.36	0.38	4.4%	< 0.05	103%	90%	110%	99%	90%	110%			
Nitrate-N	8785316		4.69	4.70	0.2%	< 0.005	98%	90%	110%	97%	90%	110%			
Nitrite-N	8785316		<0.005	<0.005	NA	< 0.005				103%	90%	110%			
Sulphate	8785316		134	134	0.0%	< 0.5	97%	90%	110%	101%	90%	110%			
Fluoride	8785316		0.30	0.31	2.0%	< 0.02	99%	85%	115%	102%	90%	110%			
Bromide	8785316		<0.05	<0.05	NA	< 0.05	104%	85%	115%	103%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.



Quality Assurance

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SAMPLING SITE:

AGAT WORK ORDER: 17Y268688
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SAMPLED BY:

Water Analysis (Continued)

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

Physical Tests Package

pH	8791144		6.82	6.89	1.0%		100%	95%	105%						
Electrical Conductivity	8791144		42	42	0.0%	< 1	93%	90%	110%						
Total Dissolved Solids	8791169	8791169	418	432	3.5%	< 5				100%	85%	115%			
Alkalinity (pH 4.5)	8791144		13	14	3.9%	< 1	91%	90%	110%						

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide Weak Acid Dissociable (WAD)

Cyanide (WAD)	8779632	8779632	0.004	0.005	NA	< 0.002	95%	70%	130%	92%	90%	110%	100%	80%	120%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide, Strong Acid Dissociable (SAD)

Cyanide (SAD)	8779632		0.005	0.005	NA	< 0.002	95%	85%	115%	91%	90%	110%	105%	80%	120%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

British Columbia CSR - Schedule 6 Total Metals

Aluminum Total	8785404		409	361	12.5%	< 5	91%	85%	115%	100%	90%	110%			
Antimony Total	8785404		<0.5	<0.5	NA	< 0.5	102%	85%	115%	97%	90%	110%			
Arsenic Total	8785404		0.3	0.3	NA	< 0.1	92%	85%	115%	100%	90%	110%			
Barium Total	8785404		176	158	10.9%	< 0.5	99%	85%	115%	97%	90%	110%			
Beryllium Total	8785404		<0.05	<0.05	NA	< 0.05	100%	85%	115%	101%	90%	110%			
Boron Total	8785404		14	13	NA	< 5	99%	85%	115%	103%	90%	110%			
Cadmium Total	8785404		0.04	0.04	NA	< 0.01	99%	85%	115%	100%	90%	110%			
Calcium Total	8785404		52200	52700	1.1%	< 50	97%	85%	115%	96%	90%	110%			
Chromium Total	8785404		0.7	0.5	NA	< 0.5	102%	85%	115%	105%	90%	110%			
Cobalt Total	8785404		0.33	0.29	14.8%	< 0.05	108%	85%	115%	102%	90%	110%			
Copper Total	8785404		1.4	1.2	NA	< 0.5	106%	85%	115%	106%	90%	110%			
Iron Total	8785404		421	418	0.8%	< 10	101%	85%	115%	99%	90%	110%			
Lead Total	8785404		0.29	0.27	6.3%	< 0.05	107%	85%	115%	94%	90%	110%			
Lithium Total	8785404		18.5	17.9	3.2%	< 0.5				103%	90%	110%			
Magnesium Total	8785404		21200	21400	1.0%	< 50	102%	85%	115%	94%	90%	110%			
Manganese Total	8785404		11	11	1.2%	< 1	104%	85%	115%	95%	90%	110%			
Mercury Total	8791074		<0.01	<0.01	NA	< 0.01	102%	85%	115%	97%	90%	110%			
Molybdenum Total	8785404		2.5	2.3	8.5%	< 0.1	113%	85%	115%	93%	90%	110%			
Nickel Total	8785404		4.8	4.3	11.1%	< 0.5	107%	85%	115%	104%	90%	110%			
Potassium Total	8785404		1030	1050	2.3%	< 100	93%	85%	115%	94%	90%	110%			
Selenium Total	8785404		13.0	13.1	0.6%	< 0.5	92%	85%	115%	100%	90%	110%			
Silver Total	8785404		<0.02	<0.02	NA	< 0.02				97%	90%	110%			
Sodium Total	8785404		8390	8490	1.3%	< 100	96%	85%	115%	93%	90%	110%			
Thallium Total	8785404		0.03	<0.02	NA	< 0.02	102%	85%	115%	96%	90%	110%			



Quality Assurance

CLIENT NAME: TETRA TECH EBA
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SAMPLED BY:

Water Analysis (Continued)

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Titanium Total	8785404		2	2	NA	< 1				109%	90%	110%			
Uranium Total	8785404		1.38	1.31	5.2%	< 0.01	113%	85%	115%	103%	90%	110%			
Vanadium Total	8785404		1	1	NA	< 1	102%	85%	115%	103%	90%	110%			
Zinc Total	8785404		<5	<5	NA	< 5	94%	85%	115%	103%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Water Analysis - Phenols

Phenols	8807232		0.002	0.002	NA	< 0.002	94%	80%	120%	88%	80%	120%	95%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:

Method Summary

CLIENT NAME: TETRA TECH EBA
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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Ethylbenzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Toluene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
m&p-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
o-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
F1 (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F2 (C10-C16)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F3 (C16-C34)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F4 (C34-C50)	ORG-180-5134	CCME Tier 1 Method	GC/FID
Bromofluorobenzene			GC/MS
Dibromofluoromethane			GC/MS
Toluene - d8			GC/MS
Propylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Monoethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Diethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Triethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Tetraethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Heptanol	TO-1410	EPA SW-846 8015	GC/FID
HMX	TO-2100	EPA SW-846 8330	HPLC
RDX	TO-2100	EPA SW-846 8330	HPLC
1,3,5-Trinitrobenzene	TO-2100	EPA SW-846 8330	HPLC
1,3-Dinitrobenzene	TO-2100	EPA SW-846 8330	HPLC
Nitrobenzene	TO-2100	EPA SW-846 8330	HPLC
3,5-Dinitroaniline	TO-2100	EPA SW-846 8330	HPLC
Nitroglycerin	TO-2100	EPA SW-846 8330	HPLC
Tetryl	TO-2100	EPA SW-846 8330	HPLC
2,4,6-Trinitrotoluene	TO-2100	EPA SW-846 8330	HPLC
2-Amino-4,6-dinitrotoluene	TO-2100	EPA SW-846 8330	HPLC
4-Amino-2,6-dinitrotoluene	TO-2100	EPA SW-846 8330	HPLC
2,4-Dinitrotoluene	TO-2100	EPA SW-846 8330	HPLC
2,6-Dinitrotoluene	TO-2100	EPA SW-846 8330	HPLC
2-Nitrotoluene	TO-2100	EPA SW-846 8330	HPLC
4-Nitrotoluene	TO-2100	EPA SW-846 8330	HPLC
3-Nitrotoluene	TO-2100	EPA SW-846 8330	HPLC
Pentaerythritol tetranitrate (PETN)	TO-2100	EPA SW-846 8330	HPLC
1,2-Dinitrobenzene	TO-2100	EPA SW-846 8330	HPLC
Gamma-Hexachlorocyclohexane	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Heptachlor	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Aldrin	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Endosulfan	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Chlordane	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
DDE	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
DDD	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
DDT	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Dieldrin	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Endrin	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Methoxychlor	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD

Method Summary

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Hexachlorobenzene	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Hexachloroethane	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
TCMX	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Phenol	TO-1200	"In house" developed method	HPLC
4-Nitrophenol	TO-1200	"In house" developed method	HPLC
m&p-Cresol	TO-1200	"In house" developed method	HPLC
o-Cresol	TO-1200	"In house" developed method	HPLC
2-Chlorophenol	TO-1200	"In house" developed method	HPLC
2,4-Dinitrophenol	TO-1200	"In house" developed method	HPLC
2-Nitrophenol	TO-1200	"In house" developed method	HPLC
2,4-Dimethylphenol	TO-1200	"In house" developed method	HPLC
2,6-Dichlorophenol	TO-1200	"In house" developed method	HPLC
4-Chloro-3-methylphenol	TO-1200	"In house" developed method	HPLC
2,4-Dichlorophenol	TO-1200	"In house" developed method	HPLC
4,6-Dinitro-2-methylphenol	TO-1200	"In house" developed method	HPLC
2,3,6-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,3,4-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,4,6-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,4,5-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,3,5-Trichlorophenol	TO-1200	"In house" developed method	HPLC
3,4,5-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,3,4,6-Tetrachlorophenol	TO-1200	"In house" developed method	HPLC
2,3,5,6-Tetrachlorophenol	TO-1200	"In house" developed method	HPLC
2,3,4,5-Tetrachlorophenol	TO-1200	"In house" developed method	HPLC
Pentachlorophenol	TO-1200	"In house" developed method	HPLC
2-Fluorophenol	TO-1200	"In house" developed method	HPLC
2,4,6-Tribromophenol	TO-1200	"In house" developed method	HPLC
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Quinoline	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acridine	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Benzo(b)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8			GC/MS
2-Fluorobiphenyl	ORG-180-5133	Modified from BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Aroclor 1242	TO-0400	EPA SW-846 8082	GC/ECD
Aroclor 1254	TO-0400	EPA SW-846 8082	GC/ECD
Aroclor 1260	TO-0400	EPA SW-846 8082	GC/ECD
Total Polychlorinated Biphenyls	TO-0400	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	TO-0400	EPA SW-846 8082	GC/ECD
Chloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Vinyl Chloride	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromomethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Chloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Trichlorofluoromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Acetone	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1-Dichloroethene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dichloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Methyl tert-butyl ether (MTBE)	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
2-Butanone (MEK)	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
trans-1,2-Dichloroethylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1-Dichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
cis-1,2-Dichloroethylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Chloroform	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,1-Trichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS

Method Summary

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Carbon Tetrachloride	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Benzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichloropropane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Trichloroethene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromodichloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
trans-1,3-Dichloropropene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
4-Methyl-2-pentanone (MIBK)	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
cis-1,3-Dichloropropene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,2-Trichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Toluene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dibromochloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Ethylene Dibromide	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Tetrachloroethene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,1,2-Tetrachloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D	GC/MS
Chlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Ethylbenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
m&p-Xylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromoform	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Styrene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,2,2-Tetrachloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
o-Xylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,3-Dichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,4-Dichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2,4-Trichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromofluorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dibromofluoromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Toluene - d8	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Chloride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Aluminum Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Antimony Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Arsenic Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Barium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Beryllium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Boron Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Cadmium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Calcium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Chromium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Cobalt Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Copper Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Iron Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Lead Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Lithium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Magnesium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Manganese Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Mercury Total	MET-181-6103	Modified from EPA 245.7	CV/AA
Molybdenum Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Nickel Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Potassium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Selenium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Silver Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Sodium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Thallium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Titanium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Uranium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Vanadium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Zinc Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Aluminum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Antimony Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Arsenic Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Barium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Beryllium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Boron Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cadmium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Calcium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Chromium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cobalt Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Copper Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Iron Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Lead Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Lithium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Magnesium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Manganese Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Mercury Dissolved	MET-181-6103, LAB-181-4015	Modified from EPA 245.7	CV/AA
Molybdenum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Nickel Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Potassium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Selenium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Silver Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Sodium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Thallium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS

Method Summary

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SAMPLING SITE:

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SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Titanium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Uranium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Vanadium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Zinc Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cyanide (WAD)	INOR-181-6010	EPA 335.3	CONTINUOUS FLOW ANALYZER
Cyanide (SAD)	INOR-181-6010	EPA 335.3	CONTINUOUS FLOW ANALYZER
pH	INOR-181-6000	Modified from SM 4500-H+	PH METER
Electrical Conductivity	INOR-181-6000	Modified from SM 2510 B	PC TITRATE
Total Dissolved Solids	INOR-181-6007	SM 2540 C, D & E	GRAVIMETRIC
Alkalinity (pH 4.5)	INOR-181-6000	Modified from SM 2320 B	PC TITRATE
Phenols	INST 0300	SM 420.2	CONTINUOUS FLOW ANALYZER



AGAT

Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature: 1°C

AGAT Job Number: 17Y268688

Notes:

OCT 5 AM 8:36

Chain of Custody Record

Report Information

Company: TETRA TECH

Contact: RYAN MARTIN

Address: 61 WATSON PL

WHITEHORSE, YT, Y1A 0H7

Phone: 867 688 4224 Fax: _____

AGAT Quote #: _____

Client Project #: 704-ENV-WENW03034-02

Report Information

1. Name: RYAN MARTIN

Email: Ryan.martin@tetratech.com

2. Name: JORDAN WAKEFIELD

Email: Jordan.Wakefield@tetratech.com
MIKE GALLAGHER@TETRA TECH.COM

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 11 (Please Specify) _____

CCME (Please Specify) FIGWQ6 CLME WQ6

Other (Please Specify) TIER 1 MWT

Report Format

Single

☐ Sample per page

Multiple

☐ Samples per page

☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT

☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____

Contact: _____

Address: _____

Phone: _____

Fax: _____

PO/A/E#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	GENERAL CHEMISTRY / ANALYSIS	FL / BTEX	PAH	GLYCOL	CYANIDE	PCB	CHLOROPHENOLS	ORGANOCHLOR PESTS	DISORDERED METALS	DISORDERED MERCURY	TOTAL METALS	TOTAL MERCURY	TOTAL PHENOLS	VOC / MTBE	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
8791169	OLMW2	GW	OCT 23 2017	FL Sampled Oct 3	X	X	X						X	X					8	X		
70	17 DUPLICATE 2	GW	OCT 3 2017		X	X	X						X	X					8	Y		
74	RMW 2	GW	OCT 3 2017		X	X	X	Y	X	X			X	X					14	Y		
77	RMW 3	GW	OCT 3 2017		X	X	X	Y	X	X			X	X					14	Y		
79	RMW 4	GW	OCT 3 2017		X	X	X	X	X	X		X	X	X					14	Y		
81	RMW 7	GW	OCT 3 2017		X	X	X	X	X	X			X	X					14	Y		
83	RMW 8	GW	OCT 3 2017		X	X	X	X	X	X		X	X	X					14	Y		
84	GH12-5	GW	OCT 3 2017		X	X	X						X	X					8	Y		
86	17BMW01	GW	OCT 2 2017		X		Y						X	X	X	X			10	Y		
87	MW13-01	GW	OCT 2 2017		X	X	X	X	X	X			X	X	X	X			10	Y		
88	17A3 MW1	GW	OCT 2 2017		X	Y	X	X	X	X	X	X	X	X			X	X	21	Y		

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign): Ann Ye

Date/Time

Page 1 of 2

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Nº: **024977**



120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6
webearth.agatlabs.com

Laboratory Use Only

Arrival Temperature: 1°C
AGAT Job Number: 17Y268688

Notes:

Chain of Custody Record

P: 778.452.4000 • F: 778.452.4074

Report Information

Company: Tetra Tech

Contact: Ryan Martin/Tania Perzoff

Address: 61 Wasson Pl
Whitehorse, YT Y1A 0H7

Phone: 867-668-9221 Fax: _____

AGAT Quote #: _____

Client Project #: 704-ENW.WENW03039-02

Report Information

1. Name:	Ryan Martin
Email:	ryan.martin@tetrattech.com
2. Name:	Jordan Wakefield
Email:	jordan.wakefield@tetrattech.com

Report Format

- ☐ Single Sample per page
- ☐ Multiple Samples per page
- ☐ Excel Format included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%
 ☐ Day 3 - 50%
 ☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ **BC CSR Soil**

- ☐ AL
- ☐ IL
- ☐ PL
- ☐ CL
- ☐ RL

☐ **BC CSR - Water**

- ☐ DW
- ☐ AW
- ☐ IW
- ☐ LW

Schedule 11 (Please Specify)

CCME (Please Specify) FIG 1-136 CCME 1-24

Other (Please Specify) TIER 1 AGENT

[illegible]

Samples Relinquished By (Print Name and Sign)

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Received By (Print Name and Sign):

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Received By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Relinquished By (Print Name and Sign)

Date/Time	Location	Activity	Remarks
10/10/2019	...	...	...

Samples Received By (Print Name and Sign):

Date/Time

Page 2 of 2

V112639



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetrattech
Courier: Air North Prepaid Collect
Waybill# 28704064130
Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
If multiple sites were submitted at once: Yes No
Custody Seal Intact: Yes No NA
TAT: <24hr 24-48hr 48-72hr Reg Other _____
Cooler Quantity: 6

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No
Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*
Earliest Expiry: _____
Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
Legal Samples: Yes No
International Samples: Yes No
Tape Sealed: Yes No
Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 7.8 + 6.8 + 7.1 = 7.2 °C 2 (Bottle/Jar) 7.7 + 7.5 + 6.8 = 7.3 °C
3 (Bottle/Jar) 7.7 + 6.6 + 6.9 = 7.4 °C 4 (Bottle/Jar) 7.4 + 6.7 + 6.5 = 6.8 °C
5 (Bottle/Jar) 7.5 + 7.6 + 7.8 = 7.6 °C 6 (Bottle/Jar) 6.8 + 6.9 + 7.2 = 6.9 °C
7 (Bottle/Jar) _____ + _____ + _____ = _____ °C 8 (Bottle/Jar) _____ + _____ + _____ = _____ °C
9 (Bottle/Jar) _____ + _____ + _____ = _____ °C 10 (Bottle/Jar) _____ + _____ + _____ = _____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____
Samples Damaged: Yes No If YES why?
No Bubble Wrap Frozen Courier
Other: _____
Account Project Manager: _____ have they been notified of the above issues: Yes No
Whom spoken to: _____ Date/Time: _____
CPM Initial _____
General Comments: _____

* Subcontracted Analysis (See CPM)



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 174268688

RECEIVING BASICS:

Received From: NOVEX #1

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 10 Containers: 205

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Oct 2, 2017

ALREADY EXCEEDED? Yes ☒ No

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 0 + 0 + 0 = 0 °C (2) 1 + 1 + 2 = 1 °C (3) 2 + 1 + 1 = 1 °C (4) 0 + 0 + 0 = 0 °C

Was ice or ice pack present:

☒ Yes ☐ No

Integrity Issues:

5) 0 + 1 + 0 = 0 °C
6) 1 + 1 + 1 = 1 °C

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Ryan Martin, Tania Perzoff

PROJECT: ENW.WENW03039-02

AGAT WORK ORDER: 17Y269471

TRACE ORGANICS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

WATER ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

DATE REPORTED: Oct 26, 2017

PAGES (INCLUDING COVER): 37

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 2°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

AGAT Western Canada - OC Pesticides (Water)

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-16

		SAMPLE DESCRIPTION:		17A2MW3	17A2MW4	Trip Blank
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797132	8797133	8797142
Aldrin	µg/L		0.01	<0.01	<0.01	<0.01
Gamma-Hexachlorocyclohexane	µg/L		0.01	<0.01	<0.01	<0.01
alpha-BHC	µg/L		0.05	<0.05	<0.05	<0.05
Chlordane	µg/L		0.04	<0.04	<0.04	<0.04
DDD	µg/L		0.05	<0.05	<0.05	<0.05
DDE (Total)	µg/L		0.05	<0.05	<0.05	<0.05
DDT	µg/L		0.04	<0.04	<0.04	<0.04
Endosulfan	µg/L		0.003	<0.003	<0.003	<0.003
Dieldrin	µg/L		0.02	<0.02	<0.02	<0.02
Endrin	µg/L		0.05	<0.05	<0.05	<0.05
Heptachlor	µg/L		0.01	<0.01	<0.01	<0.01
Heptachlor Epoxide	µg/L		0.01	<0.01	<0.01	<0.01
Methoxychlor	µg/L		0.03	<0.03	<0.03	<0.03
Hexachlorobenzene	ug/L		0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits				
TCMX	%	50-140	82	67	82	
Decachlorobiphenyl	%	60-140	114	103	82	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8797132-8797142 Results relate only to the items tested.

Analysis performed at AGAT Mississauga.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-18

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17A4MW2	17A23MW4	17A23MW5	17A32MW1	17A33MW1
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-09-29
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797134	8797135	8797136	8797137	8797138
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.4	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	45.4	<0.5	10.4	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	13.6	<0.5	<0.5	0.9
o-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	310	<100	100	<100
F1 minus BTEX (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	240	<100	<100	<100
F2 (C10-C16)	µg/L	100	<100	<100	<100	<100	<100	3680	<100	2040	<100
F3 (C16-C34)	µg/L	100	<100	<100	<100	<100	<100	530	120	530	<100
F4 (C34-C50)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Total Xylenes	ug/L	1	<1	<1	<1	<1	<1	15	<1	<1	<1
Surrogate	Unit	Acceptable Limits									
Bromofluorobenzene	%	70-130	96	96	103	91	103	102	100	95	
Dibromofluoromethane	%	70-130	106	108	115	105	108	108	106	111	
Toluene - d8	%	70-130	99	99	107	94	97	101	99	98	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-18

		SAMPLE DESCRIPTION:		17A14MW1	17A16MW2	17Duplicate1	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-09-29	2017-09-29	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797139	8797140	8797141	8797142
Benzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L		0.5	1.1	0.5	<0.5	<0.5
o-Xylene	µg/L		0.5	0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L		100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L		100	<100	<100	<100	<100
F2 (C10-C16)	µg/L		100	<100	<100	<100	<100
F3 (C16-C34)	µg/L		100	140	2620	<100	<100
F4 (C34-C50)	µg/L		100	190	4240	<100	<100
Total Xylenes	ug/L		1	2	<1	<1	<1
Surrogate	Unit	Acceptable Limits					
Bromofluorobenzene	%		70-130	98	99	95	98
Dibromofluoromethane	%		70-130	105	107	106	104
Toluene - d8	%		70-130	101	102	100	101

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8797131-8797142 The F1 (C6 - C10) fraction is determined by integrating the FID chromatogram from the beginning of the n-C6 peak to the apex of the last n-C10 peak.

The C6 - C10 fraction is calculated from the FID toluene response factor.

Quality control for the calibration follows the guidelines set out in the CCME Contaminated Sites Method for Soils.

The (F1 minus BTEX) has been calculated by subtracting the BTEX concentration from Fraction 1.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Glycols Analysis in Water

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-13

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17Duplicate1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797141
Propylene Glycol	mg/L	10	<10	<10	<10	<10	<10
Monoethylene Glycol	mg/L	10	<10	<10	<10	<10	<10
Diethylene Glycol	mg/L	5	<5	<5	<5	<5	<5
Triethylene Glycol	mg/L	10	<10	<10	<10	<10	<10
Tetraethylene Glycol	mg/L	10	<10	<10	<10	<10	<10
Surrogate	Unit	Acceptable Limits					
Heptanol	%	50-150	89	95	100	107	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8797131-8797141 Identification based on retention time relative to standards.

Analysis performed at AGAT Calgary.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Phenolic Compounds in Water

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-15

		SAMPLE DESCRIPTION:		17A2MW3	17A2MW4	17A4MW2	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797132	8797133	8797134	8797142
Phenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
4-Nitrophenol	mg/L		0.005	<0.005	<0.005	<0.005	<0.005
m&p-Cresol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
o-Cresol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2-Chlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,4-Dinitrophenol	mg/L		0.005	<0.005	<0.005	<0.005	<0.005
2-Nitrophenol	mg/L		0.005	<0.005	<0.005	<0.005	<0.005
2,4-Dimethylphenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,6-Dichlorophenol	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4-Chloro-3-methylphenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,4-Dichlorophenol	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,6-Dinitro-2-methylphenol	mg/L		0.005	<0.005	<0.005	<0.005	<0.005
2,3,6-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,3,4-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,4,6-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,4,5-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,3,5-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3,4,5-Trichlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,3,4,6-Tetrachlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,3,5,6-Tetrachlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,3,4,5-Tetrachlorophenol	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Pentachlorophenol	mg/L		0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Surrogate	Unit	Acceptable Limits					
2-Fluorophenol	%	50-150		109	110	109	109
2,4,6-Tribromophenol	%	50-150		105	105	104	103

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8797132-8797142 Results relate only to the items tested.

Analysis performed at AGAT Calgary.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Water Low Level

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17A4MW2	17A23MW4		17A23MW5
		SAMPLE TYPE:		Water	Water	Water	Water	Water		Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01		2017-10-01
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797134	RDL	8797135	RDL 8797136
Naphthalene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	87.4	0.05 <0.05
Quinoline	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	<1	0.1 <0.1
Acenaphthylene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.2	<0.2	0.02 <0.02
Acenaphthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.2	<0.2	0.02 <0.02
Fluorene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.2	2.7	0.02 <0.02
Phenanthrene	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.4	0.9	0.04 <0.04
Anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	<0.1	0.01 <0.01
Acridine	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	<0.5	0.05 <0.05
Fluoranthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	0.02 <0.02
Pyrene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	0.02 <0.02
Benzo(a)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Chrysene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Benzo(b)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Benzo(j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Dibenzo(a,h)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Benzo(b+j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01 <0.01
Surrogate	Unit	Acceptable Limits								
Naphthalene - d8	%	50-130		88	85	86	88		69	87
2-Fluorobiphenyl	%	50-130		95	89	90	88		71	88
P-Terphenyl - d14	%	60-130		90	102	99	86		104	76

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Water Low Level

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17A32MW1	17A33MW1	17A14MW1	17A16MW2	17Duplicate1	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-09-29	2017-09-29	2017-09-29	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797137	8797138	8797139	8797140	8797141	8797142
Naphthalene	µg/L	0.05	<0.05	0.12	0.17	<0.05	<0.05	<0.05	<0.05
Quinoline	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	µg/L	0.02	0.81	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/L	0.04	0.45	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acridine	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b+j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits							
Naphthalene - d8	%	50-130	84	91	100	83	91	91	91
2-Fluorobiphenyl	%	50-130	87	94	105	82	91	90	90
P-Terphenyl - d14	%	60-130	105	89	92	77	95	103	103

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8797135 PAH detection limits increased due to sample matrix interference. Sample extract was diluted.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

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CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polychlorinated Biphenyls Analysis - Water

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-13

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17A4MW2	17Duplicate1	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797134	8797141	8797142
Aroclor 1242	µg/L		0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Aroclor 1254	µg/L		0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Aroclor 1260	µg/L		0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Total Polychlorinated Biphenyls	µg/L		0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Surrogate	Unit	Acceptable Limits							
Decachlorobiphenyl	%	50-150		109	109	116	113	111	119

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8797131-8797142 Analysis performed at AGAT Calgary.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Volatile Organic Compounds in Water

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-10

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17Duplicate1	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797141	8797142
Chloromethane	µg/L	1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	µg/L	1	<1	<1	<1	<1	<1	<1
Bromomethane	µg/L	1	<1	<1	<1	<1	<1	<1
Chloroethane	µg/L	1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	µg/L	1	<1	<1	<1	<1	<1	<1
Acetone	µg/L	10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
Dichloromethane	µg/L	1	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	µg/L	1	<1	<1	<1	<1	<1	<1
2-Butanone (MEK)	µg/L	10	<10	<10	<10	<10	<10	<10
trans-1,2-Dichloroethylene	µg/L	1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	µg/L	1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethylene	µg/L	1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	µg/L	1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	µg/L	1	<1	<1	<1	<1	<1	<1
Carbon Tetrachloride	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L	1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	µg/L	1	<1	<1	<1	<1	<1	<1
4-Methyl-2-pentanone (MIBK)	µg/L	10	<10	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	µg/L	1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	µg/L	1	<1	<1	<1	<1	<1	<1
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	1	<1	<1	<1	<1	<1	<1
Ethylene Dibromide	µg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Tetrachloroethene	µg/L	1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	µg/L	1	<1	<1	<1	<1	<1	<1

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
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FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Volatile Organic Compounds in Water

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-10

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17Duplicate1	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797141	8797142
Chlorobenzene	µg/L		1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	µg/L		1	<1	<1	<1	<1	<1
Styrene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	µg/L		0.8	<0.8	<0.8	<0.8	<0.8	<0.8
o-Xylene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	µg/L		1	<1	<1	<1	<1	<1
Total Trihalomethanes	µg/L		2	<2	<2	<2	<2	<2
Total Xylenes	µg/L		1	<1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits						
Bromofluorobenzene	%	70-130		81	86	80	80	89
Dibromofluoromethane	%	70-130		100	101	98	98	100
Toluene - d8	%	70-130		88	90	84	84	86

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Anion Scan										
DATE RECEIVED: 2017-10-04					DATE REPORTED: 2017-10-13					
		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17A4MW2	17A23MW4		
		SAMPLE TYPE:		Water	Water	Water	Water	Water		
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01		
Parameter	Unit	G / S	RDL	8797131	8797132	RDL	8797133	RDL	8797134	RDL
Chloride	mg/L		0.05	2.05	0.38	0.05	0.13	0.05	8.15	0.05
Nitrate-N	mg/L		0.005	0.352	0.107	0.005	<0.005	0.005	0.211	0.005
Nitrite-N	mg/L		0.005	<0.005	<0.005	0.005	<0.005	0.005	<0.005	0.005
Sulphate	mg/L		5	218	217	0.5	4.3	5	414	0.5
Fluoride	mg/L		0.02	0.13	0.03	0.02	0.03	0.02	0.52	0.02
Bromide	mg/L		0.05	<0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05
		SAMPLE DESCRIPTION:		17A23MW5	17A32MW1	17A33MW1	17A14MW1	17A16MW2	17Duplicate1	
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-09-29	2017-09-29	2017-09-29	2017-10-01	
Parameter	Unit	G / S	RDL	8797136	8797137	8797138	RDL	8797139	RDL	8797140
Chloride	mg/L		0.05	0.40	13.4	1.80	0.05	5.59	0.05	2.40
Nitrate-N	mg/L		0.005	0.034	0.030	0.246	0.005	<0.005	0.005	0.479
Nitrite-N	mg/L		0.005	<0.005	<0.005	<0.005	0.005	<0.005	0.005	0.007
Sulphate	mg/L		5	197	718	165	0.5	95.3	5	192
Fluoride	mg/L		0.02	0.09	0.37	0.15	0.02	1.07	0.02	0.21
Bromide	mg/L		0.05	<0.05	<0.05	<0.05	0.05	0.06	0.05	<0.05
		SAMPLE DESCRIPTION:		Trip Blank						
		SAMPLE TYPE:		Water						
		DATE SAMPLED:		2017-10-01						
Parameter	Unit	G / S	RDL	8797142						
Chloride	mg/L		0.05	<0.05						
Nitrate-N	mg/L		0.005	<0.005						
Nitrite-N	mg/L		0.005	<0.005						
Sulphate	mg/L		0.5	<0.5						
Fluoride	mg/L		0.02	<0.02						
Bromide	mg/L		0.05	<0.05						

Certified By:

Anders Corvill



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Anion Scan

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8797138-8797140 Literature holding time exceeded for Nitrate, Nitrite analysis.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

British Columbia CSR- Schedule 6 Dissolved Metals

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17A4MW2	17A23MW4		17A23MW5	
		SAMPLE TYPE:		Water	Water	Water	Water	Water		Water	
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01		2017-10-01	
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797134	RDL	8797135	RDL	8797136
Aluminum Dissolved	µg/L	2	<2	9	8	177	2	20	2	16	
Antimony Dissolved	µg/L	0.2	<0.2	<0.2	<0.2	0.5	0.2	0.3	0.2	<0.2	
Arsenic Dissolved	µg/L	0.1	0.2	0.3	3.2	1.3	0.1	5.8	0.1	0.3	
Barium Dissolved	µg/L	0.2	40.1	124	87.6	105	2	865	0.2	23.5	
Beryllium Dissolved	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	<0.01	
Boron Dissolved	µg/L	2	15	20	3	295	2	30	2	13	
Cadmium Dissolved	µg/L	0.01	0.07	0.02	<0.01	0.24	0.01	<0.01	0.01	0.02	
Calcium Dissolved	µg/L	50	120000	127000	63400	85700	50	133000	50	115000	
Chromium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	0.5	0.5	<0.5	0.5	<0.5	
Cobalt Dissolved	µg/L	0.05	0.34	0.76	0.82	1.19	0.05	2.13	0.05	0.60	
Copper Dissolved	µg/L	0.2	0.6	0.9	<0.2	1.5	0.2	0.3	0.2	0.2	
Iron Dissolved	µg/L	10	<10	17	900	560	10	4110	10	37	
Lead Dissolved	µg/L	0.05	<0.05	<0.05	<0.05	0.83	0.05	0.07	0.05	<0.05	
Lithium Dissolved	µg/L	0.5	13.7	<0.5	<0.5	35.4	0.5	31.5	0.5	8.5	
Magnesium Dissolved	µg/L	50	27900	53800	22500	20500	50	41600	50	20900	
Manganese Dissolved	µg/L	1	45	41	476	49	1	393	1	111	
Mercury Dissolved	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	
Molybdenum Dissolved	µg/L	0.05	0.33	0.48	0.32	7.28	0.05	1.87	0.05	0.58	
Nickel Dissolved	µg/L	0.2	0.9	0.9	0.6	2.3	0.2	4.4	0.2	0.6	
Potassium Dissolved	µg/L	50	1860	1530	900	5540	50	4520	50	1880	
Selenium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5	
Silver Dissolved	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	0.02	<0.02	
Sodium Dissolved	µg/L	50	2950	2140	437	145000	50	5350	50	2310	
Thallium Dissolved	µg/L	0.01	0.03	0.04	0.01	0.03	0.01	<0.01	0.01	0.01	
Titanium Dissolved	µg/L	0.5	0.6	1.0	0.8	5.3	0.5	2.4	0.5	1.2	
Uranium Dissolved	µg/L	0.01	2.49	2.27	0.22	9.01	0.01	2.05	0.01	2.14	
Vanadium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	1.3	0.5	<0.5	0.5	<0.5	
Zinc Dissolved	µg/L	2	<2	<2	<2	5	2	6	2	<2	
Hardness (calc)	ug CaCO3/L	100	415000	539000	251000	298000	100	503000	100	373000	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

British Columbia CSR- Schedule 6 Dissolved Metals

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17A32MW1		17A33MW1		17A14MW1		17A16MW2		17Duplicate1	
		SAMPLE TYPE:		Water		Water		Water		Water		Water	
		DATE SAMPLED:		2017-10-01		2017-09-29		2017-09-29		2017-09-29		2017-10-01	
Parameter	Unit	G / S	RD L	8797137	RD L	8797138	RD L	8797139	RD L	8797140	RD L	8797141	RD L
Aluminum Dissolved	µg/L		2	40	2	4	2	22	2	12		<2	
Antimony Dissolved	µg/L		0.2	<0.2	0.2	<0.2	0.2	1.4	0.2	2.0		<0.2	
Arsenic Dissolved	µg/L		0.1	2.5	0.1	0.5	0.1	1.6	0.1	0.3		0.2	
Barium Dissolved	µg/L		0.2	76.1	0.2	12.6	0.2	18.8	0.2	34.6		46.0	
Beryllium Dissolved	µg/L		0.01	0.03	0.01	<0.01	0.01	<0.01	0.01	<0.01		<0.01	
Boron Dissolved	µg/L		2	153	2	20	2	371	2	23		18	
Cadmium Dissolved	µg/L		0.01	<0.01	0.01	0.03	0.01	<0.01	0.01	0.04		0.07	
Calcium Dissolved	µg/L		250	341000	50	79400	50	44200	50	84900		118000	
Chromium Dissolved	µg/L		0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5		<0.5	
Cobalt Dissolved	µg/L		0.05	1.11	0.05	1.55	0.05	0.10	0.05	3.39		0.36	
Copper Dissolved	µg/L		0.2	0.3	0.2	1.0	0.2	0.7	0.2	0.2		0.9	
Iron Dissolved	µg/L		10	1800	10	<10	10	52	10	<10		<10	
Lead Dissolved	µg/L		0.05	0.10	0.05	<0.05	0.05	0.09	0.05	<0.05		0.06	
Lithium Dissolved	µg/L		2.5	128	0.5	4.0	2.5	234	0.5	13.5		15.4	
Magnesium Dissolved	µg/L		50	63000	50	14800	50	23800	50	18900		27700	
Manganese Dissolved	µg/L		1	1460	1	317	1	7	1	218		45	
Mercury Dissolved	µg/L		0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01		<0.01	
Molybdenum Dissolved	µg/L		0.05	0.41	0.05	4.69	0.05	2.40	0.05	8.57		0.42	
Nickel Dissolved	µg/L		0.2	2.8	0.2	1.1	0.2	0.8	0.2	3.1		0.9	
Potassium Dissolved	µg/L		50	6380	50	2820	50	1750	50	4130		1890	
Selenium Dissolved	µg/L		0.5	<0.5	0.5	<0.5	0.5	1.1	0.5	<0.5		<0.5	
Silver Dissolved	µg/L		0.02	<0.02	0.02	<0.02	0.02	<0.02	0.02	<0.02		<0.02	
Sodium Dissolved	µg/L		50	26900	50	1790	50	13400	50	4850		3000	
Thallium Dissolved	µg/L		0.01	<0.01	0.01	0.01	0.01	<0.01	0.01	<0.01		<0.01	
Titanium Dissolved	µg/L		0.5	3.0	0.5	0.5	0.5	2.4	0.5	0.6		0.9	
Uranium Dissolved	µg/L		0.01	1.88	0.01	1.50	0.01	2.14	0.01	1.93		2.60	
Vanadium Dissolved	µg/L		0.5	4.8	0.5	<0.5	0.5	<0.5	0.5	<0.5		<0.5	
Zinc Dissolved	µg/L		2	4	2	2	2	<2	2	<2		<2	
Hardness (calc)	ug CaCO3/L		100	1110000	100	259000	100	208000	100	290000		409000	

Certified By:

Anders Corvill



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

British Columbia CSR- Schedule 6 Dissolved Metals

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2017-10-01
Parameter	Unit	G / S	RDL	8797142
Aluminum Dissolved	µg/L		2	<2
Antimony Dissolved	µg/L		0.2	<0.2
Arsenic Dissolved	µg/L		0.1	<0.1
Barium Dissolved	µg/L		0.2	<0.2
Beryllium Dissolved	µg/L		0.01	<0.01
Boron Dissolved	µg/L		2	<2
Cadmium Dissolved	µg/L		0.01	<0.01
Calcium Dissolved	µg/L		50	<50
Chromium Dissolved	µg/L		0.5	<0.5
Cobalt Dissolved	µg/L		0.05	<0.05
Copper Dissolved	µg/L		0.2	<0.2
Iron Dissolved	µg/L		10	<10
Lead Dissolved	µg/L		0.05	<0.05
Lithium Dissolved	µg/L		0.5	<0.5
Magnesium Dissolved	µg/L		50	<50
Manganese Dissolved	µg/L		1	<1
Mercury Dissolved	µg/L		0.01	<0.01
Molybdenum Dissolved	µg/L		0.05	<0.05
Nickel Dissolved	µg/L		0.2	<0.2
Potassium Dissolved	µg/L		50	<50
Selenium Dissolved	µg/L		0.5	<0.5
Silver Dissolved	µg/L		0.02	<0.02
Sodium Dissolved	µg/L		50	<50
Thallium Dissolved	µg/L		0.01	0.01
Titanium Dissolved	µg/L		0.5	<0.5
Uranium Dissolved	µg/L		0.01	<0.01
Vanadium Dissolved	µg/L		0.5	<0.5
Zinc Dissolved	µg/L		2	<2
Hardness (calc)	ug CaCO3/L		100	<100

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

British Columbia CSR- Schedule 6 Dissolved Metals

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-12

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Cyanide Weak Acid Dissociable (WAD)

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17A4MW2	17Duplicate1	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797134	8797141	8797142
Cyanide (WAD)	mg/L	0.002	<0.002	0.004	<0.002	0.002	0.004	<0.002	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Cyanide, Strong Acid Dissociable (SAD)

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17A4MW2	17Duplicate1	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797134	8797141	8797142
Cyanide (SAD)	mg/L		0.002	0.013	0.022	<0.002	0.010	0.012	<0.002

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Physical Tests Package

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-12

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17A4MW2	17A23MW4	17A23MW5	17A32MW1	17A33MW1
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-10-01	2017-09-29
Parameter	Unit	G / S	RDL	8797131	8797132	8797133	8797134	8797135	8797136	8797137	8797138
pH	pH units	0.01	7.70	7.60	7.71	7.91	7.57	7.80	7.30	7.75	
Electrical Conductivity	uS/cm	1	780	960	484	1200	938	733	1900	539	
Total Dissolved Solids	mg/L	5	502	652	248	762	535	470	1510	320	
Alkalinity (pH 4.5)	mg CaCO3/L	1	210	342	267	221	528	210	506	110	
		SAMPLE DESCRIPTION:		17A14MW1	17A16MW2	17Duplicate1	Trip Blank				
		SAMPLE TYPE:		Water	Water	Water	Water				
		DATE SAMPLED:		2017-09-29	2017-09-29	2017-10-01	2017-10-01				
Parameter	Unit	G / S	RDL	8797139	8797140	8797141	8797142				
pH	pH units	0.01	8.02	7.85	7.81	4.63					
Electrical Conductivity	uS/cm	1	465	616	781	4					
Total Dissolved Solids	mg/L	5	278	410	492	<5					
Alkalinity (pH 4.5)	mg CaCO3/L	1	144	127	212	<1					

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8797131-8797142 Literature holding time exceeded for pH analysis.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Water Analysis - Phenols

DATE RECEIVED: 2017-10-04

DATE REPORTED: 2017-10-13

		SAMPLE DESCRIPTION:		17A2MW3	17A2MW4	Trip Blank
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-10-01	2017-10-01	2017-10-01
Parameter	Unit	G / S	RDL	8797132	8797133	8797142
Phenols	mg/L			0.002	0.006	0.005
						<0.002

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8797132-8797142 Analysis performed at AGAT Calgary.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Trace Organics Analysis

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME BTEX/F1-F4 (Water)

Benzene	68135	8797142	<0.5	<0.5	NA	< 0.5	96%	80%	120%				92%	70%	130%
Ethylbenzene	68135	8797142	<0.5	<0.5	NA	< 0.5	94%	80%	120%				89%	70%	130%
Toluene	68135	8797142	<0.5	<0.5	NA	< 0.5	94%	80%	120%				88%	70%	130%
m&p-Xylene	68135	8797142	<0.5	<0.5	NA	< 0.5	92%	80%	120%				87%	70%	130%
o-Xylene	68135	8797142	<0.5	<0.5	NA	< 0.5	92%	80%	120%				87%	70%	130%
F1 (C6-C10)	68135	8797142	<100	<100	NA	< 100									
F1 minus BTEX (C6-C10)	68135	8797142	<100	<100	NA	< 100									
F2 (C10-C16)	68039	W-MS1	7000	6680	4.7%	< 100	101%	80%	120%				96%	70%	130%
F3 (C16-C34)	68039	W-MS1	22600	21000	7.3%	< 100	112%	80%	120%				99%	70%	130%
F4 (C34-C50)	68039	W-MS1	5080	4800	5.7%	< 100	97%	80%	120%				94%	70%	130%
Bromofluorobenzene	68135	8797142	98	97	1.0%		97%	70%	130%				97%	70%	130%
Dibromofluoromethane	68135	8797142	104	104	0.0%		99%	70%	130%				98%	70%	130%
Toluene - d8	68135	8797142	101	101	0.0%		98%	70%	130%				98%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Water Low Level

Naphthalene	68039	W-MS1	0.45	0.47	4.3%	< 0.05	100%	80%	120%				93%	50%	130%
Quinoline	68039	W-MS1	0.4	0.5	NA	< 0.1	99%	80%	120%				94%	50%	130%
Acenaphthylene	68039	W-MS1	0.42	0.43	2.4%	< 0.02	101%	80%	120%				85%	50%	130%
Acenaphthene	68039	W-MS1	0.49	0.50	2.0%	< 0.02	100%	80%	120%				98%	50%	130%
Fluorene	68039	W-MS1	0.45	0.45	0.0%	< 0.02	101%	80%	120%				90%	50%	130%
Phenanthrene	68039	W-MS1	0.40	0.41	2.5%	< 0.04	100%	80%	120%				82%	60%	130%
Anthracene	68039	W-MS1	0.42	0.47	11.2%	< 0.01	101%	80%	120%				85%	60%	130%
Acridine	68039	W-MS1	0.41	0.44	7.1%	< 0.05	99%	80%	120%				83%	50%	130%
Fluoranthene	68039	W-MS1	0.40	0.44	9.5%	< 0.02	101%	80%	120%				81%	60%	130%
Pyrene	68039	W-MS1	0.43	0.48	11.0%	< 0.02	101%	80%	120%				88%	60%	130%
Benzo(a)anthracene	68039	W-MS1	0.37	0.43	15.0%	< 0.01	101%	80%	120%				75%	60%	130%
Chrysene	68039	W-MS1	0.46	0.47	2.2%	< 0.01	101%	80%	120%				93%	60%	130%
Benzo(b)fluoranthene	68039	W-MS1	0.43	0.43	0.0%	< 0.01	99%	80%	120%				86%	60%	130%
Benzo(j)fluoranthene	68039	W-MS1	0.49	0.51	4.0%	< 0.01	102%	80%	120%				99%	60%	130%
Benzo(k)fluoranthene	68039	W-MS1	0.43	0.42	2.4%	< 0.01	103%	80%	120%				86%	60%	130%
Benzo(a)pyrene	68039	W-MS1	0.43	0.45	4.5%	< 0.01	102%	80%	120%				86%	60%	130%
Indeno(1,2,3-c,d)pyrene	68039	W-MS1	0.40	0.40	0.0%	< 0.01	101%	80%	120%				81%	60%	130%
Dibenzo(a,h)anthracene	68039	W-MS1	0.40	0.38	5.1%	< 0.01	101%	80%	120%				81%	60%	130%
Benzo(g,h,i)perylene	68039	W-MS1	0.47	0.46	2.2%	< 0.01	101%	80%	120%				95%	60%	130%
Naphthalene - d8	68039	W-MS1	101	101	0.0%		102%	80%	120%				101%	50%	130%
2-Fluorobiphenyl	68039	W-MS1	104	101	2.9%		102%	80%	120%				104%	50%	130%
P-Terphenyl - d14	68039	W-MS1	98	102	4.0%		101%	80%	120%				99%	60%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Volatile Organic Compounds in Water

Chloromethane	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				103%	70%	130%
Vinyl Chloride	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				103%	70%	130%
Bromomethane	68110	8828004	<1	<1	NA	< 1	97%	80%	120%				87%	70%	130%
Chloroethane	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				106%	70%	130%
Trichlorofluoromethane	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				100%	70%	130%
Acetone	68110	8828004	42	40	NA	< 10	99%	80%	120%						
1,1-Dichloroethene	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				107%	70%	130%
Dichloromethane	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				99%	70%	130%
Methyl tert-butyl ether (MTBE)	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				101%	70%	130%
2-Butanone (MEK)	68110	8828004	<10	<10	NA	< 10	99%	80%	120%						
trans-1,2-Dichloroethylene	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				102%	70%	130%
1,1-Dichloroethane	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				101%	70%	130%
cis-1,2-Dichloroethylene	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				97%	70%	130%
Chloroform	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				100%	70%	130%
1,2-Dichloroethane	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				100%	70%	130%
1,1,1-Trichloroethane	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				97%	70%	130%
Carbon Tetrachloride	68110	8828004	<0.5	<0.5	NA	< 0.5	99%	80%	120%				97%	70%	130%
Benzene	68110	8828004	<0.5	<0.5	NA	< 0.5	99%	80%	120%				99%	70%	130%
1,2-Dichloropropane	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				99%	70%	130%
Trichloroethene	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				98%	70%	130%
Bromodichloromethane	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				98%	70%	130%
trans-1,3-Dichloropropene	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				99%	70%	130%
4-Methyl-2-pentanone (MIBK)	68110	8828004	<10	<10	NA	< 10	100%	80%	120%						
cis-1,3-Dichloropropene	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				93%	70%	130%
1,1,2-Trichloroethane	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				99%	70%	130%
Toluene	68110	8828004	<0.5	<0.5	NA	< 0.5	100%	80%	120%				99%	70%	130%
Dibromochloromethane	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				98%	70%	130%
Ethylene Dibromide	68110	8828004	<0.3	<0.3	NA	< 0.3	100%	80%	120%				100%	70%	130%
Tetrachloroethene	68110	8828004	<1	<1	NA	< 1	99%	80%	120%				81%	70%	130%
1,1,1,2-Tetrachloroethane	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				93%	70%	130%
Chlorobenzene	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				92%	70%	130%
Ethylbenzene	68110	8828004	<0.5	<0.5	NA	< 0.5	100%	80%	120%				94%	70%	130%
m&p-Xylene	68110	8828004	<0.5	<0.5	NA	< 0.5	100%	80%	120%				95%	70%	130%
Bromoform	68110	8828004	<1	<1	NA	< 1	100%	80%	120%				94%	70%	130%
Styrene	68110	8828004	<0.5	<0.5	NA	< 0.5	101%	80%	120%				96%	70%	130%
1,1,2,2-Tetrachloroethane	68110	8828004	<0.8	<0.8	NA	< 0.8	99%	80%	120%				93%	70%	130%
o-Xylene	68110	8828004	<0.5	<0.5	NA	< 0.5	100%	80%	120%				96%	70%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17Y269471

PROJECT: ENW.WENW03039-02

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	68110	8828004	<0.5	<0.5	NA	< 0.5	100%	80%	120%				95%	70%	130%
1,4-Dichlorobenzene	68110	8828004	<0.5	<0.5	NA	< 0.5	99%	80%	120%				94%	70%	130%
1,2-Dichlorobenzene	68110	8828004	<0.5	<0.5	NA	< 0.5	100%	80%	120%				95%	70%	130%
1,2,4-Trichlorobenzene	68110	8828004	<1	<1	NA	< 1	101%	80%	120%				95%	70%	130%
Bromofluorobenzene	68110	8828004	93	77	18.8%		96%	70%	130%				99%	70%	130%
Dibromofluoromethane	68110	8828004	121	105	14.2%		94%	70%	130%				102%	70%	130%
Toluene - d8	68110	8828004	115	95	19.0%		87%	70%	130%				103%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

AGAT Western Canada - OC Pesticides (Water)

Aldrin		TW	< 0.01	< 0.01	NA	< 0.01	107%	50%	140%	93%	50%	140%	89%	50%	140%
Gamma-Hexachlorocyclohexane		TW	< 0.01	< 0.01	NA	< 0.01	96%	50%	140%	85%	50%	140%	70%	50%	140%
alpha-BHC		TW	< 0.05	< 0.05	NA	< 0.05	96%	60%	140%	106%	50%	140%	108%	60%	140%
Chlordane		TW	< 0.04	< 0.04	NA	< 0.04	105%	50%	140%	104%	50%	140%	84%	50%	140%
DDD		TW	< 0.05	< 0.05	NA	< 0.05	109%	50%	140%	111%	50%	140%	95%	50%	140%
DDE (Total)		TW	< 0.05	< 0.05	NA	< 0.05	111%	60%	140%	105%	50%	140%	95%	60%	140%
DDT		TW	< 0.04	< 0.04	NA	< 0.04	100%	50%	140%	97%	50%	140%	83%	50%	140%
Endosulfan		TW	< 0.003	< 0.003	NA	< 0.003	102%	50%	140%	102%	50%	140%	87%	50%	140%
Dieldrin		TW	< 0.02	< 0.02	NA	< 0.02	105%	50%	140%	117%	50%	140%	98%	50%	140%
Endrin		TW	< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	113%	50%	140%	103%	50%	140%
Heptachlor		TW	< 0.01	< 0.01	NA	< 0.01	96%	50%	140%	106%	50%	140%	108%	50%	140%
Heptachlor Epoxide		TW	< 0.01	< 0.01	NA	< 0.01	106%	50%	140%	115%	50%	140%	94%	50%	140%
Methoxychlor		TW	< 0.03	< 0.03	NA	< 0.03	95%	50%	140%	111%	50%	140%	112%	50%	140%
Hexachlorobenzene		TW	< 0.01	< 0.01	NA	< 0.01	93%	50%	140%	89%	50%	140%	85%	50%	140%

Phenolic Compounds in Water

Phenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005	101%	80%	120%	96%	70%	130%	96%	60%	140%
4-Nitrophenol	654	8797132	<0.005	<0.005	NA	< 0.005	97%	80%	120%	93%	70%	130%	96%	60%	140%
m&p-Cresol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				97%	70%	130%	97%	60%	140%
o-Cresol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				98%	70%	130%	99%	60%	140%
2-Chlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005	109%	80%	120%	102%	70%	130%	101%	60%	140%
2,4-Dinitrophenol	654	8797132	<0.005	<0.005	NA	< 0.005	102%	80%	120%	98%	70%	130%	99%	60%	140%
2-Nitrophenol	654	8797132	<0.005	<0.005	NA	< 0.005	102%	80%	120%	96%	70%	130%	98%	60%	140%
2,4-Dimethylphenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005	102%	80%	120%	100%	70%	130%	98%	60%	140%
2,6-Dichlorophenol	654	8797132	<0.0001	<0.0001	NA	< 0.0001				95%	70%	130%	98%	60%	140%
4-Chloro-3-methylphenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005	99%	80%	120%	97%	70%	130%	96%	60%	140%
2,4-Dichlorophenol	654	8797132	<0.0001	<0.0001	NA	< 0.0001	95%	80%	120%	93%	70%	130%	94%	60%	140%
4,6-Dinitro-2-methylphenol	654	8797132	<0.005	<0.005	NA	< 0.005	110%	80%	120%	97%	70%	130%	99%	60%	140%
2,3,6-Trichlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				95%	70%	130%	99%	60%	140%
2,3,4-Trichlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				100%	70%	130%	100%	60%	140%

Quality Assurance

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
2,4,6-Trichlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005	101%	80%	120%	91%	70%	130%	94%	60%	140%
2,4,5-Trichlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				97%	70%	130%	102%	60%	140%
2,3,5-Trichlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				86%	70%	130%	88%	60%	140%
3,4,5-Trichlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				105%	70%	130%	105%	60%	140%
2,3,4,6-Tetrachlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				101%	70%	130%	94%	60%	140%
2,3,5,6-Tetrachlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				91%	70%	130%	94%	60%	140%
2,3,4,5-Tetrachlorophenol	654	8797132	<0.0005	<0.0005	NA	< 0.0005				100%	70%	130%	113%	60%	140%
Pentachlorophenol	654	8797132	<0.0004	<0.0004	NA	< 0.0004	101%	80%	120%	103%	70%	130%	103%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Glycols Analysis in Water

Propylene Glycol	149	8804743	<10	<10	0.0%	< 10	112%	70%	130%	94%	70%	130%	100%	60%	140%
Monoethylene Glycol	149	8804743	<10	<10	0.0%	< 10	113%	70%	130%	94%	70%	130%	100%	60%	140%
Diethylene Glycol	149	8804743	<5	<5	0.0%	< 5	112%	70%	130%	94%	70%	130%	100%	60%	140%
Triethylene Glycol	149	8804743	<10	<10	0.0%	< 10	111%	70%	130%	93%	70%	130%	99%	60%	140%
Tetraethylene Glycol	149	8804743	<10	<10	0.0%	< 10	117%	70%	130%	97%	70%	130%	104%	60%	140%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Polychlorinated Biphenyls Analysis - Water

Aroclor 1242	146	8797132	<0.009	<0.009	NA	< 0.009	75%	70%	130%	93%	70%	130%	95%	50%	150%
Aroclor 1254	146	8797132	<0.009	<0.009	NA	< 0.009	83%	70%	130%	103%	70%	130%	125%	50%	150%
Aroclor 1260	146	8797132	<0.009	<0.009	NA	< 0.009	109%	70%	130%	123%	70%	130%	150%	50%	150%
Total Polychlorinated Biphenyls	146	8797132	<0.009	<0.009	NA	< 0.009	89%	70%	130%	106%	70%	130%	123%	50%	150%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:



Quality Assurance

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Water Analysis															
RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Cyanide Weak Acid Dissociable (WAD)

Cyanide (WAD)	8788854	0.008	0.008	NA	< 0.002	111%	70%	130%	106%	90%	110%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide, Strong Acid Dissociable (SAD)

Cyanide (SAD)	8788854	0.015	0.013	14.3%	< 0.002	107%	85%	115%	103%	90%	110%	100%	80%	120%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

British Columbia CSR- Schedule 6 Dissolved Metals

Aluminum Dissolved	8797131	<2	<2	NA	< 2	96%	90%	110%	102%	90%	110%
Antimony Dissolved	8797131	<0.2	<0.2	NA	< 0.2	108%	90%	110%	91%	90%	110%
Arsenic Dissolved	8797131	0.2	0.2	NA	< 0.1	92%	90%	110%	102%	90%	110%
Barium Dissolved	8797131	40.1	46.0	13.6%	< 0.2	94%	90%	110%	96%	90%	110%
Beryllium Dissolved	8797131	<0.01	<0.01	NA	< 0.01	92%	90%	110%	109%	90%	110%
Boron Dissolved	8797131	15	18	19.6%	< 2	100%	90%	110%	90%	90%	110%
Cadmium Dissolved	8797131	0.07	0.07	0.1%	< 0.01	101%	90%	110%	95%	90%	110%
Calcium Dissolved	8797131	120000	119000	0.6%	< 50	101%	90%	110%	100%	90%	110%
Chromium Dissolved	8797131	<0.5	<0.5	NA	< 0.5	105%	90%	110%	105%	90%	110%
Cobalt Dissolved	8797131	0.34	0.37	8.6%	< 0.05	103%	90%	110%	104%	90%	110%
Copper Dissolved	8797131	0.6	0.5	NA	< 0.2	102%	90%	110%	106%	90%	110%
Iron Dissolved	8797131	<10	<10	NA	< 10	103%	90%	110%	101%	90%	110%
Lead Dissolved	8797131	<0.05	<0.05	NA	< 0.05	95%	90%	110%	105%	90%	110%
Lithium Dissolved	8797131	13.7	14.4	4.9%	< 0.5				100%	90%	110%
Magnesium Dissolved	8797131	27900	27700	0.9%	< 50	105%	90%	110%	101%	90%	110%
Manganese Dissolved	8797131	45	45	1.3%	< 1	103%	90%	110%	100%	90%	110%
Mercury Dissolved	8795643	<0.01	<0.01	NA	< 0.01	102%	90%	110%	99%	90%	110%
Molybdenum Dissolved	8797131	0.33	0.36	6.3%	< 0.05	96%	90%	110%	105%	90%	110%
Nickel Dissolved	8797131	0.9	0.9	NA	< 0.2	101%	90%	110%	106%	90%	110%
Potassium Dissolved	8797131	1860	1870	0.6%	< 50	98%	90%	110%	102%	90%	110%
Selenium Dissolved	8797131	<0.5	<0.5	NA	< 0.5	104%	90%	110%	101%	90%	110%
Silver Dissolved	8797131	<0.02	<0.02	NA	< 0.02				93%	90%	110%
Sodium Dissolved	8797131	2950	2990	1.3%	< 50	105%	90%	110%	101%	90%	110%
Thallium Dissolved	8797131	0.03	0.03	NA	< 0.01	94%	90%	110%	110%	90%	110%
Titanium Dissolved	8797131	0.6	0.8	NA	< 0.5				98%	90%	110%
Uranium Dissolved	8797131	2.49	2.80	11.8%	< 0.01	95%	90%	110%	109%	90%	110%
Vanadium Dissolved	8797131	<0.5	<0.5	NA	< 0.5	105%	90%	110%	107%	90%	110%
Zinc Dissolved	8797131	<2	<2	NA	< 2	94%	90%	110%	97%	90%	110%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Anion Scan

Quality Assurance

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Water Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Chloride	8797133	8797133	0.13	0.13	NA	< 0.05	103%	90%	110%	99%	90%	110%			
Nitrate-N	8797133	8797133	<0.005	<0.005	NA	< 0.005	97%	90%	110%	97%	90%	110%			
Nitrite-N	8797133	8797133	<0.005	<0.005	NA	< 0.005				101%	90%	110%			
Sulphate	8797133	8797133	4.3	4.3	0.2%	< 0.5	96%	90%	110%	100%	90%	110%			
Fluoride	8797133	8797133	0.03	0.03	NA	< 0.02	98%	85%	115%	95%	90%	110%			
Bromide	8797133	8797133	<0.05	<0.05	NA	< 0.05	104%	85%	115%	100%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Physical Tests Package

pH	8797131		7.70	7.75	0.6%		100%	95%	105%						
Electrical Conductivity	8797131		780	779	0.1%	< 1	95%	90%	110%						
Total Dissolved Solids	8795349		378	368	2.7%	< 5				90%	85%	115%			
Alkalinity (pH 4.5)	8797131		210	215	2.2%	< 1	92%	90%	110%						

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Water Analysis - Phenols

Phenols	8797132	8797132	0.006	0.005	NA	< 0.002	97%	80%	120%	97%	80%	120%	93%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:



Method Summary

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
alpha-BHC	ORG 5007	EPA SW-846 8081A & 8082	GC/ECD
Chlordane	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
DDD	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
DDE (Total)	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
DDT	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Endosulfan	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Dieldrin	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Endrin	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Heptachlor	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Methoxychlor	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
TCMX	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5112	EPA SW-846 3510 & 8081	GC/ECD
Benzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Ethylbenzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Toluene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
m&p-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
o-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
F1 (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F2 (C10-C16)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F3 (C16-C34)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F4 (C34-C50)	ORG-180-5134	CCME Tier 1 Method	GC/FID
Bromofluorobenzene			GC/MS
Dibromofluoromethane			GC/MS
Toluene - d8			GC/MS
Propylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Monoethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Diethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Triethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Tetraethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Heptanol	TO-1410	EPA SW-846 8015	GC/FID
Phenol	TO-1200	"In house" developed method	HPLC
4-Nitrophenol	TO-1200	"In house" developed method	HPLC
m&p-Cresol	TO-1200	"In house" developed method	HPLC
o-Cresol	TO-1200	"In house" developed method	HPLC
2-Chlorophenol	TO-1200	"In house" developed method	HPLC
2,4-Dinitrophenol	TO-1200	"In house" developed method	HPLC
2-Nitrophenol	TO-1200	"In house" developed method	HPLC
2,4-Dimethylphenol	TO-1200	"In house" developed method	HPLC
2,6-Dichlorophenol	TO-1200	"In house" developed method	HPLC
4-Chloro-3-methylphenol	TO-1200	"In house" developed method	HPLC
2,4-Dichlorophenol	TO-1200	"In house" developed method	HPLC
4,6-Dinitro-2-methylphenol	TO-1200	"In house" developed method	HPLC
2,3,6-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,3,4-Trichlorophenol	TO-1200	"In house" developed method	HPLC

Method Summary

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
2,4,6-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,4,5-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,3,5-Trichlorophenol	TO-1200	"In house" developed method	HPLC
3,4,5-Trichlorophenol	TO-1200	"In house" developed method	HPLC
2,3,4,6-Tetrachlorophenol	TO-1200	"In house" developed method	HPLC
2,3,5,6-Tetrachlorophenol	TO-1200	"In house" developed method	HPLC
2,3,4,5-Tetrachlorophenol	TO-1200	"In house" developed method	HPLC
Pentachlorophenol	TO-1200	"In house" developed method	HPLC
2-Fluorophenol	TO-1200	"In house" developed method	HPLC
2,4,6-Tribromophenol	TO-1200	"In house" developed method	HPLC
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Quinoline	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acridine	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8			GC/MS
2-Fluorobiphenyl	ORG-180-5133	Modified from BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Aroclor 1242	TO-0400	EPA SW-846 8082	GC/ECD
Aroclor 1254	TO-0400	EPA SW-846 8082	GC/ECD

Method Summary

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1260	TO-0400	EPA SW-846 8082	GC/ECD
Total Polychlorinated Biphenyls	TO-0400	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	TO-0400	EPA SW-846 8082	GC/ECD
Chloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Vinyl Chloride	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromomethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Chloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Trichlorofluoromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Acetone	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1-Dichloroethene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dichloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Methyl tert-butyl ether (MTBE)	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
2-Butanone (MEK)	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
trans-1,2-Dichloroethylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1-Dichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
cis-1,2-Dichloroethylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Chloroform	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,1-Trichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Carbon Tetrachloride	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Benzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichloropropane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Trichloroethene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromodichloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
trans-1,3-Dichloropropene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
4-Methyl-2-pentanone (MIBK)	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
cis-1,3-Dichloropropene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,2-Trichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Toluene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dibromochloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Ethylene Dibromide	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Tetrachloroethene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,1,2-Tetrachloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D	GC/MS
Chlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Ethylbenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
m&p-Xylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromoform	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Styrene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,2,2-Tetrachloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
o-Xylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,3-Dichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,4-Dichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2,4-Trichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromofluorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dibromofluoromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Toluene - d8	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Chloride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Aluminum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Antimony Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Arsenic Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Barium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Beryllium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Boron Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cadmium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Calcium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Chromium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cobalt Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Copper Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Iron Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Lead Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Lithium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Magnesium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Manganese Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Mercury Dissolved	MET-181-6103, LAB-181-4015	Modified from EPA 245.7	CV/AA
Molybdenum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Nickel Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Potassium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Selenium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Silver Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Sodium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Thallium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS



Method Summary

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17Y269471

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Titanium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Uranium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Vanadium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Zinc Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cyanide (WAD)	INOR-181-6010	EPA 335.3	CONTINUOUS FLOW ANALYZER
Cyanide (SAD)	INOR-181-6010	EPA 335.3	CONTINUOUS FLOW ANALYZER
pH	INOR-181-6000	Modified from SM 4500-H+	PH METER
Electrical Conductivity	INOR-181-6000	Modified from SM 2510 B	PC TITRATE
Total Dissolved Solids	INOR-181-6007	SM 2540 C, D & E	GRAVIMETRIC
Alkalinity (pH 4.5)	INOR-181-6000	Modified from SM 2320 B	PC TITRATE
Phenols	INST 0300	SM 420.2	CONTINUOUS FLOW ANALYZER



AGAT

Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature: 2°C

AGAT Job Number: 174269471

Notes:

OCT 4 10:02

Chain of Custody Record

Report Information

Company: TETRA TECH
Contact: RYAN MARTIN/TANIA PERZOFF
Address: 61 WASSON PL
WHITEHORSE, YT, Y1A 0H7
Phone: 867-668-9221 Fax: _____
AGAT Quote #: _____
Client Project #: ENW. WENW 03039-02

Report Information

1. Name: RYAN MARTIN
Email: RYAN.MARTIN@TETRATECH.COM
2. Name: JORDAN WAKEFIELD
Email: JORDAN.WAKEFIELD@TETRATECH.COM

Requirements (Please Check)

- ☐ BC CSR Soil ☐ BC CSR - Water
- ☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL

Schedule 11 (Please Specify)

CCME (Please Specify)

Other (Please Specify)

TIER 1, FIGWGG
CCME NWT

Report Format

- ☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☐ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	PHC	EL	BTEX	F2-F4 + PAH	METALS DISSOLVED	MERCURY DISSOLVED	GENERAL CHEMISTRY/ANIONS	CYANIDE	POLYCHLORINATED BIPHENYLS	VOC/MTBE	GLYCOLS	TOTAL PHENOLS	CHLORO PHENOLS	ORGANOCHLORINE PESTICIDES	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
<u>8797132</u>	<u>17A1 MW 1</u>	<u>GW</u>	<u>OCT 1 2017</u>		X	X	X	X	X	X	X	X	X	X	X	X	X	X	<u>17</u>	<u>Y</u>		
<u>1321334</u>	<u>17A2 MW 3</u>	<u>GW</u>	<u>OCT 1 2017</u>	<u>Please Run FI/BTEX FROM</u>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	<u>17</u>	<u>Y</u>		
<u>1321344</u>	<u>17A2 MW 4</u>	<u>GW</u>	<u>OCT 1 2017</u>	<u>VOC Vial for</u>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	<u>20</u>	<u>Y</u>		
<u>134</u>	<u>17A4 MW 2</u>	<u>GW</u>	<u>OCT 1 2017</u>	<u>17A2 MW 3</u>	X	X	X	X	X	X	X	X				X			<u>12</u>	<u>Y</u>		
<u>135</u>	<u>17A23 MW 4</u>	<u>GW</u>	<u>OCT 1 2017</u>		X	X	X	X	X	X									<u>8</u>	<u>Y</u>		
<u>136</u>	<u>17A23 MW 5</u>	<u>GW</u>	<u>OCT 1 2017</u>		X	X	X	X	X	X									<u>8</u>	<u>Y</u>		
<u>137</u>	<u>17A22 MW 1</u>	<u>GW</u>	<u>OCT 1 2017</u>		X	X	X	X	X										<u>8</u>	<u>Y</u>		
<u>139</u>	<u>17A33 MW 1</u>	<u>GW</u>	<u>SEPT 29 2017</u>		X	X	X	X	X										<u>8</u>	<u>Y</u>		
<u>139</u>	<u>17A14 MW 1</u>	<u>GW</u>	<u>SEPT 29 2017</u>		X	X	X	X	X										<u>8</u>	<u>Y</u>		
<u>140</u>	<u>17A16 MW 2</u>	<u>GW</u>	<u>SEPT 29 2017</u>		X	X	X	X	X										<u>8</u>	<u>Y</u>		
<u>141</u>	<u>17 DUPLICATE 1</u>	<u>GW</u>	<u>OCT 1 2017</u>		X	X	X	X	X	X	X	X	X	X	X							

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Date/Time

Date/Time

Date/Time

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

Date/Time

Date/Time

Page 1 of 2

Nº:

025257



Laboratories

V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

Chain of Custody Record

Report Information

Company: TETRA TECH
Contact: RYAN MARTIN / TANIA PERZOFF
Address: 61 Wisconsin Pl
Whitehorse, YT Y1A 0H7
Phone: (867) 668-9221 Fax: _____
AGAT Quote #: _____
Client Project #: ENV.WENW03039-02

Invoice To

Same as above Yes ☐ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Report Information

1. Name: Ryan Martin
Email: Ryan.Martin@tetratech.com
2. Name: Jordan Wakefield
Email: jordan.wakefield@tetratech.com

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 11 (Please Specify)

CCME (Please Specify) Tier 1 FLETC

Other (Please Specify) NWT

Report Format

- ☐ Single Sample per page
- ☐ Multiple Samples per page
- ☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☐ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

[illegible]

Samples Relinquished By (Print Name and Sign):

MIKE GALLO
Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Date/Time

Oct
Date/Time

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

	Date/Time

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Page 2 of 2

Nº: 025254



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech
Courier: Air North Prepaid ☒ Collect ☐
Waybill# 287 04064126

Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____

If multiple sites were submitted at once: Yes ☐ No ☒

Custody Seal Intact: Yes ☒ No ☐ NA ☐

TAT: <24hr 24-48hr 48-72hr Reg Other _____

Cooler Quantity: 6

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes ☐ No ☒

Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO₄ , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*

Earliest Expiry: _____

Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____

Legal Samples: Yes No

International Samples: Yes No

Tape Sealed: Yes No

Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 5.1 + 4.8 + 5.5 = 5.3 °C 2 (Bottle/Jar) 5.5 + 5.6 + 6.1 = 5.7 °C
3 (Bottle/Jar) 5.0 + 6.0 + 5.5 = 5.5 °C 4 (Bottle/Jar) 5.6 + 6.1 + 6.2 = 5.9 °C
5 (Bottle/Jar) 5.7 + 6.1 + 5.4 = 5.7 °C 6 (Bottle/Jar) 5.2 + 5.1 + 5.4 = 5.2 °C
7 (Bottle/Jar) _____ + _____ + _____ = _____ °C 8 (Bottle/Jar) _____ + _____ + _____ = _____ °C
9 (Bottle/Jar) _____ + _____ + _____ = _____ °C 10 (Bottle/Jar) _____ + _____ + _____ = _____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____

Samples Damaged: Yes No If YES why?

No Bubble Wrap Frozen Courier

Other: _____

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date/Time: _____

CPM Initial _____

General Comments: _____

* Subcontracted Analysis (See CPM)



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 179269471

RECEIVING BASICS:

Received From: Novex

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 6 Containers: 148

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Spt 29, 2017

ALREADY EXCEEDED? ☒ Yes ☐ No

Nitrate, nitrite hold time exceeded for 17A33Mw1, 17A14Mw1, and 17A16Mw2.

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 0 + 0 + 1 = 0 °C (2) 0 + 1 + 2 = 1 °C (3) 0 + 1 + 2 = 1 °C (4) 4 + 2 + 4 = 3 °C

Was ice or ice pack present: ☒ Yes ☐ No

Integrity Issues:

5) 0 + 1 + 2 = 1

6) 4 + 0 + 2 = 2

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____

Date and Time: _____

ADDITIONAL NOTES:

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Ryan Martin, Tania Perzoff

PROJECT: 704-ENW.WENW03039-02

AGAT WORK ORDER: 17Y269763

SOIL ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

TRACE ORGANICS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

DATE REPORTED: Oct 23, 2017

PAGES (INCLUDING COVER): 17

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 1°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269763

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-17

		SAMPLE DESCRIPTION:		17A8SS1		17A8SS2		17A8SS3		17A8SSDUP1	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2017-10-03		2017-10-03		2017-10-03		2017-10-03	
Parameter	Unit	G / S	RDL	8800408	RDL	8800418	RDL	8800421	RDL	8800425	
Antimony	µg/g		0.1	0.9	0.1	3.2	0.1	0.6		0.5	
Arsenic	µg/g		0.1	18.4	0.1	32.7	0.1	8.1		7.6	
Barium	µg/g		0.5	281	2.5	3740	0.5	191		193	
Beryllium	µg/g		0.1	2.2	0.1	1.0	0.1	1.6		1.5	
Cadmium	µg/g		0.01	1.06	0.01	1.97	0.01	2.21		2.09	
Chromium	µg/g		1	12	1	21	1	21		19	
Cobalt	µg/g		0.1	16.1	0.1	16.6	0.1	23.4		22.5	
Copper	µg/g		0.2	423	0.2	175	1.0	1160		1130	
Lead	µg/g		0.1	10.8	0.1	20.2	0.1	16.5		13.7	
Mercury	µg/g		0.05	0.08	0.05	0.12	0.1	0.5		0.2	
Molybdenum	µg/g		0.2	2.6	0.2	6.1	0.2	5.6		5.1	
Nickel	µg/g		0.5	22.7	0.5	53.3	0.5	16.1		15.4	
Phosphorus	µg/g		5	309	5	656	5	512		603	
Selenium	µg/g		0.1	1.8	0.1	1.5	0.1	3.3		3.2	
Silver	µg/g		0.5	<0.5	0.5	<0.5	0.5	0.6		0.6	
Thallium	µg/g		0.1	0.2	0.1	0.3	0.1	0.5		0.5	
Tin	µg/g		0.2	2.3	0.2	1.1	0.2	4.5		4.1	
Uranium	µg/g		0.2	2.7	0.2	3.8	0.2	2.4		2.4	
Vanadium	µg/g		1	22	1	76	1	30		30	
Zinc	µg/g		1	225	1	307	1	296		274	
pH 1:2	pH units		0.05	7.45	0.05	7.10	0.05	7.54		7.33	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8800408-8800425 Results are based on the dry weight of the sample

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269763

PROJECT: 704-ENW.WENW03039-02

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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Total Nitrogen in Soil (%)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-13

		SAMPLE DESCRIPTION:		17A8SS1	17A8SS2	17A8SS3	17A8SSDUP1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8800408	8800418	8800421	8800425
Nitrogen - Total	%	0.02	0.15	0.22	0.03	0.03	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269763

PROJECT: 704-ENW.WENW03039-02

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FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-18

		SAMPLE DESCRIPTION:		17A8SS1		17A8SS2	17A8SS3	17A8SSDUP1
		SAMPLE TYPE:		Soil		Soil	Soil	Soil
		DATE SAMPLED:		2017-10-03		2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8800408	RDL	8800418	8800421	8800425
Benzene	µg/g		0.005	<0.005	0.005	<0.005	<0.005	<0.005
Toluene	µg/g		0.05	<0.05	0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g		0.01	<0.01	0.01	<0.01	<0.01	<0.01
m&p-Xylene	µg/g		0.02	<0.02	0.02	<0.02	<0.02	<0.02
o-Xylene	µg/g		0.02	<0.02	0.02	<0.02	<0.02	<0.02
F1 (C6-C10)	µg/g		10	<10	10	<10	<10	<10
F1 minus BTEX (C6-C10)	µg/g		10	<10	10	<10	<10	<10
F2 (C10-C16)	µg/g		40	<40	20	<20	115	164
F3 (C16-C34)	µg/g		40	466	20	86	4680	5950
F4 (C34-C50)	µg/g		40	181	20	26	3640	6040
Moisture	%		1	55.0	0.5	33.4	24.3	28.2
Total Xylenes	µg/g		0.05	<0.05	0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits						
Bromofluorobenzene	%	60-140		104		94	96	101
Dibromofluoromethane	%	60-140		107		106	102	103
Toluene - d8	%	60-140		124		114	108	116

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269763

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-18

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8800408 Results are based on the dry weight of the sample.
The C6-C10 (F1) fraction is calculated using toluene response factor.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
n-C6 and n-C10 response factors are within 30% of Toluene response factor.
n-C10, n-C16 and n-C34 response factors are within 10% of their average.
C50 response factor is within 70% of n-C10 + n-C16 + n-C34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of n-C50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.
EPH detection limits increased due to high sample moisture content.

8800418-8800425 Results are based on the dry weight of the sample.
The C6-C10 (F1) fraction is calculated using toluene response factor.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
n-C6 and n-C10 response factors are within 30% of Toluene response factor.
n-C10, n-C16 and n-C34 response factors are within 10% of their average.
C50 response factor is within 70% of n-C10 + n-C16 + n-C34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of n-C50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17Y269763

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
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CANADA V5J 0B6
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-18

		SAMPLE DESCRIPTION:		17A8SS1	17A8SS2		17A8SS3	17A8SSDUP1
		SAMPLE TYPE:		Soil	Soil		Soil	Soil
		DATE SAMPLED:		2017-10-03	2017-10-03		2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8800408	8800418	RDL	8800421	8800425
Naphthalene	µg/g		0.005	<0.005	<0.005	0.02	<0.02	<0.02
2-Methylnaphthalene	µg/g		0.005	<0.005	<0.005	0.02	<0.02	<0.02
1-Methylnaphthalene	µg/g		0.005	<0.005	<0.005	0.02	<0.02	<0.02
Acenaphthylene	µg/g		0.005	<0.005	<0.005	0.02	<0.02	<0.02
Acenaphthene	µg/g		0.005	<0.005	<0.005	0.02	<0.02	<0.02
Fluorene	µg/g		0.02	<0.02	<0.02	0.1	<0.1	<0.1
Phenanthrene	µg/g		0.02	<0.02	<0.02	0.1	<0.1	<0.1
Anthracene	µg/g		0.004	<0.004	<0.004	0.02	<0.02	<0.02
Fluoranthene	µg/g		0.01	0.01	<0.01	0.05	0.24	0.19
Pyrene	µg/g		0.01	<0.01	<0.01	0.05	0.29	0.33
Benzo(a)anthracene	µg/g		0.03	<0.03	<0.03	0.2	<0.2	<0.2
Chrysene	µg/g		0.05	<0.05	<0.05	0.2	<0.2	<0.2
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	0.2	<0.2	<0.2
Benzo(j)fluoranthene	µg/g		0.05	<0.05	<0.05	0.2	<0.2	<0.2
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	0.2	<0.2	<0.2
Benzo(a)pyrene	µg/g		0.03	<0.03	<0.03	0.2	<0.2	<0.2
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02	<0.02	0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/g		0.005	<0.005	<0.005	0.02	<0.02	<0.02
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	0.2	<0.2	<0.2
IACR CCME (Soil)	µg/g		0.6	<0.6	<0.6	3	<3	<3
B[a]P TPE (Soil)	µg/g		0.05	<0.05	<0.05	0.2	<0.2	<0.2
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05	<0.05	0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits						
Naphthalene - d8	%		50-130	67	57		62	54
2-Fluorobiphenyl	%		50-130	73	62		59	53
P-Terphenyl - d14	%		60-130	76	69		82	73

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269763

PROJECT: 704-ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
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TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-18

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
8800408-8800418 Results are based on dry weight of sample.
8800421-8800425 Results are based on dry weight of sample.
PAH detection limits increased due to sample matrix interference.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17Y269763

PROJECT: 704-ENW.WENW03039-02

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Ryan Martin, Tania Perzoff

SAMPLED BY:

Polychlorinated Biphenyls Analysis - Soil

DATE RECEIVED: 2017-10-05

DATE REPORTED: 2017-10-16

		SAMPLE DESCRIPTION:		17A8SS1	17A8SS2	17A8SS3	17A8SSDUP1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03
Parameter	Unit	G / S	RDL	8800408	8800418	8800421	8800425
Aroclor 1242	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1254	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1260	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05
Total Polychlorinated Biphenyls	mg/kg		0.05	<0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits					
Decachlorobiphenyl	%	50-150	95	90	70	70	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8800408-8800425 Results are based on the dry weight of the sample.
Analysis performed at AGAT Calgary.

Certified By:



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y269763
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Soil Analysis															
RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME Metals in Soil

Antimony	8800418	8800418	3.2	3.3	5.1%	< 0.1	106%	70%	130%	102%	90%	110%		
Arsenic	8800418	8800418	32.7	33.1	1.1%	< 0.1	121%	70%	130%	104%	90%	110%		
Barium	8800418	8800418	3740	3840	2.7%	< 0.5	116%	70%	130%	102%	90%	110%		
Beryllium	8800418	8800418	1.0	1.1	7.4%	< 0.1	106%	70%	130%	102%	90%	110%		
Cadmium	8800418	8800418	1.97	1.92	2.5%	< 0.01	112%	70%	130%	97%	90%	110%		
Chromium	8800418	8800418	21	22	3.9%	< 1	112%	70%	130%	103%	90%	110%		
Cobalt	8800418	8800418	16.6	16.5	0.3%	< 0.1	110%	70%	130%	105%	90%	110%		
Copper	8800418	8800418	175	203	14.7%	< 0.2	104%	70%	130%	105%	90%	110%		
Lead	8800418	8800418	20.2	20.7	2.5%	< 0.1	101%	70%	130%	101%	90%	110%		
Molybdenum	8800418	8800418	6.1	6.6	8.3%	< 0.2	111%	70%	130%	101%	90%	110%		
Nickel	8800418	8800418	53.3	55.0	3.1%	< 0.5	110%	70%	130%	102%	90%	110%		
Phosphorus	8800418	8800418	656	788	18.4%	< 5	105%	70%	130%	99%	90%	110%		
Selenium	8800418	8800418	1.5	1.8	16.2%	< 0.1				101%	90%	110%		
Silver	8800418	8800418	<0.5	<0.5	NA	< 0.5	115%	70%	130%	95%	90%	110%		
Thallium	8800418	8800418	0.3	0.3	NA	< 0.1	125%	70%	130%	101%	90%	110%		
Tin	8800418	8800418	1.1	1.2	12.7%	< 0.2	98%	70%	130%	99%	90%	110%		
Uranium	8800418	8800418	3.8	4.1	8.3%	< 0.2	109%	70%	130%	102%	90%	110%		
Vanadium	8800418	8800418	76	88	14.1%	< 1	112%	70%	130%	109%	90%	110%		
Zinc	8800418	8800418	307	326	6.1%	< 1	110%	70%	130%	100%	90%	110%		
pH 1:2	8800418	8800418	7.10	7.15	0.7%		96%	90%	110%	100%	95%	105%		

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Total Nitrogen in Soil (%)

Nitrogen - Total	8811040	<0.02	<0.02	NA	< 0.02	101%	80%	120%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y269763
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME BTEX/F1-F4 (Soil)

Benzene	68035	8802219	<0.005	<0.005	NA	< 0.005	103%	80%	120%				82%	60%	140%
Toluene	68035	8802219	<0.05	<0.05	NA	< 0.05	101%	80%	120%				105%	60%	140%
Ethylbenzene	68035	8802219	<0.01	<0.01	NA	< 0.01	102%	80%	120%				106%	60%	140%
m&p-Xylene	68035	8802219	<0.02	<0.02	NA	< 0.02	101%	80%	120%				106%	60%	140%
o-Xylene	68035	8802219	<0.02	<0.02	NA	< 0.02	101%	80%	120%				103%	60%	140%
F1 (C6-C10)	68035	8802219	<10	<10	NA	< 10									
F1 minus BTEX (C6-C10)	68035	8802219	<10	<10	NA	< 10									
F2 (C10-C16)	68035	8800421	115	140	19.6%	< 20	101%	80%	120%				96%	60%	140%
F3 (C16-C34)	68035	8800421	4680	4900	4.6%	< 20	110%	80%	120%				101%	60%	140%
F4 (C34-C50)	68035	8800421	3640	4500	21.1%	< 20	95%	80%	120%				116%	60%	140%
Bromofluorobenzene	68035	8802219	99	97	2.0%		102%	60%	140%				93%	60%	140%
Dibromofluoromethane	68035	8802219	88	88	0.0%		103%	60%	140%				78%	60%	140%
Toluene - d8	68035	8802219	113	113	0.0%		102%	60%	140%				101%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	68035	8800421	<0.02	<0.02	NA	< 0.005	101%	80%	120%				101%	50%	130%
2-Methylnaphthalene	68035	8800421	<0.02	<0.02	NA	< 0.005	102%	80%	120%				83%	50%	130%
1-Methylnaphthalene	68035	8800421	<0.02	<0.02	NA	< 0.005	101%	80%	120%				96%	50%	130%
Acenaphthylene	68035	8800421	<0.02	<0.02	NA	< 0.005	101%	80%	120%				91%	50%	130%
Acenaphthene	68035	8800421	<0.02	<0.02	NA	< 0.005	101%	80%	120%				104%	50%	130%
Fluorene	68035	8800421	<0.1	<0.1	NA	< 0.02	102%	80%	120%				97%	50%	130%
Phenanthrene	68035	8800421	<0.1	<0.1	NA	< 0.02	99%	80%	120%				77%	60%	130%
Anthracene	68035	8800421	<0.1	<0.1	NA	< 0.004	103%	80%	120%				102%	60%	130%
Fluoranthene	68035	8800421	0.24	0.18	28.6%	< 0.01	101%	80%	120%				94%	60%	130%
Pyrene	68035	8800421	0.29	0.29	0.0%	< 0.01	100%	80%	120%				99%	60%	130%
Benzo(a)anthracene	68035	8800421	<0.2	<0.2	NA	< 0.03	101%	80%	120%				94%	60%	130%
Chrysene	68035	8800421	<0.2	<0.2	NA	< 0.05	101%	80%	120%				98%	60%	130%
Benzo(b)fluoranthene	68035	8800421	<0.2	<0.2	NA	< 0.05	99%	80%	120%				87%	60%	130%
Benzo(j)fluoranthene	68035	8800421	<0.2	<0.2	NA	< 0.05	99%	80%	120%				107%	60%	130%
Benzo(k)fluoranthene	68035	8800421	<0.2	<0.2	NA	< 0.05	105%	80%	120%				78%	60%	130%
Benzo(a)pyrene	68035	8800421	<0.2	<0.2	NA	< 0.03	103%	80%	120%				86%	60%	130%
Indeno(1,2,3-c,d)pyrene	68035	8800421	<0.1	<0.1	NA	< 0.02	101%	80%	120%				93%	60%	130%
Dibenzo(a,h)anthracene	68035	8800421	<0.02	<0.02	NA	< 0.005	101%	80%	120%				79%	60%	130%
Benzo(g,h,i)perylene	68035	8800421	<0.2	<0.2	NA	< 0.05	101%	80%	120%				97%	60%	130%
Naphthalene - d8	68035	8800421	62	52	17.5%		104%	80%	120%				102%	50%	130%
2-Fluorobiphenyl	68035	8800421	59	51	14.5%		110%	80%	120%				103%	50%	130%
P-Terphenyl - d14	68035	8800421	82	74	10.3%		104%	80%	120%				104%	60%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y269763
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polychlorinated Biphenyls Analysis - Soil

Aroclor 1242	146	8800408	< 0.05	< 0.05	NA	< 0.05	75%	70%	130%	78%	70%	130%	103%	50%	150%
Aroclor 1254	146	8800408	< 0.05	< 0.05	NA	< 0.05	83%	70%	130%	120%	70%	130%	105%	50%	150%
Aroclor 1260	146	8800408	< 0.05	< 0.05	NA	< 0.05	109%	70%	130%	117%	70%	130%	115%	50%	150%
Total Polychlorinated Biphenyls	146	8800408	< 0.05	< 0.05	NA	< 0.05	89%	70%	130%	105%	70%	130%	107%	50%	150%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:





Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y269763
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Arsenic	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Barium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Beryllium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cadmium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Chromium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cobalt	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Copper	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Lead	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Mercury	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Molybdenum	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Nickel	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Phosphorus	MET-181-6106, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6010C	ICP/OES
Selenium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Silver	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Thallium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Tin	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Uranium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Vanadium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Zinc	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
pH 1:2	INOR-181-6031	BC MOE Lab Manual B (pH, Electrometric, Soil)	PH METER
Nitrogen - Total	INOR-181-6027	Modified from ASTM E1019-11	COMBUSTION

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y269763
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Toluene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Ethylbenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
m&p-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
o-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
F1 (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F2 (C10-C16)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F3 (C16-C34)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F4 (C34-C50)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
Moisture	INOR-181-6030	SSMA Chapter 70 (2nd Ed)	GRAVIMETRIC
Bromofluorobenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Dibromofluoromethane	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Toluene - d8	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
1-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: 704-ENW.WENW03039-02
SAMPLING SITE:

AGAT WORK ORDER: 17Y269763
ATTENTION TO: Ryan Martin, Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
IACR CCME (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
B[a]P TPE (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Fluorobiphenyl	ORG-180-5102	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5102	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
Aroclor 1242	TO-0410	EPA SW-846 8082	GC/ECD
Aroclor 1254	TO-0410	EPA SW-846 8082	GC/ECD
Aroclor 1260	TO-0410	EPA SW-846 8082	GC/ECD
Total Polychlorinated Biphenyls	TO-0410	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	TO-0410	EPA SW-846 8082	GC/ECD

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetrattech
 Courier: Air North Prepaid Collect
 Waybill# 28704064130
 Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____
 If multiple sites were submitted at once: Yes No
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 6

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No
 Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Tedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*
 Earliest Expiry: _____
 Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
 Legal Samples: Yes No
 International Samples: Yes No
 Tape Sealed: Yes No
 Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 78.68 + 77.1 = 7.2 °C 2 (Bottle/Jar) 77.75 + 68.7 = 3 °C
 3 (Bottle/Jar) 77.7 + 69 = 7.4 °C 4 (Bottle/Jar) 74 + 67 + 65 = 6.8 °C
 5 (Bottle/Jar) 75 + 76 + 78 = 7.6 °C 6 (Bottle/Jar) 68 + 69 + 72 = 6.9 °C
 7 (Bottle/Jar) _____ + _____ + _____ = _____ °C 8 (Bottle/Jar) _____ + _____ + _____ = _____ °C
 9 (Bottle/Jar) _____ + _____ + _____ = _____ °C 10 (Bottle/Jar) _____ + _____ + _____ = _____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Account Project Manager: _____ have they been notified of the above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____
 General Comments: _____

* Subcontracted Analysis (See CPM)



SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 17Y269763

RECEIVING BASICS:

Received From: Novex #3

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 6 Containers: 24

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Oct 3, 2017

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 0 + 0 + 0 = 0 °C (2) 1 + 1 + 2 = 1 °C (3) 2 + 1 + 1 = 1 °C (4) 0 + 0 + 0 = 0 °C

Was ice or ice pack present: ☒ Yes ☐ No

Integrity Issues:

5) 0 + -1 + 0 = 0 °C
6) 1 + 1 + 1 = 1 °C

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

HAZARDOUS MATERIALS

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]

61 Wasson Place

Whitehorse, YT Canada Y1A 0H7

Location : House #63 to #76 + Condo 81/93/94 Cantung Mine

Project : 03039-02

16744	Hus+Cndo	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	63-01	Ceiling Stipple, House # 63 - 1st & 2nd Floor	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
2	63-02	Roof (Shingles + Tar), House # 63	Asbestos Fibres Not Detected 40 - 50 % Cellulose Fibres DNQ Quartz > 50 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
3	64-01	Paper Gasket, House # 64 - Inside Furnace	20 - 30 % Chrysotile Asbestos 60 - 70 % Cellulose Fibres > 1 % Non-fibrous	Jan 23 2018	HH	.T.
* Subjected To An Ashing Procedure						
4	65-01	Tape, House # 65 - HVAC Tape	Asbestos Fibres Not Detected 5 - 10 % Synthetic Fibres > 90 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
5	65-02	Ceiling Stipple, House # 65 - Main Floor	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
6 . 1	67-01	Light Fixture Backing, House # 67 - Kitchen	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 23 2018	HH	---
		Layer 1 Silver			LP	10 %
* Samaple [Composite] Subjected To An Ashing Procedure						
6 . 2	67-01	Light Fixture Backing, House # 67 - Kitchen	60 - 70 % Chrysotile Asbestos 20 - 30 % Cellulose Fibres > 1 % Non-fibrous	Jan 23 2018	HH	.T.
		Layer 2 Grey Fibrous			LP	90 %
7	69-01	Window Caulking, Hose # 69 - E Main Floor	Asbestos Fibres Not Detected 1 - 5 % Fibrous Glass > 95 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						

LP - Means Percent : Layer or Phase of Whole Sample

DNQ - Means Detected Not Quantitated

ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16744

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : Hus+Cndo

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report

For Tetra Tech Canada Inc. [Yukon]

Location : House #63 to #76 + Condo 81/93/94 Cantung Mine

Project : 03039-02

16744	Hus+Cndo	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
8	69-02	Oven Gasket, House # 69 - Kitchen	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
9	69-03	Mastic Around Laundry Vent, House # 69 - Exterior	Asbestos Fibres Not Detected 1 - 5 % Talc 1 - 5 % Cellulose Fibres > 90 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
10	69-04	Ceiling Panels, House # 69 - Basement	Asbestos Fibres Not Detected 10 - 20 % Fibrous Glass > 80 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
11 . 1	73-01	White Black Pattern Lino, House # 73 - Basement	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 23 2018	HH	---
		Layer 1 Clear			LP	15 %
* Layers 1, 2 and 3 of Sample [Composite] Subjected To An Ashing Procedure						
11 . 2	73-01	White Black Pattern Lino, House # 73 - Basement	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 23 2018	HH	---
		Layer 2 Patterned			LP	25 %
11 . 3	73-01	White Black Pattern Lino, House # 73 - Basement	70 - 80 % Chrysotile Asbestos > 20 % Non-fibrous	Jan 23 2018	HH	.T.
		Layer 3 Grey Fibrous			LP	55 %
11 . 4	73-01	White Black Pattern Lino, House # 73 - Basement	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 23 2018	HH	---
		Layer 4 Beige			LP	5 %
12	73-02	Floor Leveling Compound, House # 73 - Basement	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
13	73-03	Insulation in Furnace, House # 73 - Basement	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16744

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : Hus+Cndo

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : House #63 to #76 + Condo 81/93/94 Cantung Mine
Project : 03039-02

16744	Hus+Cndo	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
14	76-01	Speckled Ceiling Tile, House # 76 - Basement	Asbestos Fibres Not Detected 40 - 50 % Cellulose Fibres 30 - 40 % Fibrous Glass > 10 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
15 . 1	93-01	HVAC Tape, Condominium Unit # 93 - 01, Furnace Ducting Layer 1 Silver	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 23 2018	HH	---
* Sample [Composite] Subjected To An Ashing Procedure				LP 50 %		
15 . 2	93-01	HVAC Tape, Condominium Unit # 93 - 01, Furnace Ducting Layer 2 Brown Mastic	Asbestos Fibres Not Detected 1 - 5 % Fibrous Glass > 95 % Non-fibrous	Jan 23 2018	HH	---
				LP 50 %		
16	81-01	Loose Insulation, Condominium Unit # 81 - 01, All Unit Ceilings	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						
17	93/94	Roof System Shingles, Condomium Unit # 93 & 94	Asbestos Fibres Not Detected 40 - 50 % Cellulose Fibres > 50 % Non-fibrous	Jan 23 2018	HH	---
* Subjected To An Ashing Procedure						

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16744

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : Hus+Cndo

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : School - Cantung Mine, Tungsten, NWT
Project : 03039-02

16755	School	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1 . 1	School01	HVAC Cover Mud, HVAC Room Layer 1 Foil * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 22 2017	GN	---
1 . 2	School01	HVAC Cover Mud, HVAC Room Layer 2 Colourless Mastic	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 22 2017	GN	---
1 . 3	School01	HVAC Cover Mud, HVAC Room Layer 3 Colourless Fibrous Weave	Asbestos Fibres Not Detected 90 - 95 % Fibrous Glass > 5 % Non-fibrous	Dec 22 2017	GN	---
1 . 4	School01	HVAC Cover Mud, HVAC Room Layer 4 Brown Fibrous Sheet	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 22 2017	GN	---
2	School02	HVAC Connector, HVAC Room * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 50 - 60 % Fibrous Glass > 40 % Non-fibrous	Dec 22 2017	GN	---
3	School03	Roof Shingles, Front Entrance Roof * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 60 - 70 % Cellulose Fibres > 30 % Non-fibrous	Dec 22 2017	GN	---

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16755

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : School

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : #A - Cantung Mine, Tungsten, NWT
Project : 03039-02

16759	# A	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	A-01	Pipe Elbow, Mech. Room	Asbestos Fibres Not Detected 5 - 10 % Fibrous Glass > 90 % Non-fibrous	Jan 11 2018	HH	---
* Subjected To An Ashing Procedure						
2 . 1	A-02	Transite Board, Mech. Room	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 11 2018	HH	---
		Layer 1 Brown		LP	2 %	
* Subjected To An Ashing Procedure						
2 . 2	A-02	Transite Board, Mech. Room	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Jan 11 2018	HH	---
		Layer 2 Brown Fibrous		LP	2 %	
2 . 3	A-02	Transite Board, Mech. Room	Asbestos Fibres Not Detected 30 - 40 % Fibrous Glass > 60 % Non-fibrous	Jan 11 2018	HH	---
		Layer 3 Grey		LP	96 %	
3	A-03	HVAC Mud, Mech. Room	Asbestos Fibres Not Detected 85 - 90 % Fibrous Glass > 10 % Non-fibrous	Jan 11 2018	HH	---
* Subjected To An Ashing Procedure						
4	A-04	Pipe End Mud, Mech. Room	Asbestos Fibres Not Detected 20 - 30 % Fibrous Glass 20 - 30 % Cellulose Fibres > 40 % Non-fibrous	Jan 11 2018	HH	---
* Subjected To An Ashing Procedure						
5	A-05	HVAC Beige Mastic, Mech. Room	5 - 10 % Chrysotile Asbestos > 90 % Non-fibrous	Jan 11 2018	HH	.T.
* Subjected To An Ashing Procedure						
6 . 1	A-06	DWJC, Crawl Space	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 11 2018	HH	---
		Layer 1 Grey		LP	40 %	
* Subjected To An Ashing Procedure						

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16759 Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : # A American Industrial Hygiene Association BAPAT Lab. Id. No. 149340 Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : #A - Cantung Mine, Tungsten, NWT
Project : 03039-02

16759	# A	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
6 . 2	A-06	DWJC, Crawl Space Layer 2 White Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Jan 11 2018 LP 10 %	HH	---
6 . 3	A-06	DWJC, Crawl Space Layer 3 White * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 11 2018 LP 50 %	HH	---
7	A-07	Light Fixture, Room 105 * Subjected To An Ashing Procedure	30 - 40 % Chrysotile Asbestos 30 - 40 % Cellulose Fibres > 20 % Non-fibrous	Jan 11 2018 LP 90 %	HH	.T.
8 . 1	A-08	Beige Square Lino, Room 306 Layer 1 Clear * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 11 2018 LP 10 %	HH	---
8 . 2	A-08	Beige Square Lino, Room 306 Layer 2 White Spongy	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 11 2018 LP 60 %	HH	---
8 . 3	A-08	Beige Square Lino, Room 306 Layer 3 Brown	Asbestos Fibres Not Detected 10 - 20 % Fibrous Glass 5 - 10 % Cellulose Fibres > 70 % Non-fibrous	Jan 11 2018 LP 30 %	HH	---
9 . 1	A-09	Small Light Backing, Room 306 Layer 1 Beige/Silver Coating * Sample [Composite] Subjected To An Ashing Procedure	30 - 40 % Chrysotile Asbestos 30 - 40 % Cellulose Fibres > 20 % Non-fibrous	Jan 11 2018 LP 90 %	HH	.T.
9 . 2	A-09	Small Light Backing, Room 306 Layer 2 Yellow Fibrous	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Jan 11 2018 LP 10 %	HH	---
10 . 1	A-10	Black Window Caulking, Room 303 Layer 1 Brown Fibrous/Red Coating * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Jan 11 2018 LP 5 %	HH	---

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16759 Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : # A American Industrial Hygiene Association BAPAT Lab. Id. No. 149340 Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : #A - Cantung Mine, Tungsten, NWT
Project : 03039-02

16759	# A	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
10 . 2	A-10	Black Window Caulking, Room 303	5 - 10 % Chrysotile Asbestos > 90 % Non-fibrous	Jan 11 2018	HH	.T.
		Layer 2 Grey Mastic		LP 95 %		

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16761	Rec	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	Rec-01	Ceiling Tile, Pool Table Room	Asbestos Fibres Not Detected 30 - 40 % Cellulose Fibres 20 - 30 % Fibrous Glass 5 - 10 % Perlite > 20 % Non-fibrous	Dec 27 2017	HH	---
* Subjected To An Ashing Procedure						
2 . 1	Rec-02	HVAC Mudding, Throughout Rec Center	Asbestos Fibres Not Detected 20 - 30 % Fibrous Glass > 70 % Non-fibrous	Dec 27 2017	HH	---
Layer 1 Black/Grey Coating				LP	30 %	
* Sample [Composite] Subjected To An Ashing Procedure						
2 . 2	Rec-02	HVAC Mudding, Throughout Rec Center	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Dec 27 2017	HH	---
Layer 2 Yellow Fibrous				LP	70 %	
3	Rec-03	HVAC Mastic, Throughout Rec Center	1 - 5 % Chrysotile Asbestos 1 - 5 % Cellulose Fibres > 90 % Non-fibrous	Dec 27 2017	HH	.T.
* Subjected To An Ashing Procedure						
4 . 1	Rec-04	1" Pipe Elbow Mud, Rec Center Mech. Room	Asbestos Fibres Not Detected 40 - 50 % Cellulose Fibres > 50 % Non-fibrous	Dec 27 2017	HH	---
Layer 1 White Weave/Grey Coating				LP	15 %	
* Sample [Composite] Subjected To An Ashing Procedure						
4 . 2	Rec-04	1" Pipe Elbow Mud, Rec Center Mech. Room	30 - 40 % Chrysotile Asbestos > 60 % Non-fibrous	Dec 27 2017	HH	.T.
Layer 2 Grey				LP	80 %	
4 . 3	Rec-04	1" Pipe Elbow Mud, Rec Center Mech. Room	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Dec 27 2017	HH	---
Layer 3 Yellow Fibrous				LP	5 %	
5	Rec-05	Boiler Parging, Rec Center Mech. Room	Asbestos Fibres Not Detected 50 - 60 % Cellulose Fibres > 40 % Non-fibrous	Dec 27 2017	HH	---
* Subjected To An Ashing Procedure						
6	Rec-06	HVAC Canvas Connector, Rec Center Mech. Room	Asbestos Fibres Not Detected 60 - 70 % Fibrous Glass > 30 % Non-fibrous	Dec 27 2017	HH	---
* Subjected To An Ashing Procedure						

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16761 Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : Rec American Industrial Hygiene Association BAPAT Lab. Id. No. 149340 Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report

For Tetra Tech Canada Inc. [Yukon]

Location : Cantung Mine, Tungsten, NWT

Project : 03039-02

16761	Rec	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
7	Rec-07	10" Elbow Mud, Curing Rink Mech. Room	10 - 20 % Chrysotile Asbestos > 80 % Non-fibrous	Dec 27 2017	HH	.T.

*** Subjected To An Ashing Procedure**

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16762	DORMA	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	DORMA-01	Ceiling Stipple, Main Floor Room 8 (South)	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
* Subjected To An Ashing Procedure						
2 . 1	DORMA-02	Beige Brick Pattern Lino, Laundry Room (Main Fl)	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
		Layer 1 Clear		LP	10 %	
* Sample [Composite] Subjected To An Ashing Procedure						
2 . 2	DORMA-02	Beige Brick Pattern Lino, Laundry Room (Main Fl)	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
		Layer 2 White Spongy / Patterned		LP	30 %	
2 . 3	DORMA-02	Beige Brick Pattern Lino, Laundry Room (Main Fl)	Asbestos Fibres Not Detected 80 - 85 % Cellulose Fibres 1 - 5 % Fibrous Glass > 10 % Non-fibrous	Dec 13 2017	GN	---
		Layer 3 Light Grey Fibrous		LP	58 %	
2 . 4	DORMA-02	Beige Brick Pattern Lino, Laundry Room (Main Fl)	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
		Layer 4 Yellow Mastic Patches		LP	2 %	
3	DORMA-03	FLCMPD, Laundry Room (Main Fl)	Asbestos Fibres Not Detected Trace Cellulose Fibres 95 -100 % Non-fibrous	Dec 13 2017	GN	---
* Subjected To An Ashing Procedure						
4 . 1	DORMA-04	CT Speckled, South Half Laundry Room	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
		Layer 1 White Coating Fissure		LP	2 %	
* Sample [Composite] Subjected To An Ashing Procedure						
4 . 2	DORMA-04	CT Speckled, South Half Laundry Room	Asbestos Fibres Not Detected 20 - 30 % Cellulose Fibres 20 - 30 % Fibrous Glass DNQ Perlite > 40 % Non-fibrous	Dec 13 2017	GN	---
		Layer 2 Brown Fibrous		LP	98 %	

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16762

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : DORMA

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16762	DORMA	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
5 . 1	DORMA-05	White Rock Pattern Lino, Hallway (2nd Fl) Layer 1 Clear * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
				LP		10 %
5 . 2	DORMA-05	White Rock Pattern Lino, Hallway (2nd Fl) Layer 2 White Spongy / Patterned	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
				LP		30 %
5 . 3	DORMA-05	White Rock Pattern Lino, Hallway (2nd Fl) Layer 3 Green Fibrous	Asbestos Fibres Not Detected 90 - 95 % Cellulose Fibres 1 - 5 % Synthetic Fibres > 1 % Non-fibrous	Dec 13 2017	GN	---
				LP		50 %
5 . 4	DORMA-05	White Rock Pattern Lino, Hallway (2nd Fl) Layer 4 Brown Mastic	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
				LP		10 %
6 . 1	DORMA-06	DWJC, South Room (2nd Floor) Layer 1 White / Cream Coating * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
				LP		20 %
6 . 2	DORMA-06	DWJC, South Room (2nd Floor) Layer 2 Cream Fibrous Sheet	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 13 2017	GN	---
				LP		15 %
6 . 3	DORMA-06	DWJC, South Room (2nd Floor) Layer 3 White * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
				LP		20 %
6 . 4	DORMA-06	DWJC, South Room (2nd Floor) Layer 4 Brown Fibrous Sheet	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 13 2017	GN	---
				LP		15 %
6 . 5	DORMA-06	DWJC, South Room (2nd Floor) Layer 5 White Fibrous Patch	Asbestos Fibres Not Detected 1 - 5 % Cellulose Fibres > 95 % Non-fibrous	Dec 13 2017	GN	---
				LP		30 %

LP - Means Percent : Layer or Phase of Whole Sample

DNQ - Means Detected Not Quantitated

ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16762

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : DORMA

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16762	DORMA	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
7 . 1	DORMA-07	Beige Battleship Lino, South Room (2nd Fl) Layer 1 Brown * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Dec 13 2017 LP 75 %	GN	---
7 . 2	DORMA-07	Beige Battleship Lino, South Room (2nd Fl) Layer 2 Dark Brown	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Dec 13 2017 LP 20 %	GN	---
7 . 3	DORMA-07	Beige Battleship Lino, South Room (2nd Fl) Layer 3 Brown Weave	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 13 2017 LP 5 %	GN	---
8	DORMA-08	Ceiling Stipple, South Bedroom (2nd Fl) * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---
9 . 1	DORMA 09	Light Fixture Bactking, 2nd Foor Bedroom South Layer 1 Foil * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017 LP 5 %	GN	---
9 . 2	DORMA 09	Light Fixture Bactking, 2nd Foor Bedroom South Layer 2 Light Brown Fibrous	70 - 80 % Chrysotile Asbestos 5 - 10 % Cellulose Fibres > 10 % Non-fibrous	Dec 13 2017 LP 95 %	GN	.T.
10 . 1	DORMA-10	DWJC, N. Bedroom (2nd Fl) Layer 1 White / Cream Coating * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017 LP 25 %	GN	---
10 . 2	DORMA-10	DWJC, N. Bedroom (2nd Fl) Layer 2 Cream Fibrous Sheet	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 13 2017 LP 20 %	GN	---
10 . 3	DORMA-10	DWJC, N. Bedroom (2nd Fl) Layer 3 White * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017 LP 25 %	GN	---

LP - Means Percent : Layer or Phase of Whole Sample

DNQ - Means Detected Not Quantitated

ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16762

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : DORMA

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16762	DORMA	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
10 . 4	DORMA-10 DWJC, N. Bedroom (2nd Fl)	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 13 2017	GN	---	
	Layer 4 Brown Fibrous Sheet		LP	20 %		
10 . 5	DORMA-10 DWJC, N. Bedroom (2nd Fl)	Asbestos Fibres Not Detected 1 - 5 % Cellulose Fibres 1 - 5 % Fibrous Glass > 90 % Non-fibrous	Dec 13 2017	GN	---	
	Layer 5 White Fibrous Patch		LP	10 %		
11	DORMA-11 Ceiling Stipple, N. Side Bedroom	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 13 2017	GN	---	
	* Subjected To An Ashing Procedure					
12 . 1	DORMA-12 Roof System Shingles, DormA Roof	Asbestos Fibres Not Detected 70 - 80 % Cellulose Fibres 1 - 5 % Fibrous Glass DNQ Quartz > 15 % Non-fibrous	Dec 13 2017	GN	---	
	Phase 1 Black Fibrous / Green Pebbles		LP	50 %		
	* Subjected To An Ashing Procedure					
12 . 2	DORMA-12 Roof System Shingles, DormA Roof	Asbestos Fibres Not Detected 70 - 80 % Cellulose Fibres 1 - 5 % Fibrous Glass DNQ Quartz > 15 % Non-fibrous	Dec 13 2017	GN	---	
	Phase 2 Black Fibrous / Blue Pebbles		LP	50 %		
	* Subjected To An Ashing Procedure					

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16767	OFF	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	OFF-01	Mastic, Around First Aid Door Frame, Exterior	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 28 2017	HH	---
* Subjected To An Ashing Procedure						
2	OFF-02	Shingles, First Aid Entrance Overhang, Exterior	Asbestos Fibres Not Detected 5 -10 % Fibrous Glass > 90 % Non-fibrous	Dec 28 2017	HH	---
* Subjected To An Ashing Procedure						
3	OFF-03	Felt Paper, First Aid Entrance Overhang, Exterior	Asbestos Fibres Not Detected 70 - 80 % Cellulose Fibres > 20 % Non-fibrous	Dec 28 2017	HH	---
* Subjected To An Ashing Procedure						
4	OFF-04	Mastic, Elec. Conduit E Side of Bldg	5 - 10 % Chrysotile Asbestos > 90 % Non-fibrous	Dec 28 2017	HH	.T.
* Subjected To An Ashing Procedure						
5 . 1	OFF-05	Grey Screening Pattern Lino, Laundry, Kitchen, Common Area 2nd Floor Layer 1 Clear	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 28 2017	HH	---
* Layers 1 to 3 of Sample [Composite] Subjected To An Ashing Procedure				LP	10 %	
5 . 2	OFF-05	Grey Screening Pattern Lino, Laundry, Kitchen, Common Area 2nd Floor Layer 2 White Patches	Asbestos Fibres Not Detected 1 - 5 % Fibrous Glass > 95 % Non-fibrous	Dec 29 2017	HH	---
				LP	70 %	
5 . 3	OFF-05	Grey Screening Pattern Lino, Laundry, Kitchen, Common Area 2nd Floor Layer 3 White Fibrous	Asbestos Fibres Not Detected 95 -100 % Synthetic Fibres > 1 % Non-fibrous	Dec 29 2017	HH	---
				LP	15 %	
5 . 4	OFF-05	Grey Screening Pattern Lino, Laundry, Kitchen, Common Area 2nd Floor Layer 4 Brown Patches	Asbestos Fibres Not Detected 1 - 5 % Cellulose Fibres > 95 % Non-fibrous	Dec 28 2017	HH	---
				LP	5 %	
6 . 1	OFF-06	DWJC - Upstairs Pantry, 2nd Floor Layer 1 Beige Fibrous/White Coating	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 28 2017	HH	---
* Sample is a Portion of a Painted Wallboard with No Observable Drywall Joint Compound				LP	5 %	

LP - Means Percent : Layer or Phase of Whole Sample

DNQ - Means Detected Not Quantitated

ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16767

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : OFF

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16767	OFF	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
6 . 2	OFF-06	DWJC - Upstairs Pantry, 2nd Floor Layer 2 Grey	Asbestos Fibres Not Detected 5 - 10 % Cellulose Fibres 1 - 5 % Fibrous Glass > 85 % Non-fibrous	Dec 28 2017 LP 90 %	HH	---
6 . 3	OFF-06	DWJC - Upstairs Pantry, 2nd Floor Layer 3 Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 28 2017 LP 5 %	HH	---
7	OFF-07	Grey Ceiling Insulation, 2nd Floor * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 28 2017	HH	---
8 . 1	OFF-08	DWJC, Room D (#5) 2nd Floor Layer 1 White * Subjected To An Ashing Procedure	Trace Chrysotile Asbestos 95 -100 % Non-fibrous	Dec 29 2017 LP 15 %	HH	.T.
8 . 2	OFF-08	DWJC, Room D (#5) 2nd Floor Layer 2 Beige Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 28 2017 LP 15 %	HH	---
8 . 3	OFF-08	DWJC, Room D (#5) 2nd Floor Layer 3 White * Subjected To An Ashing Procedure	1 - 5 % Chrysotile Asbestos > 95 % Non-fibrous	Dec 28 2017 LP 15 %	HH	.T.
8 . 4	OFF-08	DWJC, Room D (#5) 2nd Floor Layer 4 Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 28 2017 LP 15 %	HH	---
8 . 5	OFF-08	DWJC, Room D (#5) 2nd Floor Layer 5 Grey	Asbestos Fibres Not Detected 1 - 5 % Cellulose Fibres 1 - 5 % Fibrous Glass > 90 % Non-fibrous	Dec 28 2017 LP 40 %	HH	---
9 . 1	OFF-09	Square White Lino, Enviro Office 1st Floor Layer 1 Clear Coat * Layers 1 to 3 of Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 28 2017 LP 10 %	HH	---

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

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Lab File 16767 Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : OFF American Industrial Hygiene Association BAPAT Lab. Id. No. 149340 Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16767	OFF	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
9 . 2	OFF-09	Square White Lino, Enviro Office 1st Floor Layer 2 Brown Pattern	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 28 2017	HH	---
				LP	60 %	
9 . 3	OFF-09	Square White Lino, Enviro Office 1st Floor Layer 3 Grey Fibrous	Asbestos Fibres Not Detected 50 - 60 % Cellulose Fibres 1 - 5 % Fibrous Glass > 35 % Non-fibrous	Dec 29 2017	HH	---
				LP	10 %	
9 . 4	OFF-09	Square White Lino, Enviro Office 1st Floor Layer 4 Orange Mastic * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 28 2017	HH	---
				LP	20 %	
10	OFF-10	Texture Coating, Walls/Ceiling, Room S of Enviro Office 1st Floor	1 - 5 % Chrysotile Asbestos > 95 % Non-fibrous	Dec 28 2017	HH	.T.
		* Subjected To An Ashing Procedure				
11 . 1	OFF-11	DWJC, Main Fl., Office Wall beside Boardroom Layer 1 White/Grey Coating * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 28 2017	HH	---
				LP	15 %	
11 . 2	OFF-11	DWJC, Main Fl., Office Wall beside Boardroom Layer 2 White Fibrous	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Dec 28 2017	HH	---
				LP	70 %	
11 . 3	OFF-11	DWJC, Main Fl., Office Wall beside Boardroom Layer 3 White * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 28 2017	HH	---
				LP	15 %	
12 . 1	OFF-12	DWJC, Main Fl., N. Bathroom	1 - 5 % Chrysotile Asbestos > 95 % Non-fibrous	Dec 28 2017	HH	.T.
		Layer 1 White/Grey Coating				
		* Subjected To An Ashing Procedure				
				LP	15 %	

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16767 Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : OFF American Industrial Hygiene Association BAPAT Lab. Id. No. 149340 Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16767	OFF	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
12 . 2	OFF-12	DWJC, Main Fl., N. Bathroom	Asbestos Fibres Not Detected	Dec 28 2017	HH	---
		Layer 2 White Fibrous	95 -100 % Cellulose Fibres > 1 % Non-fibrous	LP		70 %
12 . 3	OFF-12	DWJC, Main Fl., N. Bathroom	1 - 5 % Chrysotile Asbestos > 95 % Non-fibrous	Dec 28 2017	HH	.T.
		Layer 3 White		LP		15 %
		* Subjected To An Ashing Procedure				

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16768	Mill	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1 . 1	Mill-01	Beige Lino, Bathroom/Locker Room Layer 1 Clear * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017 LP 15 %	GN	---
1 . 2	Mill-01	Beige Lino, Bathroom/Locker Room Layer 2 White	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017 LP 5 %	GN	---
1 . 3	Mill-01	Beige Lino, Bathroom/Locker Room Layer 3 Grey Spongy	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017 LP 50 %	GN	---
1 . 4	Mill-01	Beige Lino, Bathroom/Locker Room Layer 4 Light Grey Fibrous	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres 1 - 5 % Fibrous Glass > 5 % Non-fibrous	Dec 7 2017 LP 25 %	GN	---
1 . 5	Mill-01	Beige Lino, Bathroom/Locker Room Layer 5 Grey Patches * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017 LP 5 %	GN	---
2 . 1	Mill-02	HVAC Felt & Mud, Locker Room Layer 1 White Patch * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Dec 7 2017 LP 2 %	GN	---
2 . 2	Mill-02	HVAC Felt & Mud, Locker Room Layer 2 Black Fibrous	Asbestos Fibres Not Detected 90 - 95 % Fibrous Glass > 5 % Non-fibrous	Dec 7 2017 LP 98 %	GN	---
3	Mill-03	1" Pipe Elbow Insulation, Stairwell By Locker Room * Subjected To An Ashing Procedure	20 - 30 % Chrysotile Asbestos 50 - 60 % Fibrous Glass > 10 % Non-fibrous	Dec 7 2017	GN	.T.
4 . 1	Mill-04	Lab Counter Top, 2nd Fl. Lab. Layer 1 Black Fibrous [Laminate] * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Dec 7 2017 LP 70 %	GN	---

LP - Means Percent : Layer or Phase of Whole Sample

DNQ - Means Detected Not Quantitated

ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16768

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : Mill

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16768	Mill	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
4 . 2	Mill-04	Lab Counter Top, 2nd Fl. Lab.	Asbestos Fibres Not Detected	Dec 7 2017	GN	---
		Layer 2 Brown Adhesive	95 -100 % Non-fibrous	LP	20 %	
4 . 3	Mill-04	Lab Counter Top, 2nd Fl. Lab.	Asbestos Fibres Not Detected	Dec 7 2017	GN	---
		Layer 3 Brown Fibrous Patches [Wood]	95 -100 % Cellulose Fibres > 1 % Non-fibrous	LP	10 %	
5	Mill-05	Transite Board, Main Fl., Lab	20 - 30 % Chrysotile Asbestos > 70 % Non-fibrous	Dec 7 2017	GN	.T.
* Subjected To An Ashing Procedure						
6	Mill-06	Grey Mastic, Fume Hood Main Fl. Lab	Asbestos Fibres Not Detected	Dec 7 2017	GN	---
			95 -100 % Non-fibrous			

* Subjected To An Ashing Procedure

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16769	RCMP	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	RCMP-01	Felt under Siding, by Entrance Ext. Wall	Asbestos Fibres Not Detected 90 - 95 % Cellulose Fibres Trace Fibrous Glass > 5 % Non-fibrous	Dec 22 2017	GN	---
* Subjected To An Ashing Procedure						
2	RCMP-02	Roof System, Shingles + Felt, RCMP / Medical Bldg	1 - 5 % Chrysotile Asbestos 60 - 70 % Cellulose Fibres DNQ Quartz > 25 % Non-fibrous	Dec 22 2017	GN	.T.
* Subjected To An Ashing Procedure						

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Mine D - Cantung Mine, Tungsten, NWT
Project : 03039-02

16770	MineD	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1 . 1	MineD-01	Mudded Tank Cover, Mechanical Room Phase 1 Layer 1 White/Grey Coating * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 1 - 5 % Cellulose Fibres 1 - 5 % Fibrous Glass > 90 % Non-fibrous	Dec 22 2017	HH	---
1 . 2	MineD-01	Mudded Tank Cover, Mechanical Room Phase 1 Layer 2 Yellow Fibre Patch	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Dec 22 2017	HH	---
1 . 3	MineD-01	Mudded Tank Cover, Mechanical Room Phase 2 Layer 1 White Weave/grey coat * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Dec 22 2017	HH	---
1 . 4	MineD-01	Mudded Tank Cover, Mechanical Room Phase 2 Layer 2 Grey	Asbestos Fibres Not Detected 5 - 10 % Cellulose Fibres 1 - 5 % Fibrous Glass > 85 % Non-fibrous	Dec 22 2017	HH	---
2 . 1	MineD-02	Pipe Elbow, 2nd Floor Mech Room Phase 1 Beige Fibrous * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 30 - 40 % Cellulose Fibres 1 - 5 % Fibrous Glass > 55 % Non-fibrous	Dec 22 2017	HH	---
2 . 2	MineD-02	Pipe Elbow, 2nd Floor Mech Room Phase 2 White Weave	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 22 2017	HH	---
3	MineD-03	Asbestos Pipe, Janitor Room 2nd Floor * Subjected To An Ashing Procedure	5 - 10 % Chrysotile Asbestos 1 - 5 % Crocidolite Asbestos > 85 % Non-fibrous	Dec 22 2017	HH	.T.

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16770

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : MineD

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report

For Tetra Tech Canada Inc. [Yukon]
61 Wasson Place
Whitehorse, YT Canada Y1A 0H7

Location : Cantung Mine, Tungsten, NWT
[Job # ENW.WENW03039-02]
Project : 03039-02

16787	# B	Sample Location / Description	Result(s)	Analyzed	Analyst ACM
1	B-01	Brown Caulking, Ext. Window	5 - 10 % Chrysotile Asbestos > 90 % Non-fibrous	Jan 11 2018	HH .T.
* Subjected To An Ashing Procedure					
2	B-02	10 inch Pipe Elbow, Mach. Room	Asbestos Fibres Not Detected 20 - 30 % Fibrous Glass 10 - 20 % Cellulose Fibres > 50 % Non-fibrous	Jan 11 2018	HH ---
* Subjected To An Ashing Procedure					
3 . 1	B-03	HVAC Connector, Mach. Room	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 11 2018	HH ---
		Layer 1 Grey		LP 20 %	
* Subjected To An Ashing Procedure					
3 . 2	B-03	HVAC Connector, Mach. Room	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Jan 11 2018	HH ---
		Layer 2 White Weave		LP 80 %	
* Subjected To An Ashing Procedure					
4	B-04	Electrical Backing, Electrical Panel, Mach. Room	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Jan 11 2018	HH ---
* Subjected To An Ashing Procedure					
5 . 1	B-05	FLCMPD, 1st Floor Hallway	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 11 2018	HH ---
		Phase 1 Layer 1 Brown Mastic		LP 15 %	
* Layers 1 and 2 of Sample [Composite] Subjected To An Ashing Procedure					
5 . 2	B-05	FLCMPD, 1st Floor Hallway	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 11 2018	HH ---
		Phase 1 Layer 2 White		LP 70 %	
5 . 3	B-05	FLCMPD, 1st Floor Hallway	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Jan 11 2018	HH ---
		Phase 1 Layer 3 Grey Fibrous Patch		LP 10 %	

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16787 Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : # B

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16787	# B	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
5 . 4	B-05	FLCMPD, 1st Floor Hallway	Asbestos Fibres Not Detected	Jan 11 2018	HH	---
		Phase 2 Grey Fbrous Bundle	95 -100 % Synthetic Fibres > 1 % Non-fibrous	LP		5 %
6 . 1	B-06	FLCMPD, 2nd Floor Hallway	Asbestos Fibres Not Detected	Jan 11 2018	HH	---
		Phase 1 Layer 1 Brown Fibrous	95 -100 % Cellulose Fibres > 1 % Non-fibrous	LP		20 %
6 . 2	B-06	FLCMPD, 2nd Floor Hallway	Asbestos Fibres Not Detected	Jan 11 2018	HH	---
		Phase 1 Layer 2 Brown Mastic	95 -100 % Non-fibrous	LP		45 %
* Layers 2 and 3 of Sample [Composite] Subjected To An Ashing Procedure						
6 . 3	B-06	FLCMPD, 2nd Floor Hallway	Asbestos Fibres Not Detected	Jan 11 2018	HH	---
		Phase 1 Layer 3 White	95 -100 % Non-fibrous	LP		30 %
6 . 4	B-06	FLCMPD, 2nd Floor Hallway	Asbestos Fibres Not Detected	Jan 11 2018	HH	---
		Phase 2 Grey Bundle	95 -100 % Synthetic Fibres > 1 % Non-fibrous	LP		5 %
7	B-07	Sink Backing, Room 207	1 - 5 % Chrysotile Asbestos > 95 % Non-fibrous	Jan 11 2018	HH	.T.
* Subjected To An Ashing Procedure						

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]
Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant
Samples Submitted Will Be Retained For 30 Days After Receipt And Will Be Disposed Of Thereafter Unless Otherwise Notified In Writing
Sample Submitted By Tetra Tech Canada Inc. [Yukon]

Analyst: H. He

January 19, 2018

[Facsimile]

Reviewed By: G. Nawrocki

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16787

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : # B

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : #C - Cantung Mine, Tungsten, NWT
Project : 03039-02

16825	# C	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	C-01	Ext. Felt, South Wall	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Jan 10 2018	HH	---
* Subjected To An Ashing Procedure						
2 . 1	C-02	FLCMPD, Center Seams in Living Room	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 10 2018	HH	---
		Layer 1 White		LP	95 %	
* Subjected To An Ashing Procedure						
2 . 2	C-02	FLCMPD, Center Seams in Living Room	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Jan 10 2018	HH	---
		Layer 2 Brown Patches		LP	5 %	
3	C-03	Ext. Mastic, South Wall Foundation	Asbestos Fibres Not Detected 1 - 5 % Quartz > 95 % Non-fibrous	Jan 10 2018	HH	---
* Subjected To An Ashing Procedure						

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16828	Vent	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1 . 1	VENT-01	Cover on Insulation, Vent Raise Bldg, Main Bldg by Entrance Layer 1 Foil	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017	GN	---
* Sample [Composite] Subjected To An Ashing Procedure				LP	5 %	
1 . 2	VENT-01	Cover on Insulation, Vent Raise Bldg, Main Bldg by Entrance Layer 2 White Mastic	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017	GN	---
				LP	3 %	
1 . 3	VENT-01	Cover on Insulation, Vent Raise Bldg, Main Bldg by Entrance Layer 3 Colourless Weave	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Dec 7 2017	GN	---
				LP	25 %	
1 . 4	VENT-01	Cover on Insulation, Vent Raise Bldg, Main Bldg by Entrance Layer 4 Cream Fibrous Sheet	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Dec 7 2017	GN	---
				LP	52 %	
1 . 5	VENT-01	Cover on Insulation, Vent Raise Bldg, Main Bldg by Entrance Layer 5 Brown Mastic Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017	GN	---
				LP	5 %	
1 . 6	VENT-01	Cover on Insulation, Vent Raise Bldg, Main Bldg by Entrance Layer 6 Light Grey Fibrous Patches	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Dec 7 2017	GN	---
				LP	10 %	
2	VENT-02	Gasket, Vaperizer Room by Main Vent Raise Bldg	85 - 90 % Chrysotile Asbestos > 10 % Non-fibrous	Dec 7 2017	GN	.T.

*** Subjected To An Ashing Procedure**

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16828

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : Vent

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report

For Tetra Tech Canada Inc. [Yukon]

Location : Cantung Mine, Tungsten, NWT

Project : 03039-02

16829	RVRPMP	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	RVRPMP1	Brown Mastic, Wall - River Pump Sub-station	10 - 20 % Chrysotile Asbestos > 80 % Non-fibrous	Dec 22 2017	GN	.T.
* Subjected To An Ashing Procedure						
2	RVRPMP2	Off White Mastic, Wall - River Pump Substation	10 - 20 % Chrysotile Asbestos > 80 % Non-fibrous	Dec 22 2017	GN	.T.
* Subjected To An Ashing Procedure						

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantong Mine, Tungsten, NWT
Project : 03039-02

16830	Cook	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	Cook-01	Black Mastic, Exterior b/t Freezer + Cooking House	Asbestos Fibres Not Detected 10 - 20 % Cellulose Fibres DNQ Quartz > 80 % Non-fibrous	Dec 7 2017	GN	---
* Subjected To An Ashing Procedure						
2	Cook-02	Grey Mastic, Ext. b/t Freezer + Cooking House	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017	GN	---
* Subjected To An Ashing Procedure						

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16831	80M	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1 . 1	80M-01	Blue Vinyl Floor Tile, Library/Phone Room, Custodial Room, Supply Room Layer 1 Blue	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017	GN	---
		* Subjected To An Ashing And Acid Washing Procedure		LP 99 %		
1 . 2	80M-01	Blue Vinyl Floor Tile, Library/Phone Room, Custodial Room, Supply Room Layer 2 Black Mastic Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017	GN	---
		* Subjected To An Ashing Procedure		LP 1 %		
2	80M-02	Beige Lino, Every Bathroom	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 7 2017	GN	---
		* Subjected To An Ashing And Acid Washing Procedure				

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16832	POWH	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1 . 1	POWH-01	10" Pipe Insulation, 2nd Level Near Breaker Room Layer 1 Foil	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 6 2017	GN	---
* Sample [Composite] Subjected To An Ashing Procedure						
1 . 2	POWH-01	10" Pipe Insulation, 2nd Level Near Breaker Room Layer 2 Colourless Fibrous Weave	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Dec 6 2017	GN	---
1 . 3	POWH-01	10" Pipe Insulation, 2nd Level Near Breaker Room Layer 3 Orange Mastic Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 6 2017	GN	---
1 . 4	POWH-01	10" Pipe Insulation, 2nd Level Near Breaker Room Layer 4 Cream	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Dec 6 2017	GN	---
1 . 5	POWH-01	10" Pipe Insulation, 2nd Level Near Breaker Room Layer 5 Colourless Fibrous Weave	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Dec 6 2017	GN	---
1 . 6	POWH-01	10" Pipe Insulation, 2nd Level Near Breaker Room Layer 6 Light Grey	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 6 2017	GN	---
2	POWH-02	Pipe Gasket, 2nd Level Near Breaker Room	85 - 90 % Chrysotile Asbestos > 10 % Non-fibrous	Dec 6 2017	GN	.T.
* Subjected To An Ashing Procedure						

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16832

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : POWH

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Cantung Mine, Tungsten, NWT
Project : 03039-02

16833	Mait	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	Mait-01	Window Caulking, All Exterior of Windows	Asbestos Fibres Not Detected 5 - 10 % Fibrous Glass > 90 % Non-fibrous	Dec 7 2017	GN	---
* Subjected To An Ashing Procedure						
2 . 1	Mait-02	Pipe Elbow Insulation, New Entrance	Asbestos Fibres Not Detected 70 - 80 % Cellulose Fibres > 20 % Non-fibrous	Dec 7 2017	GN	---
		Phase 1 Fibrous Weave/White Coating		LP	5 %	
* Sample [Composite] Subjected To An Ashing Procedure						
2 . 2	Mait-02	Pipe Elbow Insulation, New Entrance	Asbestos Fibres Not Detected 60 - 70 % Fibrous Glass 1 - 5 % Cellulose Fibres > 25 % Non-fibrous	Dec 7 2017	GN	---
		Phase 2 Cream Fibrous		LP	80 %	
2 . 3	Mait-02	Pipe Elbow Insulation, New Entrance	Asbestos Fibres Not Detected 85 - 90 % Fibrous Glass 1 - 5 % Cellulose Fibres > 5 % Non-fibrous	Dec 7 2017	GN	---
		Phase 3 Orange Fibrous		LP	15 %	

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Pcomp - Cantung Mine, Tungsten, NWT
Project : 03039-02

16834	Pcomp	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	Pcomp-01	Black Mastic under UFFI, Exterior Walls + Ceiling	Asbestos Fibres Not Detected DNQ Quartz 95 -100 % Non-fibrous	Dec 22 2017	GN	---
* Subjected To An Ashing Procedure						
2 . 1	Pcomp-02	Fire Door Felt, Metal Fire Door Exit	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres	Dec 22 2017	GN	---
		Layer 1 Light Brown Fibrous	Trace Fibrous Glass > 1 % Non-fibrous	LP	70 %	
* Subjected To An Ashing Procedure						
2 . 2	Pcomp-02	Fire Door Felt, Metal Fire Door Exit	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Dec 22 2017	GN	---
		Layer 2 Black		LP	30 %	

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : 119+120 - Cantung Mine, Tungsten, NWT
Project : 03039-02

16835	119+120	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1 . 1	119-01	Red Brick Pattern Lino, Basement Bedroom Layer 1 Yellow Mastic * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 22 2018	HH	---
1 . 2	119-01	Red Brick Pattern Lino, Basement Bedroom Layer 2 Clear * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 22 2018	HH	---
1 . 3	119-01	Red Brick Pattern Lino, Basement Bedroom Layer 3 Red	Asbestos Fibres Not Detected DNQ Quartz 95 -100 % Non-fibrous	Jan 22 2018	HH	---
1 . 4	119-01	Red Brick Pattern Lino, Basement Bedroom Layer 4 Clear Mastic * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 1 - 5 % Fibrous Glass > 95 % Non-fibrous	Jan 22 2018	HH	---
2 . 1	119-02	HVAC Duct Tape, Basement HVAC Room Layer 1 Foil * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Jan 22 2018	HH	---
2 . 2	119-02	HVAC Duct Tape, Basement HVAC Room Layer 2 Orange Coating	Asbestos Fibres Not Detected 1 - 5 % Fibrous Glass > 95 % Non-fibrous	Jan 22 2018	HH	---
3 . 1	119-03	12 x 12 Blue VFT, Basement Bathroom Layer 1 Grey * Subjected To An Ashing And Acid Washing Procedure	Asbestos Fibres Not Detected DNQ Quartz 95 -100 % Non-fibrous	Jan 22 2018	HH	---
3 . 2	119-03	12 x 12 Blue VFT, Basement Bathroom Layer 2 Black Mastic * Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 1 - 5 % Fibrous Glass > 95 % Non-fibrous	Jan 22 2018	HH	---

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16835 **Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445**

Client Id : 119+120 American Industrial Hygiene Association BAPAT Lab. Id. No. 149340 Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : 119+120 - Cantung Mine, Tungsten, NWT
Project : 03039-02

16835	119+120	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
4	120-01	Roof Shingles, Back Entrance Roof	Asbestos Fibres Not Detected 50 - 60 % Cellulose Fibres 1 - 5 % Fibrous Glass 1 - 5 % Hair Fibres > 30 % Non-fibrous	Jan 22 2018	HH	---
* Subjected To An Ashing Procedure						

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Misc - Cantung Mine, Tungsten, NWT
Project : 03039-02

16836	Misc	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	SUBST-01	Transite Board, Interior Walls	70 - 80 % Chrysotile Asbestos > 20 % Non-fibrous	Jan 22 2018	HH	.T.
* Subjected To An Ashing Procedure						
2	Utilidor1	Black Asphalt/Felt Cover, Utilidor	Asbestos Fibres Not Detected 20 - 30 % Cellulose Fibres 1 - 5 % Synthetic Fibres 1 - 5 % Fibrous Glass > 60 % Non-fibrous	Jan 22 2018	HH	---
* Subjected To An Ashing Procedure						
3	Shack-01	Exterior Wall Asphalt Paper, Black Shack N of Sewage Treatment	Asbestos Fibres Not Detected 20 - 30 % Cellulose Fibres 1 - 5 % Synthetic Fibres 1 - 5 % Hair Fibres > 60 % Non-fibrous	Jan 22 2018	HH	---
* Subjected To An Ashing Procedure						
4	Fuel-01	Exterior White Mastic, All Corrugated Steel Joints @ Diesel Transfer Bldg, Green	5 - 10 % Chrysotile Asbestos > 90 % Non-fibrous	Jan 22 2018	HH	.T.
* Subjected To An Ashing Procedure						
5	INCIN-01	Gasket Old Incinerator, at New Landfill	95 -100 % Chrysotile Asbestos > 1 % Non-fibrous	Jan 22 2018	HH	.T.
* Subjected To An Ashing Procedure						
6	Elect-01	Transite Board, Electric Room in Underground Mine	30 - 40 % Chrysotile Asbestos > 60 % Non-fibrous	Jan 22 2018	HH	.T.
* Subjected To An Ashing Procedure						
7 . 1	OldPH-01	10"-12" Steam Pipe Elbow, All Steam Pipe System	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Jan 22 2018	HH	---
		Layer 1 Weave/White Coating		LP	2 %	
7 . 2	OldPH-01	10"-12" Steam Pipe Elbow, All Steam Pipe System	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Jan 22 2018	HH	---
		Layer 2 Yellow Fibrous		LP	15 %	
* Layers 2 and 3 of Sample [Composite] Subjected To An Ashing Procedure						

LP - Means Percent : Layer or Phase of Whole Sample DNQ - Means Detected Not Quantitated ACM Means Asbestos Containing Material; T - Present

< Means - Less Than > Means - Greater Than

Lab File 16836

Unit 115 13988 Maycrest Way, Richmond British Columbia V6V 3C3 (604) - 279 - 9445

Client Id : Misc

American Industrial Hygiene Association BAPAT Lab. Id. No. 149340

Client Reference Id: ENW.WENW0303

Detailed Bulk Asbestos Report
For Tetra Tech Canada Inc. [Yukon]
Location : Misc - Cantung Mine, Tungsten, NWT
Project : 03039-02

16836	Misc	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
7 . 3	OldPH-01	10"-12" Steam Pipe Elbow, All Steam Pipe System Layer 3 Grey	Asbestos Fibres Not Detected 5 - 10 % Fibrous Glass > 90 % Non-fibrous	Jan 22 2018	HH	---
8	WT-01	Ext. Shingles/Felt, Water Tank Ext. Covering * Subjected To An Ashing Procedure	5 - 10 % Chrysotile Asbestos 50 - 60 % Cellulose Fibres DNQ Quartz > 30 % Non-fibrous	Jan 22 2018	HH	.T.
9 . 1	CRU-01	DWJC, Upper Office, Wall Layer 1 White/Blue Coating * Subjected To An Ashing Procedure	1 - 5 % Chrysotile Asbestos > 95 % Non-fibrous	Jan 22 2018	HH	.T.
9 . 2	CRU-01	DWJC, Upper Office, Wall Layer 2 Beige Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Jan 22 2018	HH	---

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]

Asbestos may be detected at Less Than 0.5 % by Visual Estimation, but this detection limit is highly material dependant

January 23, 2018

Reviewed By: G. Nawrocki

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Kristina Gardner

PROJECT: ENW.WENW03039-02

AGAT WORK ORDER: 17V270722

SOIL ANALYSIS REVIEWED BY: Andrew Garrard, B.Sc., General Manager

DATE REPORTED: Oct 24, 2017

PAGES (INCLUDING COVER): 12

VERSION*: 2

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 2: Sample receipt temperature 12°C.

Version 2 issued on October 30, 2017 to report additional TCLP lead results as requested by Michele Crawford of Tetra Tech. Version 2 is an amendment to version 1.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17V270722

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Kristina Gardner

SAMPLED BY:

Lead in Paint											
DATE RECEIVED: 2017-10-10						DATE REPORTED: 2017-10-24					
		SAMPLE DESCRIPTION:		SCHOOL-P01A	SCHOOL-P02A	CONDO-P01A	91-P01A	80-P01A	90-P01A	78-P01A	66-P01A
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2017-09-30	2017-09-30	2017-09-29	2017-09-29	2017-09-29	2017-09-29	2017-09-29	2017-09-29
Parameter	Unit	G / S	RDL	8808066	8808075	8808078	8808094	8808101	8808104	8808108	8808120
Lead - Total	mg/kg	10		21200	23500	1300	9130	79	1030	63	3700
		SAMPLE DESCRIPTION:		SCHOOL-P03A	119-P01A	120-P01A	COOK-P01A	CARP-P01A	MINED-P02A	97-P01A	
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	
		DATE SAMPLED:		2017-09-29	2017-09-30	2017-09-30	2017-10-01	2017-10-01	2017-10-03	2017-09-29	
Parameter	Unit	G / S	RDL	8808123	8808127	8808136	8808147	8808152	8808178	8808201	
Lead - Total	mg/kg	10		20400	20	3150	362	<10	<10	22	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17V270722

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Kristina Gardner

SAMPLED BY:

TCLP Lead											
DATE RECEIVED: 2017-10-10					DATE REPORTED: 2017-10-24						
Parameter	Unit	SAMPLE DESCRIPTION:		SCHOOL-P01B	SCHOOL-P02B	REC-P01	CONDO-P01B	91-P01B	90-P01B	SHED-P01	78-P02
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2017-09-30	2017-09-30	2017-09-30	2017-09-29	2017-09-29	2017-09-29	2017-09-29	2017-09-29
		G / S	RDL	8808072	8808076	8808077	8808089	8808099	8808105	8808106	8808107
Lead - TCLP Leachate	mg/L		0.01	45.6	16.4	1.50	1.16	0.85	0.12	0.26	<0.01
Parameter	Unit	SAMPLE DESCRIPTION:		69-P01	65-P01	66-P01B	SCHOOL-P03B			120-P01B	MILL-P01
		SAMPLE TYPE:		Paint	Paint	Paint	Paint			Paint	Paint
		DATE SAMPLED:		2017-09-29	2017-09-29	2017-09-29	2017-09-29			2017-09-30	2017-10-02
		G / S	RDL	8808114	8808119	8808121	RDL	8808126	RDL	8808139	8808141
Lead - TCLP Leachate	mg/L		0.01	1.16	0.07	0.09	0.02	79.6	0.01	0.91	0.05
Parameter	Unit	SAMPLE DESCRIPTION:		MILL-P02	FIRE-P01	COOK-P01B	DORMA-P01	OLDPH-P01	MILL-P03	80M-P01	DORMA-P02
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2017-10-02	2017-10-01	2017-10-01	2017-10-01	2017-10-02	2017-10-03	2017-10-03	2017-10-03
		G / S	RDL	8808143	8808144	8808150	8808151	8808154	8808156	8808160	8808164
Lead - TCLP Leachate	mg/L		0.01	0.46	<0.01	0.17	0.03	4.81	1.74	0.45	0.09
Parameter	Unit	SAMPLE DESCRIPTION:		WARE-P01	MINED-P01	FUEL-P01	CRU-P01	TR-P01			RVRST-P01
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint			Paint
		DATE SAMPLED:		2017-10-03	2017-10-03	2017-10-03	2017-10-03	2017-10-03			2017-10-03
		G / S	RDL	8808165	8808172	8808187	8808193	RDL	8808195	RDL	8808196
Lead - TCLP Leachate	mg/L		0.01	3.80	0.07	18.2	0.29	0.02	66.0	0.01	1.65

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 17V270722

PROJECT: ENW.WENW03039-02

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Kristina Gardner

SAMPLED BY:

TCLP Lead

DATE RECEIVED: 2017-10-10

DATE REPORTED: 2017-10-24

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

8808072-8808076 Analysis based on "as received"

Insufficient sample supplied to meet the minimum requirements of the reference method.

8808077 Analysis based on "as received"

8808089-8808105 Analysis based on "as received"

Insufficient sample supplied to meet the minimum requirements of the reference method.

8808106-8808119 Analysis based on "as received"

8808121-8808139 Analysis based on "as received"

Insufficient sample supplied to meet the minimum requirements of the reference method.

8808141-8808144 Analysis based on "as received"

8808150 Analysis based on "as received"

Insufficient sample supplied to meet the minimum requirements of the reference method.

8808151-8808196 Analysis based on "as received"

Certified By:



Quality Assurance

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-02

SAMPLING SITE:

AGAT WORK ORDER: 17V270722

ATTENTION TO: Kristina Gardner

SAMPLED BY:

Soil Analysis

RPT Date: Oct 24, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Lead in Paint

Lead - Total	8806452		112	101	10.3%	< 10	119%	80%	120%	109%	85%	115%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Lead in Paint

Lead - Total	8820489		1430	1440	1.1%	< 10	88%	80%	120%	105%	85%	115%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

TCLP Lead

Lead - TCLP Leachate	8808143	8808143	2.82	2.50	11.9%	< 0.01	79%	50%	150%	98%	90%	110%	119%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

TCLP Lead

Lead - TCLP Leachate	8822779		1.89	1.84	2.8%	< 0.01	99%	50%	150%	107%	90%	110%	90%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:

Method Summary

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 17V270722

PROJECT: ENW.WENW03039-02

ATTENTION TO: Kristina Gardner

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Lead - Total	LAB-181-4020, MET-181-6104	Modified from NIOSH 7105 and EPA 6010 C	ICP/OES
Lead - TCLP Leachate	MET-181-6102, LAB-181-4001	EPA 1311 and EPA 6020A	ICP-MS



V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Notes:

OCT 10 AM 9:32

Report Information

Company: Tetra Tech Canada
Contact: Kristina Gardner
Address: 100 Watson Place
Whitehorse, YT
Phone: 226-791-5838 Fax:
AGAT Quote #: 18194046
Client Project #: ENW.WENW03039-02

Report Information

1. Name: Kristina Gardner
Email: kristina.gardner@teta
2. Name: tech.com
Email: _____

Report Format

Excel Format
Included
ES DAT

Requirements *(Please Check)*

☐ **BC CSR Soil**

- ☐ AL
- ☐ IL
- ☐ PL
- ☐ CL
- ☐ RL

☐ **BC CSR - Water**

- ☐ DW
- ☐ AW
- ☐ IW
- ☐ LW

Schedule 11 (Please Specify)

CCME (Please Specify)

Other (Please Specify)

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	TOTAL LEACH															NUMBER OF PRESERVED	HAZARDOUS Hold for:
8808066	SCHOOL-PO1A	paint	9/30/17		X																
72	SCHOOL-PO1B	↓	9/30/17																		X
75	SCHOOL-PO2A			9/30/17		X															
76	SCHOOL-PO2B			9/30/17																	X
77	REC-PO1			9/30/17			X														
78	CONDO-PO1A			9/29/17		X															
89	CONDO-PO1B			9/29/17																	X
94	q1-PO1A			9/29/17		X															
99	q1-PO1B			9/29/17																	X
8808101	80-PO1A	↓	9/29/17		X																X
02	80-PO1B			9/29/17																	X

Samples Relinquished By (Print Name and Sign):

Michele Crawford

Samples Relinquished By (Print Name and Sign):

Date/Time

Date/Time

Date/Time

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

	Date/Time

Date/Time

Page 1 of 5

Nº: 016990



Laboratories

P: 778.452.4000 • F: 778.452.4074

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Date Revised: July 16, 2015



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 170270722

RECEIVING BASICS:

Received From: PuroLator

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: BOX Containers: 49.

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Sep 29, 2017

ALREADY EXCEEDED? Yes No

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 12 + 12 + 12 = 12 °C (2) ____ + ____ + ____ = ____ °C (3) ____ + ____ + ____ = ____ °C (4) ____ + ____ + ____ = ____ °C

Was ice or ice pack present: Yes No

Integrity Issues:

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

"97-P01A" & "97-P01B". received but not listed on the CoC.

PHC TESTPITTING CERTIFICATES

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Stephan Klump/Ben Barton

PROJECT: ENW.WENW03039-03.002

AGAT WORK ORDER: 18Y357306

SOIL ANALYSIS REVIEWED BY: Krystyna Krauze, Senior Analyst

TRACE ORGANICS REVIEWED BY: Clarissa Muljono, Report Writer

DATE REPORTED: Jul 09, 2018

PAGES (INCLUDING COVER): 25

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 8°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 18Y357306

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Ben Barton

SAMPLED BY:

Particle Size by Sieve

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		18A23TP6-3	18A23BTP7-2	18A23TP9-2	18A43TP5-2	18A17TP9-3	18A17TP10-2	18A17TP12-3	18A17TP13-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-27	2018-06-27	2018-06-27	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9372346	9372349	9372355	9372361	9372370	9372373	9372381	9372384
Sieve Analysis - 75 microns	%	1	88	88	83	71	87	79	84	84	78
Sieve Texture				Coarse	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse
		SAMPLE DESCRIPTION:		18A17TP15-1							
		SAMPLE TYPE:		Soil							
		DATE SAMPLED:		2018-06-28							
Parameter	Unit	G / S	RDL	9372388							
Sieve Analysis - 75 microns	%	1	91	91							
Sieve Texture				Coarse							

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9372346-9372388 Value reported is amount of sample retained on sieve after wash with water and represents proportion by weight particles larger than indicated sieve size.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y357306

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Ben Barton

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		18A5TP1-1	18A5TP1-3	18A5TP2-1	18A5TP2-3	18A5TP3-1	18A5BTP3-1	18A5TP3-3	18A5TP4-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-26	2018-06-26	2018-06-26	2018-06-26	2018-06-26	2018-06-26	2018-06-26	2018-06-26
Parameter	Unit	G / S	RDL	9372290	9372310	9372311	9372313	9372314	9372315	9372317	9372318
F2 (C10-C16)	µg/g		20	<20	<20	<20	<20	<20	<20	<20	<20
F3 (C16-C34)	µg/g		20	<20	<20	21	<20	<20	<20	<20	<20
F4 (C34-C50)	µg/g		20	<20	<20	21	<20	<20	79	89	88
Moisture	%		0.5	11.7	5.3	17.4	3.0	8.2	7.0	5.6	9.3
		SAMPLE DESCRIPTION:		18A5TP4-3	18A6TP17-2	18A6TP17-3	18A6TP18-2	18A6TP18-3	18A6TP19-2	18A6TP19-3	18A6TP20-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-26	2018-06-26	2018-06-26	2018-06-27	2018-06-27	2018-06-27	2018-06-27	2018-06-27
Parameter	Unit	G / S	RDL	9372320	9372322	9372323	9372325	9372326	9372328	9372329	9372331
F2 (C10-C16)	µg/g		20	<20	<20	395	<20	<20	<20	<20	<20
F3 (C16-C34)	µg/g		20	<20	<20	986	<20	<20	<20	<20	36
F4 (C34-C50)	µg/g		20	86	70	94	60	58	60	58	76
Moisture	%		0.5	5.6	8.2	29.3	8.9	7.9	8.7	5.2	11.2
		SAMPLE DESCRIPTION:		18A6BTP20-2	18A6TP20-3	18A21TP9-2	18A21TP9-3	18A21TP10-2	18A21TP10-3	18A21TP11-2	18A21TP11-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-27	2018-06-27	2018-06-27	2018-06-27	2018-06-27	2018-06-27	2018-06-27	2018-06-27
Parameter	Unit	G / S	RDL	9372332	9372333	9372335	9372336	9372338	9372340	9372342	9372343
F2 (C10-C16)	µg/g		20	<20	<20	<20	206	<20	<20	<20	<20
F3 (C16-C34)	µg/g		20	<20	<20	54	355	241	101	87	260
F4 (C34-C50)	µg/g		20	61	66	76	64	85	55	36	59
Moisture	%		0.5	7.5	4.8	2.4	5.2	5.2	3.9	7.7	3.9

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y357306

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Ben Barton

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		18A23TP6-2	18A23TP6-3	18A23TP7-2	18A23BTP7-2	18A23TP7-3	18A23TP8-2	18A23TP8-3	18A23TP9-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-27	2018-06-27	2018-06-27	2018-06-27	2018-06-27	2018-06-27	2018-06-27	2018-06-27
Parameter	Unit	G / S	RDL	9372345	9372346	9372348	9372349	9372350	9372352	9372353	9372355
F2 (C10-C16)	µg/g		20	<20	3830	<20	3080	2980	52	2140	397
F3 (C16-C34)	µg/g		20	419	2650	68	2160	2100	446	550	328
F4 (C34-C50)	µg/g		20	219	193	<20	156	85	209	<20	39
Moisture	%		0.5	5.4	6.2	4.0	5.3	12.3	8.0	16.7	13.0
		SAMPLE DESCRIPTION:		18A23TP9-3	18A43TP4-1	18A43TP4-3	18A43TP5-1	18A43TP5-2	18A27TP8-2	18A17TP8-2	18A17TP8-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-27	2018-06-27	2018-06-27	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9372356	9372357	9372359	9372360	9372361	9372364	9372366	9372367
F2 (C10-C16)	µg/g		20	1420	<20	112	<20	<20	<20	<20	<20
F3 (C16-C34)	µg/g		20	501	215	233	232	370	235	72	162
F4 (C34-C50)	µg/g		20	38	128	132	92	159	56	28	40
Moisture	%		0.5	8.6	5.3	5.7	7.8	7.9	13.6	6.1	5.7
		SAMPLE DESCRIPTION:		18A17TP9-2	18A17TP9-3	18A17BTP9-3	18A17TP10-1	18A17TP10-3	18A17TP11-2	18A17BTP11-2	18A17TP11-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9372369	9372370	9372371	9372372	9372374	9372376	9372377	9372378
F2 (C10-C16)	µg/g		20	<20	<20	<20	<20	<20	1140	978	76
F3 (C16-C34)	µg/g		20	384	79	73	294	154	2290	2100	209
F4 (C34-C50)	µg/g		20	124	<20	<20	117	81	587	557	35
Moisture	%		0.5	7.0	9.1	9.4	8.3	11.2	5.1	6.1	15.8

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y357306

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Ben Barton

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		18A17TP12-1	18A17TP12-3	18A17TP13-1	18A17TP13-3	18A17TP14-2	18A17TP14-3	18A17TP15-1	18A17TP15-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9372379	9372381	9372382	9372384	9372386	9372387	9372388	9372390
F2 (C10-C16)	µg/g	20	<20	<20	<20	<20	<20	<20	<20	<20	<20
F3 (C16-C34)	µg/g	20	1470	208	296	235	21	30	145	25	
F4 (C34-C50)	µg/g	20	771	85	118	68	<20	<20	56	<20	
Moisture	%	0.5	11.2	8.5	11.0	18.6	11.1	11.2	5.9	32.2	

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AGAT WORK ORDER: 18Y357306

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump/Ben Barton

SAMPLING SITE:

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

- Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (RL/PL) (Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
- 9372290-9372322 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
n-C10, n-C16 and n-C34 response factors are within 10% of their average.
C50 response factor is within 70% of n-C10 + n-C16 + n-C34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of n-C50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.
- 9372323 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
n-C10, n-C16 and n-C34 response factors are within 10% of their average.
C50 response factor is within 70% of n-C10 + n-C16 + n-C34 average.
Linearity is within 15%.
The chromatogram has not returned to baseline by the retention time of n-C50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.
- 9372325-9372352 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
n-C10, n-C16 and n-C34 response factors are within 10% of their average.
C50 response factor is within 70% of n-C10 + n-C16 + n-C34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of n-C50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

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Certificate of Analysis

AGAT WORK ORDER: 18Y357306

PROJECT: ENW.WENW03039-03.002

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CANADA V5J 0B6
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Ben Barton

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

- 9372353-9372374 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
- 9372376 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.
- 9372377-9372378 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.

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AGAT WORK ORDER: 18Y357306

PROJECT: ENW.WENW03039-03.002

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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Ben Barton

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

9372379

Results are based on the dry weight of the sample.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has not returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

9372381-9372390

Results are based on the dry weight of the sample.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

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AGAT WORK ORDER: 18Y357306

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Ben Barton

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

SAMPLE DESCRIPTION: 18A17TP11-2

SAMPLE TYPE: Soil

DATE SAMPLED: 2018-06-28

Parameter	Unit	G / S	RDL	9372376
Naphthalene	µg/g		0.005	<0.005
2-Methylnaphthalene	µg/g		0.005	<0.005
1-Methylnaphthalene	µg/g		0.005	0.472
Acenaphthylene	µg/g		0.005	<0.005
Acenaphthene	µg/g		0.005	<0.005
Fluorene	µg/g		0.02	0.09
Phenanthrene	µg/g		0.02	0.13
Anthracene	µg/g		0.004	<0.004
Fluoranthene	µg/g		0.01	<0.01
Pyrene	µg/g		0.01	<0.01
Benzo(a)anthracene	µg/g		0.03	<0.03
Chrysene	µg/g		0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.02	<0.02
Benzo(j)fluoranthene	µg/g		0.02	<0.02
Benzo(k)fluoranthene	µg/g		0.02	<0.02
Benzo(a)pyrene	µg/g		0.03	<0.03
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02
Dibenzo(a,h)anthracene	µg/g		0.005	<0.005
Benzo(g,h,i)perylene	µg/g		0.05	<0.05
Quinoline	µg/g		0.05	<0.05
IACR CCME (Soil)			0.6	<0.6
B[a]P TPE (Soil)	µg/g		0.05	<0.05
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05

Surrogate	Unit	Acceptable Limits	
Naphthalene - d8	%	50-130	67
2-Fluorobiphenyl	%	50-130	71
P-Terphenyl - d14	%	60-130	73

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AGAT WORK ORDER: 18Y357306

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Ben Barton

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (RL/PL) (Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
9372376 Results are based on dry weight of sample.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y357306
ATTENTION TO: Stephan Klump/Ben Barton
SAMPLED BY:

Soil Analysis															
RPT Date: Jul 09, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Particle Size by Sieve

Sieve Analysis - 75 microns	9383909	3	3	NA	< 1	100%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y357306
ATTENTION TO: Stephan Klump/Ben Barton
SAMPLED BY:

Trace Organics Analysis

RPT Date: Jul 09, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

CCME F2-F4 (Soil)

F2 (C10-C16)	69342	9372336	206	177	15.1%	< 20	100%	80%	120%				88%	60%	140%
F3 (C16-C34)	69342	9372336	355	308	14.2%	< 20	100%	80%	120%				129%	60%	140%
F4 (C34-C50)	69342	9372336	64	58	NA	< 20	92%	80%	120%				108%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME F2-F4 (Soil)

F2 (C10-C16)	69331	9372350	2980	2680	10.6%	< 20	100%	80%	120%				97%	60%	140%
F3 (C16-C34)	69331	9372350	2100	1900	10.0%	< 20	99%	80%	120%				129%	60%	140%
F4 (C34-C50)	69331	9372350	85	85	NA	< 20	98%	80%	120%				125%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME F2-F4 (Soil)

F2 (C10-C16)	69343	9372366	<20	<20	NA	< 20	100%	80%	120%				109%	60%	140%
F3 (C16-C34)	69343	9372366	72	81	NA	< 20	100%	80%	120%				119%	60%	140%
F4 (C34-C50)	69343	9372366	28	33	NA	< 20	99%	80%	120%				120%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME F2-F4 (Soil)

F2 (C10-C16)	69344	9372390	<20	<20	NA	< 20	107%	80%	120%				100%	60%	140%
F3 (C16-C34)	69344	9372390	25	29	NA	< 20	102%	80%	120%				113%	60%	140%
F4 (C34-C50)	69344	9372390	<20	<20	NA	< 20	97%	80%	120%				106%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	69331	9373257	<0.005	0.006	NA	< 0.005	103%	80%	120%				95%	50%	130%
2-Methylnaphthalene	69331	9373257	<0.005	0.005	NA	< 0.005	99%	80%	120%				87%	50%	130%
1-Methylnaphthalene	69331	9373257	<0.005	0.005	NA	< 0.005	97%	80%	120%				93%	50%	130%
Acenaphthylene	69331	9373257	<0.005	<0.005	NA	< 0.005	101%	80%	120%				92%	50%	130%
Acenaphthene	69331	9373257	<0.005	0.031	NA	< 0.005	101%	80%	120%				95%	50%	130%
Fluorene	69331	9373257	<0.02	0.06	NA	< 0.02	97%	80%	120%				92%	50%	130%
Phenanthrene	69331	9373257	0.03	0.44	NA	< 0.02	102%	80%	120%				77%	60%	130%
Anthracene	69331	9373257	0.008	0.057	NA	< 0.004	101%	80%	120%				104%	60%	130%
Fluoranthene	69331	9373257	0.03	0.08	NA	< 0.01	101%	80%	120%				92%	60%	130%
Pyrene	69331	9373257	0.03	0.04	NA	< 0.01	101%	80%	120%				104%	60%	130%
Benzo(a)anthracene	69331	9373257	<0.03	<0.03	NA	< 0.03	103%	80%	120%				87%	60%	130%
Chrysene	69331	9373257	<0.05	<0.05	NA	< 0.05	101%	80%	120%				107%	60%	130%
Benzo(b)fluoranthene	69331	9373257	<0.02	<0.02	NA	< 0.02	112%	80%	120%				81%	60%	130%
Benzo(j)fluoranthene	69331	9373257	<0.02	<0.02	NA	< 0.02	88%	80%	120%				106%	60%	130%
Benzo(k)fluoranthene	69331	9373257	<0.02	<0.02	NA	< 0.02	98%	80%	120%				106%	60%	130%
Benzo(a)pyrene	69331	9373257	<0.03	<0.03	NA	< 0.03	103%	80%	120%				88%	60%	130%



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y357306
ATTENTION TO: Stephan Klump/Ben Barton
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 09, 2018			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Indeno(1,2,3-c,d)pyrene	69331	9373257	<0.02	<0.02	NA	< 0.02	111%	80%	120%				94%	60%	130%
Dibenzo(a,h)anthracene	69331	9373257	<0.005	<0.005	NA	< 0.005	115%	80%	120%				88%	60%	130%
Benzo(g,h,i)perylene	69331	9373257	<0.05	<0.05	NA	< 0.05	114%	80%	120%				97%	60%	130%
Quinoline	69331	9373257	<0.05	<0.05	NA	< 0.05	96%	80%	120%				114%	50%	130%
IACR CCME (Soil)	69331	9373257	<0.6	<0.6	NA	< 0.6									
B[a]P TPE (Soil)	69331	9373257	<0.05	<0.05	NA	< 0.05									
Naphthalene - d8	69331	9373257	107	97	9.8%		96%	80%	120%				100%	50%	130%
2-Fluorobiphenyl	69331	9373257	106	104	1.9%		97%	80%	120%				101%	50%	130%
P-Terphenyl - d14	69331	9373257	107	99	7.8%		100%	80%	120%				95%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By: _____

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y357306
ATTENTION TO: Stephan Klump/Ben Barton
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Sieve Analysis - 75 microns	SOIL 0540; SOIL 0110	KROETSCH 2007; SHEPPARD 2007	SIEVE

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y357306
ATTENTION TO: Stephan Klump/Ben Barton
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F2 (C10-C16)	ORG-180-5101	CCME Tier 1 Method-S	GC/FID
F3 (C16-C34)	ORG-180-5101	CCME Tier 1 Method-S	GC/FID
F4 (C34-C50)	ORG-180-5101	CCME Tier 1 Method-S	GC/FID
Moisture	INOR-181-6030	SSMA Chapter 70 (2nd Ed)	GRAVIMETRIC
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
1-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Quinoline	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
IACR CCME (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
B[a]P TPE (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Fluorobiphenyl	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS



Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

Chain of Custody Record

Report Information

Company: Tetra Tech Canada

Contact: Stephan Klump/Tania Perzoff

Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7

Phone: 867-335-4695 Fax: _____

LSD: 181940YG

Client Project #: ENW.WENW03039-03.002

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Report Information

1. Name:	Stephan Klump
Email:	Stephan.Klump@tetrattech.com
2. Name:	Ben Barton
Email:	Ben.Barton@tetrattech.com

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify) _____

Report Format

- ☐ Single Sample per page
- ☒ Multiple Samples per page
- ☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%
☐ Day 3 - 50%
☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

[illegible]

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Page ____ of ____ V115419
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	

Document #: DIV-186-1500.004

Date Revised: January 26, 2018



Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

JUN 30 PM 3:13

Chain of Custody Record

Report Information

Company: Tetra Tech Canada

Contact: Stephan Klump/Tania Perzoff

Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7

Phone: 867-335-4695 Fax: _____

LSD: 181940YG

Client Project #: ENW.WENW03039-03.002

Report Information

1. Name:	Stephan Klump
Email:	Stephan.Klump@tetratech.com
2. Name:	Ben Barton
Email:	Ben.Barton@tetratech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

[illegible]

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Received By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...
10/11/2023	...	...	...
10/12/2023	...	...	...
10/13/2023	...	...	...
10/14/2023	...	...	...
10/15/2023	...	...	...
10/16/2023	...	...	...
10/17/2023	...	...	...
10/18/2023	...	...	...
10/19/2023	...	...	...
10/20/2023	...	...	...
10/21/2023	...	...	...
10/22/2023	...	...	...
10/23/2023	...	...	...
10/24/2023	...	...	...
10/25/2023	...	...	...
10/26/2023	...	...	...
10/27/2023	...	...	...
10/28/2023	...	...	...
10/29/2023	...	...	...
10/30/2023	...	...	...
10/31/2023	...	...	...

Samples Relinquished By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Received By (Print Name and Sign):

	Date/Time

Page _____ of _____

V115444

Date Revised: 10/14/2018, cv, 4x6d3



P: 778.452.4000 • F: 778.452.4074

Arrival Temperature: 8°C
AGAT Job Number: 184357306

Notes:

Report Information

Company:	Tetra Tech Canada	
Contact:	Stephan Klump/Tania Perzoff	
Address:	61 Wasson Place, Whitehorse, YT Y1A 0H7	
Phone:	867-335-4695	Fax:
LSD:	181940YG	
Client Project #:	ENW.WENW03039-03.002	

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com

2. Name: Ben Barton
Email: Ben.Barton@tetrattech.com

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Regular TAT ☒ 5 to 7 working days
Rush TAT ☐ Day 2 - 100%
☐ Day 3 - 50%
☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

[illegible]

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Page ____ of ____ V115446
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	

V115446

Document #: DIV-186-1500 004

Date Revised: January 26, 2018



Laboratories

Y5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

JUN 30 PM 3:14

Chain of Custody Record

Report Information

Company: Tetra Tech Canada

Contact: Stephan Klump/Tania Perzoff

Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7

Phone: 867-335-4695 Fax:

LSD: 181940YG

Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com
2. Name: Ben Barton
Email: Ben.Barton@tetrattech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

[illegible]

Samples Relinquished By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2019 10:00	...	...	...
10/10/2019 10:05	...	...	...
10/10/2019 10:10	...	...	...
10/10/2019 10:15	...	...	...
10/10/2019 10:20	...	...	...
10/10/2019 10:25	...	...	...
10/10/2019 10:30	...	...	...
10/10/2019 10:35	...	...	...
10/10/2019 10:40	...	...	...
10/10/2019 10:45	...	...	...
10/10/2019 10:50	...	...	...
10/10/2019 10:55	...	...	...
10/10/2019 11:00	...	...	...
10/10/2019 11:05	...	...	...
10/10/2019 11:10	...	...	...
10/10/2019 11:15	...	...	...
10/10/2019 11:20	...	...	...
10/10/2019 11:25	...	...	...
10/10/2019 11:30	...	...	...
10/10/2019 11:35	...	...	...
10/10/2019 11:40	...	...	...
10/10/2019 11:45	...	...	...
10/10/2019 11:50	...	...	...
10/10/2019 11:55	...	...	...
10/10/2019 12:00	...	...	...
10/10/2019 12:05	...	...	...
10/10/2019 12:10	...	...	...
10/10/2019 12:15	...	...	...
10/10/2019 12:20	...	...	...
10/10/2019 12:25	...	...	...
10/10/2019 12:30	...	...	...
10/10/2019 12:35	...	...	...
10/10/2019 12:40	...	...	...
10/10/2019 12:45	...	...	...
10/10/2019 12:50	...	...	...
10/10/2019 12:55	...	...	...
10/10/2019 13:00	...	...	...
10/10/2019 13:05	...	...	...
10/10/2019 13:10	...	...	...
10/10/2019 13:15	...	...	...
10/10/2019 13:20	...	...	...
10/10/2019 13:25	...	...	...
10/10/2019 13:30	...	...	...
10/10/2019 13:35	...	...	...
10/10/2019 13:40	...	...	...
10/10/2019 13:45	...	...	...
10/10/2019 13:50	...	...	...
10/10/2019 13:55	...	...	...
10/10/2019 14:00	...	...	...
10/10/2019 14:05	...	...	...
10/10/2019 14:10	...	...	...
10/10/2019 14:15	...	...	...
10/10/2019 14:20	...	...	...
10/10/2019 14:25	...	...	...
10/10/2019 14:30	...	...	...
10/10/2019 14:35	...	...	...
10/10/2019 14:40	...	...	...
10/10/2019 14:45	...	...	...
10/10/2019 14:50	...	...	...
10/10/2019 14:55	...	...	...
10/10/2019 15:00	...	...	...
10/10/2019 15:05	...	...	...
10/10/2019 15:10	...	...	...
10/10/2019 15:15	...	...	...
10/10/2019 15:20	...	...	...
10/10/2019 15:25	...	...	...
10/10/2019 15:30	...	...	...
10/10/2019 15:35	...	...	...
10/10/2019 15:40	...	...	...
10/10/2019 15:45	...	...	...
10/10/2019 15:50	...	...	...
10/10/2019 15:55	...	...	...
10/10/2019 16:00	...	...	...
10/10/2019 16:05	...	...	...
10/10/2019 16:10	...	...	...
10/10/2019 16:15	...	...	...
10/10/2019 16:20	...	...	...
10/10/2019 16:25	...	...	...
10/10/2019 16:30	...	...	...
10/10/2019 16:35	...	...	...
10/10/2019 16:40	...	...	...
10/10/2019 16:45	...	...	...
10/10/2019 16:50	...	...	...
10/10/2019 16:55	...	...	...
10/10/2019 17:00	...	...	...
10/10/2019 17:05	...	...	...

Samples Received By (Print Name and Sign):

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023 10:00	Room 101	Meeting	Discuss project progress
10/10/2023 14:00	Room 102	Training	Software training session
10/10/2023 18:00	Room 103	Dinner	Team dinner

Samples Received By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Relinquished By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...
10/11/2023	...	...	...
10/12/2023	...	...	...
10/13/2023	...	...	...
10/14/2023	...	...	...
10/15/2023	...	...	...
10/16/2023	...	...	...
10/17/2023	...	...	...
10/18/2023	...	...	...
10/19/2023	...	...	...
10/20/2023	...	...	...
10/21/2023	...	...	...
10/22/2023	...	...	...
10/23/2023	...	...	...
10/24/2023	...	...	...
10/25/2023	...	...	...
10/26/2023	...	...	...
10/27/2023	...	...	...
10/28/2023	...	...	...
10/29/2023	...	...	...
10/30/2023	...	...	...
10/31/2023	...	...	...

Samples Received By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...
10/11/2023	...	...	...
10/12/2023	...	...	...
10/13/2023	...	...	...
10/14/2023	...	...	...
10/15/2023	...	...	...
10/16/2023	...	...	...
10/17/2023	...	...	...
10/18/2023	...	...	...
10/19/2023	...	...	...
10/20/2023	...	...	...
10/21/2023	...	...	...
10/22/2023	...	...	...
10/23/2023	...	...	...
10/24/2023	...	...	...
10/25/2023	...	...	...
10/26/2023	...	...	...
10/27/2023	...	...	...
10/28/2023	...	...	...
10/29/2023	...	...	...
10/30/2023	...	...	...
10/31/2023	...	...	...

Page _____ of _____

V115448



120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

Report Information

Company: Tetra Tech Canada

Contact: Stephan Klump/Tania Perzoff

Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7

Phone: 867-335-4695 Fax: _____

LSD: 181940YG

Client Project #: ENW.WENW03039-03.002

Report Information

1. Name:	<u>Stephan Klump</u>
Email:	<u>Stephan.Klump@tetratech.com</u>
2. Name:	<u>Ben Barton</u>
Email:	<u>Ben.Barton@tetratech.com</u>

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

[illegible]

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Page ____ of ____ V115449
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	

V115449

Date Revised: January 26, 2018



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 184357306

RECEIVING BASICS:

Received From: NOVEX

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 6 Containers: 168

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Jun 26, 2018

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 9 + 9 + 8 = 9 °C (2) 8 + 6 + 7 = 7 °C (3) 4 + 4 + 5 = 4 °C (4) 7 + 11 + 12 = 10 °C

Was ice or ice pack present:

Yes ☐ No ☐

Integrity Issues:

(5) 10 + 9 + 8 = 9
(6) 8 + 8 + 8 = 8

8°C

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____

Date and Time: _____

ADDITIONAL NOTES:

18A21BTP10-3 received but was not listed on the CDC

18A21BTP10-2 initiated on the CDC, but was not received.

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Stephan Klump

PROJECT: ENW.WENW03039-03.002

AGAT WORK ORDER: 18Y358151

SOIL ANALYSIS REVIEWED BY: Krystyna Krauze, Senior Analyst

TRACE ORGANICS REVIEWED BY: Clarissa Muljono, Report Writer

DATE REPORTED: Jul 11, 2018

PAGES (INCLUDING COVER): 47

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 2°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Particle Size by Sieve

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION:		18A17TP17-2	18A17TP19-2	18A17TP21-2	18A50TP2-3	18A16TP8-3	18A16TP10-2	18A16TP12-3	18A16TP17-3						
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
		DATE SAMPLED:		2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-30	2018-06-30	2018-06-30	2018-07-01						
Parameter	Unit	G / S	RDL	9376712	9376719	9376725	9376738	9376753	9376758	9376766	9376787						
Sieve Analysis - 75 microns	%	1	20	91	65	74	85	81	89	92							
Sieve Texture			Fine	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse						
		SAMPLE DESCRIPTION:		18A16TP18-3	18A14TP18-3	18A14TP19-2	18A14TP23-2	18A14TP25-2	18A14TP26-3	18A14TP29-3	18A31TP10-3						
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
		DATE SAMPLED:		2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-02	2018-07-02	2018-07-02	2018-07-02						
Parameter	Unit	G / S	RDL	9376790	9376803	9376805	9376818	9376830	9376834	9376844	9376855						
Sieve Analysis - 75 microns	%	1	95	76	74	82	80	80	80	80	76						
Sieve Texture			Coarse	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse	Coarse						
		SAMPLE DESCRIPTION:		18A32TP2-2	18A10TP4-3												
		SAMPLE TYPE:		Soil	Soil												
		DATE SAMPLED:		2018-07-02	2018-07-03												
Parameter	Unit	G / S	RDL	9376860	9376878												
Sieve Analysis - 75 microns	%	1	85	74													
Sieve Texture			Coarse	Coarse													

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9376712-9376878 Value reported is amount of sample retained on sieve after wash with water and represents proportion by weight particles larger than indicated sieve size.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION: 18A31TP9-2		18A31TP9-3	
		SAMPLE TYPE: Soil		Soil	
		DATE SAMPLED: 2018-07-02		2018-07-02	
Parameter	Unit	G / S	RDL	RDL	9376851
Benzene	µg/g	0.005	<0.005	0.005	<0.005
Toluene	µg/g	0.05	0.10	0.05	0.05
Ethylbenzene	µg/g	0.01	0.05	0.01	<0.01
m&p-Xylene	µg/g	0.02	0.06	0.02	0.07
o-Xylene	µg/g	0.02	<0.02	0.02	<0.02
F1 (C6-C10)	µg/g	10	100	100	691
F1 minus BTEX (C6-C10)	µg/g	10	100	100	691
F2 (C10-C16)	µg/g	20	1640	20	12800
F3 (C16-C34)	µg/g	20	666	20	2250
F4 (C34-C50)	µg/g	20	73	20	32
Moisture	%	0.5	10.4	0.5	9.1
Total Xylenes	µg/g	0.05	0.06	0.05	0.07
Surrogate	Unit	Acceptable Limits			
Bromofluorobenzene	%	60-140	109		91
Dibromofluoromethane	%	60-140	131		122
Toluene - d8	%	60-140	118		136

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

CCME BTEX/F1-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (RL/PL) (Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

9376850 Results are based on the dry weight of the sample.
The C6-C10 (F1) fraction is calculated using toluene response factor.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376851 Results are based on the dry weight of the sample.
The C6-C10 (F1) fraction is calculated using toluene response factor.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
F1 detection limit increased due to sample dilution.
Soil sample is visibly heterogeneous.

Analysis performed at AGAT Vancouver (unless marked by *)

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION:		18A17TP16-1	18A17TP16-3	18A17TP17-2	18A17BTP17-2	18A17TP17-3	18A17TP18-2	18A17TP18-3	18A17TP19-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-29
Parameter	Unit	G / S	RDL	9376706	9376710	9376712	9376713	9376714	9376716	9376717	9376719
F2 (C10-C16)	µg/g		20	<20	<20	1180	1050	27	774	1620	6190
F3 (C16-C34)	µg/g		20	102	747	12200	12200	949	6810	5030	11100
F4 (C34-C50)	µg/g		20	58	699	13300	12900	398	2180	1680	1940
Moisture	%		0.5	10.4	14.8	22.3	23.5	9.9	12.9	12.2	7.5
		SAMPLE DESCRIPTION:		18A17TP19-3	18A17TP20-2	18A17TP20-3	18A17TP21-2	18A17TP22-2	18A17TP22-3	18A17TP23-2	18A17TP23-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-29
Parameter	Unit	G / S	RDL	9376720	9376722	9376723	9376725	9376727	9376728	9376730	9376731
F2 (C10-C16)	µg/g		20	7000	<20	<20	1050	<20	<20	<20	<20
F3 (C16-C34)	µg/g		20	13700	1610	591	17900	814	1300	858	1340
F4 (C34-C50)	µg/g		20	1460	1210	339	9190	276	964	421	613
Moisture	%		0.5	8.5	9.6	8.8	19.9	12.3	17.3	10.6	10.1
		SAMPLE DESCRIPTION:		18A50TP1-1	18A50TP1-3	18A50TP2-1	18A50BTP2-1	18A50TP2-3	18A50TP3-1	18A50TP3-3	18A50TP4-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-29	2018-06-30	2018-06-30	2018-06-30
Parameter	Unit	G / S	RDL	9376732	9376734	9376735	9376736	9376738	9376741	9376743	9376744
F2 (C10-C16)	µg/g		20	<20	<20	<20	<20	<20	<20	<20	<20
F3 (C16-C34)	µg/g		20	54	34	138	123	<20	23	<20	22
F4 (C34-C50)	µg/g		20	59	33	45	47	<20	<20	<20	<20
Moisture	%		0.5	17.8	17.2	8.7	9.8	10.7	12.2	11.1	6.9

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Certificate of Analysis

AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION:		18A50TP4-3	18A16TP7-2	18A16TP7-3	18A16BTP7-3	18A16TP8-2	18A16TP8-3	18A16TP9-2	18A16TP9-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30
Parameter	Unit	G / S	RDL	9376746	9376748	9376749	9376750	9376752	9376753	9376755	9376756
F2 (C10-C16)	µg/g		20	<20	<20	<20	<20	<20	<20	<20	<20
F3 (C16-C34)	µg/g		20	30	<20	<20	<20	46	201	304	168
F4 (C34-C50)	µg/g		20	<20	<20	<20	<20	<20	59	137	62
Moisture	%		0.5	9.9	2.3	11.9	8.5	11.2	10.2	12.6	12.2
		SAMPLE DESCRIPTION:		18A16TP10-2	18A16TP10-3	18A16TP11-1	18A16BTP11-1	18A16TP11-2	18A16TP12-1	18A16TP12-3	18A16TP13-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30
Parameter	Unit	G / S	RDL	9376758	9376759	9376760	9376761	9376762	9376764	9376766	9376768
F2 (C10-C16)	µg/g		20	<20	<20	74	72	<20	<20	<20	3860
F3 (C16-C34)	µg/g		20	51	37	2060	2080	680	386	356	9420
F4 (C34-C50)	µg/g		20	<20	<20	583	630	247	152	141	3080
Moisture	%		0.5	12.4	13.2	7.4	6.2	8.3	5.0	4.8	5.8
		SAMPLE DESCRIPTION:		18A16TP13-3	18A16TP14-1	18A16TP14-3	18A16TP15-1	18A16TP15-3	18A16TP16-2	18A16TP16-3	18A16TP17-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-06-30	2018-07-01
Parameter	Unit	G / S	RDL	9376769	9376770	9376772	9376773	9376775	9376777	9376778	9376785
F2 (C10-C16)	µg/g		20	36	67	<20	47	<20	<20	<20	159
F3 (C16-C34)	µg/g		20	645	4260	120	2600	129	89	285	3830
F4 (C34-C50)	µg/g		20	430	1660	69	1820	66	38	133	1920
Moisture	%		0.5	4.8	10.9	8.8	5.3	8.6	3.9	3.9	3.9

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AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION:		18A16TP17-3	18A16TP18-2	18A16TP18-3	18A14TP15-1	18A14TP15-2	18A14BTP15-2	18A14TP15-3	18A14TP16-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01
Parameter	Unit	G / S	RDL	9376787	9376789	9376790	9376791	9376792	9376793	9376794	9376795
F2 (C10-C16)	µg/g		20	<20	<20	<20	116	581	724	1520	<20
F3 (C16-C34)	µg/g		20	65	42	35	533	464	562	553	<20
F4 (C34-C50)	µg/g		20	30	<20	<20	123	101	119	80	<20
Moisture	%		0.5	3.0	5.3	5.7	14.0	6.7	7.7	8.9	9.7
		SAMPLE DESCRIPTION:		18A14TP16-2	18A14TP17-2	18A14TP17-3	18A14TP18-1	18A14TP18-3	18A14TP19-2	18A14TP19-3	18A14TP20-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01
Parameter	Unit	G / S	RDL	9376796	9376799	9376800	9376801	9376803	9376805	9376806	9376808
F2 (C10-C16)	µg/g		20	<20	3220	3430	422	<20	214	<20	<20
F3 (C16-C34)	µg/g		20	<20	1600	1770	786	84	1530	49	<20
F4 (C34-C50)	µg/g		20	<20	346	543	303	40	595	41	<20
Moisture	%		0.5	8.7	9.8	8.8	6.8	13.0	10.3	24.5	8.5
		SAMPLE DESCRIPTION:		18A14TP20-3	18A14TP21-2	18A14TP21-3	18A14TP22-2	18A14BTP22-2	18A14TP22-3	18A14TP23-2	18A14TP23-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01
Parameter	Unit	G / S	RDL	9376809	9376811	9376812	9376814	9376815	9376816	9376818	9376819
F2 (C10-C16)	µg/g		20	<20	222	239	1600	1580	682	50	1720
F3 (C16-C34)	µg/g		20	<20	37800	25100	841	784	2430	1960	6700
F4 (C34-C50)	µg/g		20	<20	8050	7800	83	59	1040	966	315
Moisture	%		0.5	5.6	10.4	10.4	10.8	10.6	10.4	7.8	9.9

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AGAT WORK ORDER: 18Y358151

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION:		18A14TP24-2	18A14TP24-3	18A14TP25-2	18A14TP25-3	18A14TP26-1	18A14TP26-3	18A14BTP26-3	18A14TP27-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-07-01	2018-07-01	2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02
Parameter	Unit	G / S	RDL	9376821	9376822	9376830	9376831	9376832	9376834	9376835	9376837
F2 (C10-C16)	µg/g		20	4420	3590	30	<20	<20	95	75	<20
F3 (C16-C34)	µg/g		20	1210	1050	209	158	57	690	520	<20
F4 (C34-C50)	µg/g		20	53	41	145	99	40	305	235	<20
Moisture	%		0.5	10.5	10.9	16.7	13.7	9.7	14.4	14.6	7.8
		SAMPLE DESCRIPTION:		18A14TP27-3	18A14TP28-2	18A14TP28-3	18A14TP29-1	18A14TP29-3	18A31TP8-2	18A31TP8-3	18A31BTP8-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02
Parameter	Unit	G / S	RDL	9376838	9376840	9376841	9376842	9376844	9376846	9376847	9376848
F2 (C10-C16)	µg/g		20	44	<20	<20	<20	<20	3860	2970	2390
F3 (C16-C34)	µg/g		20	53	<20	24	241	173	1500	758	714
F4 (C34-C50)	µg/g		20	<20	<20	<20	141	93	250	41	46
Moisture	%		0.5	9.6	8.8	10.7	9.3	9.9	9.4	8.5	9.9
		SAMPLE DESCRIPTION:		18A31TP9-1	18A31TP10-1	18A31BTP10-1	18A31TP10-3	18A32TP1-2	18A32TP1-3	18A32TP2-2	18A32BTP2-2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02
Parameter	Unit	G / S	RDL	9376849	9376852	9376853	9376855	9376857	9376858	9376860	9376861
F2 (C10-C16)	µg/g		20	5750	624	443	<20	<20	24	<20	<20
F3 (C16-C34)	µg/g		20	4220	1230	815	50	47	280	166	153
F4 (C34-C50)	µg/g		20	857	310	171	<20	<20	119	28	40
Moisture	%		0.5	5.8	7.7	6.9	9.1	8.2	7.5	9.0	9.8

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Certificate of Analysis

AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION:		18A32TP2-3	18A32TP3-2	18A32TP3-3	18A32TP4-2	18A32TP4-3	18A10TP6-1	18A10TP6-3	18A10TP4-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-03	2018-07-03	2018-07-03
Parameter	Unit	G / S	RDL	9376862	9376864	9376865	9376867	9376868	9376873	9376875	9376876
F2 (C10-C16)	µg/g		20	<20	<20	<20	<20	<20	<20	38	<20
F3 (C16-C34)	µg/g		20	127	376	263	30	<20	588	436	730
F4 (C34-C50)	µg/g		20	53	98	115	<20	<20	427	169	483
Moisture	%		0.5	11.3	10.2	10.5	12.2	12.5	8.1	13.7	12.5
		SAMPLE DESCRIPTION:		18A10TP4-3	18A10TP5-1	18A10TP5-3	18A10BTP4-1				
		SAMPLE TYPE:		Soil	Soil	Soil	Soil				
		DATE SAMPLED:		2018-07-03	2018-07-03	2018-07-03	2018-07-03				
Parameter	Unit	G / S	RDL	9376878	9376879	9376881	9376882				
F2 (C10-C16)	µg/g		20	<20	<20	<20	<20				
F3 (C16-C34)	µg/g		20	129	375	<20	611				
F4 (C34-C50)	µg/g		20	67	130	<20	359				
Moisture	%		0.5	14.9	8.0	10.9	4.8				

Certified By:



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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (RL/PL) (Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

9376706 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
n-C10, n-C16 and n-C34 response factors are within 10% of their average.
C50 response factor is within 70% of n-C10 + n-C16 + n-C34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of n-C50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376710-9376713 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
n-C10, n-C16 and n-C34 response factors are within 10% of their average.
C50 response factor is within 70% of n-C10 + n-C16 + n-C34 average.
Linearity is within 15%.
The chromatogram has not returned to baseline by the retention time of n-C50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376714-9376720 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
n-C10, n-C16 and n-C34 response factors are within 10% of their average.
C50 response factor is within 70% of n-C10 + n-C16 + n-C34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of n-C50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376722 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

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AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
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TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has not returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Soil sample is visibly heterogeneous.

9376723-9376727 Results are based on the dry weight of the sample.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Soil sample is visibly heterogeneous.

9376728 Results are based on the dry weight of the sample.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has not returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Soil sample is visibly heterogeneous.

9376730-9376736 Results are based on the dry weight of the sample.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

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AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376738-9376761 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376762 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has not returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376764-9376768 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.

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PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376769-9376770 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has not returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376772-9376832 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376834 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.

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PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

Linearity is within 15%.
The chromatogram has not returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376835-9376868 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376873 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has not returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376875 Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.

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AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376876

Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has not returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376878-9376881

Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

9376882

Results are based on the dry weight of the sample.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has not returned to baseline by the retention time of nC50.

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AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

Extraction and holding times were met for this sample.
Soil sample is visibly heterogeneous.

Analysis performed at AGAT Vancouver (unless marked by *)

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PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION:		18A17TP19-2	18A17TP19-3	18A17TP21-2	18A16TP13-2	18A16TP13-3	18A16TP16-2	18A14TP17-2	18A14TP17-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-06-29	2018-06-29	2018-06-29	2018-06-30	2018-06-30	2018-06-30	2018-07-01	2018-07-01
Parameter	Unit	G / S	RDL	9376719	9376720	9376725	9376768	9376769	9376777	9376799	9376800
Naphthalene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.88	1.97
2-Methylnaphthalene	µg/g		0.01	<0.01	<0.01	<0.01	1.10	<0.01	<0.01	2.20	0.85
1-Methylnaphthalene	µg/g		0.01	1.30	<0.01	<0.01	4.62	<0.01	<0.01	1.86	1.04
Acenaphthylene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluorene	µg/g		0.02	1.35	2.02	<0.02	0.61	<0.02	<0.02	0.33	0.54
Phenanthrene	µg/g		0.02	0.63	1.08	<0.02	0.48	<0.02	<0.02	0.32	0.42
Anthracene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	µg/g		0.05	0.20	0.09	<0.05	0.14	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.02	0.27	0.21	0.21	0.25	<0.02	<0.02	0.02	<0.02
Benzo(a)anthracene	µg/g		0.02	0.05	0.02	0.03	0.05	<0.02	<0.02	<0.02	<0.02
Chrysene	µg/g		0.05	0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.02	0.04	0.02	0.08	0.02	<0.02	<0.02	<0.02	<0.02
Benzo(j)fluoranthene	µg/g		0.02	0.03	0.03	0.04	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	µg/g		0.02	0.03	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	0.02	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02
Dibenzo(a,h)anthracene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Quinoline	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
IACR CCME (Soil)			0.6	0.9	<0.6	1.3	<0.6	<0.6	<0.6	<0.6	<0.6
B[a]P TPE (Soil)	µg/g		0.05	0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	µg/g		0.05	0.07	0.05	0.12	<0.05	<0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits									
Naphthalene - d8	%	50-130	111	123	86	122	96	97	103	115	
2-Fluorobiphenyl	%	50-130	92	128	114	78	92	95	104	112	
P-Terphenyl - d14	%	60-130	106	100	112	86	92	110	99	105	

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AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION:		18A14TP21-2	18A14TP21-3	18A14TP23-3	18A14TP24-2	18A14TP24-3	18A31TP8-2	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:		2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-02	
Parameter	Unit	G / S	RDL	9376811	9376812	9376819	9376821	9376822	RDL	9376846
Naphthalene	µg/g		0.01	<0.01	<0.01	<0.01	0.73	0.31	0.1	2.4
2-Methylnaphthalene	µg/g		0.01	<0.01	<0.01	<0.01	2.41	1.31	0.1	6.7
1-Methylnaphthalene	µg/g		0.01	<0.01	<0.01	<0.01	2.61	1.35	0.1	3.2
Acenaphthylene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	<0.1
Acenaphthene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	<0.1
Fluorene	µg/g		0.02	<0.02	<0.02	<0.02	0.41	0.18	0.2	0.6
Phenanthrene	µg/g		0.02	<0.02	<0.02	<0.02	0.53	0.26	0.2	0.7
Anthracene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.2	<0.2
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
Pyrene	µg/g		0.02	<0.02	<0.02	<0.02	0.02	0.02	0.02	0.02
Benzo(a)anthracene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02
Benzo(j)fluoranthene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02
Benzo(k)fluoranthene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02
Dibenzo(a,h)anthracene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
Quinoline	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
IACR CCME (Soil)			0.6	<0.6	<0.6	<0.6	<0.6	<0.6	0.6	<0.6
B[a]P TPE (Soil)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
Surrogate	Unit	Acceptable Limits								
Naphthalene - d8	%	50-130	71	90	116	112	111			106
2-Fluorobiphenyl	%	50-130	66	92	92	112	98			108
P-Terphenyl - d14	%	60-130	101	118	117	110	107			106

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

		SAMPLE DESCRIPTION:		18A31TP8-3	18A31BTP8-3	18A31TP9-2	18A31TP9-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-07-02	2018-07-02	2018-07-02	2018-07-02
Parameter	Unit	G / S	RDL	9376847	9376848	9376850	9376851
Naphthalene	µg/g		0.01	0.80	0.58	0.60	1.40
2-Methylnaphthalene	µg/g		0.01	<0.01	<0.01	2.56	2.56
1-Methylnaphthalene	µg/g		0.01	0.64	0.42	1.21	1.94
Acenaphthylene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthene	µg/g		0.01	<0.01	<0.01	<0.01	<0.01
Fluorene	µg/g		0.02	0.28	0.19	0.12	0.25
Phenanthrene	µg/g		0.02	0.25	0.18	0.11	0.19
Anthracene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02
Benzo(j)fluoranthene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02
Dibenzo(a,h)anthracene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Quinoline	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
IACR CCME (Soil)			0.6	<0.6	<0.6	<0.6	<0.6
B[a]P TPE (Soil)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits					
Naphthalene - d8	%	50-130	106	105	101	NA	
2-Fluorobiphenyl	%	50-130	97	93	89	83	
P-Terphenyl - d14	%	60-130	97	93	90	102	

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y358151

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

Polyaromatic Hydrocarbons in Soil Low Level

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-11

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (RL/PL) (Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

9376719-9376850 Results are based on dry weight of sample.
PAH detection limits increased due to sample matrix interference. Sample extract was diluted.

9376851 Results are based on dry weight of sample.
Naphthalene-d8 surrogate recovery is not available due to sample matrix interference.
PAH detection limits increased due to sample matrix interference. Sample extract was diluted.

Analysis performed at AGAT Vancouver (unless marked by *)

Certified By:



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358151
ATTENTION TO: Stephan Klump
SAMPLED BY:

Soil Analysis

RPT Date: Jul 11, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE				
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Particle Size by Sieve

Sieve Analysis - 75 microns	3044	99	99	0.0%	< 1	100%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358151
ATTENTION TO: Stephan Klump
SAMPLED BY:

Trace Organics Analysis

RPT Date: Jul 11, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE				
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME F2-F4 (Soil)

F2 (C10-C16)	69359	9376725	1050	1100	4.7%	< 20	100%	80%	120%				71%	60%	140%
F3 (C16-C34)	69359	9376725	17900	18900	5.4%	< 20	101%	80%	120%				98%	60%	140%
F4 (C34-C50)	69359	9376725	9190	10400	12.4%	< 20	99%	80%	120%				129%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME F2-F4 (Soil)

F2 (C10-C16)	69361	9376768	3860	4250	9.6%	< 20	101%	80%	120%				93%	60%	140%
F3 (C16-C34)	69361	9376768	9420	10600	11.8%	< 20	101%	80%	120%				100%	60%	140%
F4 (C34-C50)	69361	9376768	3080	3300	6.9%	< 20	99%	80%	120%				117%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME F2-F4 (Soil)

F2 (C10-C16)	69363	9376769	36	29	NA	< 20	106%	80%	120%				84%	60%	140%
F3 (C16-C34)	69363	9376769	645	576	11.3%	< 20	100%	80%	120%				117%	60%	140%
F4 (C34-C50)	69363	9376769	430	448	4.1%	< 20	100%	80%	120%				71%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME F2-F4 (Soil)

F2 (C10-C16)	69362	9376822	3590	3730	3.8%	< 20	106%	80%	120%				103%	60%	140%
F3 (C16-C34)	69362	9376822	1050	1100	4.7%	< 20	100%	80%	120%				116%	60%	140%
F4 (C34-C50)	69362	9376822	41	38	NA	< 20	100%	80%	120%				111%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME F2-F4 (Soil)

F2 (C10-C16)	69369	9376851	12800	11900	7.3%	< 20	101%	80%	120%				101%	60%	140%
F3 (C16-C34)	69369	9376851	2250	2100	6.9%	< 20	100%	80%	120%				107%	60%	140%
F4 (C34-C50)	69369	9376851	32	33	NA	< 20	97%	80%	120%				122%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME F2-F4 (Soil)

F2 (C10-C16)	69370	9376881	<20	<20	NA	< 20	101%	80%	120%				83%	60%	140%
F3 (C16-C34)	69370	9376881	<20	<20	NA	< 20	101%	80%	120%				119%	60%	140%
F4 (C34-C50)	69370	9376881	<20	<20	NA	< 20	99%	80%	120%				61%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	69359	9376725	<0.01	<0.01	NA	< 0.005	93%	80%	120%				102%	50%	130%
2-Methylnaphthalene	69359	9376725	<0.01	<0.01	NA	< 0.005	94%	80%	120%				97%	50%	130%
1-Methylnaphthalene	69359	9376725	<0.01	<0.01	NA	< 0.005	94%	80%	120%				95%	50%	130%
Acenaphthylene	69359	9376725	<0.01	<0.01	NA	< 0.005	96%	80%	120%				93%	50%	130%
Acenaphthene	69359	9376725	<0.01	<0.01	NA	< 0.005	98%	80%	120%				93%	50%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358151
ATTENTION TO: Stephan Klump
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 11, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Fluorene	69359	9376725	<0.02	<0.02	NA	< 0.02	99%	80%	120%				92%	50%	130%
Phenanthrene	69359	9376725	<0.02	<0.02	NA	< 0.02	100%	80%	120%				85%	60%	130%
Anthracene	69359	9376725	<0.02	<0.02	NA	< 0.004	102%	80%	120%				95%	60%	130%
Fluoranthene	69359	9376725	<0.05	<0.05	NA	< 0.01	101%	80%	120%				92%	60%	130%
Pyrene	69359	9376725	0.21	0.22	4.7%	< 0.01	100%	80%	120%				92%	60%	130%
Benzo(a)anthracene	69359	9376725	0.03	0.03	NA	< 0.03	101%	80%	120%				87%	60%	130%
Chrysene	69359	9376725	<0.05	<0.05	NA	< 0.05	100%	80%	120%				97%	60%	130%
Benzo(b)fluoranthene	69359	9376725	0.08	0.07	NA	< 0.02	101%	80%	120%				80%	60%	130%
Benzo(j)fluoranthene	69359	9376725	0.04	0.04	NA	< 0.02	102%	80%	120%				102%	60%	130%
Benzo(k)fluoranthene	69359	9376725	0.04	0.04	NA	< 0.02	100%	80%	120%				82%	60%	130%
Benzo(a)pyrene	69359	9376725	0.06	0.05	NA	< 0.03	101%	80%	120%				82%	60%	130%
Indeno(1,2,3-c,d)pyrene	69359	9376725	0.05	0.04	NA	< 0.02	94%	80%	120%				89%	60%	130%
Dibenzo(a,h)anthracene	69359	9376725	<0.02	<0.02	NA	< 0.005	91%	80%	120%				83%	60%	130%
Benzo(g,h,i)perylene	69359	9376725	0.05	0.05	NA	< 0.05	101%	80%	120%				86%	60%	130%
Quinoline	69359	9376725	<0.05	<0.05	NA	< 0.05	99%	80%	120%				103%	50%	130%
Naphthalene - d8	69359	9376725	86	94	8.9%		91%	80%	120%				98%	50%	130%
2-Fluorobiphenyl	69359	9376725	114	117	2.6%		93%	80%	120%				100%	50%	130%
P-Terphenyl - d14	69359	9376725	112	107	4.6%		101%	80%	120%				92%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	69361	9376768	<0.01	<0.01	NA	< 0.005	104%	80%	120%				97%	50%	130%
2-Methylnaphthalene	69361	9376768	1.10	1.02	7.5%	< 0.005	102%	80%	120%				87%	50%	130%
1-Methylnaphthalene	69361	9376768	4.73	3.75	23.1%	< 0.005	101%	80%	120%				90%	50%	130%
Acenaphthylene	69361	9376768	<0.01	<0.01	NA	< 0.005	106%	80%	120%				71%	50%	130%
Acenaphthene	69361	9376768	<0.01	<0.01	NA	< 0.005	105%	80%	120%				82%	50%	130%
Fluorene	69361	9376768	0.61	0.44	32.4%	< 0.02	105%	80%	120%				83%	50%	130%
Phenanthrene	69361	9376768	0.48	0.36	28.6%	< 0.02	100%	80%	120%				76%	60%	130%
Anthracene	69361	9376768	<0.02	<0.02	NA	< 0.004	99%	80%	120%				107%	60%	130%
Fluoranthene	69361	9376768	0.14	0.11	NA	< 0.01	101%	80%	120%				89%	60%	130%
Pyrene	69361	9376768	0.25	0.19	27.3%	< 0.01	102%	80%	120%				90%	60%	130%
Benzo(a)anthracene	69361	9376768	0.05	0.04	NA	< 0.03	102%	80%	120%				75%	60%	130%
Chrysene	69361	9376768	0.06	<0.05	NA	< 0.05	100%	80%	120%				94%	60%	130%
Benzo(b)fluoranthene	69361	9376768	0.02	<0.02	NA	< 0.02	100%	80%	120%				71%	60%	130%
Benzo(j)fluoranthene	69361	9376768	<0.02	<0.02	NA	< 0.02	97%	80%	120%				112%	60%	130%
Benzo(k)fluoranthene	69361	9376768	<0.02	<0.02	NA	< 0.02	101%	80%	120%				71%	60%	130%
Benzo(a)pyrene	69361	9376768	<0.05	<0.05	NA	< 0.03	100%	80%	120%				81%	60%	130%
Indeno(1,2,3-c,d)pyrene	69361	9376768	<0.02	<0.02	NA	< 0.02	105%	80%	120%				68%	60%	130%
Dibenzo(a,h)anthracene	69361	9376768	<0.02	<0.02	NA	< 0.005	111%	80%	120%				64%	60%	130%
Benzo(g,h,i)perylene	69361	9376768	<0.05	<0.05	NA	< 0.05	106%	80%	120%				71%	60%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358151
ATTENTION TO: Stephan Klump
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 11, 2018			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Quinoline	69361	9376768	<0.05	<0.05	NA	< 0.05	99%	80%	120%				103%	50%	130%
Naphthalene - d8	69361	9376768	122	117	4.2%		101%	80%	120%				99%	50%	130%
2-Fluorobiphenyl	69361	9376768	78	69	12.2%		98%	80%	120%				98%	50%	130%
P-Terphenyl - d14	69361	9376768	86	107	21.8%		105%	80%	120%				96%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	69363	9376769	<0.01	<0.01	NA	< 0.005	104%	80%	120%				110%	50%	130%
2-Methylnaphthalene	69363	9376769	<0.01	<0.01	NA	< 0.005	102%	80%	120%				98%	50%	130%
1-Methylnaphthalene	69363	9376769	<0.01	<0.01	NA	< 0.005	103%	80%	120%				108%	50%	130%
Acenaphthylene	69363	9376769	<0.01	<0.01	NA	< 0.005	103%	80%	120%				100%	50%	130%
Acenaphthene	69363	9376769	<0.01	<0.01	NA	< 0.005	100%	80%	120%				107%	50%	130%
Fluorene	69363	9376769	<0.02	<0.02	NA	< 0.02	99%	80%	120%				106%	50%	130%
Phenanthrene	69363	9376769	<0.02	<0.02	NA	< 0.02	101%	80%	120%				90%	60%	130%
Anthracene	69363	9376769	<0.02	<0.02	NA	< 0.004	101%	80%	120%				101%	60%	130%
Fluoranthene	69363	9376769	<0.05	<0.05	NA	< 0.01	102%	80%	120%				98%	60%	130%
Pyrene	69363	9376769	<0.02	<0.02	NA	< 0.01	102%	80%	120%				105%	60%	130%
Benzo(a)anthracene	69363	9376769	<0.02	<0.02	NA	< 0.03	101%	80%	120%				96%	60%	130%
Chrysene	69363	9376769	<0.05	<0.05	NA	< 0.05	99%	80%	120%				112%	60%	130%
Benzo(b)fluoranthene	69363	9376769	<0.02	<0.02	NA	< 0.02	107%	80%	120%				92%	60%	130%
Benzo(j)fluoranthene	69363	9376769	<0.02	<0.02	NA	< 0.02	99%	80%	120%				99%	60%	130%
Benzo(k)fluoranthene	69363	9376769	<0.02	<0.02	NA	< 0.02	95%	80%	120%				94%	60%	130%
Benzo(a)pyrene	69363	9376769	<0.05	<0.05	NA	< 0.03	102%	80%	120%				95%	60%	130%
Indeno(1,2,3-c,d)pyrene	69363	9376769	<0.02	<0.02	NA	< 0.02	101%	80%	120%				91%	60%	130%
Dibenzo(a,h)anthracene	69363	9376769	<0.02	<0.02	NA	< 0.005	108%	80%	120%				100%	60%	130%
Benzo(g,h,i)perylene	69363	9376769	<0.05	<0.05	NA	< 0.05	111%	80%	120%				109%	60%	130%
Quinoline	69363	9376769	<0.05	<0.05	NA	< 0.05	99%	80%	120%				103%	50%	130%
Naphthalene - d8	69363	9376769	96	106	9.9%		102%	80%	120%				105%	50%	130%
2-Fluorobiphenyl	69363	9376769	92	103	11.3%		103%	80%	120%				102%	50%	130%
P-Terphenyl - d14	69363	9376769	92	104	12.2%		101%	80%	120%				93%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	69362	9376822	0.31	0.30	3.3%	< 0.005	93%	80%	120%				103%	50%	130%
2-Methylnaphthalene	69362	9376822	1.31	1.47	11.5%	< 0.005	94%	80%	120%				103%	50%	130%
1-Methylnaphthalene	69362	9376822	1.35	1.28	5.3%	< 0.005	94%	80%	120%				99%	50%	130%
Acenaphthylene	69362	9376822	<0.01	<0.01	NA	< 0.005	96%	80%	120%				104%	50%	130%
Acenaphthene	69362	9376822	<0.01	<0.01	NA	< 0.005	98%	80%	120%				99%	50%	130%
Fluorene	69362	9376822	0.18	0.15	18.2%	< 0.02	99%	80%	120%				93%	50%	130%
Phenanthrene	69362	9376822	0.26	0.23	12.2%	< 0.02	100%	80%	120%				93%	60%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358151
ATTENTION TO: Stephan Klump
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 11, 2018			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Anthracene	69362	9376822	<0.02	<0.02	NA	< 0.004	102%	80%	120%				107%	60%	130%
Fluoranthene	69362	9376822	<0.05	<0.05	NA	< 0.01	101%	80%	120%				105%	60%	130%
Pyrene	69362	9376822	0.02	0.02	NA	< 0.01	100%	80%	120%				107%	60%	130%
Benzo(a)anthracene	69362	9376822	<0.02	<0.02	NA	< 0.03	101%	80%	120%				99%	60%	130%
Chrysene	69362	9376822	<0.05	<0.05	NA	< 0.05	100%	80%	120%				105%	60%	130%
Benzo(b)fluoranthene	69362	9376822	<0.02	<0.02	NA	< 0.02	101%	80%	120%				95%	60%	130%
Benzo(j)fluoranthene	69362	9376822	<0.02	<0.02	NA	< 0.02	102%	80%	120%				108%	60%	130%
Benzo(k)fluoranthene	69362	9376822	<0.02	<0.02	NA	< 0.02	100%	80%	120%				91%	60%	130%
Benzo(a)pyrene	69362	9376822	<0.05	<0.05	NA	< 0.03	101%	80%	120%				94%	60%	130%
Indeno(1,2,3-c,d)pyrene	69362	9376822	<0.02	<0.02	NA	< 0.02	94%	80%	120%				88%	60%	130%
Dibenzo(a,h)anthracene	69362	9376822	<0.02	<0.02	NA	< 0.005	91%	80%	120%				91%	60%	130%
Benzo(g,h,i)perylene	69362	9376822	<0.05	<0.05	NA	< 0.05	101%	80%	120%				85%	60%	130%
Quinoline	69362	9376822	<0.05	<0.05	NA	< 0.05	99%	80%	120%				87%	50%	130%
Naphthalene - d8	69362	9376822	111	99	11.4%		91%	80%	120%				120%	50%	130%
2-Fluorobiphenyl	69362	9376822	98	101	3.0%		93%	80%	120%				109%	50%	130%
P-Terphenyl - d14	69362	9376822	107	111	3.7%		101%	80%	120%				116%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Soil Low Level

Naphthalene	69369	9376851	1.40	1.39	0.7%	< 0.005	104%	80%	120%				108%	50%	130%
2-Methylnaphthalene	69369	9376851	2.56	2.48	3.2%	< 0.005	102%	80%	120%				107%	50%	130%
1-Methylnaphthalene	69369	9376851	1.94	1.77	9.2%	< 0.005	103%	80%	120%				116%	50%	130%
Acenaphthylene	69369	9376851	<0.01	<0.01	NA	< 0.005	103%	80%	120%				108%	50%	130%
Acenaphthene	69369	9376851	<0.01	<0.01	NA	< 0.005	100%	80%	120%				110%	50%	130%
Fluorene	69369	9376851	0.25	0.20	22.2%	< 0.02	99%	80%	120%				107%	50%	130%
Phenanthrene	69369	9376851	0.19	0.17	11.1%	< 0.02	101%	80%	120%				98%	60%	130%
Anthracene	69369	9376851	<0.02	<0.02	NA	< 0.004	101%	80%	120%				117%	60%	130%
Fluoranthene	69369	9376851	<0.05	<0.05	NA	< 0.01	102%	80%	120%				112%	60%	130%
Pyrene	69369	9376851	<0.02	<0.02	NA	< 0.01	102%	80%	120%				112%	60%	130%
Benzo(a)anthracene	69369	9376851	<0.02	<0.02	NA	< 0.03	101%	80%	120%				110%	60%	130%
Chrysene	69369	9376851	<0.05	<0.05	NA	< 0.05	99%	80%	120%				117%	60%	130%
Benzo(b)fluoranthene	69369	9376851	<0.02	<0.02	NA	< 0.02	107%	80%	120%				98%	60%	130%
Benzo(j)fluoranthene	69369	9376851	<0.02	<0.02	NA	< 0.02	99%	80%	120%				117%	60%	130%
Benzo(k)fluoranthene	69369	9376851	<0.02	<0.02	NA	< 0.02	95%	80%	120%				109%	60%	130%
Benzo(a)pyrene	69369	9376851	<0.05	<0.05	NA	< 0.03	102%	80%	120%				106%	60%	130%
Indeno(1,2,3-c,d)pyrene	69369	9376851	<0.02	<0.02	NA	< 0.02	101%	80%	120%				98%	60%	130%
Dibenzo(a,h)anthracene	69369	9376851	<0.02	<0.02	NA	< 0.005	108%	80%	120%				103%	60%	130%
Benzo(g,h,i)perylene	69369	9376851	<0.05	<0.05	NA	< 0.05	111%	80%	120%				112%	60%	130%
Quinoline	69369	9376851	<0.05	<0.05	NA	< 0.05	99%	80%	120%				95%	50%	130%
Naphthalene - d8	69369	9376851	<1	<1	NA		102%	80%	120%				115%	50%	130%



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358151
ATTENTION TO: Stephan Klump
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 11, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
2-Fluorobiphenyl	69369	9376851	83	77	7.5%	103%	80%	120%				109%	50%	130%	
P-Terphenyl - d14	69369	9376851	102	95	7.1%	101%	80%	120%				109%	60%	130%	

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME BTEX/F1-F4 (Soil)

Benzene	69358	9376850	<0.005	<0.005	NA	< 0.005	100%	80%	120%				89%	60%	140%
Toluene	69358	9376850	0.10	0.10	NA	< 0.05	100%	80%	120%				100%	60%	140%
Ethylbenzene	69358	9376850	0.05	0.04	NA	< 0.01	100%	80%	120%				97%	60%	140%
m&p-Xylene	69358	9376850	0.06	0.06	NA	< 0.02	98%	80%	120%				97%	60%	140%
o-Xylene	69358	9376850	<0.02	<0.02	NA	< 0.02	98%	80%	120%				92%	60%	140%
F1 (C6-C10)	69358	9376850	100	104	3.9%	< 10									
F1 minus BTEX (C6-C10)	69358	9376850	100	103	3.0%	< 10									
Bromofluorobenzene	69358	9376850	109	111	1.8%		100%	60%	140%				84%	60%	140%
Dibromofluoromethane	69358	9376850	131	122	7.1%		101%	60%	140%				91%	60%	140%
Toluene - d8	69358	9376850	118	122	3.3%		100%	60%	140%				109%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By: _____

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358151
ATTENTION TO: Stephan Klump
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Sieve Analysis - 75 microns	SOIL 0540; SOIL 0110	KROETSCH 2007; SHEPPARD 2007	SIEVE

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358151
ATTENTION TO: Stephan Klump
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Toluene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
Ethylbenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
m&p-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
o-Xylene	ORG-180-5100	EPA SW-846 8260-S	GC/MS/FID
F1 (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5100	CCME Tier 1 Method-S	GC/MS/FID
F2 (C10-C16)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F3 (C16-C34)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
F4 (C34-C50)	ORG-180-5101	CCME Tier 1 Method-S H	GC/FID
Moisture	INOR-181-6030	SSMA Chapter 70 (2nd Ed)	GRAVIMETRIC
Bromofluorobenzene	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Dibromofluoromethane	ORG-180-5100	EPA SW-846 8260-S	GC/MS
Toluene - d8	ORG-180-5100	EPA SW-846 8260-S	GC/MS
F2 (C10-C16)	ORG-180-5101	CCME Tier 1 Method-S	GC/FID
F3 (C16-C34)	ORG-180-5101	CCME Tier 1 Method-S	GC/FID
F4 (C34-C50)	ORG-180-5101	CCME Tier 1 Method-S	GC/FID
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
1-Methylnaphthalene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358151
ATTENTION TO: Stephan Klump
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Benzo(g,h,i)perylene	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Quinoline	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
IACR CCME (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
B[a]P TPE (Soil)	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8	ORG-180-5102	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
2-Fluorobiphenyl	ORG-180-5102	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5102	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS



AGAT Laboratories

(Whitehorse) via Navex ETA: 11am

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature: 2°C

AGAT Job Number: 18/358/01

Notes:

JUL 5 am 9:52

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com
2. Name: Ben Barton
Email: Ben.Barton@tetrattech.com

Requirements (Please Check)

☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL-LD ☐ RL-HD
☐ WL-N ☐ WL-R

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

Report Format

☐ Single Sample per page
☒ Multiple Samples per page
☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%
☐ Day 3 - 50%
☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	BTEX/F1	F2-F4	PAH	Grain Size	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
<u>9376706</u>	<u>18A17TP16-1</u>	Soil	9:30 29/6/18		☒	☒						
<u>709</u>	<u>18A17TP16-2</u>	Soil	9:30 29/6/18		☒	☒						
<u>710</u>	<u>18A17TP16-3</u>	Soil	9:30 29/6/18		☒	☒						
<u>711</u>	<u>18A17TP17-1</u>	Soil	10:00 29/6/18		☒	☒						
<u>712</u>	<u>18A17TP17-2</u>	Soil	10:00 29/6/18		☒	☒	☒					
<u>713</u>	<u>18A17BTP17-2</u>	Soil	10:00 29/6/18		☒	☒						
<u>714</u>	<u>18A17TP17-3</u>	Soil	10:00 29/6/18		☒	☒						
<u>715</u>	<u>18A17TP18-1</u>	Soil	10:30 29/6/18		☒	☒						
<u>716</u>	<u>18A17TP18-2</u>	Soil	10:30 29/6/18		☒	☒						
<u>717</u>	<u>18A17TP18-3</u>	Soil	10:30 29/6/18		☒	☒						
<u>718</u>	<u>18A17TP19-1</u>	Soil	11:00 29/6/18		☒	☒						

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18

Samples Received By (Print Name and Sign):

Ann

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Page 1 of 16

V115338



P: 778.452.4000 • F: 778.452.4074

Notes:

18Y358151

JUL 5 4 49:52

V115339



120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

Laboratory Use Only

Arrival Temperature:

AGAT Job Number: 184358/S1

Notes:

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com

2. Name: Ben Barton
Email: Ben.Barton@tetrattech.com

Report Format

☐ Single Sample per page
☒ Multiple Samples per page
☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements *(Please Check)*

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

[illegible]

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18

Date/Time

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

Date/Time

Date/Time

Date/Time

Page 3 of 16

V115340



Laboratories

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name:	Stephan Klump
Email:	Stephan.Klump@tetratech.com
2. Name:	Ben Barton
Email:	Ben.Barton@tetratech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements *(Please Check)*

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

[illegible]

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18

Date/Time

Samples Received By (Print Name and Sign)

Samples Received By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	10:00 AM	Arrived at the site	Weather: Clear, Temperature: 25°C
10/10/2023	10:15 AM	Started data collection	Initial readings: pH 7.2, DO 8.5 mg/L
10/10/2023	11:30 AM	Conducted water sampling	Sample collected for analysis
10/10/2023	12:00 PM	Lunch break	
10/10/2023	1:00 PM	Continued data collection	Readings: pH 7.1, DO 8.3 mg/L
10/10/2023	2:30 PM	Completed data collection	Final readings: pH 7.0, DO 8.1 mg/L
10/10/2023	3:00 PM	Departed the site	

Date/Time

Date/Time

Date/Time

Page 4 of 16

V115341



Laboratory Use Only

Arrival Temperature: 2°C

AGAT Job Number: 18Y358/SI

Notes:

JUL 5 9:52

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com
2. Name: Ben Barton
Email: Ben.Barton@tetrattech.com

Report Format

☐ Single
☐ Sample per
page
☒ Multiple
☒ Samples per
page
☒ Excel Format
Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL-LD ☐ RL-HD
☐ WL-N ☐ WL-R

Schedule 3.3 (Please Specify) _____

CCME (Please Specify) PL/RL

Other (Please Specify) _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	BTEX/F1	F2-F4	PAH	Grain Size												NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
<u>9376763</u>	<u>18A16TP11-3</u>	<u>Soil</u>	<u>11:30 30/6/18</u>																	<u>2</u>			
<u>764</u>	<u>18A16TP12-1</u>	<u>Soil</u>	<u>13:00 30/6/18</u>			☒														<u>2</u>			
<u>765</u>	<u>18A16TP12-2</u>	<u>Soil</u>	<u>13:00 30/6/18</u>																	<u>2</u>			
<u>766</u>	<u>18A16TP12-3</u>	<u>Soil</u>	<u>13:00 30/6/18</u>			☒		☒												<u>2</u>			
<u>767</u>	<u>18A16TP13-1</u>	<u>Soil</u>	<u>14:00 30/6/18</u>																	<u>2</u>			
<u>768</u>	<u>18A16TP13-2</u>	<u>Soil</u>	<u>14:00 30/6/18</u>			☒	☒													<u>2</u>			
<u>769</u>	<u>18A16TP13-3</u>	<u>Soil</u>	<u>14:00 30/6/18</u>			☒	☒													<u>2</u>			
<u>770</u>	<u>18A16TP14-1</u>	<u>Soil</u>	<u>14:30 30/6/18</u>			☒														<u>2</u>			
<u>771</u>	<u>18A16TP14-2</u>	<u>Soil</u>	<u>14:30 30/6/18</u>																	<u>2</u>			
<u>772</u>	<u>18A16TP14-3</u>	<u>Soil</u>	<u>14:30 30/6/18</u>			☒														<u>2</u>			
<u>773</u>	<u>18A16TP15-1</u>	<u>Soil</u>	<u>15:00 30/6/18</u>			☒														<u>2</u>			

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18

Samples Received By (Print Name and Sign):

Ann

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Page 6 of 16

V115343



Laboratories

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetratech.com

2. Name: Ben Barton
Email: Ben.Barton@tetratech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

[illegible]

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Date/Time	Location	Activity	Remarks
10/10/2023 10:00	Room 101	Meeting with Mr. Smith	Discussed project progress
10/10/2023 14:30	Office	Working on report	Completed section 2
10/10/2023 18:00	Gym	Cardio workout	30 minutes
10/11/2023 09:00	Room 102	Meeting with Ms. Jones	Discussed budget
10/11/2023 11:00	Office	Working on report	Completed section 3
10/11/2023 15:00	Room 103	Meeting with Mr. Brown	Discussed contract
10/11/2023 17:00	Office	Working on report	Completed section 4
10/12/2023 08:00	Room 104	Meeting with Ms. White	Discussed timeline
10/12/2023 10:00	Office	Working on report	Completed section 5
10/12/2023 13:00	Room 105	Meeting with Mr. Green	Discussed strategy
10/12/2023 15:00	Office	Working on report	Completed section 6
10/12/2023 17:00	Room 106	Meeting with Ms. Black	Discussed results
10/12/2023 19:00	Office	Working on report	Completed section 7
10/13/2023 09:00	Room 107	Meeting with Mr. Grey	Discussed future plans
10/13/2023 11:00	Office	Working on report	Completed section 8
10/13/2023 14:00	Room 108	Meeting with Ms. Yellow	Discussed challenges
10/13/2023 16:00	Office	Working on report	Completed section 9
10/13/2023 18:00	Room 109	Meeting with Mr. Purple	Discussed conclusions
10/13/2023 20:00	Office	Working on report	Completed section 10

[illegible]

Page 8 of 16

V115345



Laboratories

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number: 18Y358151

Notes:

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name:	<u>Stephan Klump</u>
Email:	<u>Stephan.Klump@tetrattech.com</u>
2. Name:	<u>Ben Barton</u>
Email:	<u>Ben.Barton@tetrattech.com</u>

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements *(Please Check)*

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

[illegible]

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18

Date/Time	

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

Date/Time

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Page 9 of 16

V115346



Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number: 184358151

Notes:

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetratech.com

2. Name: Ben Barton
Email: Ben.Barton@tetratech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	BTEX/H	F2-F4	PAH	Grain S											NUMBER OF	PRESERVED	HAZARDOUS	Held for:
9376807	18A14TP20-1	Soil	13:00 1/7/18																2			
808	18A14TP20-2	Soil	13:00 1/7/18			☒													2			
809	18A14TP20-3	Soil	13:00 1/7/18			☒													2			
810	18A14TP21-1	Soil	13:30 1/7/18																2			
811	18A14TP21-2	Soil	13:30 1/7/18			☒	☒												2			
812	18A14TP21-3	Soil	13:30 1/7/18			☒	☒												2			
813	18A14TP22-1	Soil	14:00 1/7/18																2			
814	18A14TP22-2	Soil	14:00 1/7/18			☒													2			
815	18A14BTP22-2	Soil	14:00 1/7/18			☒													2			
816	18A14TP22-3	Soil	14:00 1/7/18			☒													2			
817	18A14TP23-1	Soil	14:30 1/7/18																2			

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):	

Date/Time

Date/Time

Samples Relinquished By (Print Name and Sign):

	Date/Time

Samples Received By (Print Name and Sign):	

	Date/Time

Page 10 of 16

V115347



Laboratories

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name:	<u>Stephan Klump</u>
Email:	<u>Stephan.Klump@tetratech.com</u>
2. Name:	<u>Ben Barton</u>
Email:	<u>Ben.Barton@tetratech.com</u>

Report Format

☐ Single Sample per page
☒ Multiple Samples per page
☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____

Contact: _____

Address: _____

Phone: _____ Fax: _____

PO/AFE#: _____

Requirements *(Please Check)*

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	BTEX/VOC	F2-F4	PAH	Grain Size												NUMBER OF SAMPLING POINTS	PRESERVED	HAZARDOUS	HOLD FOR:
9376818	18A14TP23-2	Soil	14:30 1/7/18			☒		☒												2			
819	18A14TP23-3	Soil	14:30 1/7/18			☒	☒													2			
820	18A14TP24-1	Soil	15:30 1/7/18																	2			
821	18A14TP24-2	Soil	15:30 1/7/18			☒	☒													2			
822	18A14TP24-3	Soil	15:30 1/7/18			☒	☒													2			
823	18A17BTP17-2	Soil	10:00 29/6/18																	2			
824	18A17TP17-3	Soil	10:00 29/6/18																	2			
825	18A17TP18-1	Soil	10:30 29/6/18																	2			
826	18A17TP18-2	Soil	10:30 29/6/18																	2			
827	18A17TP18-3	Soil	10:30 29/6/18																	2			
✓ 828	18A17TP19-1	Soil	11:00 29/6/18																	2			

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18

Date/Time

Samples Received By (Print Name and Sign)

Samples Received By (Print Name and Sign)	

Date/Time

Date/Time

Date/Time	Location	Activity	Remarks
10/10/2019	...	...	...

Date/Time	Location	Activity	Remarks
10/10/2019	...	...	...

Page 11 of 16

V115348

Laboratory Use Only

Arrival Temperature:

AGAT Job Number: 18Y358151

Notes:

JUL 5 AM 9:53

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com
2. Name: Ben Barton
Email: Ben.Barton@tetrattech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements *(Please Check)*

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	BTEX/VOC	F2-F4	PAH	Grain Size											NUMBER OF SAMPLING POINTS	PRESERVED	HAZARDOUS	Held for Analysis
9376829	18A14TP25-1	Soil	8:00 2/7/2018																2			
830	18A14TP25-2	Soil	8:00 2/7/2018			☒		☒											2			
831	18A14TP25-3	Soil	8:00 2/7/2018			☒													2			
832	18A14TP26-1	Soil	8:30 2/7/2018			☒													2			
833	18A14TP26-2	Soil	8:30 2/7/2018																2			
834	18A14TP26-3	Soil	8:30 2/7/2018			☒		☒											2			
835	18A14BTP26-3	Soil	8:30 2/7/2018			☒													2			
836	18A14TP27-1	Soil	9:00 2/7/2018																2			
837	18A14TP27-2	Soil	9:00 2/7/2018			☒													2			
838	18A14TP27-3	Soil	9:00 2/7/2018			☒													2			
839	18A14TP28-1	Soil	9:30 2/7/2018																2			

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18

Date/Time

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Date/Time

[illegible]

Page 12 of 16

2

V115349



Laboratories

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number: 189358151

Notes:

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com

2. Name: Ben Barton
Email: Ben.Barton@tetrattech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/A/E#:

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	BTEX/V	F2-F4	PAH	Grain S										NUMBER C	PRESERVE	HAZARD	Hold for: L
9376840	18A14TP28-2	Soil	9:30 2/7/2018			☒												2			
841	18A14TP28-3	Soil	9:30 2/7/2018			☒												2			
842	18A14TP29-1	Soil	10:00 2/7/2018			☒												2			
843	18A14TP29-2	Soil	10:00 2/7/2018															2			
844	18A14TP29-3	Soil	10:00 2/7/2018			☒		☒										2			
845	18A31TP8-1	Soil	10:30 2/7/2018															2			
846	18A31TP8-2	Soil	10:30 2/7/2018			☒	☒											2			
847	18A31TP8-3	Soil	10:30 2/7/2018			☒	☒											2			
848	18A31BTP8-3	Soil	10:30 2/7/2018			☒	☒											2			
849	18A31TP9-1	Soil	11:00 2/7/2018			☒												2			
850	18A31TP9-2	Soil	11:00 2/7/2018			☒	☒											2			

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time
4/7/18[illegible]

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

Date/Time

Date/Time	Location	Activity	Notes
10/10/2023 10:00	Room 101	Meeting with Mr. Smith	Discussed project progress
10/10/2023 14:30	Room 202	Training session	Completed module 3
10/11/2023 09:15	Room 101	Meeting with Mr. Jones	Reviewed contract terms
10/11/2023 16:00	Room 303	Workshop	Brainstorming ideas for Q4
10/12/2023 11:45	Room 101	Meeting with Mr. Brown	Finalized action items
10/12/2023 15:30	Room 202	Training session	Completed module 4
10/13/2023 08:00	Room 101	Meeting with Mr. Green	Discussed budget review
10/13/2023 13:00	Room 303	Workshop	Developed new strategy
10/13/2023 17:00	Room 101	Meeting with Mr. White	Reviewed meeting minutes
10/14/2023 10:30	Room 202	Training session	Completed module 5
10/14/2023 14:00	Room 101	Meeting with Mr. Black	Discussed client feedback
10/15/2023 09:00	Room 303	Workshop	Brainstorming ideas for Q1
10/15/2023 12:00	Room 101	Meeting with Mr. Grey	Reviewed project timeline
10/15/2023 16:30	Room 202	Training session	Completed module 6
10/16/2023 11:00	Room 101	Meeting with Mr. Yellow	Discussed marketing plan
10/16/2023 15:00	Room 303	Workshop	Developed new product
10/17/2023 08:30	Room 101	Meeting with Mr. Purple	Reviewed financial reports
10/17/2023 13:30	Room 202	Training session	Completed module 7
10/17/2023 17:30	Room 101	Meeting with Mr. Blue	Discussed HR matters
10/18/2023 10:00	Room 303	Workshop	Brainstorming ideas for Q2
10/18/2023 14:30	Room 101	Meeting with Mr. Orange	Reviewed project status
10/19/2023 09:30	Room 202	Training session	Completed module 8
10/19/2023 13:00	Room 101	Meeting with Mr. Red	Discussed legal issues
10/19/2023 16:00	Room 303	Workshop	Developed new process
10/20/2023 11:30	Room 101	Meeting with Mr. Pink	Reviewed meeting minutes
10/20/2023 15:00	Room 202	Training session	Completed module 9
10/21/2023 08:00	Room 101	Meeting with Mr. Brown	Discussed project progress
10/21/2023 12:30	Room 303	Workshop	Brainstorming ideas for Q3
10/21/2023 16:00	Room 101	Meeting with Mr. Green	Reviewed contract terms
10/22/2023 09:00	Room 202	Training session	Completed module 10
10/22/2023 13:00	Room 101	Meeting with Mr. White	Discussed budget review
10/22/2023 17:00	Room 303	Workshop	Developed new strategy
10/23/2023 10:30	Room 101	Meeting with Mr. Black	Reviewed meeting minutes
10/23/2023 14:00	Room 202	Training session	Completed module 11
10/24/2023 08:30	Room 101	Meeting with Mr. Grey	Discussed client feedback
10/24/2023 12:00	Room 303	Workshop	Brainstorming ideas for Q4
10/24/2023 16:30	Room 101	Meeting with Mr. Yellow	Reviewed project timeline
10/25/2023 09:00	Room 202	Training session	Completed module 12
10/25/2023 13:00	Room 101	Meeting with Mr. Blue	Discussed marketing plan
10/25/2023 17:00	Room 303	Workshop	Developed new product
10/26/2023 10:30	Room 101	Meeting with Mr. Purple	Reviewed financial reports
10/26/2023 14:00	Room 202	Training session	Completed module 13
10/27/2023 08:00	Room 101	Meeting with Mr. Brown	Discussed project progress
10/27/2023 12:00	Room 303	Workshop	Brainstorming ideas for Q1
10/27/2023 16:00	Room 101	Meeting with Mr. Green	Reviewed contract terms
10/28/2023 09:00	Room 202	Training session	Completed module 14
10/28/2023 13:00	Room 101	Meeting with Mr. White	Discussed budget review
10/28/2023 17:00	Room 303	Workshop	Developed new strategy
10/29/2023 10:30	Room 101	Meeting with Mr. Black	Reviewed meeting minutes
10/29/2023 14:00	Room 202	Training session	Completed module 15
10/30/2023 08:30	Room 101	Meeting with Mr. Grey	Discussed client feedback
10/30/2023 12:00	Room 303	Workshop	Brainstorming ideas for Q2
10/30/2023 16:30	Room 101	Meeting with Mr. Yellow	Reviewed project timeline
10/31/2023 09:00	Room 202	Training session	Completed module 16
10/31/2023 13:00	Room 101	Meeting with Mr. Blue	Discussed marketing plan
10/31/2023 17:00	Room 303	Workshop	Developed new product

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V115510



P: 778.452.4000 • F: 778.452.4074

JUL 5 4:55 PM '55

Date Revised: January 26, 2018



Laboratories

P: 778.452.4000 • F: 778.452.4074

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

JUL 5 AM 9:50

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name:	Stephan Klump
Email:	Stephan.Klump@tetrattech.com
2. Name:	Ben Barton
Email:	Ben.Barton@tetrattech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) PL/RL

Other (Please Specify)

[illegible]

Samples Relinquished By (Print Name and Sign):

Ben Barton

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

4/7/18

Samples Received By (Print Name and Sign)	

Samples Received By (Print Name and Sign)	

Date/Time

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Date/Time

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V115512

103

Whitehorse, Y.T

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech

Courier: Adnorn ☒ Prepaid ☐ Collect

Waybill# 28704065386

Branch: EDM GP FM FM RD VAN LYD FSJ EST Other: _____

If multiple sites were submitted at once: Yes ☐ No ☒

Custody Seal Intact: Yes ☐ No ☒ NA

TAT: <24hr 24-48hr 48-72hr Reg Other: _____

Cooler Quantity: 15

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) <u>7.4</u> + <u>7.5</u> + <u>7.6</u> = <u>7.5</u> °C	2 (Bottle/Jar) <u>7.9</u> + <u>7.3</u> + <u>8.0</u> = <u>7.7</u> °C
3 (Bottle/Jar) <u>9.6</u> + <u>9.2</u> + <u>8.1</u> = <u>9.2</u> °C	4 (Bottle/Jar) <u>9.4</u> + <u>7.6</u> + <u>9.4</u> = <u>9.5</u> °C
5 (Bottle/Jar) <u>9.5</u> + <u>9.4</u> + <u>9.6</u> = <u>9.5</u> °C	6 (Bottle/Jar) <u>5.7</u> + <u>8.8</u> + <u>6.4</u> = <u>7.0</u> °C
7 (Bottle/Jar) <u>6.6</u> + <u>9.5</u> + <u>9.3</u> = <u>8.5</u> °C	8 (Bottle/Jar) <u>8.4</u> + <u>7.8</u> + <u>9.1</u> = <u>8.4</u> °C
9 (Bottle/Jar) <u>7.9</u> + <u>8.3</u> + <u>7.9</u> = <u>8.0</u> °C	10 (Bottle/Jar) <u>7.8</u> + <u>7.3</u> + <u>6.9</u> = <u>7.3</u> °C

(If more than 10 coolers are received use another sheet of paper and attach)

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes ☐ No ☒

Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Fedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*

Earliest Expiry: _____

Hydrocarbons: Earliest Expiry: _____

LOGISTICS USE ONLY

Workorder No: _____

Samples Damaged: Yes ☐ No ☒ If YES why? _____

No Bubble Wrap ☐ Frozen ☐ Courier ☐

Other: _____

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☒

Whom spoken to: _____ Date/Time: _____

CPM Initial: _____

General Comments: _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES ☐ NO ☒ Precaution Taken: _____

Legal Samples: Yes ☐ No ☒

International Samples: Yes ☐ No ☒

Tape Sealed: Yes ☐ No ☒

Coolant Used: Icepack ☒ Bagged Ice ☐ Free Ice ☐ Free Water ☐ None ☐

Date Issued: October 05, 2015
Document ID: SR-9505.003

* Subcontracted Analysis (See CPM)



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 184358151

RECEIVING BASICS:

Received From: novex #1

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 7 Containers: 317 317

TIME SENSITIVE ISSUES:

Earliest Date Sampled: 29 JUL '18

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 2 + 2 + 2 = 2 °C (2) 2 + 1 + 1 = 1 °C (3) 2 + 2 + 2 = 2 °C (4) 2 + 2 + 2 = 2 °C

Was ice or ice pack present: ☒ Yes ☐ No

Integrity Issues:

5) 2 + 1 + 2 = 2 °C
6) 2 + 2 + 2 = 2 °C
7) 2 + 1 + 1 = 1 °C

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

SOIL METALS CERTIFICATES

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Darren Thomas/Ben Barton

PROJECT: ENW.WENW03039-03

AGAT WORK ORDER: 18Y379937

SOIL ANALYSIS REVIEWED BY: Dana Solari, Lab Reporter

TRACE ORGANICS REVIEWED BY: Clarissa Muljono, Report Writer

DATE REPORTED: Oct 05, 2018

PAGES (INCLUDING COVER): 27

VERSION*: 2

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 2: Sample receipt temperature 2°C.

Version 2 is issued on October 5th, 2018 to report metals on sample 18-MS17-065 as requested by Darren Thomas of Tetra Tech EBA on October 1st, 2018. Version 2 is an amendment to Version 1.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y379937

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-10-05

SAMPLE DESCRIPTION:				18MS15-055	18MS3-014	18MS17-075			18MS15-056	18MS15-057	18MS17-074
SAMPLE TYPE:				Soil	Soil	Soil			Soil	Soil	Soil
DATE SAMPLED:				2018-08-25	2018-08-25	2018-08-25			2018-08-25	2018-08-25	2018-08-25
Parameter	Unit	G / S	RDL	9511440	9511441	RDL	9511442	RDL	9511443	9511444	9511445
Antimony	µg/g	40	0.1	0.7	2.6	0.1	3.2	0.1	2.5	3.5	2.4
Arsenic	µg/g	12	0.1	20.1	27.5	0.1	20.6	0.1	22.9	20.1	22.1
Barium	µg/g	2000	0.5	223	1290	1.0	1020	0.5	610	599	1530
Beryllium	µg/g	8	0.1	1.9	1.2	0.1	1.1	0.1	1.4	1.1	1.2
Cadmium	µg/g	22	0.01	3.30	1.73	0.01	2.14	0.01	2.03	2.85	1.67
Chromium	µg/g	87	1	17	23	1	27	1	17	22	26
Cobalt	µg/g	300	0.1	19.3	15.4	0.1	16.7	0.1	17.3	15.6	14.2
Copper	µg/g	91	0.2	753	286	0.2	198	0.2	363	224	144
Lead	µg/g	600	0.1	11.8	20.8	0.1	21.6	0.1	20.4	18.9	21.1
Mercury	µg/g	50	0.01	4.97	1.66	0.01	2.48	0.01	5.46	2.30	0.92
Molybdenum	µg/g	40	0.2	3.0	7.3	0.2	6.9	0.2	5.4	7.7	7.0
Nickel	µg/g	89	0.5	17.3	38.1	0.5	44.6	0.5	35.5	44.3	38.8
Selenium	µg/g	2.9	0.1	2.9	1.7	0.1	1.8	0.1	2.2	2.2	1.3
Silver	µg/g	40	0.5	0.6	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.1	0.5	0.4	0.1	0.5	0.1	0.4	0.4	0.5
Tin	µg/g	300	0.2	3.9	1.7	0.2	1.7	0.2	2.0	1.2	2.1
Uranium	µg/g	300	0.2	2.1	2.9	0.2	2.8	0.2	2.6	1.9	3.1
Vanadium	µg/g	130	1	33	82	1	88	1	54	73	93
Zinc	µg/g	360	1	295	189	1	248	1	245	271	184
pH 1:2	pH units	6 to 8	0.1	7.0	7.6	0.1	7.4	0.1	7.2	7.4	7.7

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y379937

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-10-05

		SAMPLE DESCRIPTION:		18MS15-058	18MS17-076	18MS17-073	18MS17-070	18MS17-069	18MS17-063	DUP 1	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:		2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-25	
Parameter	Unit	G / S	RDL	9511446	9511447	9511448	9511449	9511450	9511451	RDL	9511452
Antimony	µg/g	40	0.1	3.6	1.2	2.0	1.4	2.7	1.6	0.1	4.4
Arsenic	µg/g	12	0.1	28.2	22.7	21.7	25.2	18.7	32.0	0.1	24.0
Barium	µg/g	2000	0.5	1280	312	1340	598	594	654	1.0	2320
Beryllium	µg/g	8	0.1	1.0	1.2	2.1	1.0	0.8	1.3	0.1	0.6
Cadmium	µg/g	22	0.01	2.08	1.50	1.58	1.31	2.37	1.69	0.01	2.44
Chromium	µg/g	87	1	25	28	24	17	15	21	1	20
Cobalt	µg/g	300	0.1	18.5	22.1	13.8	13.2	14.1	18.0	0.1	14.1
Copper	µg/g	91	0.2	178	462	363	242	283	295	0.2	85.4
Lead	µg/g	600	0.1	24.7	22.1	18.4	23.9	14.8	16.0	0.1	20.2
Mercury	µg/g	50	0.01	1.12	1.00	2.25	1.60	2.06	2.90	0.01	0.70
Molybdenum	µg/g	40	0.2	5.2	4.5	5.5	3.3	4.7	4.6	0.2	6.3
Nickel	µg/g	89	0.5	48.9	31.2	31.8	27.0	34.9	31.8	0.5	50.5
Selenium	µg/g	2.9	0.1	1.2	2.6	1.1	1.2	1.4	2.0	0.1	1.6
Silver	µg/g	40	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Thallium	µg/g	1	0.1	0.4	0.5	0.5	0.4	0.3	0.4	0.1	0.4
Tin	µg/g	300	0.2	1.3	2.5	2.7	1.6	1.1	2.1	0.2	0.5
Uranium	µg/g	300	0.2	2.6	2.7	3.2	2.0	1.8	1.9	0.2	1.7
Vanadium	µg/g	130	1	82	87	59	39	52	72	1	95
Zinc	µg/g	360	1	265	155	205	170	291	206	1	280
pH 1:2	pH units	6 to 8	0.1	7.6	7.3	7.7	7.5	7.7	7.5	0.1	8.0

Certified By:

D. Solari



Certificate of Analysis

AGAT WORK ORDER: 18Y379937

PROJECT: ENW.WENW03039-03

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CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-10-05

		SAMPLE DESCRIPTION:		DUP 2		18MS19-080	18MS19-079	18MS19-081	18MS19-082	
		SAMPLE TYPE:		Soil		Soil	Soil	Soil	Soil	
		DATE SAMPLED:		2018-08-25		2018-08-26	2018-08-26	2018-08-26	2018-08-26	
Parameter	Unit	G / S	RDL	9511467	RDL	9511469	9511478	9511479	RDL	9511480
Antimony	µg/g	40	0.1	3.3	0.1	0.2	0.3	0.3	0.1	3.6
Arsenic	µg/g	12	0.1	26.4	0.1	12.3	11.3	23.1	0.1	18.2
Barium	µg/g	2000	1.0	2650	0.5	150	37.0	140	1.0	2990
Beryllium	µg/g	8	0.1	1.0	0.1	0.3	0.4	0.9	0.1	0.4
Cadmium	µg/g	22	0.01	2.15	0.01	0.59	0.59	1.98	0.01	2.17
Chromium	µg/g	87	1	28	1	8	9	19	1	16
Cobalt	µg/g	300	0.1	16.4	0.1	3.7	4.7	8.3	0.1	11.3
Copper	µg/g	91	0.2	242	0.2	20.6	19.0	93.2	0.2	39.6
Lead	µg/g	600	0.1	23.0	0.1	5.0	4.6	9.2	0.1	15.2
Mercury	µg/g	50	0.01	1.76	0.01	0.19	0.15	0.47	0.01	0.26
Molybdenum	µg/g	40	0.2	6.6	0.2	1.0	0.9	2.6	0.2	5.1
Nickel	µg/g	89	0.5	48.3	0.5	8.6	8.0	18.3	0.5	39.9
Selenium	µg/g	2.9	0.1	1.6	0.1	0.5	0.5	0.7	0.1	1.4
Silver	µg/g	40	0.5	<0.5	0.5	<0.5	<0.5	<0.5	0.5	<0.5
Thallium	µg/g	1	0.1	0.5	0.1	0.1	0.1	0.2	0.1	0.3
Tin	µg/g	300	0.2	1.8	0.2	0.8	1.2	3.1	0.2	0.5
Uranium	µg/g	300	0.2	2.2	0.2	1.3	1.1	2.0	0.2	2.6
Vanadium	µg/g	130	1	105	1	13	12	22	1	64
Zinc	µg/g	360	1	274	1	60	89	182	1	242
pH 1:2	pH units	6 to 8	0.1	7.6	0.1	8.4	8.3	8.3	0.1	8.2

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y379937

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-10-05

		SAMPLE DESCRIPTION:		18MS19-083	18MS19-084		18MS19-085	18MS19-086		18MS19-087
		SAMPLE TYPE:		Soil	Soil		Soil	Soil		Soil
		DATE SAMPLED:		2018-08-26	2018-08-26		2018-08-26	2018-08-26		2018-08-26
Parameter	Unit	G / S	RDL	9511481	9511482	RDL	9511483	9511484	RDL	9511485
Antimony	µg/g	40	0.1	0.5	0.9	0.1	3.0	3.1	0.1	3.3
Arsenic	µg/g	12	0.1	15.7	10.3	0.1	23.2	19.8	0.1	28.0
Barium	µg/g	2000	0.5	809	836	2.5	3850	4020	5	3600
Beryllium	µg/g	8	0.1	0.5	0.8	0.1	0.8	0.5	0.1	0.6
Cadmium	µg/g	22	0.01	0.63	0.78	0.01	1.85	2.08	0.01	2.30
Chromium	µg/g	87	1	20	34	1	34	21	1	33
Cobalt	µg/g	300	0.1	9.9	22.4	0.1	20.0	13.2	0.1	13.7
Copper	µg/g	91	0.2	30.1	127	0.2	73.0	35.6	0.2	86.8
Lead	µg/g	600	0.1	6.2	9.0	0.1	17.7	15.9	0.1	16.6
Mercury	µg/g	50	0.01	0.28	0.55	0.01	0.44	0.20	0.01	0.69
Molybdenum	µg/g	40	0.2	1.5	1.6	0.2	5.4	4.8	0.2	6.1
Nickel	µg/g	89	0.5	18.8	35.9	0.5	52.3	46.2	0.5	49.0
Selenium	µg/g	2.9	0.1	0.9	0.5	0.1	1.4	1.0	0.1	1.5
Silver	µg/g	40	0.5	<0.5	<0.5	0.5	<0.5	<0.5	0.5	<0.5
Thallium	µg/g	1	0.1	0.2	0.3	0.1	0.4	0.3	0.1	0.4
Tin	µg/g	300	0.2	1.2	1.0	0.2	1.0	0.8	0.2	1.2
Uranium	µg/g	300	0.2	1.5	1.3	0.2	2.3	2.3	0.2	2.3
Vanadium	µg/g	130	1	29	55	1	85	67	1	87
Zinc	µg/g	360	1	72	99	1	250	270	1	292
pH 1:2	pH units	6 to 8	0.1	8.2	8.2	0.1	8.1	8.1	0.1	8.1

Certified By:

D. Solari



Certificate of Analysis

AGAT WORK ORDER: 18Y379937

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-10-05

		SAMPLE DESCRIPTION:		18MS19-088		18MS19-089		18MS3-012	18MS3-015	18MS3-013
		SAMPLE TYPE:		Soil		Soil		Soil	Soil	Soil
		DATE SAMPLED:		2018-08-26		2018-08-26		2018-08-26	2018-08-26	2018-08-26
Parameter	Unit	G / S	RDL	9511486	RDL	9511487	RDL	9511489	9511490	9511491
Antimony	µg/g	40	0.1	2.3	0.1	5.7	0.1	2.2	3.1	0.8
Arsenic	µg/g	12	0.1	26.2	0.1	20.8	0.1	32.4	25.3	24.3
Barium	µg/g	2000	1.0	2580	5	6610	0.5	1920	559	205
Beryllium	µg/g	8	0.1	0.7	0.1	0.5	0.1	0.9	1.5	1.4
Cadmium	µg/g	22	0.01	2.09	0.01	3.31	0.01	1.52	1.23	1.28
Chromium	µg/g	87	1	26	1	20	1	26	18	30
Cobalt	µg/g	300	0.1	14.5	0.1	16.2	0.1	14.0	23.0	16.5
Copper	µg/g	91	0.2	51.9	0.2	41.9	0.2	60.4	597	299
Lead	µg/g	600	0.1	15.0	0.1	20.8	0.1	22.0	21.7	25.4
Mercury	µg/g	50	0.01	0.44	0.01	0.16	0.01	0.55	3.49	1.44
Molybdenum	µg/g	40	0.2	4.9	0.2	6.9	0.2	4.7	6.2	3.7
Nickel	µg/g	89	0.5	42.9	0.5	67.6	0.5	43.7	37.0	26.6
Selenium	µg/g	2.9	0.1	1.2	0.1	1.5	0.1	1.2	4.7	1.4
Silver	µg/g	40	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.7	<0.5
Thallium	µg/g	1	0.1	0.4	0.1	0.4	0.1	0.4	0.5	0.5
Tin	µg/g	300	0.2	1.0	0.2	0.4	0.2	1.5	2.7	2.8
Uranium	µg/g	300	0.2	2.9	0.2	2.5	0.2	3.5	2.9	2.6
Vanadium	µg/g	130	1	72	1	110	1	71	66	74
Zinc	µg/g	360	1	265	1	402	1	213	269	144
pH 1:2	pH units	6 to 8	0.1	8.0	0.1	8.2	0.1	7.7	5.6	7.5

Certified By:

D. Solari



Certificate of Analysis

AGAT WORK ORDER: 18Y379937

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-10-05

		SAMPLE DESCRIPTION:		18MS17-062		18MS7-022		18MS18-078		18MS3-016		18MS13-040	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2018-08-27		2018-08-27		2018-08-27		2018-08-27		2018-08-27	
Parameter	Unit	G / S	RDL	9511492	RDL	9511494	RDL	9511495	9511496	RDL	9511497		
Antimony	µg/g	40	0.1	3.7	0.1	3.6	0.1	1.8	2.7	0.1	1.1		
Arsenic	µg/g	12	0.1	24.6	0.1	21.9	0.1	20.8	18.8	0.1	20.5		
Barium	µg/g	2000	5	4520	1.0	3510	0.5	1510	1430	0.5	116		
Beryllium	µg/g	8	0.1	0.4	0.1	0.7	0.1	1.0	0.8	0.1	2.0		
Cadmium	µg/g	22	0.01	2.38	0.01	2.09	0.01	1.74	2.21	0.01	1.84		
Chromium	µg/g	87	1	18	1	17	1	26	20	1	12		
Cobalt	µg/g	300	0.1	18.7	0.1	14.1	0.1	13.6	15.8	0.1	31.5		
Copper	µg/g	91	0.2	82.7	0.2	180	0.2	219	135	0.4	1200		
Lead	µg/g	600	0.1	18.3	0.1	20.2	0.1	25.4	19.2	0.1	9.9		
Mercury	µg/g	50	0.01	0.42	0.01	0.63	0.01	1.15	1.25	0.01	1.28		
Molybdenum	µg/g	40	0.2	5.8	0.2	6.4	0.2	4.8	4.6	0.2	2.7		
Nickel	µg/g	89	0.5	58.9	0.5	43.3	0.5	33.3	41.2	0.5	20.2		
Selenium	µg/g	2.9	0.1	1.3	0.1	1.4	0.1	1.2	1.3	0.1	5.8		
Silver	µg/g	40	0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	0.5	0.8		
Thallium	µg/g	1	0.1	0.4	0.1	0.4	0.1	0.4	0.4	0.1	0.3		
Tin	µg/g	300	0.2	0.4	0.2	1.3	0.2	2.0	1.4	0.2	3.3		
Uranium	µg/g	300	0.2	1.8	0.2	2.4	0.2	2.2	2.5	0.2	1.9		
Vanadium	µg/g	130	1	65	1	71	1	82	63	1	29		
Zinc	µg/g	360	1	325	1	286	1	210	278	1	218		
pH 1:2	pH units	6 to 8	0.1	8.0	0.1	8.0	0.1	7.8	7.5	0.1	6.7		

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CCME Metals in Soil

DATE RECEIVED: 2018-08-30

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		SAMPLE DESCRIPTION:		18MS20-091	18MS13-039	18MS13-038	18MS13-036	18MS13-034			18MS13-035	18MS13-037
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil			Soil	Soil
		DATE SAMPLED:		2018-08-27	2018-08-27	2018-08-27	2018-08-27	2018-08-27			2018-08-27	2018-08-27
Parameter	Unit	G / S	RDL	9511498	9511499	9511500	9511501	9511502	RDL		9511503	9511504
Antimony	µg/g	40	0.1	0.5	1.6	1.1	3.5	2.7	0.1		4.2	3.6
Arsenic	µg/g	12	0.1	31.0	25.3	23.6	20.9	18.6	0.1		24.1	22.3
Barium	µg/g	2000	0.5	248	502	427	1300	915	1.0		1440	2860
Beryllium	µg/g	8	0.1	1.5	0.6	1.5	1.0	0.8	0.1		0.6	0.7
Cadmium	µg/g	22	0.01	1.90	2.23	1.92	3.45	2.27	0.01		2.80	2.29
Chromium	µg/g	87	1	11	16	29	28	23	1		24	20
Cobalt	µg/g	300	0.1	11.1	10.0	18.7	17.9	17.7	0.1		16.3	16.0
Copper	µg/g	91	0.2	856	62.8	621	213	295	0.2		72.6	49.7
Lead	µg/g	600	0.1	12.6	17.2	20.5	19.6	15.3	0.1		21.8	21.0
Mercury	µg/g	50	0.01	2.09	0.48	1.44	0.57	0.66	0.01		0.12	0.10
Molybdenum	µg/g	40	0.2	2.7	4.1	4.8	6.6	5.8	0.2		6.9	6.6
Nickel	µg/g	89	0.5	10.9	25.2	29.0	50.4	38.0	0.5		53.3	49.2
Selenium	µg/g	2.9	0.1	1.6	1.0	2.2	1.9	2.2	0.1		1.5	1.6
Silver	µg/g	40	0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.5		<0.5	<0.5
Thallium	µg/g	1	0.1	0.3	0.3	0.6	0.4	0.3	0.1		0.4	0.4
Tin	µg/g	300	0.2	3.5	1.8	3.6	1.6	1.6	0.2		0.7	1.0
Uranium	µg/g	300	0.2	1.9	1.6	2.6	2.0	1.8	0.2		2.1	2.0
Vanadium	µg/g	130	1	22	42	95	108	63	1		86	71
Zinc	µg/g	360	1	203	172	189	291	235	1		285	282
pH 1:2	pH units	6 to 8	0.1	7.4	8.0	7.5	6.8	6.8	0.1		8.0	8.0

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-10-05

		SAMPLE DESCRIPTION:		18MS5-019	18MS5-018	18MS17-068	DUP 3		DUP 4		DUP 5
		SAMPLE TYPE:		Soil	Soil	Soil	Soil		Soil		Soil
		DATE SAMPLED:		2018-08-27	2018-08-27	2018-08-27	2018-08-26		2018-08-27		2018-08-27
Parameter	Unit	G / S	RDL	9511505	9511506	9511507	RDL	9511508	RDL	9511509	9511510
Antimony	µg/g	40	0.1	0.6	0.6	0.5	0.1	3.0	0.1	2.9	0.4
Arsenic	µg/g	12	0.1	22.7	8.0	11.9	0.1	20.4	0.1	17.0	12.1
Barium	µg/g	2000	0.5	130	624	257	1.0	3010	0.5	1710	247
Beryllium	µg/g	8	0.1	1.3	1.3	1.2	0.1	0.5	0.1	0.7	1.2
Cadmium	µg/g	22	0.01	2.10	0.91	0.62	0.01	2.04	0.01	2.26	0.81
Chromium	µg/g	87	1	24	25	30	1	20	1	19	28
Cobalt	µg/g	300	0.1	14.5	17.2	16.4	0.1	12.1	0.1	15.9	16.6
Copper	µg/g	91	0.2	185	159	119	0.2	35.5	0.2	175	124
Lead	µg/g	600	0.1	21.4	19.6	21.4	0.1	17.4	0.1	20.6	21.5
Mercury	µg/g	50	0.01	0.27	0.55	0.49	0.01	0.07	0.01	1.29	0.54
Molybdenum	µg/g	40	0.2	3.0	2.1	1.7	0.2	5.3	0.2	5.2	1.7
Nickel	µg/g	89	0.5	31.7	37.8	30.9	0.5	39.2	0.5	38.4	30.1
Selenium	µg/g	2.9	0.1	1.3	1.0	0.9	0.1	1.4	0.1	1.4	0.9
Silver	µg/g	40	0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5
Thallium	µg/g	1	0.1	0.3	0.2	0.3	0.1	0.3	0.1	0.4	0.3
Tin	µg/g	300	0.2	2.0	0.9	1.6	0.2	0.8	0.2	1.6	1.7
Uranium	µg/g	300	0.2	2.7	1.3	1.9	0.2	2.7	0.2	2.8	2.6
Vanadium	µg/g	130	1	46	40	43	1	91	1	63	42
Zinc	µg/g	360	1	215	159	120	1	204	1	235	127
pH 1:2	pH units	6 to 8	0.1	7.8	7.8	7.7	0.1	8.0	0.1	7.5	7.7

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

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SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

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		SAMPLE DESCRIPTION:		18MS10-031	18MS11-032	18MS6-021			18MS6-020	18MS17-067	18MS17-065
		SAMPLE TYPE:		Soil	Soil	Soil			Soil	Soil	Soil
		DATE SAMPLED:		2018-08-28	2018-08-28	2018-08-28			2018-08-28	2018-08-28	2018-08-28
Parameter	Unit	G / S	RDL	9511523	9511530	9511531	RDL	9511532	RDL	9511533	9511537
Antimony	µg/g	40	0.1	1.5	0.3	0.4	0.1	2.2	0.1	0.9	1.0
Arsenic	µg/g	12	0.1	21.0	8.1	3.3	0.1	16.3	0.1	9.7	12.9
Barium	µg/g	2000	0.5	412	135	122	1.0	1970	0.5	542	784
Beryllium	µg/g	8	0.1	0.7	0.9	0.9	0.1	0.9	0.1	1.2	0.6
Cadmium	µg/g	22	0.01	1.30	1.07	0.75	0.01	1.59	0.01	1.59	1.17
Chromium	µg/g	87	1	20	16	15	1	37	1	18	20
Cobalt	µg/g	300	0.1	13.6	11.1	10.5	0.1	23.3	0.1	15.6	9.6
Copper	µg/g	91	0.2	125	257	514	0.2	134	0.2	481	148
Lead	µg/g	600	0.1	15.7	10.0	15.5	0.1	16.7	0.1	11.3	14.9
Mercury	µg/g	50	0.01	1.60	1.79	0.81	0.01	0.21	0.01	0.99	0.40
Molybdenum	µg/g	40	0.2	2.0	2.9	2.1	0.2	4.0	0.2	4.7	3.4
Nickel	µg/g	89	0.5	31.9	12.4	12.8	0.5	54.7	0.5	19.5	21.7
Selenium	µg/g	2.9	0.1	1.1	1.4	1.4	0.1	1.4	0.1	2.5	1.2
Silver	µg/g	40	0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5
Thallium	µg/g	1	0.1	0.3	0.3	0.5	0.1	0.4	0.1	0.4	0.3
Tin	µg/g	300	0.2	0.9	2.6	2.9	0.2	1.0	0.2	2.9	1.4
Uranium	µg/g	300	0.2	1.5	1.8	5.3	0.2	1.7	0.2	2.0	1.8
Vanadium	µg/g	130	1	46	21	25	1	66	1	35	43
Zinc	µg/g	360	1	156	108	92	1	186	1	159	107
pH 1:2	pH units	6 to 8	0.1	7.8	7.5	7.5	0.1	8.1	0.1	7.3	8.0

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		SAMPLE DESCRIPTION:		18MS17-066		18MS8-023		18MS17-064		18MS9-029		18MS9-028		18MS9-027	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2018-08-28		2018-08-28		2018-08-28		2018-08-28		2018-08-28		2018-08-28	
Parameter	Unit	G / S	RDL	9511541	RDL	9511542	RDL	9511543	9511544	9511545	9511546	9511543	9511544	9511545	9511546
Antimony	µg/g	40	0.1	0.6	0.1	1.9	0.1	0.8	0.9	0.4	0.5				
Arsenic	µg/g	12	0.1	28.0	0.1	19.1	0.1	30.4	14.6	15.8	12.5				
Barium	µg/g	2000	0.5	393	0.5	588	0.5	590	605	146	143				
Beryllium	µg/g	8	0.1	1.1	0.1	1.1	0.1	0.9	0.5	1.0	1.5				
Cadmium	µg/g	22	0.01	1.13	0.01	1.62	0.01	1.34	0.72	1.10	3.13				
Chromium	µg/g	87	1	17	1	19	1	18	14	21	19				
Cobalt	µg/g	300	0.1	11.0	0.1	16.1	0.1	11.1	10.9	10.5	10.2				
Copper	µg/g	91	0.2	427	0.4	1090	0.2	201	223	168	246				
Lead	µg/g	600	0.1	12.3	0.1	16.0	0.1	11.6	13.8	14.1	18.9				
Mercury	µg/g	50	0.01	0.66	0.01	1.15	0.01	0.71	0.38	0.55	6.14				
Molybdenum	µg/g	40	0.2	2.3	0.2	13.7	0.2	2.8	1.8	3.1	5.5				
Nickel	µg/g	89	0.5	17.3	0.5	28.5	0.5	22.5	20.7	17.4	19.1				
Selenium	µg/g	2.9	0.1	1.3	0.1	3.0	0.1	1.3	1.1	1.0	1.0				
Silver	µg/g	40	0.5	<0.5	0.5	0.7	0.5	<0.5	<0.5	<0.5	<0.5				
Thallium	µg/g	1	0.1	0.3	0.1	0.3	0.1	0.3	0.2	0.3	0.4				
Tin	µg/g	300	0.2	3.0	0.2	2.9	0.2	1.9	0.9	2.5	3.4				
Uranium	µg/g	300	0.2	2.0	0.2	2.0	0.2	1.8	2.2	1.8	3.0				
Vanadium	µg/g	130	1	32	1	50	1	38	26	31	40				
Zinc	µg/g	360	1	104	1	166	1	122	100	99	306				
pH 1:2	pH units	6 to 8	0.1	7.9	0.1	7.3	0.1	7.8	7.7	7.7	8.0				

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CCME Metals in Soil

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		SAMPLE DESCRIPTION:		18MS9-026		18MS9-024		DUP 6	DUP 7	18MS12-033
		SAMPLE TYPE:		Soil		Soil		Soil	Soil	Soil
		DATE SAMPLED:		2018-08-28		2018-08-28		2018-08-28	2018-08-28	2018-08-26
Parameter	Unit	G / S	RDL	9511547	RDL	9511548	RDL	9511549	9511550	9511553
Antimony	µg/g	40	0.1	0.7	0.1	3.9	0.1	1.3	0.7	1.5
Arsenic	µg/g	12	0.1	19.4	0.1	22.1	0.1	14.4	18.9	15.0
Barium	µg/g	2000	0.5	293	1.0	3300	0.5	806	251	242
Beryllium	µg/g	8	0.1	0.8	0.1	0.5	0.1	0.8	0.7	1.7
Cadmium	µg/g	22	0.01	0.84	0.01	2.57	0.01	1.35	0.79	1.43
Chromium	µg/g	87	1	23	1	18	1	23	21	17
Cobalt	µg/g	300	0.1	12.1	0.1	15.9	0.1	11.4	12.1	15.7
Copper	µg/g	91	0.2	135	0.2	63.2	0.2	191	140	607
Lead	µg/g	600	0.1	12.4	0.1	19.4	0.1	21.4	11.8	11.4
Mercury	µg/g	50	0.01	1.69	0.01	0.27	0.01	2.34	1.39	1.81
Molybdenum	µg/g	40	0.2	1.9	0.2	6.3	0.2	3.8	1.7	1.9
Nickel	µg/g	89	0.5	26.1	0.5	59.0	0.5	28.6	25.9	18.0
Selenium	µg/g	2.9	0.1	0.8	0.1	1.6	0.1	1.2	1.0	2.8
Silver	µg/g	40	0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.1	0.2	0.1	0.3	0.1	0.4	0.3	0.4
Tin	µg/g	300	0.2	0.8	0.2	0.3	0.2	1.5	0.9	3.3
Uranium	µg/g	300	0.2	1.5	0.2	1.8	0.2	1.8	1.3	2.0
Vanadium	µg/g	130	1	38	1	67	1	46	38	27
Zinc	µg/g	360	1	105	1	326	1	144	99	151
pH 1:2	pH units	6 to 8	0.1	7.4	0.1	7.8	0.1	7.6	7.4	7.3

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (IL) (Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

9511440-9511553 Results are based on the dry weight of the sample

Analysis performed at AGAT Vancouver (unless marked by *)

Certified By:

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Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

CCME F2-F4 (Soil)

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-10-05

				18A16TP20-	18A16TP20-	18A16TP19-	18A16TP19-	18A14TP29-	18A14TP29-	18A23TP10-	18A23TP10-
SAMPLE DESCRIPTION:				0.5m	1.0m	0.5m	1.0m	0.5m	1.0m	0.4m	1.0m
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-28	2018-08-28
Parameter	Unit	G / S	RDL	9511432	9511433	9511435	9511436	9511438	9511439	9511535	9511536
F2 (C10-C16)	µg/g		20	<20	51	<20	<20	<20	<20	<20	<20
F3 (C16-C34)	µg/g		20	469	1560	63	78	58	36	<20	63
F4 (C34-C50)	µg/g		20	151	423	32	46	23	<20	<20	29
Moisture	%		0.5	5.2	5.8	7.9	8.5	9.3	9.2	16.1	9.4
				18A23TP11-	18A23TP11-						
SAMPLE DESCRIPTION:				0.4m	0.8m						
SAMPLE TYPE:				Soil	Soil						
DATE SAMPLED:				2018-08-28	2018-08-28						
Parameter	Unit	G / S	RDL	9511539	9511540						
F2 (C10-C16)	µg/g		20	<20	<20						
F3 (C16-C34)	µg/g		20	1230	<20						
F4 (C34-C50)	µg/g		20	488	<20						
Moisture	%		0.5	7.9	6.8						

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9511432-9511540 Results are based on the dry weight of the sample.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50, and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Soil sample is visibly heterogeneous.

Analysis performed at AGAT Vancouver (unless marked by *)

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 18Y379937

PROJECT: ENW.WENW03039-03

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLING SITE:

SAMPLED BY:

Soil Analysis															
RPT Date: Oct 05, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME Metals in Soil

Antimony	9511444		3.5	3.2	8.3%	< 0.1	116%	70%	130%	98%	90%	110%
Arsenic	9511444		20.1	25.5	23.4%	< 0.1	121%	70%	130%	106%	90%	110%
Barium	9511444		599	598	0.2%	< 0.5	100%	70%	130%	92%	90%	110%
Beryllium	9511444		1.1	0.9	17.3%	< 0.1	103%	70%	130%	99%	90%	110%
Cadmium	9511444		2.85	2.67	6.5%	< 0.01	110%	70%	130%	105%	90%	110%
Chromium	9511444		22	19	14.8%	< 1	104%	70%	130%	99%	90%	110%
Cobalt	9511444		15.6	15.7	0.3%	< 0.1	111%	70%	130%	109%	90%	110%
Copper	9511444		224	215	3.9%	< 0.2	100%	70%	130%	105%	90%	110%
Lead	9511444		18.9	17.5	7.8%	< 0.1	103%	70%	130%	110%	90%	110%
Mercury	9511444		2.30	2.08	10.1%	< 0.01	96%	70%	130%	98%	90%	110%
Molybdenum	9511444		7.7	5.4	35.8%	< 0.2	107%	70%	130%	99%	90%	110%
Nickel	9511444		44.3	41.1	7.4%	< 0.5	105%	70%	130%	108%	90%	110%
Selenium	9511444		2.2	2.3	3.7%	< 0.1				108%	90%	110%
Silver	9511444		<0.5	<0.5	NA	< 0.5	121%	70%	130%	97%	90%	110%
Thallium	9511444		0.4	0.4	NA	< 0.1	119%	70%	130%	110%	90%	110%
Tin	9511444		1.2	1.1	10.4%	< 0.2	104%	70%	130%	101%	90%	110%
Uranium	9511444		1.9	1.7	11.8%	< 0.2	109%	70%	130%	103%	90%	110%
Vanadium	9511444		73	69	5.3%	< 1	107%	70%	130%	100%	90%	110%
Zinc	9511444		271	250	7.9%	< 1	111%	70%	130%	107%	90%	110%
pH 1:2	9520479		6.9	6.9	0.4%		99%	90%	110%	99%	95%	105%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME Metals in Soil

Antimony	9510664		0.7	0.7	0.5%	< 0.1	115%	70%	130%	102%	90%	110%
Arsenic	9510664		96.3	116	18.6%	< 0.1	127%	70%	130%	101%	90%	110%
Barium	9510664		123	123	0.3%	< 0.5	97%	70%	130%	108%	90%	110%
Beryllium	9510664		2.8	2.7	3.8%	< 0.1	109%	70%	130%	110%	90%	110%
Cadmium	9510664		1.66	1.61	2.9%	< 0.01	115%	70%	130%	106%	90%	110%
Chromium	9510664		53	52	2.4%	< 1	110%	70%	130%	105%	90%	110%
Cobalt	9510664		44.2	42.0	5.1%	< 0.1	107%	70%	130%	106%	90%	110%
Copper	9510664		107	99.9	6.4%	< 0.2	102%	70%	130%	105%	90%	110%
Lead	9510664		45.9	44.6	2.8%	< 0.1	111%	70%	130%	110%	90%	110%
Mercury	9510664		0.06	0.07	9.3%	< 0.01	92%	70%	130%	102%	90%	110%
Molybdenum	9510664		1.8	1.9	4.2%	< 0.2	104%	70%	130%	101%	90%	110%
Nickel	9510664		74.7	70.8	5.4%	< 0.5	107%	70%	130%	105%	90%	110%
Selenium	9510664		0.9	0.9	1.7%	< 0.1				104%	90%	110%
Silver	9510664		<0.5	<0.5	NA	< 0.5	123%	70%	130%	103%	90%	110%
Thallium	9510664		0.8	0.8	4.9%	< 0.1	120%	70%	130%	109%	90%	110%
Tin	9510664		3.4	3.4	0.3%	< 0.2	112%	70%	130%	101%	90%	110%



Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 18Y379937

PROJECT: ENW.WENW03039-03

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Oct 05, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Uranium	9510664		4.9	4.4	12.2%	< 0.2	112%	70%	130%	102%	90%	110%			
Vanadium	9510664		67	66	2.4%	< 1	107%	70%	130%	100%	90%	110%			
Zinc	9510664		330	318	3.7%	< 1	110%	70%	130%	106%	90%	110%			
pH 1:2	9590612		5.7	5.7	0.4%		98%	90%	110%	100%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME Metals in Soil

Antimony	9511481		0.5	0.5	2.6%	< 0.1	113%	70%	130%	99%	90%	110%			
Arsenic	9511481		15.7	12.5	22.8%	< 0.1	113%	70%	130%	94%	90%	110%			
Barium	9511481		809	601	29.6%	< 0.5	104%	70%	130%	101%	90%	110%			
Beryllium	9511481		0.5	0.5	2.3%	< 0.1	108%	70%	130%	96%	90%	110%			
Cadmium	9511481		0.63	0.59	7.0%	< 0.01	114%	70%	130%	93%	90%	110%			
Chromium	9511481		20	18	9.9%	< 1	101%	70%	130%	94%	90%	110%			
Cobalt	9511481		9.9	8.5	16.0%	< 0.1	113%	70%	130%	100%	90%	110%			
Copper	9511481		30.1	26.3	13.6%	< 0.2	103%	70%	130%	97%	90%	110%			
Lead	9511481		6.2	6.8	9.3%	< 0.1	105%	70%	130%	94%	90%	110%			
Mercury	9511481		0.28	0.34	21.2%	< 0.01	101%	70%	130%	99%	90%	110%			
Molybdenum	9511481		1.5	1.6	5.9%	< 0.2	103%	70%	130%	90%	90%	110%			
Nickel	9511481		18.8	19.3	2.8%	< 0.5	114%	70%	130%	97%	90%	110%			
Selenium	9511481		0.9	0.7	16.5%	< 0.1				90%	90%	110%			
Silver	9511481		<0.5	<0.5	NA	< 0.5	113%	70%	130%	94%	90%	110%			
Thallium	9511481		0.2	0.2	NA	< 0.1	127%	70%	130%	99%	90%	110%			
Tin	9511481		1.2	1.2	4.0%	< 0.2	107%	70%	130%	97%	90%	110%			
Uranium	9511481		1.5	1.5	4.5%	< 0.2	102%	70%	130%	98%	90%	110%			
Vanadium	9511481		29	29	0.3%	< 1	110%	70%	130%	92%	90%	110%			
Zinc	9511481		72	73	1.3%	< 1	121%	70%	130%	104%	90%	110%			
pH 1:2	9511508		8.0	8.0	0.5%		99%	90%	110%	100%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME Metals in Soil

Antimony	9511508		3.0	3.0	0.0%	< 0.1	115%	70%	130%	100%	90%	110%			
Arsenic	9511508		20.4	19.9	2.5%	< 0.1	111%	70%	130%	98%	90%	110%			
Barium	9511508		3010	3360	11.0%	< 0.5	104%	70%	130%	109%	90%	110%			
Beryllium	9511508		0.5	0.5	0.0%	< 0.1	98%	70%	130%	109%	90%	110%			
Cadmium	9511508		2.04	1.98	2.6%	< 0.01	115%	70%	130%	108%	90%	110%			
Chromium	9511508		20	19	6.0%	< 1	110%	70%	130%	104%	90%	110%			
Cobalt	9511508		12.1	12.5	2.6%	< 0.1	110%	70%	130%	99%	90%	110%			
Copper	9511508		35.5	38.2	7.4%	< 0.2	101%	70%	130%	101%	90%	110%			
Lead	9511508		17.4	16.9	3.0%	< 0.1	105%	70%	130%	108%	90%	110%			
Mercury	9511508		0.07	0.09	28.1%	< 0.01	104%	70%	130%	108%	90%	110%			
Molybdenum	9511508		5.3	5.0	5.5%	< 0.2	107%	70%	130%	109%	90%	110%			



Quality Assurance

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-03

SAMPLING SITE:

AGAT WORK ORDER: 18Y379937

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Oct 05, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Nickel	9511508		39.2	40.1	2.2%	< 0.5	103%	70%	130%	106%	90%	110%			
Selenium	9511508		1.4	1.5	5.8%	< 0.1				102%	90%	110%			
Silver	9511508		<0.5	<0.5	NA	< 0.5	117%	70%	130%	105%	90%	110%			
Thallium	9511508		0.3	0.3	NA	< 0.1	123%	70%	130%	108%	90%	110%			
Tin	9511508		0.8	0.8	NA	< 0.2	113%	70%	130%	102%	90%	110%			
Uranium	9511508		2.7	2.3	14.5%	< 0.2	112%	70%	130%	105%	90%	110%			
Vanadium	9511508		91	78	15.8%	< 1	112%	70%	130%	104%	90%	110%			
Zinc	9511508		204	212	3.9%	< 1	106%	70%	130%	104%	90%	110%			
pH 1:2	9510664		7.1	7.1	0.7%		99%	90%	110%	100%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:

D. Soliman



Quality Assurance

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-03

SAMPLING SITE:

AGAT WORK ORDER: 18Y379937

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 05, 2018

			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME F2-F4 (Soil)

F2 (C10-C16)	69671	9511436	<20	<20	NA	< 20	114%	80%	120%				79%	60%	140%
F3 (C16-C34)	69671	9511436	78	60	NA	< 20	98%	80%	120%				91%	60%	140%
F4 (C34-C50)	69671	9511436	46	29	NA	< 20	98%	80%	120%				99%	60%	140%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:



Method Summary

CLIENT NAME: TETRA TECH EBA

PROJECT: ENW.WENW03039-03

SAMPLING SITE:

AGAT WORK ORDER: 18Y379937

ATTENTION TO: Darren Thomas/Ben Barton

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Arsenic	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Barium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Beryllium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cadmium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Chromium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cobalt	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Copper	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Lead	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Mercury	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Molybdenum	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Nickel	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Selenium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Silver	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Thallium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Tin	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Uranium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Vanadium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Zinc	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
pH 1:2	INOR-181-6031	BC MOE Lab Manual B (pH, Electrometric, Soil)	PH METER
Trace Organics Analysis			
F2 (C10-C16)	ORG-180-5101	CCME Tier 1 Method-S	GC/FID
F3 (C16-C34)	ORG-180-5101	CCME Tier 1 Method-S	GC/FID
F4 (C34-C50)	ORG-180-5101	CCME Tier 1 Method-S	GC/FID
Moisture	INOR-181-6030	SSMA Chapter 70 (2nd Ed)	GRAVIMETRIC



AGAT

Laboratories

120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

P: 778.452.4000 - F: 778.452.4074

Laboratory Use Only

Arrival Temperature: 2°C
AGAT Job Number: 18Y379937
Notes: AUG 30 AM 10:51

Chain of Custody Record

Report Information

Company: TERA TECH
Contact: Darren Thomas / Ben Barton
Address: 61 Wesson Place, Whitehorse, YT
Phone: 867-668-4223 Fax: _____
LSD: _____
Client Project #: ENV. W. ENV. 3039-03

Report Information

1. Name: Darren Thomas
Email: Darren.Thomas@teratech.com
2. Name: Ben Barton
Email: Ben.Barton@teratech.com

Requirements (Please Check)

- ☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL-LD ☐ RL-HD
☐ WL-N ☐ WL-R

Schedule 3.3 (Please Specify)

CCME (Please Specify) IL

Other (Please Specify)

Report Format

- ☐ Single Sample per page
☐ Multiple Samples per page
☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____
Phone: _____ Fax: _____
PO/AFE#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	PK-P2-P4	Mex 45	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: 60 DAYS
9511431	18A16TP20 - 0.0m	Soil	2018/08/25 8:35							X
32	↓ 0.5m		↓		X					X
33	↓ 1.0m		↓		X					X
34	18A16TP19 - 0.0m		2018/08/25 7:30							X
35	↓ 0.5m		↓		X					X
36	↓ 1.0m		↓		X					X
37	18A14TP29 - 0.0m		2018/08/25 12:45							X
38	↓ 0.5m		↓		X					X
39	↓ 1.0m		↓		X					X
40	18MS15-055		2018/08/25 10:20							
41	18MS3-014		" 16:30							

Samples Relinquished By (Print Name and Sign): <u>Darren Thomas</u>	Date/Time: <u>AUG 29 2018 09:30am</u>	Samples Received By (Print Name and Sign): <u>MARA ZONEK</u>	Date/Time: <u>More for it</u>
Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign):	Date/Time:
Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign):	Date/Time:

Page 1 of 7
Nº: 032843



AGAT

Laboratories

120 - 8600 Glenlyon Parkway

Burnaby, BC

V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use OnlyArrival Temperature: 2°CAGAT Job Number: 184379937

Notes:

AUG 30 AM 10:52

Chain of Custody Record**Report Information**Company: TERRA TECH CANADA

Contact: _____

Address: See page 1

Phone: _____ Fax: _____

LSD: _____

Client Project #: ENV-WENW03039-03**Report Information**

1. Name: _____

Email: _____

2. Name: _____

Email: _____

Requirements (Please Check)☐ BC CSR Soil☐ AL☐ IL☐ PL☐ CL☐ RL-LD ☐ RL-HD☐ WL-N ☐ WL-R☐ BC CSR - Water☐ DW☐ AW☐ IW☐ LW

Schedule 3.3 (Please Specify) _____

CCME (Please Specify) _____

Other (Please Specify) _____

Report Format☐ Single Sample per page☐ Multiple Samples per page☐ Excel Format Included**Turnaround Time Required (TAT)**Regular TAT ☐ 5 to 7 working daysRush TAT ☐ Day 2 - 100%☐ Day 3 - 50%☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice ToSame as above Yes ☐ / No ☐

Company: _____

Contact: _____

Address: _____

Phone: _____ Fax: _____

PO/AFE#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	PKT F2-F4 Met 1/5	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
9511442	18MS17-075	Soil	2018-08-25 16:05		X				
43	18MS15-056		" 15:40		X				
44	18MS15-057		" 15:20		X				
45	18MS17-074		" 13:55		X				
46	18MS15-058		" 14:40		X				
47	18MS17-076		" 13:30		X				
48	18MS17-073		" 13:55		X				
49	18MS17-070		" 11:50		X				
50	18MS17-069		" 11:20		X				
51	18MS17-063		" 8:10		X				
52	DUP 1		2018-08-25 12:00		X				

Samples Relinquished By (Print Name and Sign): _____

Date/Time: _____

Samples Received By (Print Name and Sign): MAMA ZANETTE

Date/Time: _____

Samples Relinquished By (Print Name and Sign): _____

Date/Time: _____

Samples Received By (Print Name and Sign): Mama Zanette

Date/Time: _____

Samples Relinquished By (Print Name and Sign): _____

Date/Time: _____

Samples Received By (Print Name and Sign): _____

Date/Time: _____

Page 2 of 7Nº: **032840**



AGAT

Laboratories

120 - 8600 Glenlyon Parkway

Burnaby, BC

V5J 0B6

P: 778.452.4000 • F: 778.452.4074

Laboratory Use OnlyArrival Temperature: 20CAGAT Job Number: 184379937

Notes:

AUG 30 AM 10:52

Chain of Custody Record**Report Information**Company: TETRA TECH CANADA

Contact: _____

Address: See page 1

Phone: _____ Fax: _____

LSD: _____

Client Project #: ENV-WELW 3039-03**Report Information**

1. Name: _____

Email: _____

2. Name: _____

Email: _____

Requirements (Please Check)☐ BC CSR Soil☐ AL☐ IL☐ PL☐ CL☐ RL-LD ☐ RL-HD☐ WL-N ☐ WL-R☐ BC CSR - Water☐ DW☐ AW☐ IW☐ LW

Schedule 3.3 (Please Specify) _____

CCME (Please Specify) _____

Other (Please Specify) _____

Report Format☐ Single
☐ Sample per page☐ Multiple
☐ Samples per page☐ Excel Format Included**Turnaround Time Required (TAT)**Regular TAT ☐ 5 to 7 working daysRush TAT ☐ Day 2 - 100%☐ Day 3 - 50%☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM**Invoice To**Same as above Yes ☐ / No ☐

Company: _____

Contact: _____

Address: _____

Phone: _____ Fax: _____

PO/AFE#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
751150X0	18MS13-036	Soil	2018-08-27 13:00		X			
01 02	18MS13-036		13:20		X			
02 03	18MS13-034		13:55		X			
03 04	18MS13-035		14:25		X			
04 05	18MS13-037		15:00		X			
05 06	18MS5-019		15:30		X			
06 07	18MS5-018		16:00		X			
07 08	18MS17-068		16:30		X			
08 09	D.P. 3		2018-08-26 12:00		X			
09 10	D.P. 4		2018-08-27 12:00		X			
10	D.P. 5		"		X			

Samples Relinquished By (Print Name and Sign): _____

Date/Time

Samples Received By (Print Name and Sign): Mona ZONEVE

Date/Time

Samples Relinquished By (Print Name and Sign): _____

Date/Time

Samples Received By (Print Name and Sign): Mani Javadi

Date/Time

Samples Relinquished By (Print Name and Sign): _____

Date/Time

Samples Received By (Print Name and Sign): _____

Date/Time

Page 5 of 7Nº: 032844



Whitehorse, YT



AGAT Laboratories

**SAMPLE INTEGRITY RECEIPT
FORM**

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech

Courier: Air North Prepaid Collect

Waybill# 287 04065854

Branch: EDM GP FM FM RD VAN LYD FSJ EST Other: _____

If multiple sites were submitted at once: Yes No

Custody Seal Intact: Yes No NA

TAT: <24hr 24-48hr 48-72hr Reg Other _____

Cooler Quantity: 7

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No

Inorganic Tests (Please Circle): Mibi, BOD, Nitrate/Nitrite, Turbidity, Microtox, Ortho PO₄, Tedlar Bag, Residual Chlorine, Chlorophyll*, Chloroamines*

Earliest Expiry: _____

Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____

Legal Samples: Yes No

International Samples: Yes No

Tape Sealed: Yes No

Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) <u>8.6 + 8.3 + 8.5 = 8.5</u> °C	2 (Bottle/Jar) <u>6.9 + 7.4 + 7.7 = 7.4</u> °C
3 (Bottle/Jar) <u>8.7 + 7.9 + 9.1 = 8.6</u> °C	4 (Bottle/Jar) <u>7.6 + 7.4 + 6.7 = 7.2</u> °C
5 (Bottle/Jar) <u>7.4 + 7.5 + 6.7 = 7.2</u> °C	6 (Bottle/Jar) <u>6.1 + 9.1 + 8.7 = 8.2</u> °C
7 (Bottle/Jar) <u>7.6 + 6.7 + 7.1 = 7.2</u> °C	8 (Bottle/Jar) _____ °C
9 (Bottle/Jar) _____ °C	10 (Bottle/Jar) _____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____

Samples Damaged: Yes No If YES why?

No Bubble Wrap Frozen Courier

Other: _____

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date/Time: _____

CPM Initial _____

General Comments: _____

Date issued: October 05, 2015
Document ID: SR-9505.008

* Subcontracted Analysis (See CPM)

Page 1 of 1



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 184379 937

RECEIVING BASICS:

Received From: NOVEX T11

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 7 Containers: 156

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Aug 15, 2018

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 2+2+1 = 2 °C (2) 3+3+0 = 2 °C (3) 1+0+8 = 3 °C (4) 0+0+0 = 0 °C

Was ice or ice pack present: Yes No 2 °C

Integrity Issues: (5) 0+0+0 = 0 °C (6) 0+0+1 = 0 °C (7) 2+3+3 = 3 °C

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

"18MS10-01" listed on the coc but not received.

"18MS10-31" & "10MS12-033" received but not listed on the coc.

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Darren Thomas

PROJECT: ENW.WENW03039-03

AGAT WORK ORDER: 18Y380994

SOIL ANALYSIS REVIEWED BY: Dana Solari, Lab Reporter

DATE REPORTED: Sep 11, 2018

PAGES (INCLUDING COVER): 22

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature: 2°C

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-09-04

DATE REPORTED: 2018-09-11

		SAMPLE DESCRIPTION:		18MS14-042		18MS14-041		18MS20-096		18MS1-001		18MS1-002	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2018-08-29		2018-08-29		2018-08-29		2018-08-29		2018-08-29	
Parameter	Unit	G / S	RDL	9519895	RDL	9519900	RDL	9519901	9519902	RDL	9519903		
Antimony	µg/g		0.1	1.1	0.1	4.7	0.1	1.8	1.2	0.1	1.6		
Arsenic	µg/g		0.1	133	0.1	158	0.1	35.6	11.8	0.1	14.2		
Barium	µg/g		0.5	417	1.0	3870	0.5	648	601	0.5	189		
Beryllium	µg/g		0.1	1.0	0.1	1.3	0.1	1.5	0.6	0.1	1.4		
Cadmium	µg/g		0.01	0.79	0.01	1.91	0.01	1.70	0.95	0.01	2.80		
Chromium	µg/g		1	27	1	28	1	26	18	1	15		
Cobalt	µg/g		0.1	19.7	0.1	36.7	0.1	19.3	10.5	0.1	24.8		
Copper	µg/g		0.2	54.1	0.2	77.6	0.2	655	124	0.4	1450		
Lead	µg/g		0.1	29.4	0.1	56.7	0.1	20.7	17.3	0.1	14.2		
Mercury	µg/g		0.01	0.05	0.01	0.04	0.01	0.45	0.64	0.01	2.00		
Molybdenum	µg/g		0.2	2.0	0.2	5.5	0.2	5.0	2.3	0.2	3.9		
Nickel	µg/g		0.5	36.5	0.5	91.9	0.5	34.3	23.9	0.5	25.4		
Selenium	µg/g		0.1	0.6	0.1	1.7	0.1	2.9	1.0	0.1	3.9		
Silver	µg/g		0.5	<0.5	0.5	<0.5	0.5	0.6	<0.5	0.5	0.9		
Thallium	µg/g		0.1	0.2	0.1	0.4	0.1	0.4	0.2	0.1	0.5		
Tin	µg/g		0.2	1.0	0.2	0.9	0.2	3.1	2.5	0.2	4.5		
Uranium	µg/g		0.2	2.9	0.2	3.4	0.2	2.4	1.2	0.2	2.2		
Vanadium	µg/g		1	41	1	94	1	79	40	1	48		
Zinc	µg/g		1	147	1	340	1	162	129	1	279		
pH 1:2	pH units		0.1	7.3	0.1	7.4	0.1	6.8	7.7	0.1	7.0		

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Darren Thomas

SAMPLING SITE:

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-09-04

DATE REPORTED: 2018-09-11

		SAMPLE DESCRIPTION:		18MS1-003	18MS1-004	18MS1-005	18MS17-077	18MS20-092	18MS4-017	18MS9-025	18MS10-030
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29
Parameter	Unit	G / S	RDL	9519904	9519905	9519906	9519907	9519908	9519909	9519910	9519911
Antimony	µg/g		0.1	0.1	0.1	0.3	0.3	2.7	0.2	2.4	0.4
Arsenic	µg/g		0.1	4.1	4.9	3.6	5.7	20.8	5.4	23.1	9.7
Barium	µg/g		0.5	48.1	62.8	135	149	1930	76.1	1340	121
Beryllium	µg/g		0.1	0.1	0.2	0.2	0.2	0.6	0.1	0.8	1.6
Cadmium	µg/g		0.01	0.13	0.20	0.31	0.34	2.22	0.19	2.38	11.6
Chromium	µg/g		1	4	5	8	7	18	6	23	19
Cobalt	µg/g		0.1	2.4	4.2	4.1	3.8	16.2	3.5	17.2	16.7
Copper	µg/g		0.2	43.0	71.7	42.4	26.8	167	11.4	230	691
Lead	µg/g		0.1	2.7	3.7	5.0	4.0	19.4	3.1	18.3	13.3
Mercury	µg/g		0.01	0.42	0.09	0.17	0.10	0.99	0.08	1.34	3.09
Molybdenum	µg/g		0.2	<0.2	0.2	0.4	0.4	4.2	0.2	5.3	2.6
Nickel	µg/g		0.5	4.8	5.8	8.9	7.8	42.9	7.3	44.6	16.5
Selenium	µg/g		0.1	0.6	0.8	0.6	0.6	1.5	0.5	1.3	1.6
Silver	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g		0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.4	0.5
Tin	µg/g		0.2	0.2	0.3	0.4	0.2	1.1	<0.2	1.8	4.8
Uranium	µg/g		0.2	0.4	0.5	0.6	0.6	1.6	0.7	1.9	2.3
Vanadium	µg/g		1	7	7	12	12	63	9	80	29
Zinc	µg/g		1	16	25	32	32	231	18	222	989
pH 1:2	pH units		0.1	8.0	8.0	8.1	8.2	7.7	8.1	7.4	7.4

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-09-04

DATE REPORTED: 2018-09-11

		SAMPLE DESCRIPTION:		18MS17-072		18MS17-071		DUP8		18MS20-090	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2018-08-29		2018-08-29		2018-08-29		2018-08-30	
Parameter	Unit	G / S	RDL	9519912	RDL	9519913	RDL	9519914	RDL	9519915	
Antimony	µg/g		0.1	4.0	0.1	4.8	0.1	0.2	0.1	6.5	
Arsenic	µg/g		0.1	28.0	0.1	27.0	0.1	4.7	0.1	35.7	
Barium	µg/g		1.0	3410	2.5	4300	0.5	56.2	2.5	4030	
Beryllium	µg/g		0.1	0.8	0.1	0.7	0.1	0.1	0.1	0.5	
Cadmium	µg/g		0.01	3.30	0.01	3.06	0.01	0.14	0.01	3.70	
Chromium	µg/g		1	25	1	24	1	5	1	23	
Cobalt	µg/g		0.1	21.3	0.1	19.1	0.1	2.9	0.1	19.9	
Copper	µg/g		0.2	198	0.2	88.2	0.2	32.3	0.2	50.6	
Lead	µg/g		0.1	26.8	0.1	25.2	0.1	2.9	0.1	24.2	
Mercury	µg/g		0.01	1.42	0.01	0.33	0.01	0.48	0.01	0.09	
Molybdenum	µg/g		0.2	6.5	0.2	6.4	0.2	0.2	0.2	8.7	
Nickel	µg/g		0.5	63.4	0.5	68.8	0.5	5.4	0.5	78.7	
Selenium	µg/g		0.1	2.0	0.1	1.8	0.1	0.7	0.1	1.4	
Silver	µg/g		0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	
Thallium	µg/g		0.1	0.4	0.1	0.5	0.1	<0.1	0.1	0.5	
Tin	µg/g		0.2	1.5	0.2	0.8	0.2	0.2	0.2	0.4	
Uranium	µg/g		0.2	2.2	0.2	2.1	0.2	0.4	0.2	2.2	
Vanadium	µg/g		1	100	1	106	1	7	1	96	
Zinc	µg/g		1	377	1	379	1	18	1	440	
pH 1:2	pH units		0.1	7.1	0.1	7.7	0.1	8.2	0.1	8.0	

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-09-04

DATE REPORTED: 2018-09-11

		SAMPLE DESCRIPTION:		18MS14-043		18MS14-045		18MS14-047		18MS14-053		18MS14-054	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2018-08-30		2018-08-30		2018-08-30		2018-08-30		2018-08-30	
Parameter	Unit	G / S	RDL	9519917	RDL	9519918	RDL	9519919	9519920	RDL	9519921		
Antimony	µg/g		0.1	6.1	0.1	2.8	0.1	6.6	5.1	0.1	6.3		
Arsenic	µg/g		0.1	30.9	0.1	77.6	0.1	29.4	29.8	0.1	33.0		
Barium	µg/g	5	9170	0.5	1530	2.5	8710	4980	1.0	3200			
Beryllium	µg/g		0.1	0.4	0.1	0.8	0.1	0.5	0.5	0.1	0.4		
Cadmium	µg/g		0.01	3.78	0.01	2.25	0.01	5.86	2.37	0.01	1.98		
Chromium	µg/g		1	19	1	24	1	20	26	1	20		
Cobalt	µg/g		0.1	23.4	0.1	18.9	0.1	22.2	16.3	0.1	14.3		
Copper	µg/g		0.2	76.6	0.2	85.6	0.2	66.9	39.4	0.2	41.4		
Lead	µg/g		0.1	25.9	0.1	24.6	0.1	25.7	26.7	0.1	32.6		
Mercury	µg/g		0.01	0.11	0.01	0.25	0.01	0.17	0.11	0.01	0.06		
Molybdenum	µg/g		0.2	9.4	0.2	4.4	0.2	8.2	8.2	0.2	9.4		
Nickel	µg/g		0.5	96.3	0.5	51.7	0.5	84.0	57.9	0.5	62.2		
Selenium	µg/g		0.1	2.1	0.1	1.1	0.1	1.6	1.8	0.1	2.0		
Silver	µg/g		0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	0.5	<0.5		
Thallium	µg/g		0.1	0.4	0.1	0.4	0.1	0.5	0.3	0.1	0.4		
Tin	µg/g		0.2	0.5	0.2	1.0	0.2	0.6	0.3	0.2	0.3		
Uranium	µg/g		0.2	2.1	0.2	2.3	0.2	3.8	1.9	0.2	1.9		
Vanadium	µg/g		1	98	1	77	1	126	118	1	114		
Zinc	µg/g		1	503	1	280	1	643	349	1	373		
pH 1:2	pH units		0.1	7.7	0.1	7.3	0.1	7.7	7.6	0.1	6.9		

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-09-04

DATE REPORTED: 2018-09-11

		SAMPLE DESCRIPTION:		18MS16-059		18MS16-060		18MS16-061		18MS2-010		18MS2-009	
		SAMPLE TYPE:		Soil		Soil		Soil		Soil		Soil	
		DATE SAMPLED:		2018-08-30		2018-08-30		2018-08-30		2018-08-30		2018-08-30	
Parameter	Unit	G / S	RDL	9519922	RDL	9519923	RDL	9519924	RDL	9519925	RDL	9519926	RDL
Antimony	µg/g		0.1	4.5	0.1	4.4	0.1	11.0	0.1	6.3		6.5	
Arsenic	µg/g		0.1	25.6	0.1	51.4	0.1	45.4	0.1	30.5		48.7	
Barium	µg/g		1.0	2900	0.5	1770	1.0	3540	2.5	4660		4480	
Beryllium	µg/g		0.1	0.4	0.1	0.4	0.1	0.5	0.1	0.5		0.6	
Cadmium	µg/g		0.01	2.36	0.01	1.83	0.01	4.25	0.01	3.81		7.17	
Chromium	µg/g		1	21	1	19	1	18	1	20		21	
Cobalt	µg/g		0.1	13.0	0.1	11.1	0.1	17.1	0.1	18.8		39.2	
Copper	µg/g		0.2	34.4	0.2	61.3	0.2	72.4	0.2	56.1		56.2	
Lead	µg/g		0.1	22.9	0.1	21.4	0.1	73.3	0.1	27.1		25.3	
Mercury	µg/g		0.01	0.05	0.01	0.27	0.01	0.28	0.01	0.13		0.13	
Molybdenum	µg/g		0.2	6.9	0.2	7.9	0.2	14.8	0.2	10.2		12.7	
Nickel	µg/g		0.5	54.8	0.5	43.8	0.5	79.6	0.5	68.9		105	
Selenium	µg/g		0.1	1.1	0.1	1.4	0.1	3.9	0.1	1.7		2.2	
Silver	µg/g		0.5	<0.5	0.5	<0.5	0.5	0.9	0.5	<0.5		<0.5	
Thallium	µg/g		0.1	0.3	0.1	0.4	0.1	0.6	0.1	0.5		0.6	
Tin	µg/g		0.2	0.3	0.2	0.7	0.2	0.3	0.2	0.4		0.5	
Uranium	µg/g		0.2	1.7	0.2	1.3	0.2	2.5	0.2	2.3		9.7	
Vanadium	µg/g		1	113	1	151	1	95	1	112		110	
Zinc	µg/g		1	315	1	270	1	546	1	473		598	
pH 1:2	pH units		0.1	5.6	0.1	5.1	0.1	7.9	0.1	8.0		8.2	

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-09-04

DATE REPORTED: 2018-09-11

SAMPLE DESCRIPTION:				18MS2-011		18MS2-006		18MS2-007		18MS2-008		18MS14-051	
SAMPLE TYPE:				Soil		Soil		Soil		Soil		Soil	
DATE SAMPLED:				2018-08-30		2018-08-30		2018-08-30		2018-08-30		2018-08-30	
Parameter	Unit	G / S	RDL	9519927	RDL	9519928	9519929	RDL	9519930	RDL	9519931		
Antimony	µg/g		0.1	5.2	0.1	7.0	8.0	0.1	2.0	0.1	7.2		
Arsenic	µg/g		0.1	26.8	0.1	31.2	58.0	0.1	25.0	0.1	50.9		
Barium	µg/g		1.0	3320	2.5	4370	4680	0.5	1690	2.5	5610		
Beryllium	µg/g		0.1	0.5	0.1	0.5	0.5	0.1	3.8	0.1	0.9		
Cadmium	µg/g		0.01	4.02	0.01	4.77	4.58	0.01	1.39	0.01	7.92		
Chromium	µg/g		1	22	1	20	21	1	22	1	34		
Cobalt	µg/g		0.1	18.7	0.1	17.0	27.4	0.1	14.6	0.1	17.7		
Copper	µg/g		0.2	47.5	0.2	63.1	73.0	0.2	23.3	0.2	66.2		
Lead	µg/g		0.1	24.0	0.1	25.5	36.0	0.1	21.2	0.1	64.4		
Mercury	µg/g		0.01	0.11	0.01	0.10	0.11	0.01	0.18	0.01	0.09		
Molybdenum	µg/g		0.2	9.4	0.2	11.2	13.5	0.2	3.5	0.2	13.7		
Nickel	µg/g		0.5	68.3	0.5	79.0	98.2	0.5	37.6	0.5	83.7		
Selenium	µg/g		0.1	1.1	0.1	2.6	2.0	0.1	0.8	0.1	2.5		
Silver	µg/g		0.5	<0.5	0.5	<0.5	<0.5	0.5	<0.5	0.5	1.3		
Thallium	µg/g		0.1	0.5	0.1	0.5	0.6	0.1	0.3	0.1	1.1		
Tin	µg/g		0.2	0.3	0.2	0.3	0.4	0.2	0.6	0.2	0.4		
Uranium	µg/g		0.2	2.5	0.2	2.1	2.3	0.2	1.9	0.2	6.2		
Vanadium	µg/g		1	102	1	120	111	1	61	1	120		
Zinc	µg/g		1	418	1	551	689	1	213	1	424		
pH 1:2	pH units		0.1	8.0	0.1	8.0	8.0	0.1	7.7	0.1	6.5		

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Darren Thomas

SAMPLING SITE:

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-09-04

DATE REPORTED: 2018-09-11

		SAMPLE DESCRIPTION:		18MS14-048	18MS14-050	18MS14-046	18MS14-044	18MS14-049	DUP9	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:		2018-08-30	2018-08-30	2018-08-30	2018-08-30	2018-08-30	2018-08-30	
Parameter	Unit	G / S	RDL	9519932	9519933	9519934	9519935	9519936	RDL	9519937
Antimony	µg/g		0.1	6.0	5.4	6.7	5.9	4.9	0.1	5.3
Arsenic	µg/g		0.1	27.0	32.6	29.4	24.4	25.2	0.1	28.9
Barium	µg/g		2.5	8550	7490	8550	6500	5710	1.0	2870
Beryllium	µg/g		0.1	0.4	0.4	0.6	0.5	0.4	0.1	0.4
Cadmium	µg/g		0.01	4.40	3.91	4.62	3.25	3.37	0.01	1.76
Chromium	µg/g		1	18	17	21	19	19	1	20
Cobalt	µg/g		0.1	18.4	17.1	22.2	17.2	17.4	0.1	12.6
Copper	µg/g		0.2	48.9	43.6	64.6	45.0	44.7	0.2	35.8
Lead	µg/g		0.1	23.3	23.0	27.2	36.3	23.0	0.1	27.2
Mercury	µg/g		0.01	0.09	0.10	0.15	0.09	0.11	0.01	0.07
Molybdenum	µg/g		0.2	7.5	7.6	12.0	9.7	6.6	0.2	8.5
Nickel	µg/g		0.5	69.1	64.1	94.3	73.3	67.9	0.5	57.4
Selenium	µg/g		0.1	1.3	1.3	2.3	1.9	1.1	0.1	1.9
Silver	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Thallium	µg/g		0.1	0.4	0.4	0.6	0.5	0.4	0.1	0.4
Tin	µg/g		0.2	<0.2	<0.2	0.3	0.3	<0.2	0.2	0.3
Uranium	µg/g		0.2	2.1	2.1	2.9	2.1	1.6	0.2	1.7
Vanadium	µg/g		1	114	95	141	118	92	1	109
Zinc	µg/g		1	481	426	589	435	397	1	311
pH 1:2	pH units		0.1	8.1	8.2	7.9	7.7	8.2	0.1	7.2

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Darren Thomas

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-09-04

DATE REPORTED: 2018-09-11

		SAMPLE DESCRIPTION:		DUP10	DUP11	18MS14-052
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2018-08-30	2018-08-30	2018-08-30
Parameter	Unit	G / S	RDL	9519938	9519939	9520158
Antimony	µg/g		0.1	6.8	5.1	5.3
Arsenic	µg/g		0.1	52.6	23.3	28.6
Barium	µg/g		2.5	5480	5470	5440
Beryllium	µg/g		0.1	0.8	0.4	0.5
Cadmium	µg/g		0.01	7.00	3.30	3.05
Chromium	µg/g		1	30	16	20
Cobalt	µg/g		0.1	18.3	16.3	19.8
Copper	µg/g		0.2	63.3	42.8	50.4
Lead	µg/g		0.1	58.0	36.9	26.4
Mercury	µg/g		0.01	0.09	0.07	0.10
Molybdenum	µg/g		0.2	12.8	6.9	7.2
Nickel	µg/g		0.5	85.5	68.6	70.8
Selenium	µg/g		0.1	2.0	1.1	1.7
Silver	µg/g		0.5	1.1	<0.5	<0.5
Thallium	µg/g		0.1	0.9	0.4	0.4
Tin	µg/g		0.2	0.3	<0.2	0.3
Uranium	µg/g		0.2	4.9	2.0	1.9
Vanadium	µg/g		1	114	88	111
Zinc	µg/g		1	431	404	408
pH 1:2	pH units		0.1	6.3	8.0	7.0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9519895-9520158 Results are based on the dry weight of the sample

Certified By:

D. Solari

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

ATTENTION TO: Darren Thomas

SAMPLING SITE:

SAMPLED BY:

Soil Analysis															
RPT Date: Sep 11, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME Metals in Soil

Antimony	9519903		1.6	1.7	4.2%	< 0.1	121%	70%	130%	100%	90%	110%		
Arsenic	9519903		14.2	17.5	20.9%	< 0.1	100%	70%	130%	105%	90%	110%		
Barium	9519903		189	233	20.8%	< 0.5	108%	70%	130%	105%	90%	110%		
Beryllium	9519903		1.4	1.4	3.5%	< 0.1	102%	70%	130%	100%	90%	110%		
Cadmium	9519903		2.80	2.32	18.9%	< 0.01	116%	70%	130%	105%	90%	110%		
Chromium	9519903		15	15	3.2%	< 1	113%	70%	130%	107%	90%	110%		
Cobalt	9519903		24.8	23.6	4.9%	< 0.1	116%	70%	130%	101%	90%	110%		
Copper	9519903		1450	1280	12.5%	< 0.2	107%	70%	130%	108%	90%	110%		
Lead	9519903		14.2	14.9	4.4%	< 0.1	105%	70%	130%	102%	90%	110%		
Mercury	9519903		2.00	2.13	6.3%	< 0.01	110%	70%	130%	105%	90%	110%		
Molybdenum	9519903		3.9	4.1	4.4%	< 0.2	105%	70%	130%	100%	90%	110%		
Nickel	9519903		25.4	24.0	5.5%	< 0.5	115%	70%	130%	100%	90%	110%		
Selenium	9519903		3.9	3.6	7.1%	< 0.1				103%	90%	110%		
Silver	9519903		0.9	0.8	NA	< 0.5	124%	70%	130%	103%	90%	110%		
Thallium	9519903		0.5	0.5	2.1%	< 0.1	110%	70%	130%	101%	90%	110%		
Tin	9519903		4.5	4.0	11.8%	< 0.2	106%	70%	130%	100%	90%	110%		
Uranium	9519903		2.2	2.3	2.9%	< 0.2	105%	70%	130%	101%	90%	110%		
Vanadium	9519903		48	47	0.9%	< 1	116%	70%	130%	103%	90%	110%		
Zinc	9519903		279	236	16.8%	< 1	113%	70%	130%	95%	90%	110%		
pH 1:2	9526371		8.0	8.0	0.4%		100%	90%	110%	100%	95%	105%		

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME Metals in Soil

Antimony	9519922		4.5	4.0	13.4%	< 0.1	111%	70%	130%	109%	90%	110%		
Arsenic	9519922		25.6	26.8	4.6%	< 0.1	115%	70%	130%	106%	90%	110%		
Barium	9519922		2900	2960	2.0%	< 0.5	103%	70%	130%	106%	90%	110%		
Beryllium	9519922		0.4	0.5	NA	< 0.1	97%	70%	130%	98%	90%	110%		
Cadmium	9519922		2.36	2.46	3.8%	< 0.01	112%	70%	130%	103%	90%	110%		
Chromium	9519922		21	22	4.5%	< 1	104%	70%	130%	98%	90%	110%		
Cobalt	9519922		13.0	13.4	2.8%	< 0.1	107%	70%	130%	103%	90%	110%		
Copper	9519922		34.4	33.4	2.8%	< 0.2	99%	70%	130%	104%	90%	110%		
Lead	9519922		22.9	22.1	3.6%	< 0.1	99%	70%	130%	104%	90%	110%		
Mercury	9519922		0.05	0.05	8.6%	< 0.01	83%	70%	130%	101%	90%	110%		
Molybdenum	9519922		6.9	6.6	4.1%	< 0.2	106%	70%	130%	106%	90%	110%		
Nickel	9519922		54.8	55.2	0.9%	< 0.5	104%	70%	130%	102%	90%	110%		
Selenium	9519922		1.1	1.3	16.2%	< 0.1				101%	90%	110%		
Silver	9519922		<0.5	<0.5	NA	< 0.5	107%	70%	130%	97%	90%	110%		
Thallium	9519922		0.3	0.3	NA	< 0.1	108%	70%	130%	99%	90%	110%		
Tin	9519922		0.3	0.4	NA	< 0.2	98%	70%	130%	97%	90%	110%		

Quality Assurance

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

ATTENTION TO: Darren Thomas

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Sep 11, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Uranium	9519922		1.7	2.2	24.5%	< 0.2	96%	70%	130%	102%	90%	110%			
Vanadium	9519922		113	108	4.4%	< 1	108%	70%	130%	99%	90%	110%			
Zinc	9519922		315	319	1.2%	< 1	108%	70%	130%	104%	90%	110%			
pH 1:2	9519900		7.4	7.4	0.1%		99%	90%	110%	101%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME Metals in Soil

Antimony	9526371		0.3	0.3	NA	< 0.1	118%	70%	130%	106%	90%	110%			
Arsenic	9526371		4.2	4.6	8.1%	< 0.1	128%	70%	130%	103%	90%	110%			
Barium	9526371		67.9	70.9	4.3%	< 0.5	105%	70%	130%	102%	90%	110%			
Beryllium	9526371		0.2	0.2	NA	< 0.1	96%	70%	130%	102%	90%	110%			
Cadmium	9526371		0.16	0.17	5.2%	< 0.01	113%	70%	130%	103%	90%	110%			
Chromium	9526371		32	34	7.1%	< 1	106%	70%	130%	102%	90%	110%			
Cobalt	9526371		9.6	9.7	1.8%	< 0.1	117%	70%	130%	108%	90%	110%			
Copper	9526371		24.4	25.2	3.1%	< 0.2	99%	70%	130%	102%	90%	110%			
Lead	9526371		3.2	3.3	2.0%	< 0.1	117%	70%	130%	107%	90%	110%			
Mercury	9526371		0.03	0.03	NA	< 0.01	108%	70%	130%	97%	90%	110%			
Molybdenum	9526371		0.3	0.4	NA	< 0.2	104%	70%	130%	105%	90%	110%			
Nickel	9526371		22.5	22.5	0.0%	< 0.5	108%	70%	130%	104%	90%	110%			
Selenium	9526371		0.1	0.2	NA	< 0.1				103%	90%	110%			
Silver	9526371		<0.5	<0.5	NA	< 0.5	128%	70%	130%	105%	90%	110%			
Thallium	9526371		<0.1	<0.1	NA	< 0.1	119%	70%	130%	105%	90%	110%			
Tin	9526371		0.3	0.3	NA	< 0.2	113%	70%	130%	105%	90%	110%			
Uranium	9526371		0.7	0.7	NA	< 0.2	109%	70%	130%	107%	90%	110%			
Vanadium	9526371		54	57	5.8%	< 1	106%	70%	130%	104%	90%	110%			
Zinc	9526371		45	44	0.5%	< 1	108%	70%	130%	105%	90%	110%			
pH 1:2	9526371		8.0	8.0	0.4%		100%	90%	110%	100%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:





Method Summary

CLIENT NAME: TETRA TECH EBA

AGAT WORK ORDER: 18Y380994

PROJECT: ENW.WENW03039-03

ATTENTION TO: Darren Thomas

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Arsenic	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Barium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Beryllium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cadmium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Chromium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cobalt	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Copper	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Lead	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Mercury	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Molybdenum	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Nickel	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Selenium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Silver	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Thallium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Tin	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Uranium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Vanadium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Zinc	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
pH 1:2	INOR-181-6031	BC MOE Lab Manual B (pH, Electrometric, Soil)	PH METER



P: 778.452.4000 • F: 778.452.4074

SEP 4 AM 9:25

Client Project #:

Fax:

EW.WEWW3039.03

Same as above Yes ☒ / No ☐

Fax:

PO/AFE#:

Email:

CCME (Please Specify)

CCME (Please Specify)

Other (Please Specify)

Schedule 3.3 (Please Specify)

CCME (Please Specify)

Other (Please Specify)

 Excel Format Included

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

[illegible]

Samples Received By (Print Name and Sign):

Date/Time

Page 1 of 7

Nº: 032847



P: 778.452.4000 • F: 778.452.4074

Notes:

SEP 4 AM 9:26

Report Information

Client Project #: ENR. WENW 3039.03

Report Information

Email:

Requirements (Please Check)

Schedule 3.3 (Please Specify)

CCME (Please Specify)

Other (Please Specify)

3

Report Format

☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☐ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☐ / No ☐

PO/AFE#:

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	NUMBER OF PRESERVED HAZARDOUS MATERIALS
	18MS16-059	Soil	2018-08-30 11:05		
	18MS16-060		11:20		
	18MS16-061		11:35		
	18MS2-010		13:00		
	18MS2-009		13:15		
	18MS2-011		13:25		
	18MS2-006		13:40		
	18MS2-007		13:50		
	18MS2-008		14:00		
	18MS14-051		14:20		
	18MS14-048		14:30		

[illegible]

Page 3 of 4

Nº: 032849



P: 778.452.4000 • F: 778.452.4074

AGAT Job Number: 18Y380994

SEP 4 PM 9:25

Report Information

Client Project #: ENV-WF1003039-03

Report Information

Requirements (Please Check)

Schedule 3.3 (Please Specify)

CCME (Please Specify)

Other (Please Specify)

Report Format

☐ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☐ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☐ / No ☐

PO/AFE#:

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	Page <u>4</u> of <u>4</u> N°: 032850
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	



P: 778.452.4000 • F: 778.452.4074

SEP 4 AM 9:26

Report Information

Client Project #: ENR. WENR03039-03

Report Information

Email:

Report Format

 Excel Format Included

Requirements (Please Check)

☐ WL-N · ☐ WL-R

Schedule 3.3 (Please Specify)

CCME (Please Specify)

Other (Please Specify) _____

Invoice To

Same as above Yes ☐ / No ☐

PO/AFE#:

[illegible]

Page 4 of 4

N^o.

032850



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech

Courier: ArrM. H. ☒ Prepaid ☐ Collect

Waybill# 28704065876

Branch: EDM GP FN FM RD VAN LYD FSJ EST Other: _____

If multiple sites were submitted at once: Yes ☐ No ☒

Custody Seal Intact: Yes ☐ No ☒ NA

TAT: <24hr 24-48hr 48-72hr Reg Other _____

Cooler Quantity: 3

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes ☐ No ☒

Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Tediator Bag , Residual Chlorine , Chlorophyll* , Chloramines*

Earliest Expiry: _____

Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES ☐ NO ☒ Precaution Taken: _____

Legal Samples: Yes ☐ No ☒

International Samples: Yes ☐ No ☒

Tape Sealed: Yes ☐ No ☒

Coolant Used: Icepack ☐ Bagged Ice ☐ Free Ice ☐ Free Water ☐ None ☒

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 9.1 + 7.3 + 8.6 = 8.4 °C 2 (Bottle/Jar) 9.2 + 8.6 + 9.1 = 8.8 °C

3 (Bottle/Jar) 8.9 + 7.6 + 8.4 = 8.7 °C 4 (Bottle/Jar) _____ °C

5 (Bottle/Jar) _____ °C 6 (Bottle/Jar) _____ °C

7 (Bottle/Jar) _____ °C 8 (Bottle/Jar) _____ °C

9 (Bottle/Jar) _____ °C 10 (Bottle/Jar) _____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____

Samples Damaged: Yes ☐ No ☒ If YES why? _____

No Bubble Wrap ☐ Frozen ☐ Courier ☐

Other: _____

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☒

Whom spoken to: _____ Date/Time: _____

CPM Initial _____

General Comments: _____

Date issued: October 05, 2015
Document ID: SR-9505.003

* Subcontracted Analysis (See CPM)



SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 18Y380994

RECEIVING BASICS:

Received From: NOVEX

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 3 Containers: B2

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Aug. 29, 2018

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 3 + 0 + 1 = 2 °C (2) 0 + 0 + 0 = 0 °C (3) 1 + 2 + 5 = 3 °C (4) ____ + ____ + ____ = ____ °C

Was ice or ice pack present: Yes No

Integrity Issues: 2°C

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

Sample 18M514 - DS2 received but are not listed on CoC

STREAM SEDIMENTS CERTIFICATES

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Stephan Klump

PROJECT: ENW.WENW03039-03.002

AGAT WORK ORDER: 18Y379900

SOIL ANALYSIS REVIEWED BY: Clarissa Muljono, Report Writer

DATE REPORTED: Sep 07, 2018

PAGES (INCLUDING COVER): 22

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 2°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y379900

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

		SAMPLE DESCRIPTION:		18SED1-01	18SED1-02	18SED1-03	18SED1-04	18SED1-05	18SED1-06	18SED1-07	18SED2-01
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-08-25	2018-08-25	2018-08-25	2018-08-27	2018-08-25	2018-08-26	2018-08-26	2018-08-25
Parameter	Unit	G / S	RDL	9510924	9510932	9510933	9510934	9510935	9510936	9510937	9510938
Antimony	µg/g	0.1	1.2	0.7	0.8	0.6	0.5	0.4	0.4	0.7	0.7
Arsenic	µg/g	0.1	64.5	25.5	37.6	41.7	60.5	46.8	62.0	9.8	9.8
Barium	µg/g	0.5	616	520	377	164	113	62.8	92.3	375	375
Beryllium	µg/g	0.1	1.5	0.9	1.2	1.1	1.2	0.7	1.0	1.5	1.5
Cadmium	µg/g	0.01	1.79	0.89	1.78	0.93	0.83	0.44	0.60	3.47	3.47
Chromium	µg/g	1	23	13	17	18	21	13	16	16	16
Cobalt	µg/g	0.1	19.1	9.3	14.7	14.7	15.8	9.8	13.1	19.1	19.1
Copper	µg/g	0.2	328	282	547	251	166	79.3	100	593	593
Lead	µg/g	0.1	19.7	15.7	13.5	13.2	15.6	10.7	13.7	13.9	13.9
Mercury	µg/g	0.01	3.02	0.76	3.04	1.51	0.91	0.24	0.47	3.39	3.39
Molybdenum	µg/g	0.2	5.6	2.4	3.9	3.6	3.4	3.7	3.5	5.5	5.5
Nickel	µg/g	0.5	31.8	16.7	19.4	22.2	26.3	18.7	23.0	19.9	19.9
Selenium	µg/g	0.1	1.6	0.7	1.4	1.0	1.2	0.7	0.8	2.2	2.2
Silver	µg/g	0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	0.1	0.4	0.2	0.3	0.3	0.3	0.2	0.3	0.4	0.4
Tin	µg/g	0.2	3.2	1.5	3.3	2.5	2.5	1.8	2.0	4.1	4.1
Uranium	µg/g	0.2	2.9	1.6	2.3	2.3	2.3	2.0	2.1	2.9	2.9
Vanadium	µg/g	1	50	25	32	34	38	28	33	31	31
Zinc	µg/g	1	251	126	209	136	125	61	80	375	375
pH 1:2	pH units	0.1	7.6	7.9	7.7	7.8	7.8	8.0	7.9	7.8	7.8

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y379900

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

		SAMPLE DESCRIPTION:		18SED2-02	18SED2-03	18SED3-01	18SED3-02	18SED4-01	18SED4-02	18SED4-04	18SED5-01
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-26
Parameter	Unit	G / S	RDL	9510939	9510941	9510942	9510955	9510956	9510957	9510958	9510959
Antimony	µg/g	0.1	0.7	0.7	0.9	0.8	4.8	1.3	1.3	1.6	
Arsenic	µg/g	0.1	13.5	7.1	20.5	26.6	16.2	18.1	17.1	82.3	
Barium	µg/g	0.5	193	196	189	263	702	653	754	1120	
Beryllium	µg/g	0.1	2.2	1.5	2.5	4.0	0.8	1.9	1.4	1.3	
Cadmium	µg/g	0.01	3.07	3.10	4.18	5.19	1.46	3.36	3.00	1.48	
Chromium	µg/g	1	26	15	16	16	13	14	17	22	
Cobalt	µg/g	0.1	23.0	16.3	16.5	23.9	10.7	19.4	14.5	15.0	
Copper	µg/g	0.2	584	628	476	712	143	635	489	41.8	
Lead	µg/g	0.1	18.4	13.2	12.9	14.6	10.3	12.8	11.2	20.6	
Mercury	µg/g	0.01	3.57	3.17	6.99	9.49	2.00	8.49	2.77	0.25	
Molybdenum	µg/g	0.2	6.2	5.1	9.2	11.9	5.5	6.3	3.5	2.6	
Nickel	µg/g	0.5	24.2	13.4	17.9	19.7	20.4	20.3	26.3	32.0	
Selenium	µg/g	0.1	1.9	2.2	1.8	1.9	0.8	1.6	1.4	0.8	
Silver	µg/g	0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	
Thallium	µg/g	0.1	0.5	0.4	0.4	0.5	0.2	0.4	0.3	0.3	
Tin	µg/g	0.2	5.0	4.2	3.7	4.2	1.3	3.5	3.3	2.5	
Uranium	µg/g	0.2	2.8	3.2	3.9	4.2	2.7	3.6	2.2	5.6	
Vanadium	µg/g	1	33	25	23	25	41	30	35	40	
Zinc	µg/g	1	645	312	669	875	289	573	360	192	
pH 1:2	pH units	0.1	7.8	7.8	7.7	7.7	8.0	7.8	7.7	7.8	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y379900

PROJECT: ENW.WENW03039-03.002

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Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

		SAMPLE DESCRIPTION:		18SED5-02	18SED5-03	18SED5-04	18SED5-05	18SED5-06	18SED6-01	18SED6-02	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:		2018-08-26	2018-08-26	2018-08-26	2018-08-26	2018-08-26	2018-08-27	2018-08-27	
Parameter	Unit	G / S	RDL	9510960	9510961	9510962	9510963	9510964	9510965	RDL	9510966
Antimony	µg/g		0.1	0.5	0.5	0.9	0.5	0.4	1.9	0.1	5.0
Arsenic	µg/g		0.1	35.4	85.5	130	95.9	45.6	201	0.1	25.7
Barium	µg/g		0.5	285	111	203	97.3	98.0	266	2.5	5860
Beryllium	µg/g		0.1	0.9	3.2	3.9	3.5	1.9	3.1	0.1	0.5
Cadmium	µg/g		0.01	1.12	2.75	1.78	1.03	1.09	3.50	0.01	2.86
Chromium	µg/g		1	19	44	34	34	20	21	1	22
Cobalt	µg/g		0.1	10.4	25.3	21.3	17.3	11.1	41.1	0.1	14.9
Copper	µg/g		0.2	63.1	120	122	92.3	70.2	36.7	0.2	49.0
Lead	µg/g		0.1	13.0	24.8	76.7	24.1	20.1	47.9	0.1	18.2
Mercury	µg/g		0.01	0.47	0.27	0.40	0.31	0.40	0.71	0.01	0.12
Molybdenum	µg/g		0.2	1.2	1.9	2.6	2.4	2.4	4.2	0.2	7.7
Nickel	µg/g		0.5	18.9	43.8	37.3	31.1	16.5	244	0.5	63.5
Selenium	µg/g		0.1	0.9	0.8	1.0	0.6	0.8	4.5	0.1	1.4
Silver	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Thallium	µg/g		0.1	0.2	0.5	0.6	0.5	0.3	0.4	0.1	0.4
Tin	µg/g		0.2	1.4	4.0	3.3	4.1	1.7	0.7	0.2	0.4
Uranium	µg/g		0.2	3.1	29.0	13.9	11.8	13.1	40.6	0.2	2.6
Vanadium	µg/g		1	25	57	56	43	30	39	1	177
Zinc	µg/g		1	109	351	276	211	114	336	1	336
pH 1:2	pH units		0.1	7.8	7.4	7.6	7.2	7.5	6.7	0.1	7.8

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y379900

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

		SAMPLE DESCRIPTION:		18SED6-04	18SED6-05	18SED6-06	18SED6-07	18SED6-08	18SED6-09	18SED6-10	18SED6-11
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-08-27	2018-08-27	2018-08-27	2018-08-27	2018-08-27	2018-08-27	2018-08-27	2018-08-27
Parameter	Unit	G / S	RDL	9510967	9510968	9510969	9510970	9510971	9510972	9510973	9510974
Antimony	µg/g	0.1	2.4	2.1	1.6	1.4	1.4	1.2	3.0	1.8	
Arsenic	µg/g	0.1	127	244	169	148	184	153	203	131	
Barium	µg/g	0.5	943	99.1	111	33.2	30.4	23.9	37.5	24.1	
Beryllium	µg/g	0.1	1.2	2.4	1.9	1.6	1.7	1.3	1.7	1.5	
Cadmium	µg/g	0.01	1.39	1.91	1.60	1.30	1.21	1.10	1.50	1.22	
Chromium	µg/g	1	23	29	26	27	26	24	28	27	
Cobalt	µg/g	0.1	24.2	42.2	32.6	28.7	32.4	27.8	31.2	31.9	
Copper	µg/g	0.2	35.6	46.5	36.0	30.3	30.2	24.5	28.0	25.7	
Lead	µg/g	0.1	47.8	66.4	53.2	43.6	67.7	32.7	54.7	50.1	
Mercury	µg/g	0.01	0.10	0.05	0.06	0.09	0.02	0.03	0.01	0.15	
Molybdenum	µg/g	0.2	2.2	0.9	0.8	0.5	0.4	0.3	0.5	0.5	
Nickel	µg/g	0.5	58.5	87.0	75.4	80.7	69.4	49.8	81.8	62.3	
Selenium	µg/g	0.1	0.8	0.9	0.6	0.6	0.3	0.4	0.4	0.6	
Silver	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	µg/g	0.1	0.2	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Tin	µg/g	0.2	0.4	0.7	0.6	0.4	0.4	0.3	0.4	0.4	
Uranium	µg/g	0.2	2.4	4.0	3.5	2.8	2.5	1.8	3.4	1.9	
Vanadium	µg/g	1	35	24	21	17	16	15	18	16	
Zinc	µg/g	1	218	269	240	216	214	170	243	194	
pH 1:2	pH units	0.1	7.4	7.2	7.4	7.2	7.2	7.1	7.2	7.2	

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y379900

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

		SAMPLE DESCRIPTION:		18SED7-01	18SED7-02	18SED7-03	18SED7-04	18SED8-01	18SED8-02	18SED8-03	18SED8-04
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-08-27	2018-08-24	2018-08-24	2018-08-24	2018-08-27	2018-08-27	2018-08-27	2018-08-27
Parameter	Unit	G / S	RDL	9510975	9510976	9510978	9510979	9510980	9510981	9510982	9510983
Antimony	µg/g	0.1	0.3	0.4	0.4	0.3	0.3	0.3	<0.1	<0.1	<0.1
Arsenic	µg/g	0.1	121	132	143	116	16.0	2.8	2.8	1.9	1.9
Barium	µg/g	0.5	180	173	194	163	140	29.7	23.5	13.6	13.6
Beryllium	µg/g	0.1	1.3	1.8	1.9	1.6	0.4	<0.1	<0.1	<0.1	<0.1
Cadmium	µg/g	0.01	0.68	0.90	1.07	0.68	0.36	0.08	0.07	0.05	0.05
Chromium	µg/g	1	19	21	22	20	8	3	2	1	1
Cobalt	µg/g	0.1	20.4	24.3	28.3	21.5	6.2	1.9	1.6	1.3	1.3
Copper	µg/g	0.2	33.4	41.5	47.6	35.1	114	4.1	3.3	2.2	2.2
Lead	µg/g	0.1	19.2	24.5	26.0	21.9	5.5	1.8	1.6	1.0	1.0
Mercury	µg/g	0.01	0.13	0.17	0.18	0.18	1.20	0.09	0.15	0.02	0.02
Molybdenum	µg/g	0.2	1.1	1.3	1.4	1.2	0.5	<0.2	<0.2	<0.2	<0.2
Nickel	µg/g	0.5	36.1	45.9	52.0	38.6	11.6	3.7	3.8	2.7	2.7
Selenium	µg/g	0.1	0.8	0.9	1.4	0.8	1.1	0.6	0.6	0.4	0.4
Silver	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	0.1	0.4	0.5	0.6	0.5	0.1	<0.1	<0.1	<0.1	<0.1
Tin	µg/g	0.2	2.0	2.9	2.9	2.4	0.5	<0.2	<0.2	<0.2	<0.2
Uranium	µg/g	0.2	9.8	15.4	21.3	11.3	0.7	0.3	0.3	0.3	0.3
Vanadium	µg/g	1	28	33	33	29	11	4	4	2	2
Zinc	µg/g	1	95	127	119	101	46	11	10	7	7
pH 1:2	pH units	0.1	6.8	7.0	7.0	7.4	7.5	8.2	8.4	8.7	8.7

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y379900

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

		SAMPLE DESCRIPTION:		18SED9-01	18SED10-01	18SED10-02	18SED10-03	18SED10-04	18SED10-05	DUP-SED-01	DUP-SED-02
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2018-08-25	2018-08-24	2018-08-24	2018-08-25	2018-08-25	2018-08-25	2018-08-25	2018-08-25
Parameter	Unit	G / S	RDL	9510984	9510985	9510986	9510987	9510989	9510990	9510991	9510992
Antimony	µg/g	0.1	1.7	1.6	0.8	0.2	0.1	0.5	1.3	0.7	
Arsenic	µg/g	0.1	25.7	16.2	8.2	4.8	6.8	17.9	9.9		
Barium	µg/g	0.5	800	952	234	45.5	25.1	126	647	349	
Beryllium	µg/g	0.1	1.3	0.8	1.0	0.3	0.2	1.7	1.8	1.7	
Cadmium	µg/g	0.01	3.08	2.11	8.35	0.29	0.21	0.65	3.60	3.06	
Chromium	µg/g	1	21	21	8	5	4	9	13	16	
Cobalt	µg/g	0.1	31.9	12.1	8.7	4.0	3.5	14.0	19.5	19.6	
Copper	µg/g	0.2	244	299	195	39.7	18.7	462	586	620	
Lead	µg/g	0.1	19.7	15.3	6.8	3.3	3.0	4.2	12.3	13.1	
Mercury	µg/g	0.01	4.65	1.23	1.54	0.80	0.43	2.52	8.22	4.51	
Molybdenum	µg/g	0.2	3.5	2.7	4.4	0.4	0.2	1.7	5.6	5.6	
Nickel	µg/g	0.5	52.4	40.6	25.7	7.4	8.0	11.5	20.4	21.3	
Selenium	µg/g	0.1	2.8	2.8	3.2	0.6	0.6	1.7	2.1	2.0	
Silver	µg/g	0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	µg/g	0.1	0.4	0.3	0.8	<0.1	<0.1	0.2	0.4	0.4	
Tin	µg/g	0.2	1.6	0.9	1.6	0.3	<0.2	2.1	3.1	3.6	
Uranium	µg/g	0.2	4.8	3.9	7.6	1.1	0.7	2.3	3.8	4.4	
Vanadium	µg/g	1	37	49	16	7	6	13	28	27	
Zinc	µg/g	1	690	204	193	44	42	104	597	413	
pH 1:2	pH units	0.1	7.2	7.4	7.3	8.0	8.2	7.7	7.8	7.8	

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AGAT WORK ORDER: 18Y379900

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

CCME Metals in Soil

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

Parameter	Unit	SAMPLE DESCRIPTION:		DUP-SED-03	DUP-SED-04
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2018-08-27	2018-08-27
		G / S	RDL	9510994	9510995
Antimony	µg/g		0.1	1.4	<0.1
Arsenic	µg/g		0.1	143	2.6
Barium	µg/g		0.5	24.5	18.4
Beryllium	µg/g		0.1	1.3	<0.1
Cadmium	µg/g		0.01	1.14	0.07
Chromium	µg/g		1	27	1
Cobalt	µg/g		0.1	28.7	1.5
Copper	µg/g		0.2	28.0	2.7
Lead	µg/g		0.1	42.6	1.5
Mercury	µg/g		0.01	0.18	0.10
Molybdenum	µg/g		0.2	0.5	<0.2
Nickel	µg/g		0.5	73.7	3.7
Selenium	µg/g		0.1	0.4	0.5
Silver	µg/g		0.5	<0.5	<0.5
Thallium	µg/g		0.1	<0.1	<0.1
Tin	µg/g		0.2	0.3	<0.2
Uranium	µg/g		0.2	2.2	0.3
Vanadium	µg/g		1	16	3
Zinc	µg/g		1	211	9
pH 1:2	pH units		0.1	7.4	8.5

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9510924-9510964 Results are based on the dry weight of the sample

9510965 Results are based on the dry weight of the sample.

Due to sample matrix, pH could not be analyzed at the 1:2 dilution specified in the reference method.

9510966-9510985 Results are based on the dry weight of the sample

9510986 Results are based on the dry weight of the sample

Due to sample matrix, pH could not be analyzed at the 1:2 dilution specified in the reference method.

9510987-9510995 Results are based on the dry weight of the sample

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Certificate of Analysis

AGAT WORK ORDER: 18Y379900

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Cyanide in Soil (WAD and SAD)

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

		SAMPLE DESCRIPTION: 18SED1-01				18SED1-02				18SED1-03		18SED1-04		18SED1-05	
		SAMPLE TYPE: Soil				Soil				Soil		Soil		Soil	
		DATE SAMPLED: 2018-08-25				2018-08-25				2018-08-25		2018-08-27		2018-08-25	
Parameter	Unit	G / S	RDL	9510924	RDL	9510932	RDL	9510933	9510934	9510935					
Cyanide (SAD)	µg/g		2.5	<2.5	0.5	<0.5	2.5	<2.5	<2.5	<2.5					
Cyanide (WAD)	µg/g		2.5	<2.5	0.5	<0.5	2.5	<2.5	<2.5	<2.5					
		SAMPLE DESCRIPTION: 18SED1-06				18SED1-07		18SED2-01		18SED2-02		18SED2-03		18SED3-01	
		SAMPLE TYPE: Soil				Soil		Soil		Soil		Soil		Soil	
		DATE SAMPLED: 2018-08-26				2018-08-26		2018-08-25		2018-08-25		2018-08-25		2018-08-25	
Parameter	Unit	G / S	RDL	9510936	9510937	9510938	9510939	9510941	9510942	9510955	9510956				
Cyanide (SAD)	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				
Cyanide (WAD)	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5				
		SAMPLE DESCRIPTION: 18SED4-02				18SED4-04		18SED5-01		18SED5-02		18SED5-03			
		SAMPLE TYPE: Soil				Soil		Soil		Soil		Soil			
		DATE SAMPLED: 2018-08-25				2018-08-25		2018-08-26		2018-08-26		2018-08-26			
Parameter	Unit	G / S	RDL	9510957	9510958	RDL	9510959	RDL	9510960	RDL	9510961				
Cyanide (SAD)	µg/g		2.5	<2.5	<2.5	10	<10	5	<5	10	<10				
Cyanide (WAD)	µg/g		2.5	<2.5	<2.5	10	<10	5	<5	10	<10				
		SAMPLE DESCRIPTION: 18SED5-04				18SED5-05		18SED5-06		18SED6-01		18SED6-02			
		SAMPLE TYPE: Soil				Soil		Soil		Soil		Soil			
		DATE SAMPLED: 2018-08-26				2018-08-26		2018-08-26		2018-08-27		2018-08-27			
Parameter	Unit	G / S	RDL	9510962	9510963	9510964	RDL	9510965	RDL	9510966					
Cyanide (SAD)	µg/g		10	<10	<10	<10	5	<5	0.5	<0.5					
Cyanide (WAD)	µg/g		10	<10	<10	<10	5	<5	0.5	<0.5					
		SAMPLE DESCRIPTION: 18SED6-04				18SED6-05		18SED6-06		18SED6-07		18SED6-08			
		SAMPLE TYPE: Soil				Soil		Soil		Soil		Soil			
		DATE SAMPLED: 2018-08-27				2018-08-27		2018-08-27		2018-08-27		2018-08-27			
Parameter	Unit	G / S	RDL	9510967	RDL	9510968	RDL	9510969	RDL	9510970	9510971				
Cyanide (SAD)	µg/g		2.5	<2.5	10	<10	2.5	<2.5	0.5	<0.5	<0.5				
Cyanide (WAD)	µg/g		2.5	<2.5	10	<10	2.5	<2.5	0.5	<0.5	<0.5				

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y379900

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
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CANADA V5J 0B6
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Cyanide in Soil (WAD and SAD)

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

		SAMPLE DESCRIPTION: 18SED6-09				18SED6-10	18SED6-11	18SED7-01		18SED7-02	
		SAMPLE TYPE: Soil				Soil	Soil	Soil		Soil	
		DATE SAMPLED: 2018-08-27				2018-08-27	2018-08-27	2018-08-27		2018-08-24	
Parameter	Unit	G / S	RDL	9510972	RDL	9510973	9510974	RDL	9510975	9510976	
Cyanide (SAD)	µg/g		2.5	<2.5	0.5	<0.5	<0.5	5	<5	<5	
Cyanide (WAD)	µg/g		2.5	<2.5	0.5	<0.5	<0.5	5	<5	<5	
		SAMPLE DESCRIPTION: 18SED7-03				18SED7-04	18SED8-01		18SED8-02	18SED8-03	
		SAMPLE TYPE: Soil				Soil	Soil		Soil	Soil	
		DATE SAMPLED: 2018-08-24				2018-08-24	2018-08-27		2018-08-27	2018-08-27	
Parameter	Unit	G / S	RDL	9510978	RDL	9510979	RDL	9510980	RDL	9510981	9510982
Cyanide (SAD)	µg/g		10	<10	2.5	<2.5	10	<10	0.5	<0.5	<0.5
Cyanide (WAD)	µg/g		10	<10	2.5	<2.5	10	<10	0.5	<0.5	<0.5
		SAMPLE DESCRIPTION: 18SED8-04				18SED9-01	18SED10-01	18SED10-02	18SED10-03		18SED10-04
		SAMPLE TYPE: Soil				Soil	Soil	Soil	Soil		Soil
		DATE SAMPLED: 2018-08-27				2018-08-25	2018-08-24	2018-08-24	2018-08-25		2018-08-25
Parameter	Unit	G / S	RDL	9510983	RDL	9510984	9510985	9510986	RDL	9510987	9510989
Cyanide (SAD)	µg/g		0.5	<0.5	5	<5	<5	<5	2.5	<2.5	<2.5
Cyanide (WAD)	µg/g		0.5	<0.5	5	<5	<5	<5	2.5	<2.5	<2.5
		SAMPLE DESCRIPTION: 18SED10-05				DUP-SED-01	DUP-SED-02		DUP-SED-03	DUP-SED-04	
		SAMPLE TYPE: Soil				Soil	Soil		Soil	Soil	
		DATE SAMPLED: 2018-08-25				2018-08-25	2018-08-25		2018-08-27	2018-08-27	
Parameter	Unit	G / S	RDL	9510990	RDL	9510991	RDL	9510992	9510994	9510995	
Cyanide (SAD)	µg/g		0.5	<0.5	2.5	<2.5	0.5	<0.5	<0.5	<0.5	
Cyanide (WAD)	µg/g		0.5	<0.5	2.5	<2.5	0.5	<0.5	<0.5	<0.5	

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Certificate of Analysis

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Cyanide in Soil (WAD and SAD)

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-07

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9510924 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.
9510933-9510935 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.
9510957-9510965 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.
9510967-9510969 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.
9510972 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.
9510975-9510980 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.
9510984-9510989 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.
9510991 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379900
ATTENTION TO: Stephan Klump
SAMPLED BY:

Soil Analysis															
RPT Date: Sep 07, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME Metals in Soil

Antimony	9510924		1.2	1.1	7.5%	< 0.1	112%	70%	130%	103%	90%	110%			
Arsenic	9510924		64.5	54.7	16.4%	< 0.1	129%	70%	130%	91%	90%	110%			
Barium	9510924		616	589	4.4%	< 0.5	106%	70%	130%	93%	90%	110%			
Beryllium	9510924		1.5	1.4	5.1%	< 0.1	98%	70%	130%	100%	90%	110%			
Cadmium	9510924		1.79	1.79	0.1%	< 0.01	112%	70%	130%	96%	90%	110%			
Chromium	9510924		23	21	10.7%	< 1	104%	70%	130%	99%	90%	110%			
Cobalt	9510924		19.1	17.8	7.3%	< 0.1	111%	70%	130%	99%	90%	110%			
Copper	9510924		328	303	7.8%	< 0.2	102%	70%	130%	98%	90%	110%			
Lead	9510924		19.7	19.1	3.2%	< 0.1	103%	70%	130%	103%	90%	110%			
Mercury	9510924		3.02	2.97	1.9%	< 0.01	97%	70%	130%	93%	90%	110%			
Molybdenum	9510924		5.6	4.9	14.6%	< 0.2	101%	70%	130%	99%	90%	110%			
Nickel	9510924		31.8	30.5	4.2%	< 0.5	104%	70%	130%	96%	90%	110%			
Selenium	9510924		1.6	1.7	4.2%	< 0.1				103%	90%	110%			
Silver	9510924		<0.5	<0.5	NA	< 0.5	111%	70%	130%	91%	90%	110%			
Thallium	9510924		0.4	0.4	NA	< 0.1	121%	70%	130%	101%	90%	110%			
Tin	9510924		3.2	3.0	5.8%	< 0.2	105%	70%	130%	98%	90%	110%			
Uranium	9510924		2.9	2.9	0.2%	< 0.2	105%	70%	130%	103%	90%	110%			
Vanadium	9510924		50	46	8.2%	< 1	110%	70%	130%	100%	90%	110%			
Zinc	9510924		251	241	4.3%	< 1	105%	70%	130%	91%	90%	110%			
pH 1:2	9510924		7.6	7.6	0.0%		99%	90%	110%	99%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide in Soil (WAD and SAD)

Cyanide (SAD)	9510661		< 0.5	< 0.5	NA	< 0.5	82%	70%	130%	98%	90%	110%	108%	80%	120%
Cyanide (WAD)	9510661		< 0.5	< 0.5	NA	< 0.5				96%	90%	110%	102%	80%	120%

CCME Metals in Soil

Antimony	9510942		0.9	0.9	1.7%	< 0.1	125%	70%	130%	109%	90%	110%			
Arsenic	9510942		20.5	20.5	0.2%	< 0.1	115%	70%	130%	96%	90%	110%			
Barium	9510942		189	192	1.7%	< 0.5	117%	70%	130%	102%	90%	110%			
Beryllium	9510942		2.5	2.5	1.3%	< 0.1	123%	70%	130%	103%	90%	110%			
Cadmium	9510942		4.18	4.17	0.3%	< 0.01	114%	70%	130%	96%	90%	110%			
Chromium	9510942		16	16	1.1%	< 1	115%	70%	130%	98%	90%	110%			
Cobalt	9510942		16.5	16.6	0.6%	< 0.1	123%	70%	130%	102%	90%	110%			
Copper	9510942		476	482	1.2%	< 0.2	108%	70%	130%	95%	90%	110%			
Lead	9510942		12.9	13.2	2.7%	< 0.1	119%	70%	130%	103%	90%	110%			
Mercury	9510942		6.99	6.91	1.1%	< 0.01	120%	70%	130%	100%	90%	110%			
Molybdenum	9510942		9.2	9.1	0.7%	< 0.2	122%	70%	130%	96%	90%	110%			
Nickel	9510942		17.9	17.7	1.2%	< 0.5	114%	70%	130%	94%	90%	110%			
Selenium	9510942		1.8	1.5	18.8%	< 0.1				105%	90%	110%			

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379900
ATTENTION TO: Stephan Klump
SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Sep 07, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Silver	9510942		< 0.5	< 0.5	NA	< 0.5	128%	70%	130%	94%	90%	110%			
Thallium	9510942		0.4	0.4	NA	< 0.1	129%	70%	130%	98%	90%	110%			
Tin	9510942		3.7	3.6	2.4%	< 0.2	122%	70%	130%	98%	90%	110%			
Uranium	9510942		3.9	4.0	3.3%	< 0.2	127%	70%	130%	108%	90%	110%			
Vanadium	9510942		23	22	5.3%	< 1	119%	70%	130%	93%	90%	110%			
Zinc	9510942		669	662	1.1%	< 1	118%	70%	130%	97%	90%	110%			
pH 1:2	9510942		7.7	7.7	0.4%		100%	90%	110%	100%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME Metals in Soil

Antimony	9510975		0.3	0.4	NA	< 0.1	112%	70%	130%	105%	90%	110%			
Arsenic	9510975		121	139	14.0%	< 0.1	104%	70%	130%	90%	90%	110%			
Barium	9510975		180	208	14.0%	< 0.5	97%	70%	130%	102%	90%	110%			
Beryllium	9510975		1.3	1.5	15.3%	< 0.1	93%	70%	130%	96%	90%	110%			
Cadmium	9510975		0.68	0.77	13.6%	< 0.01	116%	70%	130%	98%	90%	110%			
Chromium	9510975		19	20	6.7%	< 1	103%	70%	130%	97%	90%	110%			
Cobalt	9510975		20.4	22.4	9.6%	< 0.1	107%	70%	130%	102%	90%	110%			
Copper	9510975		33.4	37.5	11.7%	< 0.2	95%	70%	130%	96%	90%	110%			
Lead	9510975		19.2	21.7	11.9%	< 0.1	98%	70%	130%	99%	90%	110%			
Mercury	9510975		0.13	0.16	16.5%	< 0.01	99%	70%	130%	99%	90%	110%			
Molybdenum	9510975		1.1	1.4	21.0%	< 0.2	100%	70%	130%	100%	90%	110%			
Nickel	9510975		36.1	41.6	14.2%	< 0.5	107%	70%	130%	101%	90%	110%			
Selenium	9510975		0.8	1.0	27.4%	< 0.1				103%	90%	110%			
Silver	9510975		<0.5	<0.5	NA	< 0.5	116%	70%	130%	93%	90%	110%			
Thallium	9510975		0.4	0.4	NA	< 0.1	103%	70%	130%	98%	90%	110%			
Tin	9510975		2.0	2.3	13.6%	< 0.2	97%	70%	130%	95%	90%	110%			
Uranium	9510975		9.8	10.9	10.6%	< 0.2	96%	70%	130%	99%	90%	110%			
Vanadium	9510975		28	31	11.9%	< 1	104%	70%	130%	95%	90%	110%			
Zinc	9510975		95	103	8.7%	< 1	102%	70%	130%	98%	90%	110%			
pH 1:2	9510975		6.8	6.8	0.1%		99%	90%	110%	99%	95%	105%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide in Soil (WAD and SAD)

Cyanide (SAD)	9510956		< 0.5	< 0.5	NA	< 0.5	75%	70%	130%	93%	90%	110%	106%	80%	120%
Cyanide (WAD)	9510956		< 0.5	< 0.5	NA	< 0.5				103%	90%	110%	90%	80%	120%

Cyanide in Soil (WAD and SAD)

Cyanide (SAD)	9510976		<5	<5	NA	< 0.5	73%	70%	130%	100%	90%	110%	108%	80%	120%
Cyanide (WAD)	9510976		<5	<5	NA	< 0.5				110%	90%	110%	120%	80%	120%



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379900
ATTENTION TO: Stephan Klump
SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Sep 07, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

Certified By: _____

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379900
ATTENTION TO: Stephan Klump
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Arsenic	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Barium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Beryllium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cadmium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Chromium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Cobalt	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Copper	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Lead	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Mercury	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Molybdenum	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Nickel	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Selenium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Silver	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Thallium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Tin	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Uranium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Vanadium	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
Zinc	MET-181-6102, LAB-181-4008	BC MOE Lab Manual C (SALM) and EPA 6020A	ICP-MS
pH 1:2	INOR-181-6031	BC MOE Lab Manual B (pH, Electrometric, Soil)	PH METER
Cyanide (SAD)	LAB-181-4013, INOR-181-6010	Modified from EPA 9013A and EPA 335.3	CONTINUOUS FLOW ANALYZER
Cyanide (WAD)	LAB-181-4013, INOR-181-6010	Modified from EPA 9013A and EPA 335.3	CONTINUOUS FLOW ANALYZER



P: 778.452.4000 • F: 778.452.4074

Aug 30. 10.51

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: (867) 668-3068 Fax: _____
LSD: _____
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: stephan.klump@tetrattech.com

2. Name: Tania Perzoff
Email: Tania.Perzoff@tetrattech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
 Contact: _____
 Address: _____

 Phone: _____ Fax: _____
 PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) Sediment Freshwater

Other (Please Specify)

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	Total M	Total M	WAD+	pH												NUMBER C	PRESERVE	HAZARDOU	Hold for: r
9510966	18SED6-02	SOIL	10:20 27/08/18		☒	☒	☒	☒												2	N	N	
					☒	☒	☒	☒												2	N	N	
67	18SED6-04	SOIL	09:45 27/08/18		☒	☒	☒	☒												2	N	N	
68	18SED6-05	SOIL	08:55 27/08/18		☒	☒	☒	☒												2	N	N	
69	18SED6-06	SOIL	08:45 27/08/18		☒	☒	☒	☒												2	N	N	
70	18SED6-07	SOIL	08:20 27/08/18		☒	☒	☒	☒												2	N	N	
71	18SED6-08	SOIL	07:30 27/08/18		☒	☒	☒	☒												2	N	N	
72	18SED6-09	SOIL	16:40 27/08/18		☒	☒	☒	☒												2	N	N	
73	18SED6-10	SOIL	16:20 27/08/18		☒	☒	☒	☒												2	N	N	
74	18SED6-11	SOIL	16:10 27/08/18		☒	☒	☒	☒												2	N	N	
75	18SED7-01	SOIL	15:00 27/08/18		☒	☒	☒	☒												2	N	N	

Samples Relinquished By (Print Name and Sign):

Cole Fischer

Samples Relinquished By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023 10:00	Room 101	Meeting with Mr. Smith	Discussed project progress
10/10/2023 14:30	Room 202	Training session	Completed module 3
10/10/2023 16:00	Room 101	Meeting with Mr. Jones	Discussed budget issues
10/10/2023 18:00	Room 303	Dinner with team	Relaxing after a long day
10/10/2023 20:00	Room 101	Meeting with Mr. Brown	Discussed future plans

29/08/1 08:00

Date/Time

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date/Time

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Page ____ of ____

V116174

Laboratory Use Only

Arrival Temperature: 2°C
AGAT Job Number: 1843799

Notes:

Aug 30 10:5

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: (867) 668-3068 Fax: _____
LSD: _____
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name:	Stephan Klump
Email:	stephan.klump@tetrattech.com
2. Name:	Tania Perzoff
Email:	Tania.Perzoff@tetrattech.com

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days
Rush TAT ☐ Day 2 - 100%
☐ Day 3 - 50%
☐ Day 4 - 25%

Date Required:

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ BC CSR - Water

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) Sediment Freshwater

Other (Please Specify)

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	Total M	Total M	WAD+	pH													NUMBER C	PRESERVE	HAZARDOL	Hold for:
9510976	18SED7-02	SOIL	15:30 24/08/18		☒	☒	☒	☒													2	N	N	
78	18SED7-03	SOIL	16:00 24/08/18		☒	☒	☒	☒													2	N	N	
79	18SED7-04	SOIL	16:15 24/08/18		☒	☒	☒	☒													2	N	N	
80	18SED8-01	SOIL	11:03 27/08/18		☒	☒	☒	☒													2	N	N	
81	18SED8-02	SOIL	11:30 27/08/18		☒	☒	☒	☒													2	N	N	
82	18SED8-03	SOIL	11:10 27/08/18		☒	☒	☒	☒													2	N	N	
83	18SED8-04	SOIL	11:00 27/08/18		☒	☒	☒	☒													2	N	N	
84	18SED9-01	SOIL	11:15 25/08/18		☒	☒	☒	☒													2	N	N	
85	18SED10-01	SOIL	17:40 24/08/18		☒	☒	☒	☒													2	N	N	
86	18SED10-02	SOIL	17:30 24/08/18		☒	☒	☒	☒													2	N	N	
87	18SED10-03	SOIL	11:20 25/08/18		☒	☒	☒	☒													2	N	N	

Samples Relinquished By (Print Name and Sign):

Cole Fischer

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Date/Time	Location	Activity	Remarks
10/10/2023 10:00	Room 101	Meeting with Mr. Smith	Discussed project progress
10/10/2023 14:30	Office	Writing report	Completed section 2
10/11/2023 09:00	Room 102	Meeting with Ms. Jones	Discussed budget
10/11/2023 11:00	Office	Reviewing documents	Found errors in section 3
10/11/2023 15:00	Room 101	Meeting with Mr. Smith	Discussed corrections
10/12/2023 08:30	Office	Writing report	Completed section 4
10/12/2023 13:00	Room 102	Meeting with Ms. Jones	Discussed final review
10/12/2023 16:00	Office	Reviewing documents	Final check completed

29/08/1 08:00

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Date/Time

Samples Received By (Print Name and Sign)

Samples Received By (Print Name and Sign):	

Samples Received By (Print Name and Sign) _____	

Date/Time	Location	Activity	Remarks
10/10/2023 10:00	...	...	...

Date/Time	Location	Activity	Remarks
10/10/2019 10:00	...	...	...
10/10/2019 10:05	...	...	...
10/10/2019 10:10	...	...	...
10/10/2019 10:15	...	...	...
10/10/2019 10:20	...	...	...
10/10/2019 10:25	...	...	...
10/10/2019 10:30	...	...	...
10/10/2019 10:35	...	...	...
10/10/2019 10:40	...	...	...
10/10/2019 10:45	...	...	...
10/10/2019 10:50	...	...	...
10/10/2019 10:55	...	...	...
10/10/2019 11:00	...	...	...
10/10/2019 11:05	...	...	...
10/10/2019 11:10	...	...	...
10/10/2019 11:15	...	...	...
10/10/2019 11:20	...	...	...
10/10/2019 11:25	...	...	...
10/10/2019 11:30	...	...	...
10/10/2019 11:35	...	...	...
10/10/2019 11:40	...	...	...
10/10/2019 11:45	...	...	...
10/10/2019 11:50	...	...	...
10/10/2019 11:55	...	...	...
10/10/2019 12:00	...	...	...
10/10/2019 12:05	...	...	...
10/10/2019 12:10	...	...	...
10/10/2019 12:15	...	...	...
10/10/2019 12:20	...	...	...
10/10/2019 12:25	...	...	...
10/10/2019 12:30	...	...	...
10/10/2019 12:35	...	...	...
10/10/2019 12:40	...	...	...
10/10/2019 12:45	...	...	...
10/10/2019 12:50	...	...	...
10/10/2019 12:55	...	...	...
10/10/2019 13:00	...	...	...
10/10/2019 13:05	...	...	...
10/10/2019 13:10	...	...	...
10/10/2019 13:15	...	...	...
10/10/2019 13:20	...	...	...
10/10/2019 13:25	...	...	...
10/10/2019 13:30	...	...	...
10/10/2019 13:35	...	...	...
10/10/2019 13:40	...	...	...
10/10/2019 13:45	...	...	...
10/10/2019 13:50	...	...	...
10/10/2019 13:55	...	...	...
10/10/2019 14:00	...	...	...
10/10/2019 14:05	...	...	...
10/10/2019 14:10	...	...	...
10/10/2019 14:15	...	...	...
10/10/2019 14:20	...	...	...
10/10/2019 14:25	...	...	...
10/10/2019 14:30	...	...	...
10/10/2019 14:35	...	...	...
10/10/2019 14:40	...	...	...
10/10/2019 14:45	...	...	...
10/10/2019 14:50	...	...	...
10/10/2019 14:55	...	...	...
10/10/2019 15:00	...	...	...
10/10/2019 15:05	...	...	...
10/10/2019 15:10	...	...	...
10/10/2019 15:15	...	...	...
10/10/2019 15:20	...	...	...
10/10/2019 15:25	...	...	...
10/10/2019 15:30	...	...	...
10/10/2019 15:35	...	...	...
10/10/2019 15:40	...	...	...
10/10/2019 15:45	...	...	...
10/10/2019 15:50	...	...	...
10/10/2019 15:55	...	...	...
10/10/2019 16:00	...	...	...
10/10/2019 16:05	...	...	...
10/10/2019 16:10	...	...	...
10/10/2019 16:15	...	...	...
10/10/2019 16:20	...	...	...
10/10/2019 16:25	...	...	...
10/10/2019 16:30	...	...	...
10/10/2019 16:35	...	...	...
10/10/2019 16:40	...	...	...
10/10/2019 16:45	...	...	...
10/10/2019 16:50	...	...	...
10/10/2019 16:55	...	...	...
10/10/2019 17:00	...	...	...
10/10/2019 17:05	...	...	...

Date/Time	Location	Activity	Remarks
10/10/2023	...	...	...

Page _____ of _____

V116175

Whitehorse, YT



AGAT Laboratories

**SAMPLE INTEGRITY RECEIPT
FORM**

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech

Courier: Air North Prepaid Collect

Waybill# 287 04065854

Branch: EDM GP FM FM RD VAN LYD FSJ EST Other: _____

If multiple sites were submitted at once: Yes No

Custody Seal Intact: Yes No NA

TAT: <24hr 24-48hr 48-72hr Reg Other _____

Cooler Quantity: 7

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No

Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Fedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*

Earliest Expiry: _____

Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____

Legal Samples: Yes No

International Samples: Yes No

Tape Sealed: Yes No

Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) <u>8.6 + 8.3 + 8.5 = 8.5</u> °C	2 (Bottle/Jar) <u>6.9 + 7.4 + 7.9 = 7.4</u> °C
3 (Bottle/Jar) <u>8.7 + 7.9 + 9.1 = 8.6</u> °C	4 (Bottle/Jar) <u>7.6 + 7.4 + 6.7 = 7.2</u> °C
5 (Bottle/Jar) <u>7.4 + 7.5 + 6.7 = 7.2</u> °C	6 (Bottle/Jar) <u>6.9 + 9.1 + 8.7 = 8.2</u> °C
7 (Bottle/Jar) <u>7.6 + 6.7 + 7.1 = 7.2</u> °C	8 (Bottle/Jar) _____ °C
9 (Bottle/Jar) _____ °C	10 (Bottle/Jar) _____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____

Samples Damaged: Yes No If YES why?

No Bubble Wrap Frozen Courier

Other: _____

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date/Time: _____

CPM Initial _____

General Comments: _____

* Subcontracted Analysis (See CPM)

Date Issued: October 05, 2015
Document ID: SR-9505.003

Page 1 of 1



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 1843799.00

RECEIVING BASICS:

Received From: NOVEX 1/2

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 7

Containers: 5L 2/2 100

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Aug 25²⁴ 2018

ALREADY EXCEEDED?

Yes No

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 2 + 2 + 1 = 2 °C (2) 3 + 3 + 0 = 2 °C (3) 1 + 0 + 8 = 3 °C (4) 0 + 0 + 0 = 0 °C

Was ice or ice pack present: Yes No 2 °C

Integrity Issues: (5) 0 + 0 + 0 = 0 °C (6) 0 + 0 + 1 = 0 °C (7) 2 + 3 + 3 = 3 °C

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____

Date and Time: _____

ADDITIONAL NOTES:

"18SEID 4-03" received but not listed on the CoC.

GROUNDWATER CERTIFICATES

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Stephan Klump/Tania Perzoff

PROJECT: ENW.WENW03039-03.002

AGAT WORK ORDER: 18V357100

TRACE ORGANICS REVIEWED BY: Clarissa Muljono, Report Writer

WATER ANALYSIS REVIEWED BY: Clarissa Muljono, Report Writer

DATE REPORTED: Jul 09, 2018

PAGES (INCLUDING COVER): 21

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 8°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		RMW5	RMW8	RMW9	RMW11	RMW11	RMW12	RMW13	RMW14
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9370715	9370747	9370748	9370749	9370750	9370751	9370752	9370753
Benzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F2 (C10-C16)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	µg/L		100	<100	<100	<100	<100	140	<100	<100	250
F4 (C34-C50)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
Total Xylenes	ug/L		1	<1	<1	<1	<1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits									
Bromofluorobenzene	%		70-130	95	102	99	99	94	100	98	99
Dibromofluoromethane	%		70-130	98	106	102	104	95	103	103	101
Toluene - d8	%		70-130	96	99	97	99	93	99	97	96

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		TB1	FB1
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9370754	9370755
Benzene	µg/L		0.5	<0.5	<0.5
Ethylbenzene	µg/L		0.5	<0.5	<0.5
Toluene	µg/L		0.5	<0.5	<0.5
m&p-Xylene	µg/L		0.5	<0.5	<0.5
o-Xylene	µg/L		0.5	<0.5	<0.5
F1 (C6-C10)	µg/L		100	<100	<100
F1 minus BTEX (C6-C10)	µg/L		100	<100	<100
F2 (C10-C16)	µg/L		100	<100	<100
F3 (C16-C34)	µg/L		100	<100	<100
F4 (C34-C50)	µg/L		100	<100	<100
Total Xylenes	ug/L		1	<1	<1
Surrogate	Unit	Acceptable Limits			
Bromofluorobenzene	%		70-130	98	107
Dibromofluoromethane	%		70-130	102	111
Toluene - d8	%		70-130	96	106

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9370715-9370755 The F1 (C6 - C10) fraction is determined by integrating the FID chromatogram from the beginning of the n-C6 peak to the apex of the last n-C10 peak.

The C6 - C10 fraction is calculated from the FID toluene response factor.

Quality control for the calibration follows the guidelines set out in the CCME Contaminated Sites Method for Soils.

The (F1 minus BTEX) has been calculated by subtracting the BTEX concentration from Fraction 1.

The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Quality control data is available upon request.

Assistance in the interpretation of data is available upon request.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

The chromatogram has returned to baseline by the retention time of nC50.

Extraction and holding times were met for this sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Water Low Level

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		RMW5	RMW9	RMW11	RMW11	TB1	FB1
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9370715	9370748	9370749	9370750	9370754	9370755
Naphthalene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Quinoline	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/L	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acridine	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1-Methylnaphthalene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits							
Naphthalene - d8	%	50-130	88	84	85	86	86	86	84
2-Fluorobiphenyl	%	50-130	93	88	89	89	89	89	87
P-Terphenyl - d14	%	60-130	74	76	84	89	90	90	86

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
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CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Anions and Nutrients

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		RMW5	RMW8	RMW9		RMW11		RMW11
		SAMPLE TYPE:		Water	Water	Water		Water		Water
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28		2018-06-28		2018-06-28
Parameter	Unit	G / S	RDL	9370715	9370747	RDL	9370748	RDL	9370749	9370750
Chloride	mg/L		0.05	1.74	5.10	0.05	2.95	0.05	1.95	0.66
Nitrate-N	mg/L		0.005	1.14	1.05	0.005	1.10	0.005	<0.005	0.008
Nitrite-N	mg/L		0.005	<0.005	<0.005	0.005	<0.005	0.005	<0.005	<0.005
Sulphate	mg/L		5	358	625	50	1730	5	209	92.3
Fluoride	mg/L		0.02	0.08	0.12	0.02	0.14	0.02	0.04	0.14
Bromide	mg/L		0.05	<0.05	<0.05	0.05	<0.05	0.05	<0.05	<0.05
Ammonia-N	mg/L		0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01
Nitrogen - Total	mg/L		0.05	1.36	1.16	0.05	1.27	0.05	0.18	0.23
		SAMPLE DESCRIPTION:		RMW12	RMW13	RMW14	TB1	FB1		
		SAMPLE TYPE:		Water	Water	Water	Water	Water		
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28		
Parameter	Unit	G / S	RDL	9370751	9370752	9370753	9370754	9370755		
Chloride	mg/L		0.05	0.08	0.19	0.20	<0.05	<0.05		
Nitrate-N	mg/L		0.005	0.026	0.201	0.051	0.016	<0.005		
Nitrite-N	mg/L		0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Sulphate	mg/L		0.5	90.0	82.1	41.5	<0.5	<0.5		
Fluoride	mg/L		0.02	0.07	0.05	0.04	<0.02	<0.02		
Bromide	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Ammonia-N	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Nitrogen - Total	mg/L		0.05	0.10	0.22	0.35	<0.05	<0.05		

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
9370754 Result for Nitrate confirmed with duplicate analysis.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
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TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		RMW5	RMW8	RMW9		RMW11	RMW11	RMW12
		SAMPLE TYPE:		Water	Water	Water		Water	Water	Water
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28		2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9370715	9370747	RDL	9370748	RDL	9370749	9370751
Aluminum Dissolved	µg/L	2	<2	<2	<2	2	<2	2	<2	3
Antimony Dissolved	µg/L	0.2	<0.2	<0.2	<0.2	0.2	<0.2	0.2	<0.2	<0.2
Arsenic Dissolved	µg/L	0.1	0.2	0.3	0.1	0.3	0.1	0.2	0.1	0.2
Barium Dissolved	µg/L	0.2	24.4	33.2	0.2	19.5	0.2	34.3	41.7	96.3
Beryllium Dissolved	µg/L	0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	<0.01
Boron Dissolved	µg/L	2	13	24	2	11	2	3	3	4
Cadmium Dissolved	µg/L	0.01	0.07	0.42	0.01	0.23	0.01	0.25	0.08	0.03
Calcium Dissolved	µg/L	50	133000	260000	250	475000	50	119000	59000	58700
Chromium Dissolved	µg/L	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5
Cobalt Dissolved	µg/L	0.05	<0.05	0.11	0.05	0.23	0.05	<0.05	<0.05	<0.05
Copper Dissolved	µg/L	0.2	3.0	0.7	0.2	2.0	0.2	0.7	0.8	0.2
Iron Dissolved	µg/L	10	24	<10	10	11	10	<10	<10	<10
Lead Dissolved	µg/L	0.05	0.12	<0.05	0.05	<0.05	0.05	<0.05	<0.05	<0.05
Lithium Dissolved	µg/L	0.5	5.1	17.1	0.5	14.1	0.5	6.4	3.3	3.1
Magnesium Dissolved	µg/L	50	37000	72100	50	248000	50	38900	9660	11000
Manganese Dissolved	µg/L	1	7	5	1	9	1	<1	2	1
Mercury Dissolved	µg/L	0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	<0.01
Molybdenum Dissolved	µg/L	0.05	0.75	0.56	0.05	0.24	0.05	0.34	0.44	0.58
Nickel Dissolved	µg/L	0.2	0.6	1.6	0.2	1.7	0.2	0.8	0.5	<0.2
Potassium Dissolved	µg/L	50	2360	3340	50	5070	50	1360	1120	1310
Selenium Dissolved	µg/L	0.5	0.6	<0.5	0.5	0.6	0.5	0.7	<0.5	<0.5
Silver Dissolved	µg/L	0.02	<0.02	<0.02	0.02	<0.02	0.02	<0.02	<0.02	<0.02
Sodium Dissolved	µg/L	50	4450	6450	50	4150	50	1090	975	1020
Strontium Dissolved	µg/L	0.1	143	341	0.1	465	0.1	93.2	76.6	63.7
Thallium Dissolved	µg/L	0.01	<0.01	0.01	0.01	<0.01	0.01	<0.01	<0.01	<0.01
Tin Dissolved	µg/L	0.05	<0.05	<0.05	0.05	0.10	0.05	<0.05	0.07	<0.05
Titanium Dissolved	µg/L	0.5	0.9	1.4	0.5	1.9	0.5	1.1	0.8	0.9
Tungsten Dissolved	µg/L	0.01	1.09	5.73	0.01	0.23	0.01	0.06	0.23	0.16
Uranium Dissolved	µg/L	0.01	3.89	7.23	0.01	5.88	0.01	3.30	1.04	2.07
Vanadium Dissolved	µg/L	0.5	<0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		RMW5	RMW8	RMW9		RMW11	RMW11	RMW12
		SAMPLE TYPE:		Water	Water	Water		Water	Water	Water
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28		2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9370715	9370747	RDL	9370748	RDL	9370749	9370751
Zinc Dissolved	µg/L		2	4	14	2	8	2	4	5
Hardness (calc)	ug CaCO3/L		100	484000	946000	100	2210000	100	457000	187000
										192000

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

Parameter	Unit	SAMPLE DESCRIPTION:		RMW13	RMW14	TB1	FB1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28	2018-06-28
		G / S	RDL	9370752	9370753	9370754	9370755
Aluminum Dissolved	µg/L		2	4	3	<2	<2
Antimony Dissolved	µg/L		0.2	<0.2	<0.2	<0.2	<0.2
Arsenic Dissolved	µg/L		0.1	0.5	0.3	<0.1	<0.1
Barium Dissolved	µg/L		0.2	119	93.1	<0.2	<0.2
Beryllium Dissolved	µg/L		0.01	<0.01	<0.01	<0.01	<0.01
Boron Dissolved	µg/L		2	3	2	<2	<2
Cadmium Dissolved	µg/L		0.01	<0.01	0.02	<0.01	<0.01
Calcium Dissolved	µg/L		50	58700	60700	<50	<50
Chromium Dissolved	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
Cobalt Dissolved	µg/L		0.05	<0.05	<0.05	<0.05	<0.05
Copper Dissolved	µg/L		0.2	2.5	0.9	<0.2	<0.2
Iron Dissolved	µg/L		10	<10	<10	<10	<10
Lead Dissolved	µg/L		0.05	0.10	<0.05	<0.05	<0.05
Lithium Dissolved	µg/L		0.5	4.4	3.0	<0.5	<0.5
Magnesium Dissolved	µg/L		50	13800	14200	<50	<50
Manganese Dissolved	µg/L		1	<1	1	<1	<1
Mercury Dissolved	µg/L		0.01	<0.01	<0.01	<0.01	<0.01
Molybdenum Dissolved	µg/L		0.05	0.84	0.79	<0.05	<0.05
Nickel Dissolved	µg/L		0.2	<0.2	0.2	<0.2	<0.2
Potassium Dissolved	µg/L		50	1100	1160	<50	<50
Selenium Dissolved	µg/L		0.5	<0.5	<0.5	<0.5	<0.5
Silver Dissolved	µg/L		0.02	<0.02	<0.02	<0.02	<0.02
Sodium Dissolved	µg/L		50	1110	863	<50	<50
Strontium Dissolved	µg/L		0.1	54.6	51.6	<0.1	<0.1
Thallium Dissolved	µg/L		0.01	<0.01	<0.01	<0.01	<0.01
Tin Dissolved	µg/L		0.05	0.05	0.11	<0.05	<0.05
Titanium Dissolved	µg/L		0.5	0.9	1.1	<0.5	<0.5
Tungsten Dissolved	µg/L		0.01	0.38	0.43	<0.01	0.02
Uranium Dissolved	µg/L		0.01	1.82	1.30	<0.01	<0.01
Vanadium Dissolved	µg/L		0.5	<0.5	<0.5	<0.5	<0.5

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
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FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		RMW13	RMW14	TB1	FB1
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9370752	9370753	9370754	9370755
Zinc Dissolved	µg/L	2	3	3	<2	<2	4
Hardness (calc)	ug CaCO3/L	100	203000	210000	<100	<100	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
9370755 Result for Zn and W confirmed with duplicate analysis.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

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FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Cyanide, Strong Acid Dissociable (SAD)

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		RMW5	RMW8	RMW9	TB1	FB1
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9370715	9370747	9370748	9370754	9370755
Cyanide (SAD)	mg/L	0.002	<0.002	0.006	0.004	<0.002	<0.002	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18V357100

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Physical Tests Package

DATE RECEIVED: 2018-06-30

DATE REPORTED: 2018-07-09

		SAMPLE DESCRIPTION:		RMW5	RMW8	RMW9	RMW11	RMW11	RMW12	RMW13	RMW14
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28	2018-06-28
Parameter	Unit	G / S	RDL	9370715	9370747	9370748	9370749	9370750	9370751	9370752	9370753
pH	pH units	0.01		7.25	7.16	6.88	7.27	7.35	7.36	7.48	7.54
Electrical Conductivity	uS/cm	1		991	1510	3050	791	359	364	375	378
Total Dissolved Solids	mg/L	5		735	1220	3050	522	218	222	240	208
Alkalinity (pH 4.5)	mg CaCO3/L	1		211	317	450	236	94	105	116	164
		SAMPLE DESCRIPTION:		TB1	FB1						
		SAMPLE TYPE:		Water	Water						
		DATE SAMPLED:		2018-06-28	2018-06-28						
Parameter	Unit	G / S	RDL	9370754	9370755						
pH	pH units	0.01		3.95	3.84						
Electrical Conductivity	uS/cm	1		2	1						
Total Dissolved Solids	mg/L	5		<5	<5						
Alkalinity (pH 4.5)	mg CaCO3/L	1		<1	<1						

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
9370715-9370755 Literature holding time exceeded for pH analysis.

Certified By:

Quality Assurance

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Trace Organics Analysis

RPT Date: Jul 09, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME BTEX/F1-F4 (Water)

Benzene	69352	9370755	<0.5	<0.5	NA	< 0.5	99%	80%	120%				90%	70%	130%
Ethylbenzene	69352	9370755	<0.5	<0.5	NA	< 0.5	100%	80%	120%				88%	70%	130%
Toluene	69352	9370755	<0.5	<0.5	NA	< 0.5	100%	80%	120%				89%	70%	130%
m&p-Xylene	69352	9370755	<0.5	<0.5	NA	< 0.5	100%	80%	120%				89%	70%	130%
o-Xylene	69352	9370755	<0.5	<0.5	NA	< 0.5	100%	80%	120%				90%	70%	130%
F1 (C6-C10)	69352	9370755	<100	<100	NA	< 100									
F1 minus BTEX (C6-C10)	69352	9370755	<100	<100	NA	< 100									
F2 (C10-C16)	69338	W-MS1	6180	6040	2.3%	< 100	100%	80%	120%				98%	70%	130%
F3 (C16-C34)	69338	W-MS1	26200	23500	10.9%	< 100	102%	80%	120%				113%	70%	130%
F4 (C34-C50)	69338	W-MS1	2850	2540	11.5%	< 100	90%	80%	120%				81%	70%	130%
Bromofluorobenzene	69352	9370755	107	98	8.8%		100%	70%	130%				99%	70%	130%
Dibromofluoromethane	69352	9370755	111	98	12.4%		99%	70%	130%				100%	70%	130%
Toluene - d8	69352	9370755	106	98	7.8%		101%	70%	130%				100%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Polyaromatic Hydrocarbons in Water Low Level

Naphthalene	69338	W-MS1	0.41	0.42	2.4%	< 0.05	103%	80%	120%				84%	50%	130%
Quinoline	69338	W-MS1	0.55	0.55	0.0%	< 0.05	96%	80%	120%				110%	50%	130%
Acenaphthylene	69338	W-MS1	0.45	0.45	0.0%	< 0.02	101%	80%	120%				91%	50%	130%
Acenaphthene	69338	W-MS1	0.42	0.43	2.4%	< 0.02	101%	80%	120%				86%	50%	130%
Fluorene	69338	W-MS1	0.46	0.47	2.2%	< 0.02	97%	80%	120%				94%	50%	130%
Phenanthrene	69338	W-MS1	0.36	0.36	0.0%	< 0.04	102%	80%	120%				73%	60%	130%
Anthracene	69338	W-MS1	0.50	0.49	2.0%	< 0.01	101%	80%	120%				101%	60%	130%
Acridine	69338	W-MS1	0.58	0.50	14.8%	< 0.05	96%	80%	120%				116%	50%	130%
Fluoranthene	69338	W-MS1	0.45	0.45	0.0%	< 0.02	101%	80%	120%				91%	60%	130%
Pyrene	69338	W-MS1	0.51	0.51	0.0%	< 0.02	101%	80%	120%				104%	60%	130%
Benzo(a)anthracene	69338	W-MS1	0.41	0.41	0.0%	< 0.01	103%	80%	120%				84%	60%	130%
Chrysene	69338	W-MS1	0.54	0.54	0.0%	< 0.01	101%	80%	120%				108%	60%	130%
Benzo(b)fluoranthene	69338	W-MS1	0.40	0.39	2.5%	< 0.01	112%	80%	120%				81%	60%	130%
Benzo(j)fluoranthene	69338	W-MS1	0.49	0.57	15.1%	< 0.01	88%	80%	120%				100%	60%	130%
Benzo(k)fluoranthene	69338	W-MS1	0.41	0.42	2.4%	< 0.01	98%	80%	120%				82%	60%	130%
Benzo(a)pyrene	69338	W-MS1	0.44	0.44	0.0%	< 0.01	103%	80%	120%				89%	60%	130%
Indeno(1,2,3-c,d)pyrene	69338	W-MS1	0.42	0.42	0.0%	< 0.01	111%	80%	120%				86%	60%	130%
Dibenzo(a,h)anthracene	69338	W-MS1	0.39	0.40	2.5%	< 0.01	115%	80%	120%				80%	60%	130%
Benzo(g,h,i)perylene	69338	W-MS1	0.46	0.46	0.0%	< 0.01	114%	80%	120%				92%	60%	130%
1-Methylnaphthalene	69338	W-MS1	0.42	0.43	2.4%	< 0.05	97%	80%	120%				85%	50%	130%
2-Methylnaphthalene	69338	W-MS1	0.35	0.36	2.8%	< 0.05	99%	80%	120%				71%	50%	130%
Naphthalene - d8	69338	W-MS1	92	96	4.3%		96%	80%	120%				92%	50%	130%
2-Fluorobiphenyl	69338	W-MS1	96	97	1.0%		97%	80%	120%				96%	50%	130%



Quality Assurance

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SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 09, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
P-Terphenyl - d14	69338	W-MS1	86	88	2.3%		100%	80%	120%				87%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

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Water Analysis															
RPT Date: Jul 09, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Physical Tests Package

pH	9369902		6.80	6.84	0.6%		99%	95%	105%						
Electrical Conductivity	9369902		1110	1120	1.0%	< 1	100%	90%	110%						
Total Dissolved Solids	9369898		2910	2880	1.1%	< 5				90%	85%	115%			
Alkalinity (pH 4.5)	9369902		525	524	0.1%	< 1	99%	90%	110%						

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Anions and Nutrients

Chloride	9370750		0.66	0.66	0.4%	< 0.05	106%	90%	110%	95%	90%	110%			
Nitrate-N	9370750		0.008	0.012	NA	< 0.005	99%	90%	110%	97%	90%	110%			
Nitrite-N	9370750		<0.005	<0.005	NA	< 0.005				96%	90%	110%			
Sulphate	9370750		92.3	91.7	0.6%	< 0.5	100%	90%	110%	106%	90%	110%			
Fluoride	9370750		0.14	0.14	2.3%	< 0.02	100%	85%	115%	99%	90%	110%			
Bromide	9370750		<0.05	<0.05	NA	< 0.05	105%	85%	115%	97%	90%	110%			
Ammonia-N	9370715		<0.01	<0.01	NA	< 0.01	97%	85%	115%	102%	90%	110%			
Nitrogen - Total	9368795		2.21	2.16	2.4%	< 0.05	96%	85%	115%	109%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

BC CSR Omnibus Dissolved Metals

Aluminum Dissolved	9374683		5	6	NA	< 2	101%	90%	110%	100%	90%	110%			
Antimony Dissolved	9374683		<0.2	0.2	NA	< 0.2	104%	90%	110%	100%	90%	110%			
Arsenic Dissolved	9374683		0.5	0.5	5.9%	< 0.1	102%	90%	110%	101%	90%	110%			
Barium Dissolved	9374683		22.4	22.6	0.8%	< 0.2	104%	90%	110%	99%	90%	110%			
Beryllium Dissolved	9374683		<0.01	<0.01	NA	< 0.01	106%	90%	110%	106%	90%	110%			
Boron Dissolved	9374683		23	23	3.3%	< 2	91%	90%	110%	103%	90%	110%			
Cadmium Dissolved	9374683		1.02	1.01	0.7%	< 0.01	96%	90%	110%	95%	90%	110%			
Calcium Dissolved	9374683		149000	147000	1.4%	< 50	96%	90%	110%	101%	90%	110%			
Chromium Dissolved	9374683		<0.5	<0.5	NA	< 0.5	102%	90%	110%	98%	90%	110%			
Cobalt Dissolved	9374683		3.45	3.47	0.4%	< 0.05	102%	90%	110%	102%	90%	110%			
Copper Dissolved	9374683		4.0	4.6	13.1%	< 0.2	103%	90%	110%	103%	90%	110%			
Iron Dissolved	9374683		< 10	< 10	NA	< 10	106%	90%	110%	105%	90%	110%			
Lead Dissolved	9374683		0.07	0.07	NA	< 0.05	98%	90%	110%	96%	90%	110%			
Lithium Dissolved	9374683		14.7	14.9	0.9%	< 0.5				105%	90%	110%			
Magnesium Dissolved	9374683		21900	21800	0.5%	< 50	102%	90%	110%	100%	90%	110%			
Manganese Dissolved	9374683		713	709	0.6%	< 1	100%	90%	110%	98%	90%	110%			
Mercury Dissolved	9361536		0.01	0.01	NA	< 0.01	109%	90%	110%	104%	90%	110%			
Molybdenum Dissolved	9374683		8.72	9.05	3.8%	< 0.05	93%	90%	110%	94%	90%	110%			
Nickel Dissolved	9374683		17.3	17.4	0.8%	< 0.2	105%	90%	110%	104%	90%	110%			
Potassium Dissolved	9374683		27200	27500	1.1%	< 50	98%	90%	110%	103%	90%	110%			
Selenium Dissolved	9374683		4.5	4.3	4.1%	< 0.5	102%	90%	110%	100%	90%	110%			
Silver Dissolved	9374683		<0.02	<0.02	NA	< 0.02				97%	90%	110%			



Quality Assurance

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AGAT WORK ORDER: 18V357100
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SAMPLED BY:

Water Analysis (Continued)

RPT Date: Jul 09, 2018			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Sodium Dissolved	9374683		58600	58400	0.3%	< 50	100%	90%	110%	101%	90%	110%			
Strontium Dissolved	9374683		1250	1270	1.3%	< 0.1	103%	90%	110%	92%	90%	110%			
Thallium Dissolved	9374683		0.13	0.13	1.8%	< 0.01	98%	90%	110%	98%	90%	110%			
Tin Dissolved	9374683		0.06	0.08	NA	< 0.05				99%	90%	110%			
Titanium Dissolved	9374683		1.3	1.4	NA	< 0.5				96%	90%	110%			
Tungsten Dissolved	9374683		0.04	0.04	NA	< 0.01				99%	90%	110%			
Uranium Dissolved	9374683		2.06	2.13	3.5%	< 0.01	103%	90%	110%	108%	90%	110%			
Vanadium Dissolved	9374683		<0.5	<0.5	NA	< 0.5	104%	90%	110%	97%	90%	110%			
Zinc Dissolved	9374683		111	109	1.6%	< 2	100%	90%	110%	97%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide, Strong Acid Dissociable (SAD)

Cyanide (SAD)	9363008	0.004	0.004	NA	< 0.002	112%	85%	115%	102%	90%	110%	100%	80%	120%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By: _____

Method Summary

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Ethylbenzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Toluene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
m&p-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
o-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
F1 (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F2 (C10-C16)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F3 (C16-C34)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F4 (C34-C50)	ORG-180-5134	CCME Tier 1 Method	GC/FID
Bromofluorobenzene		EPA SW-846 8260	GC/MS
Dibromofluoromethane		EPA SW-846 8260	GC/MS
Toluene - d8		EPA SW-846 8260	GC/MS
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Quinoline	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acridine	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
1-Methylnaphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
2-Methylnaphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8			GC/MS
2-Fluorobiphenyl	ORG-180-5133	Modified form BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Chloride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia-N	INOR-181-6001	Modified from SM 4500-NH3 G	CONTINUOUS FLOW ANALYZER
Nitrogen - Total	INOR-181-6006	Modified from SM 4500-N	COMBUSTION
Aluminum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Antimony Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Arsenic Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Barium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Beryllium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Boron Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cadmium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Calcium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Chromium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cobalt Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Copper Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Iron Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Lead Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Lithium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Magnesium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Manganese Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Mercury Dissolved	MET-181-6103, LAB-181-4015	Modified from EPA 245.7	CV/AA
Molybdenum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Nickel Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Potassium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Selenium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Silver Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Sodium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES



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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Strontium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Thallium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Tin Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Titanium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Tungsten Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Uranium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Vanadium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Zinc Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cyanide (SAD)	INOR-181-6010	EPA 335.3	CONTINUOUS FLOW ANALYZER
pH	INOR-181-6000	Modified from SM 4500-H+	PH METER
Electrical Conductivity	INOR-181-6000	Modified from SM 2510 B	PC TITRATE
Total Dissolved Solids	INOR-181-6007	SM 2540 C, D & E	GRAVIMETRIC
Alkalinity (pH 4.5)	INOR-181-6000	Modified from SM 2320 B	PC TITRATE



Laboratory Use Only

Arrival Temperature: 8°C

AGAT Job Number: 18V 357100

Notes:

Jun 30 PM 3:13

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com
2. Name: Tania Perzoff
Email: Tania.Perzoff@tetrattech.com

Report Format

☐ Single
Sample per
page
☒ Multiple
Samples per
page
☒ Excel Format
Included

Requirements (Please Check)

☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL-LD ☐ RL-HD
☐ WL-N ☐ WL-R

Schedule 3.3 (Please Specify)

CCME (Please Specify) Groundwater standard

Other (Please Specify)

Invoice To

Same as above Yes ☒ / No ☐

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Phone: 867-335-4695 Fax: _____
PO/AFE#: _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	pH, EC, TDS, Alk, Anions	TSS, BOD	Dissolved Metals (inc. Hg)	Cyanide	Ammonia	Total Nitrogen	TOC	Phenols	VOC	BTEX	F1-F4	PAH	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
<u>93 70715</u>	RMW5 ✓	Water	1530 28/06/18		☒	☒	☒	☒	☒	☒				☒	☒	☒	12	Y		
<u>747</u>	RMW8 ✓	Water	1730 28/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
<u>748</u>	RMW9 ✓	Water	1500 28/06/18		☒	☒	☒	☒	☒	☒				☒	☒	☒	12	Y		
<u>749</u>	RMW10 ✓	Water	1340 28/06/18		☒	☒		☒	☒	☒				☒	☒	☒	12	Y		
<u>750</u>	RMW11 ✓	Water	1300 28/06/18		☒	☒		☒	☒	☒				☒	☒	☒	12	Y		
<u>751</u>	RMW12 ✓	Water	1200 28/06/18		☒	☒		☒	☒	☒				☒	☒		12	Y		
<u>752</u>	RMW13 ✓	Water	0930 28/06/18		☒	☒		☒	☒	☒				☒	☒		12	Y		
<u>753</u>	RMW14 ✓	Water	0900 28/06/18		☒	☒		☒	☒	☒				☒	☒		12	Y		
<u>754</u>	Trip Blank ✓	Water	11:00 29/06/18		☒	☒	☒	☒	☒	☒				☒	☒	☒				
<u>755</u>	Field Blank ✓	Water	11:00 29/06/18		☒	☒	☒	☒	☒	☒				☒	☒	☒				

Samples Relinquished By (Print Name and Sign): Cole Fischer	Date/Time 0622 29/06	Samples Received By (Print Name and Sign):	Date/Time	Page _____ of _____ Nº:
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 181357100

RECEIVING BASICS:

Received From: XOVEX

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 6 Containers: 120

TIME SENSITIVE ISSUES:

Earliest Date Sampled: 28-Jun-18

ALREADY EXCEEDED?

Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 9 + 9 + 8 = 9 °C (2) 8 + 6 + 7 = 7 °C (3) 4 + 4 + 5 = 4 °C (4) 7 + 11 + 12 = 10 °C

Was ice or ice pack present:

Yes

No

(5) 10 + 9 + 8 = 9

Integrity Issues:

(6) 8 + 8 + 8 = 8

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____

Date and Time: _____

ADDITIONAL NOTES:

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Stephan Klump/Tania Perzoff

PROJECT: ENW.WENW03039-03.002

AGAT WORK ORDER: 18Y358442

TRACE ORGANICS REVIEWED BY: Clarissa Muljono, Report Writer

WATER ANALYSIS REVIEWED BY: Clarissa Muljono, Report Writer

DATE REPORTED: Jul 12, 2018

PAGES (INCLUDING COVER): 44

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 3°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		RMW1		17A32MW1		NLMW3		NLMW1		S4-27-18		OLBMW1	
		SAMPLE TYPE:		Water		Water		Water		Water		Water		Water	
		DATE SAMPLED:		2018-07-02		2018-07-02		2018-07-02		2018-07-02		2018-07-01		2018-06-30	
Parameter	Unit	G / S	RDL	9378777	RDL	9378811	RDL	9378812	9378813	9378814	9378815				
Benzene	µg/L		0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L		0.5	<0.5	0.5	2.7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L		0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L		0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L		0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L		100	<100	100	<100	100	<100	<100	<100	<100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L		100	<100	100	<100	100	<100	<100	<100	<100	<100	<100	<100	<100
F2 (C10-C16)	µg/L		100	<100	300	23800	100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	µg/L		100	<100	300	6080	100	<100	<100	<100	<100	<100	<100	<100	<100
F4 (C34-C50)	µg/L		100	<100	300	760	100	<100	<100	<100	<100	<100	<100	<100	<100
Total Xylenes	ug/L		1	<1	1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits													
Bromofluorobenzene	%		70-130		98		98		99		107		98		100
Dibromofluoromethane	%		70-130		89		120		119		121		120		121
Toluene - d8	%		70-130		95		93		94		101		94		95

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		OLMW1	OLMW2	RMW2	RMW4	RMW7	GH12-I	GH12-J	17BMW-01
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-07-01	2018-07-01	2018-06-29	2018-06-29	2018-06-29	2018-06-30	2018-06-30	2018-07-01
Parameter	Unit	G / S	RDL	9378816	9378817	9378818	9378820	9378821	9378822	9378823	9378824
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F2 (C10-C16)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	µg/L	100	140	<100	<100	<100	<100	<100	<100	<100	300
F4 (C34-C50)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	320
Total Xylenes	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits									
Bromofluorobenzene	%	70-130	97	98	98	97	97	98	96	97	
Dibromofluoromethane	%	70-130	121	123	125	122	124	123	123	123	
Toluene - d8	%	70-130	93	94	93	93	93	95	93	94	

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		17A1MW1	17A2MW3	17A2MW4	17A3MW1	17A4MW2	17A13MW2	17A14MW1	17A16MW2
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-29	2018-07-01	2018-07-01	2018-07-01	2018-06-30	2018-06-30	2018-07-01	2018-06-30
Parameter	Unit	G / S	RDL	9378825	9378826	9378827	9378828	9378829	9378830	9378831	9378832
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F2 (C10-C16)	µg/L	100	<100	<100	<100	<100	<100	<100	150	<100	<100
F3 (C16-C34)	µg/L	100	<100	140	110	<100	<100	200	380	400	400
F4 (C34-C50)	µg/L	100	<100	250	140	<100	<100	220	620	650	650
Total Xylenes	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits									
Bromofluorobenzene	%	70-130	96	96	96	96	96	97	94	101	102
Dibromofluoromethane	%	70-130	122	124	125	123	127	118	114	116	116
Toluene - d8	%	70-130	94	93	92	94	94	94	92	93	93

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		17A17MW2	17A23MW5	17A33MW1	17A33MW2	DUP1	DUP2	DUP3	DUP4
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-29	2018-06-30	2018-06-29	2018-06-30	2018-06-29	2018-06-30	2018-06-30	2018-07-01
Parameter	Unit	G / S	RDL	9378833	9378834	9378835	9378836	9378837	9378838	9378840	9378842
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
F1 (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F1 minus BTEX (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F2 (C10-C16)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	µg/L	100	250	<100	<100	<100	<100	100	<100	<100	140
F4 (C34-C50)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	200
Total Xylenes	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Surrogate	Unit	Acceptable Limits									
Bromofluorobenzene	%	70-130	103	101	101	101	100	100	102	108	100
Dibromofluoromethane	%	70-130	115	115	116	116	116	117	115	126	118
Toluene - d8	%	70-130	95	94	92	93	93	94	95	101	94

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		Field Blank	Trip Blank
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2018-07-02	
Parameter	Unit	G / S	RDL	9379112	9379114
Benzene	µg/L		0.5	<0.5	<0.5
Ethylbenzene	µg/L		0.5	<0.5	<0.5
Toluene	µg/L		0.5	<0.5	<0.5
m&p-Xylene	µg/L		0.5	<0.5	<0.5
o-Xylene	µg/L		0.5	<0.5	<0.5
F1 (C6-C10)	µg/L		100	<100	<100
F1 minus BTEX (C6-C10)	µg/L		100	<100	<100
F2 (C10-C16)	µg/L		100	<100	<100
F3 (C16-C34)	µg/L		100	<100	<100
F4 (C34-C50)	µg/L		100	<100	<100
Total Xylenes	ug/L		1	<1	<1
Surrogate	Unit	Acceptable Limits			
Bromofluorobenzene	%		70-130	99	94
Dibromofluoromethane	%		70-130	119	104
Toluene - d8	%		70-130	93	88

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

CCME BTEX/F1-F4 (Water)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

- 9378777 The F1 (C6 - C10) fraction is determined by integrating the FID chromatogram from the beginning of the n-C6 peak to the apex of the last n-C10 peak.
The C6 - C10 fraction is calculated from the FID toluene response factor.
Quality control for the calibration follows the guidelines set out in the CCME Contaminated Sites Method for Soils.
The (F1 minus BTEX) has been calculated by subtracting the BTEX concentration from Fraction 1.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
- 9378811 The F1 (C6 - C10) fraction is determined by integrating the FID chromatogram from the beginning of the n-C6 peak to the apex of the last n-C10 peak.
The C6 - C10 fraction is calculated from the FID toluene response factor.
Quality control for the calibration follows the guidelines set out in the CCME Contaminated Sites Method for Soils.
The (F1 minus BTEX) has been calculated by subtracting the BTEX concentration from Fraction 1.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.
Sample was extracted by modified extraction procedure for high solids samples. EPH and PAH detection limits increased.
- 9378812-9379114 The F1 (C6 - C10) fraction is determined by integrating the FID chromatogram from the beginning of the n-C6 peak to the apex of the last n-C10 peak.
The C6 - C10 fraction is calculated from the FID toluene response factor.
Quality control for the calibration follows the guidelines set out in the CCME Contaminated Sites Method for Soils.
The (F1 minus BTEX) has been calculated by subtracting the BTEX concentration from Fraction 1.
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Quality control data is available upon request.
Assistance in the interpretation of data is available upon request.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
The chromatogram has returned to baseline by the retention time of nC50.
Extraction and holding times were met for this sample.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Polyaromatic Hydrocarbons in Water Low Level

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

SAMPLE DESCRIPTION:				17A32MW1	17A14MW1	17A16MW2	17A23MW5	17A33MW1	17A33MW2	DUP2	
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	
DATE SAMPLED:				2018-07-02	2018-07-01	2018-06-30	2018-06-30	2018-06-29	2018-06-30	2018-06-30	
Parameter	Unit	G / S	RDL	9378811	RDL	9378831	9378832	9378834	9378835	9378836	9378838
Naphthalene	µg/L		0.2	<0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Quinoline	µg/L		0.2	<0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/L		0.1	<0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthene	µg/L		0.1	<0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	µg/L		0.1	2.3	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/L		0.2	1.4	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Anthracene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acridine	µg/L		0.2	<0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/L		0.1	<0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	µg/L		0.1	0.2	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(j)fluoranthene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-c,d)pyrene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L		0.05	<0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1-Methylnaphthalene	µg/L		0.2	14.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	µg/L		0.2	<0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	µg/L		0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits									
Naphthalene - d8	%	50-130	NA			90	88	86	95	95	97
2-Fluorobiphenyl	%	50-130	94			91	88	88	98	94	101
P-Terphenyl - d14	%	60-130	112			90	88	94	89	87	71

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9378811 Naphthalene-d8 surrogate is not available due to sample matrix interference.

Sample was extracted by modified extraction procedure for high solids samples. EPH and PAH detection limits increased.

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Volatile Organic Compounds in Water

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		17A1MW1	DUP4
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2018-06-29	2018-07-01
Parameter	Unit	G / S	RDL	9378825	9378842
Chloromethane	µg/L		1	<1	<1
Vinyl Chloride	µg/L		1	<1	<1
Bromomethane	µg/L		1	<1	<1
Chloroethane	µg/L		1	<1	<1
Trichlorofluoromethane	µg/L		1	<1	<1
Acetone	µg/L		10	<10	<10
1,1-Dichloroethylene	µg/L		1	<1	<1
Dichloromethane	µg/L		1	<1	<1
2-Butanone (MEK)	µg/L		10	<10	<10
trans-1,2-Dichloroethylene	µg/L		1	<1	<1
1,1-Dichloroethane	µg/L		1	<1	<1
cis-1,2-Dichloroethylene	µg/L		1	<1	<1
Chloroform	µg/L		1	<1	<1
1,2-Dichloroethane	µg/L		1	<1	<1
1,1,1-Trichloroethane	µg/L		1	<1	<1
Carbon Tetrachloride	µg/L		0.5	<0.5	<0.5
1,2-Dichloropropane	µg/L		1	<1	<1
Trichloroethene	µg/L		1	<1	<1
Bromodichloromethane	µg/L		1	<1	<1
trans-1,3-Dichloropropene	µg/L		1	<1	<1
4-Methyl-2-pentanone (MIBK)	µg/L		10	<10	<10
cis-1,3-Dichloropropene	µg/L		1	<1	<1
1,1,2-Trichloroethane	µg/L		1	<1	<1
Dibromochloromethane	µg/L		1	<1	<1
1,2-Dibromoethane	µg/L		0.3	<0.3	<0.3
Tetrachloroethylene	µg/L		1	<1	<1
1,1,1,2-Tetrachloroethane	µg/L		1	<1	<1
Chlorobenzene	µg/L		1	<1	<1
Bromoform	µg/L		1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L		0.8	<0.8	<0.8

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Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Volatile Organic Compounds in Water

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		17A1MW1	DUP4
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2018-06-29	2018-07-01
Parameter	Unit	G / S	RDL	9378825	9378842
1,3-Dichlorobenzene	µg/L		0.5	<0.5	<0.5
1,4-Dichlorobenzene	µg/L		0.5	<0.5	<0.5
1,2-Dichlorobenzene	µg/L		0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	µg/L		1	<1	<1
1,3-Dichloropropene (cis + trans)	µg/L		1	<1	<1
Total Trihalomethanes	µg/L		2	<2	<2
Surrogate	Unit	Acceptable Limits			
Bromofluorobenzene	%	70-130	91	89	
Dibromofluoromethane	%	70-130	106	103	
Toluene - d8	%	70-130	109	105	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Anions and Nutrients

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		RMW1		17A32MW1		NLMW3		NLMW1		S4-27-18	
		SAMPLE TYPE:		Water		Water		Water		Water		Water	
		DATE SAMPLED:		2018-07-02		2018-07-02		2018-07-02		2018-07-02		2018-07-01	
Parameter	Unit	G / S	RDL	9378777	RDL	9378811	RDL	9378812	9378813	RDL	9378814		
Chloride	mg/L		0.05	3.98	0.05	10.9	0.05	4.70	12.9	0.05	0.08		
Nitrate-N	mg/L		0.05	<0.05	0.005	0.019	0.005	0.214	1.18	0.005	0.149		
Nitrite-N	mg/L		0.005	<0.005	0.005	<0.005	0.005	<0.005	<0.005	0.005	<0.005		
Sulphate	mg/L		500	17700	50	1400	5	156	114	0.5	74.5		
Fluoride	mg/L		0.2	16.0	0.02	0.26	0.02	0.41	1.28	0.02	0.06		
Bromide	mg/L		0.05	0.08	0.05	0.13	0.05	<0.05	0.07	0.05	<0.05		
Ammonia-N	mg/L		0.01	0.41	0.01	0.54	0.01	<0.01	0.03	0.01	<0.01		
Nitrogen - Total	mg/L		0.05	1.15	0.05	0.54	0.05	0.24	1.15	0.05	0.23		
		SAMPLE DESCRIPTION:		OLBMW1		OLMW1		OLMW2		RMW2		RMW4	
		SAMPLE TYPE:		Water		Water		Water		Water		Water	
		DATE SAMPLED:		2018-06-30		2018-07-01		2018-07-01		2018-06-29		2018-06-29	
Parameter	Unit	G / S	RDL	9378815	9378816	9378817	RDL	9378818	9378820	RDL	9378821		
Chloride	mg/L		0.05	0.10	0.13	0.26	0.05	1.82	1.86	0.05	0.59		
Nitrate-N	mg/L		0.005	0.008	0.053	0.013	0.005	0.332	0.005	0.005	0.006		
Nitrite-N	mg/L		0.005	<0.005	<0.005	<0.005	0.005	0.016	<0.005	0.005	<0.005		
Sulphate	mg/L		0.5	44.8	6.1	37.4	5	962	752	50	1970		
Fluoride	mg/L		0.02	0.07	<0.02	0.03	0.02	0.15	0.65	0.02	0.14		
Bromide	mg/L		0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	0.05	<0.05		
Ammonia-N	mg/L		0.01	<0.01	<0.01	<0.01	0.01	0.05	0.42	0.01	0.03		
Nitrogen - Total	mg/L		0.05	0.12	0.17	0.24	0.05	0.51	0.53	0.05	0.18		

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Anions and Nutrients

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

SAMPLE DESCRIPTION:				GH12-I		GH12-J		17BMW-01		17A1MW1	17A2MW3
SAMPLE TYPE:				Water		Water		Water		Water	Water
DATE SAMPLED:				2018-06-30		2018-06-30		2018-07-01		2018-06-29	2018-07-01
Parameter	Unit	G / S	RDL	9378822	RDL	9378823	RDL	9378824	RDL	9378825	9378826
Chloride	mg/L		0.05	0.83	0.05	1.73	0.05	0.30	0.05	2.35	0.35
Nitrate-N	mg/L		0.005	0.100	0.005	0.331	0.005	0.140	0.005	0.806	0.229
Nitrite-N	mg/L		0.005	<0.005	0.005	<0.005	0.005	<0.005	0.005	<0.005	<0.005
Sulphate	mg/L		0.5	64.1	5	105	0.5	99.2	5	312	171
Fluoride	mg/L		0.02	0.11	0.02	0.04	0.02	0.20	0.02	0.10	0.02
Bromide	mg/L		0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	<0.05
Ammonia-N	mg/L		0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01
Nitrogen - Total	mg/L		0.05	0.10	0.05	0.35	0.05	0.26	0.05	0.79	0.24
SAMPLE DESCRIPTION:				17A2MW4	17A3MW1	17A4MW2	17A13MW2	17A14MW1	17A16MW2	17A17MW2	
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	
DATE SAMPLED:				2018-07-01	2018-07-01	2018-06-30	2018-06-30	2018-07-01	2018-06-30	2018-06-29	
Parameter	Unit	G / S	RDL	9378827	9378828	RDL	9378829	9378830	9378831	9378832	9378833
Chloride	mg/L		0.05	0.07	2.33	0.05	5.88	3.07	4.14	2.92	1.17
Nitrate-N	mg/L		0.005	0.011	0.010	0.005	0.346	0.039	0.007	0.612	0.215
Nitrite-N	mg/L		0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	0.011	<0.005
Sulphate	mg/L		0.5	12.2	18.2	5	297	332	114	212	505
Fluoride	mg/L		0.02	0.02	0.97	0.02	0.55	0.17	0.86	0.17	0.20
Bromide	mg/L		0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ammonia-N	mg/L		0.01	0.03	<0.01	0.01	0.05	0.11	<0.01	<0.01	<0.01
Nitrogen - Total	mg/L		0.05	0.28	0.09	0.05	0.43	0.26	0.09	0.61	0.36

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Anions and Nutrients

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		17A23MW5	17A33MW1	17A33MW2	DUP1	DUP2	DUP3	
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	
		DATE SAMPLED:		2018-06-30	2018-06-29	2018-06-30	2018-06-29	2018-06-30	2018-06-30	
Parameter	Unit	G / S	RDL	9378834	9378835	9378836	9378837	9378838	RDL	9378840
Chloride	mg/L		0.05	1.37	0.77	1.73	1.12	1.69	0.05	0.78
Nitrate-N	mg/L		0.005	0.114	0.207	0.963	0.239	1.00	0.005	0.108
Nitrite-N	mg/L		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005
Sulphate	mg/L		5	356	112	196	481	189	0.5	61.1
Fluoride	mg/L		0.02	0.07	0.14	0.11	0.21	0.11	0.02	0.12
Bromide	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
Ammonia-N	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
Nitrogen - Total	mg/L		0.05	0.31	0.25	1.03	0.36	0.98	0.05	0.12
		SAMPLE DESCRIPTION:		DUP4		Field Blank	Trip Blank			
		SAMPLE TYPE:		Water		Water	Water			
		DATE SAMPLED:		2018-07-01		2018-07-02				
Parameter	Unit	G / S	RDL	9378842	RDL	9379112	9379114			
Chloride	mg/L		0.05	0.43	0.05	<0.05	<0.05			
Nitrate-N	mg/L		0.005	0.216	0.005	<0.005	<0.005			
Nitrite-N	mg/L		0.005	<0.005	0.005	<0.005	<0.005			
Sulphate	mg/L		5	159	0.5	<0.5	<0.5			
Fluoride	mg/L		0.02	<0.02	0.02	<0.02	<0.02			
Bromide	mg/L		0.05	<0.05	0.05	<0.05	<0.05			
Ammonia-N	mg/L		0.01	<0.01	0.01	<0.01	<0.01			
Nitrogen - Total	mg/L		0.05	0.33	0.05	<0.05	<0.05			

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
9378814-9379114 Literature holding time exceeded for Nitrate, Nitrite analysis.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		RMW1		17A32MW1		NLMW3		NLMW1	
		SAMPLE TYPE:		Water		Water		Water		Water	
		DATE SAMPLED:		2018-07-02		2018-07-02		2018-07-02		2018-07-02	
Parameter	Unit	G / S	RD L	9378777	RD L	9378811	RD L	9378812	RD L	9378813	
Aluminum Dissolved	µg/L		20	259000	2	26	2	15	2	4	
Antimony Dissolved	µg/L		0.2	<0.2	0.2	<0.2	0.2	0.4	0.2	<0.2	
Arsenic Dissolved	µg/L		0.1	4.9	0.1	1.4	0.1	0.2	0.1	0.2	
Barium Dissolved	µg/L		0.2	3.0	0.2	58.6	0.2	70.3	0.2	69.0	
Beryllium Dissolved	µg/L		0.5	136	0.01	0.02	0.01	0.01	0.01	<0.01	
Boron Dissolved	µg/L		100	274	2	545	2	129	2	185	
Cadmium Dissolved	µg/L		0.01	22.0	0.01	0.04	0.01	0.24	0.01	0.33	
Calcium Dissolved	µg/L		250	420000	250	469000	50	111000	50	78200	
Chromium Dissolved	µg/L		0.5	65.1	0.5	<0.5	0.5	<0.5	0.5	<0.5	
Cobalt Dissolved	µg/L		0.05	356	0.05	3.34	0.05	0.08	0.05	0.13	
Copper Dissolved	µg/L		10	21800	0.2	3.8	0.2	2.1	0.2	1.0	
Iron Dissolved	µg/L		50	1250000	50	6780	10	232	10	112	
Lead Dissolved	µg/L		0.05	0.24	0.05	<0.05	0.05	<0.05	0.05	<0.05	
Lithium Dissolved	µg/L		25	802	2.5	271	0.5	18.8	1.0	116	
Magnesium Dissolved	µg/L		250	360000	250	89400	50	15000	50	21200	
Manganese Dissolved	µg/L		5	24100	5	2670	1	1	1	<1	
Mercury Dissolved	µg/L		0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	
Molybdenum Dissolved	µg/L		0.05	0.15	0.05	0.35	0.05	1.66	0.05	1.99	
Nickel Dissolved	µg/L		0.2	256	0.2	7.2	0.2	0.7	0.2	1.3	
Potassium Dissolved	µg/L		250	4300	250	7510	50	3030	50	2970	
Selenium Dissolved	µg/L		0.5	2.6	0.5	<0.5	0.5	<0.5	0.5	<0.5	
Silver Dissolved	µg/L		0.02	0.44	0.02	<0.02	0.02	<0.02	0.02	<0.02	
Sodium Dissolved	µg/L		250	27900	250	58400	50	13600	50	24800	
Strontium Dissolved	µg/L		0.1	556	0.1	849	0.1	170	0.1	105	
Thallium Dissolved	µg/L		0.01	0.48	0.01	<0.01	0.01	<0.01	0.01	0.02	
Tin Dissolved	µg/L		0.05	0.19	0.05	<0.05	0.05	0.15	0.05	0.06	
Titanium Dissolved	µg/L		0.5	11.5	0.5	3.4	0.5	1.6	0.5	1.9	
Tungsten Dissolved	µg/L		0.01	11.9	0.01	2.21	0.01	0.72	0.01	1.18	
Uranium Dissolved	µg/L		0.01	38.9	0.01	4.47	0.01	2.24	0.01	2.74	
Vanadium Dissolved	µg/L		0.5	12.8	0.5	<0.5	0.5	<0.5	0.5	<0.5	

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AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		RMW1		17A32MW1		NLMW3		NLMW1	
		SAMPLE TYPE:		Water		Water		Water		Water	
		DATE SAMPLED:		2018-07-02		2018-07-02		2018-07-02		2018-07-02	
Parameter	Unit	G / S	RDL	9378777	RDL	9378811	RDL	9378812	RDL	9378813	
Zinc Dissolved	µg/L		2	1680	2	14	2	3	2	<2	
Hardness (calc)	ug CaCO3/L		100	2530000	100	1540000	100	339000	100	283000	

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BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		S4-27-18	OLBMW1	OLMW1	OLMW2	RMW2	RMW4		
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water		
		DATE SAMPLED:		2018-07-01	2018-06-30	2018-07-01	2018-07-01	2018-06-29	2018-06-29		
Parameter	Unit	G / S	RDL	9378814	9378815	9378816	9378817	9378818	9378820	RDL	9378821
Aluminum Dissolved	µg/L	2	4	3	10	3	3	<2	2	<2	
Antimony Dissolved	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	
Arsenic Dissolved	µg/L	0.1	0.6	0.3	0.3	0.4	1.0	0.3	0.1	0.9	
Barium Dissolved	µg/L	0.2	3.4	60.1	105	147	14.8	17.8	0.2	12.9	
Beryllium Dissolved	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.01	<0.01	
Boron Dissolved	µg/L	2	<2	<2	<2	<2	15	11	2	23	
Cadmium Dissolved	µg/L	0.01	<0.01	0.02	0.03	0.05	0.96	<0.01	0.01	0.43	
Calcium Dissolved	µg/L	50	49400	98600	108000	119000	237000	147000	250	469000	
Chromium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	
Cobalt Dissolved	µg/L	0.05	<0.05	<0.05	0.11	0.13	8.33	<0.05	0.05	22.3	
Copper Dissolved	µg/L	0.2	0.8	5.3	0.9	2.0	2.0	<0.2	0.2	0.4	
Iron Dissolved	µg/L	10	64	49	48	66	46300	17300	10	82900	
Lead Dissolved	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	
Lithium Dissolved	µg/L	0.5	4.9	1.5	0.6	0.6	30.2	7.8	0.5	34.5	
Magnesium Dissolved	µg/L	50	10400	19300	29700	22100	69700	31600	50	187000	
Manganese Dissolved	µg/L	1	<1	2	16	91	1840	1100	1	4320	
Mercury Dissolved	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	
Molybdenum Dissolved	µg/L	0.05	1.71	0.50	0.23	0.19	0.08	0.48	0.05	0.14	
Nickel Dissolved	µg/L	0.2	<0.2	0.6	0.3	0.6	11.4	<0.2	0.2	29.2	
Potassium Dissolved	µg/L	50	791	1300	1240	1070	3120	2440	50	9660	
Selenium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	
Silver Dissolved	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	
Sodium Dissolved	µg/L	50	707	356	504	427	4870	4630	50	5700	
Strontium Dissolved	µg/L	0.1	90.6	88.0	54.5	86.6	268	164	0.1	981	
Thallium Dissolved	µg/L	0.01	<0.01	<0.01	0.02	0.03	0.02	<0.01	0.01	0.04	
Tin Dissolved	µg/L	0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	0.05	<0.05	
Titanium Dissolved	µg/L	0.5	0.8	1.1	2.0	1.3	1.5	2.0	0.5	1.3	
Tungsten Dissolved	µg/L	0.01	0.40	2.98	0.09	0.05	0.08	1.09	0.01	0.11	
Uranium Dissolved	µg/L	0.01	2.10	0.81	0.63	0.70	0.88	0.66	0.01	3.92	
Vanadium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		S4-27-18	OLBMW1	OLMW1	OLMW2	RMW2	RMW4	RMW7
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-07-01	2018-06-30	2018-07-01	2018-07-01	2018-06-29	2018-06-29	2018-06-29
Parameter	Unit	G / S	RDL	9378814	9378815	9378816	9378817	9378818	9378820	RDL 9378821
Zinc Dissolved	µg/L		2	<2	<2	3	<2	37	<2	2
Hardness (calc)	ug CaCO3/L		100	166000	326000	392000	388000	879000	497000	100
										1940000

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DATE RECEIVED: 2018-07-05

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		SAMPLE DESCRIPTION:		GH12-I	GH12-J	17BMW-01	17A1MW1	17A2MW3	17A2MW4	17A3MW1	17A4MW2
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-30	2018-06-30	2018-07-01	2018-06-29	2018-07-01	2018-07-01	2018-07-01	2018-06-30
Parameter	Unit	G / S	RDL	9378822	9378823	9378824	9378825	9378826	9378827	9378828	9378829
Aluminum Dissolved	µg/L	2	<2	<2	<2	2	<2	<2	4	4	6
Antimony Dissolved	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3	0.3
Arsenic Dissolved	µg/L	0.1	0.2	0.1	0.6	0.3	0.2	2.7	1.9	0.4	0.4
Barium Dissolved	µg/L	0.2	34.0	110	4.7	55.9	120	85.9	89.5	22.8	22.8
Beryllium Dissolved	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron Dissolved	µg/L	2	<2	4	3	17	20	<2	90	209	209
Cadmium Dissolved	µg/L	0.01	0.04	0.29	<0.01	0.06	0.02	<0.01	0.02	0.07	0.07
Calcium Dissolved	µg/L	50	52900	80700	59000	147000	104000	64900	53800	78700	78700
Chromium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt Dissolved	µg/L	0.05	<0.05	<0.05	0.15	0.10	0.17	1.02	0.07	0.42	0.42
Copper Dissolved	µg/L	0.2	3.0	0.2	0.9	2.0	0.4	2.5	<0.2	0.6	0.6
Iron Dissolved	µg/L	10	321	115	71	43	30	444	445	45	45
Lead Dissolved	µg/L	0.05	0.11	<0.05	<0.05	<0.05	<0.05	0.14	0.05	<0.05	<0.05
Lithium Dissolved	µg/L	0.5	9.5	6.6	14.2	16.3	0.5	<0.5	85.9	30.5	30.5
Magnesium Dissolved	µg/L	50	9730	16800	9810	34400	46400	24200	13100	18500	18500
Manganese Dissolved	µg/L	1	<1	<1	49	<1	2	235	17	<1	<1
Mercury Dissolved	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Molybdenum Dissolved	µg/L	0.05	1.89	1.22	1.22	0.30	0.44	0.62	4.39	7.86	7.86
Nickel Dissolved	µg/L	0.2	0.2	0.6	0.6	0.7	0.2	1.0	0.6	0.5	0.5
Potassium Dissolved	µg/L	50	632	886	924	2090	1160	801	1080	5120	5120
Selenium Dissolved	µg/L	0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver Dissolved	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sodium Dissolved	µg/L	50	1060	1400	1020	4030	1920	419	8840	106000	106000
Strontium Dissolved	µg/L	0.1	85.2	92.1	88.7	189	72.0	35.7	70.1	83.2	83.2
Thallium Dissolved	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin Dissolved	µg/L	0.05	<0.05	<0.05	0.09	0.10	<0.05	<0.05	<0.05	<0.05	<0.05
Titanium Dissolved	µg/L	0.5	0.9	1.0	1.1	1.3	1.1	1.3	1.7	1.6	1.6
Tungsten Dissolved	µg/L	0.01	0.24	0.02	0.37	0.91	0.07	0.40	9.68	5.73	5.73
Uranium Dissolved	µg/L	0.01	5.71	3.48	2.07	3.25	1.39	0.58	2.62	6.93	6.93
Vanadium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		GH12-I	GH12-J	17BMW-01	17A1MW1	17A2MW3	17A2MW4	17A3MW1	17A4MW2
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-30	2018-06-30	2018-07-01	2018-06-29	2018-07-01	2018-07-01	2018-07-01	2018-06-30
Parameter	Unit	G / S	RDL	9378822	9378823	9378824	9378825	9378826	9378827	9378828	9378829
Zinc Dissolved	µg/L	2	4	4	4	4	7	<2	4	<2	<2
Hardness (calc)	ug CaCO3/L	100	172000	271000	188000	509000	451000	262000	188000	273000	

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		SAMPLE DESCRIPTION:		17A13MW2		17A14MW1		17A16MW2		17A17MW2		17A23MW5		17A33MW1	
		SAMPLE TYPE:		Water		Water		Water		Water		Water		Water	
		DATE SAMPLED:		2018-06-30		2018-07-01		2018-06-30		2018-06-29		2018-06-30		2018-06-29	
Parameter	Unit	G / S	RDL	9378830	RDL	9378831	RDL	9378832	9378833	9378834	9378835	9378836	9378837	9378838	9378839
Aluminum Dissolved	µg/L		2	<2	2	2	2	5	<2	<2	3				
Antimony Dissolved	µg/L		0.2	<0.2	0.2	0.5	0.2	0.4	<0.2	<0.2	<0.2				
Arsenic Dissolved	µg/L		0.1	0.6	0.1	1.4	0.1	1.0	0.4	0.3	0.3				
Barium Dissolved	µg/L		0.2	25.7	0.2	32.5	0.2	32.8	29.9	22.9	6.8				
Beryllium Dissolved	µg/L		0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01				
Boron Dissolved	µg/L		2	57	2	279	2	22	30	6	5				
Cadmium Dissolved	µg/L		0.01	0.01	0.01	<0.01	0.01	0.05	<0.01	0.02	<0.01				
Calcium Dissolved	µg/L		50	156000	50	71000	50	98700	235000	120000	66100				
Chromium Dissolved	µg/L		0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5				
Cobalt Dissolved	µg/L		0.05	0.40	0.05	0.15	0.05	1.87	0.06	<0.05	<0.05				
Copper Dissolved	µg/L		0.2	0.3	0.2	0.2	0.2	0.3	0.7	0.3	0.4				
Iron Dissolved	µg/L		10	15	10	29	10	23	35	<10	<10				
Lead Dissolved	µg/L		0.05	<0.05	0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05				
Lithium Dissolved	µg/L		0.5	33.7	2.5	244	0.5	11.1	22.5	7.8	3.0				
Magnesium Dissolved	µg/L		50	38200	50	29900	50	19500	46400	23200	11300				
Manganese Dissolved	µg/L		1	239	1	28	1	141	20	4	2				
Mercury Dissolved	µg/L		0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01				
Molybdenum Dissolved	µg/L		0.05	1.11	0.05	1.88	0.05	1.83	0.77	0.43	0.98				
Nickel Dissolved	µg/L		0.2	1.4	0.2	1.1	0.2	2.7	0.6	0.3	0.2				
Potassium Dissolved	µg/L		50	2880	50	1940	50	2420	3200	1870	1500				
Selenium Dissolved	µg/L		0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5				
Silver Dissolved	µg/L		0.02	<0.02	0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02				
Sodium Dissolved	µg/L		50	30300	50	13500	50	3280	7230	6230	1300				
Strontium Dissolved	µg/L		0.1	350	0.1	187	0.1	146	495	168	89.3				
Thallium Dissolved	µg/L		0.01	0.01	0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.01				
Tin Dissolved	µg/L		0.05	<0.05	0.05	0.06	0.05	<0.05	<0.05	<0.05	<0.05				
Titanium Dissolved	µg/L		0.5	1.6	0.5	2.5	0.5	0.9	1.9	1.1	0.9				
Tungsten Dissolved	µg/L		0.01	0.49	0.01	5.83	0.01	3.68	0.76	0.35	0.77				
Uranium Dissolved	µg/L		0.01	6.53	0.01	2.34	0.01	1.71	3.61	2.46	1.11				
Vanadium Dissolved	µg/L		0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5				

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ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		17A13MW2		17A14MW1		17A16MW2		17A17MW2		17A23MW5		17A33MW1	
		SAMPLE TYPE:		Water		Water		Water		Water		Water		Water	
		DATE SAMPLED:		2018-06-30		2018-07-01		2018-06-30		2018-06-29		2018-06-30		2018-06-29	
Parameter	Unit	G / S	RDL	9378830	RDL	9378831	RDL	9378832	9378833	9378834	9378835				
Zinc Dissolved	µg/L		2	<2	2	<2	2	<2	<2	<2	<2				
Hardness (calc)	ug CaCO3/L		100	547000	100	300000	100	327000	778000	395000	212000				

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		SAMPLE DESCRIPTION:		17A33MW2	DUP1	DUP2	DUP3	DUP4	Field Blank	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-30	2018-06-29	2018-06-30	2018-06-30	2018-07-01	2018-07-02	
Parameter	Unit	G / S	RDL	9378836	9378837	9378838	9378840	9378842	9379112	9379114
Aluminum Dissolved	µg/L	2	<2	<2	<2	<2	<2	<2	<2	<2
Antimony Dissolved	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arsenic Dissolved	µg/L	0.1	0.4	0.3	0.4	0.2	0.2	<0.1	<0.1	<0.1
Barium Dissolved	µg/L	0.2	12.0	29.7	10.8	32.4	112	<0.2	<0.2	<0.2
Beryllium Dissolved	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron Dissolved	µg/L	2	6	33	6	5	22	<2	<2	<2
Cadmium Dissolved	µg/L	0.01	0.02	<0.01	0.01	0.04	0.02	<0.01	<0.01	<0.01
Calcium Dissolved	µg/L	50	109000	236000	107000	54700	109000	<50	<50	<50
Chromium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt Dissolved	µg/L	0.05	<0.05	0.11	<0.05	<0.05	0.17	<0.05	<0.05	<0.05
Copper Dissolved	µg/L	0.2	0.3	0.6	0.3	0.6	0.6	0.2	<0.2	<0.2
Iron Dissolved	µg/L	10	<10	38	<10	<10	<10	<10	<10	<10
Lead Dissolved	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lithium Dissolved	µg/L	0.5	7.6	22.8	8.5	10.3	0.6	<0.5	<0.5	<0.5
Magnesium Dissolved	µg/L	50	21000	46200	21300	10100	48200	<50	<50	<50
Manganese Dissolved	µg/L	1	<1	33	<1	<1	1	<1	<1	<1
Mercury Dissolved	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Molybdenum Dissolved	µg/L	0.05	0.47	0.72	0.50	1.83	0.36	<0.05	<0.05	<0.05
Nickel Dissolved	µg/L	0.2	<0.2	0.6	<0.2	0.2	0.3	<0.2	<0.2	<0.2
Potassium Dissolved	µg/L	50	1810	3290	1840	676	1200	<50	<50	<50
Selenium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5
Silver Dissolved	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sodium Dissolved	µg/L	50	1730	7350	1770	1130	2030	<50	<50	<50
Strontium Dissolved	µg/L	0.1	156	470	148	79.2	68.4	<0.1	<0.1	<0.1
Thallium Dissolved	µg/L	0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin Dissolved	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Titanium Dissolved	µg/L	0.5	0.5	1.8	0.5	0.9	1.3	<0.5	<0.5	<0.5
Tungsten Dissolved	µg/L	0.01	0.72	0.82	0.74	0.29	0.07	<0.01	<0.01	<0.01
Uranium Dissolved	µg/L	0.01	1.98	4.07	1.95	6.24	1.27	<0.01	<0.01	<0.01
Vanadium Dissolved	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION: 17A33MW2		DUP1	DUP2	DUP3	DUP4	Field Blank	Trip Blank
		SAMPLE TYPE: Water		Water	Water	Water	Water	Water	Water
		DATE SAMPLED: 2018-06-30		2018-06-29	2018-06-30	2018-06-30	2018-07-01	2018-07-02	
Parameter	Unit	G / S	RDL	9378836	9378837	9378838	9378840	9378842	9379112
Zinc Dissolved	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Hardness (calc)	ug CaCO3/L	100	359000	780000	355000	178000	471000	<100	<100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
9379112 Result for Cu confirmed with duplicate analysis.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y358442

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Cyanide, Strong Acid Dissociable (SAD)

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		RMW1	NLMW3	NLMW1	S4-27-18	OLBMW1	OLMW1	OLMW2	RMW2
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-07-02	2018-07-02	2018-07-02	2018-07-01	2018-06-30	2018-07-01	2018-07-01	2018-06-29
Parameter	Unit	G / S	RDL	9378777	9378812	9378813	9378814	9378815	9378816	9378817	9378818
Cyanide (SAD)	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
		SAMPLE DESCRIPTION:		RMW4	RMW7	17BMW-01	17A1MW1	17A2MW3	17A2MW4	17A3MW1	17A4MW2
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-29	2018-06-29	2018-07-01	2018-06-29	2018-07-01	2018-07-01	2018-07-01	2018-06-30
Parameter	Unit	G / S	RDL	9378820	9378821	9378824	9378825	9378826	9378827	9378828	9378829
Cyanide (SAD)	mg/L		0.002	<0.002	<0.002	<0.002	0.011	<0.002	<0.002	<0.002	0.005
		SAMPLE DESCRIPTION:		DUP4	Field Blank	Trip Blank					
		SAMPLE TYPE:		Water	Water	Water					
		DATE SAMPLED:		2018-07-01	2018-07-02						
Parameter	Unit	G / S	RDL	9378842	9379112	9379114					
Cyanide (SAD)	mg/L		0.002	<0.002	<0.002	<0.002					

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Physical Tests Package

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		RMW1	17A32MW1	NLMW3	NLMW1	S4-27-18	OLBMW1	OLMW1	OLMW2
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-07-02	2018-07-02	2018-07-02	2018-07-02	2018-07-01	2018-06-30	2018-07-01	2018-07-01
Parameter	Unit	G / S	RDL	9378777	9378811	9378812	9378813	9378814	9378815	9378816	9378817
pH	pH units		0.01	2.58	6.33	7.00	7.18	7.20	7.37	7.01	7.04
Electrical Conductivity	uS/cm		1	6330	2420	675	611	310	548	653	655
Total Dissolved Solids	mg/L		5	8960	2060	312	325	212	270	292	368
Alkalinity (pH 4.5)	mg CaCO3/L		1	<1	294	210	212	92	272	381	346
		SAMPLE DESCRIPTION:		RMW2	RMW4	RMW7	GH12-I	GH12-J	17BMW-01	17A1MW1	17A2MW3
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-29	2018-06-29	2018-06-29	2018-06-30	2018-06-30	2018-07-01	2018-06-29	2018-07-01
Parameter	Unit	G / S	RDL	9378818	9378820	9378821	9378822	9378823	9378824	9378825	9378826
pH	pH units		0.01	6.16	6.18	6.02	6.97	7.27	7.26	7.22	7.16
Electrical Conductivity	uS/cm		1	1590	1310	2910	346	507	383	923	823
Total Dissolved Solids	mg/L		5	1310	1020	2860	180	242	192	630	495
Alkalinity (pH 4.5)	mg CaCO3/L		1	105	98	97	120	166	106	233	317
		SAMPLE DESCRIPTION:		17A2MW4	17A3MW1	17A4MW2	17A13MW2	17A14MW1	17A16MW2	17A17MW2	17A23MW5
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-07-01	2018-07-01	2018-06-30	2018-06-30	2018-07-01	2018-06-30	2018-06-29	2018-06-30
Parameter	Unit	G / S	RDL	9378827	9378828	9378829	9378830	9378831	9378832	9378833	9378834
pH	pH units		0.01	7.05	7.33	7.49	7.41	7.42	7.31	7.28	7.37
Electrical Conductivity	uS/cm		1	473	389	975	1050	635	672	1360	1040
Total Dissolved Solids	mg/L		5	225	208	620	735	402	450	1060	738
Alkalinity (pH 4.5)	mg CaCO3/L		1	266	203	205	270	234	141	321	239

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AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Physical Tests Package

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		17A33MW1	17A33MW2	DUP1	DUP2	DUP3	DUP4
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-06-29	2018-06-30	2018-06-29	2018-06-30	2018-06-30	2018-07-01
Parameter	Unit	G / S	RDL	9378835	9378836	9378837	9378838	9378840	9378842
pH	pH units	0.01	7.32	7.36	7.32	7.34	7.34	7.34	7.25
Electrical Conductivity	uS/cm	1	416	663	1350	707	387	875	
Total Dissolved Solids	mg/L	5	265	425	1000	478	205	505	
Alkalinity (pH 4.5)	mg CaCO3/L	1	107	155	309	162	122	308	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9378777-9378842 Literature holding time exceeded for pH analysis.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Physical Tests Package

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		Field Blank	Trip Blank
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2018-07-02	
Parameter	Unit	G / S	RDL	9379112	9379114
Electrical Conductivity	uS/cm		1	10	10
Total Dissolved Solids	mg/L		5	<5	<5
Alkalinity (pH 4.5)	mg CaCO3/L		1	<1	<1

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
9379112-9379114 Literature holding time exceeded for pH analysis.

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y358442

PROJECT: ENW.WENW03039-03.002

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<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump/Tania Perzoff

SAMPLED BY:

Water Analysis - Phenols

DATE RECEIVED: 2018-07-05

DATE REPORTED: 2018-07-12

		SAMPLE DESCRIPTION:		NLMW3	NLMW1	OLBMW1	OLMW1	OLMW2	17A2MW3	17A2MW4	17A3MW1
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2018-07-02	2018-07-02	2018-06-30	2018-07-01	2018-07-01	2018-07-01	2018-07-01	2018-07-01
Parameter	Unit	G / S	RDL	9378812	9378813	9378815	9378816	9378817	9378826	9378827	9378828
Phenols	mg/L			0.002	0.003	0.004	0.003	0.004	0.003	0.004	0.005
		SAMPLE DESCRIPTION:		17A4MW2							
		SAMPLE TYPE:		Water							
		DATE SAMPLED:		2018-06-30							
Parameter	Unit	G / S	RDL	9378829							
Phenols	mg/L			0.002	0.003						

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
9378812-9378829 Analysis performed at AGAT Calgary.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

Trace Organics Analysis

RPT Date: Jul 12, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

CCME BTEX/F1-F4 (Water)

Benzene	69365	9378777	<0.5	<0.5	NA	< 0.5	100%	80%	120%				92%	70%	130%
Ethylbenzene	69365	9378777	<0.5	<0.5	NA	< 0.5	100%	80%	120%				92%	70%	130%
Toluene	69365	9378777	<0.5	<0.5	NA	< 0.5	100%	80%	120%				93%	70%	130%
m&p-Xylene	69365	9378777	<0.5	<0.5	NA	< 0.5	98%	80%	120%				92%	70%	130%
o-Xylene	69365	9378777	<0.5	<0.5	NA	< 0.5	98%	80%	120%				92%	70%	130%
F1 (C6-C10)	69365	9378777	<100	<100	NA	< 100									
F1 minus BTEX (C6-C10)	69365	9378777	<100	<100	NA	< 100									
F2 (C10-C16)	69353	W-MS1	5790	5990	3.4%	< 100	107%	80%	120%				91%	70%	130%
F3 (C16-C34)	69353	W-MS1	23600	24900	5.4%	< 100	104%	80%	120%				102%	70%	130%
F4 (C34-C50)	69353	W-MS1	2490	2640	5.8%	< 100	94%	80%	120%				73%	70%	130%
Bromofluorobenzene	69365	9378777	98	102	4.0%		100%	70%	130%				94%	70%	130%
Dibromofluoromethane	69365	9378777	89	88	1.1%		101%	70%	130%				93%	70%	130%
Toluene - d8	69365	9378777	95	102	7.1%		100%	70%	130%				95%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME BTEX/F1-F4 (Water)

F2 (C10-C16)	69348	W-MS1	6020	5670	6.0%	< 100	93%	80%	120%				94%	70%	130%
F3 (C16-C34)	69348	W-MS1	23800	23000	3.4%	< 100	94%	80%	120%				102%	70%	130%
F4 (C34-C50)	69348	W-MS1	2670	2570	3.8%	< 100	87%	80%	120%				71%	70%	130%

Polyaromatic Hydrocarbons in Water Low Level

Naphthalene	69348	W-MS1	0.45	0.41	9.3%	< 0.05	93%	80%	120%				92%	50%	130%
Quinoline	69348	W-MS1	0.49	0.54	9.7%	< 0.05	99%	80%	120%				99%	50%	130%
Acenaphthylene	69348	W-MS1	0.48	0.41	15.7%	< 0.02	96%	80%	120%				97%	50%	130%
Acenaphthene	69348	W-MS1	0.51	0.44	14.7%	< 0.02	98%	80%	120%				103%	50%	130%
Fluorene	69348	W-MS1	0.49	0.42	15.4%	< 0.02	99%	80%	120%				99%	50%	130%
Phenanthrene	69348	W-MS1	0.51	0.44	14.7%	< 0.04	100%	80%	120%				103%	60%	130%
Anthracene	69348	W-MS1	0.51	0.44	14.7%	< 0.01	102%	80%	120%				103%	60%	130%
Acridine	69348	W-MS1	0.49	0.51	4.0%	< 0.05	100%	80%	120%				98%	50%	130%
Fluoranthene	69348	W-MS1	0.50	0.43	15.1%	< 0.02	101%	80%	120%				102%	60%	130%
Pyrene	69348	W-MS1	0.51	0.44	14.7%	< 0.02	100%	80%	120%				103%	60%	130%
Benzo(a)anthracene	69348	W-MS1	0.50	0.42	17.4%	< 0.01	101%	80%	120%				101%	60%	130%
Chrysene	69348	W-MS1	0.53	0.49	7.8%	< 0.01	100%	80%	120%				107%	60%	130%
Benzo(b)fluoranthene	69348	W-MS1	0.48	0.41	15.7%	< 0.01	101%	80%	120%				97%	60%	130%
Benzo(j)fluoranthene	69348	W-MS1	0.58	0.55	5.3%	< 0.01	102%	80%	120%				116%	60%	130%
Benzo(k)fluoranthene	69348	W-MS1	0.46	0.39	16.5%	< 0.01	100%	80%	120%				94%	60%	130%
Benzo(a)pyrene	69348	W-MS1	0.47	0.41	13.6%	< 0.01	101%	80%	120%				94%	60%	130%
Indeno(1,2,3-c,d)pyrene	69348	W-MS1	0.46	0.39	16.5%	< 0.01	94%	80%	120%				92%	60%	130%
Dibenzo(a,h)anthracene	69348	W-MS1	0.40	0.36	10.5%	< 0.01	91%	80%	120%				81%	60%	130%
Benzo(g,h,i)perylene	69348	W-MS1	0.48	0.41	15.7%	< 0.01	101%	80%	120%				97%	60%	130%

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 12, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1-Methylnaphthalene	69348	W-MS1	0.41	0.37	10.3%	< 0.05	94%	80%	120%				83%	50%	130%
2-Methylnaphthalene	69348	W-MS1	0.39	0.35	10.8%	< 0.05	94%	80%	120%				80%	50%	130%
Naphthalene - d8	69348	W-MS1	110	97	12.6%		91%	80%	120%				110%	50%	130%
2-Fluorobiphenyl	69348	W-MS1	113	100	12.2%		93%	80%	120%				113%	50%	130%
P-Terphenyl - d14	69348	W-MS1	103	94	9.1%		101%	80%	120%				103%	60%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Volatile Organic Compounds in Water

Chloromethane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				86%	70%	130%
Vinyl Chloride	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				90%	70%	130%
Bromomethane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				84%	70%	130%
Chloroethane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				86%	70%	130%
Trichlorofluoromethane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				87%	70%	130%
Acetone	69364	9381836	<10	<10	NA	< 10	99%	80%	120%						
1,1-Dichloroethylene	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				92%	70%	130%
Dichloromethane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				85%	70%	130%
2-Butanone (MEK)	69364	9381836	<10	<10	NA	< 10	99%	80%	120%						
trans-1,2-Dichloroethylene	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				88%	70%	130%
1,1-Dichloroethane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				92%	70%	130%
cis-1,2-Dichloroethylene	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				91%	70%	130%
Chloroform	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				93%	70%	130%
1,2-Dichloroethane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				92%	70%	130%
1,1,1-Trichloroethane	69364	9381836	<1	<1	NA	< 1	100%	80%	120%				90%	70%	130%
Carbon Tetrachloride	69364	9381836	<0.5	<0.5	NA	< 0.5	100%	80%	120%				88%	70%	130%
1,2-Dichloropropane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				95%	70%	130%
Trichloroethene	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				91%	70%	130%
Bromodichloromethane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				90%	70%	130%
trans-1,3-Dichloropropene	69364	9381836	<1	<1	NA	< 1	100%	80%	120%				93%	70%	130%
4-Methyl-2-pentanone (MIBK)	69364	9381836	<10	<10	NA	< 10	99%	80%	120%						
cis-1,3-Dichloropropene	69364	9381836	<1	<1	NA	< 1	100%	80%	120%				90%	70%	130%
1,1,2-Trichloroethane	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				93%	70%	130%
Dibromochloromethane	69364	9381836	<1	<1	NA	< 1	100%	80%	120%				91%	70%	130%
1,2-Dibromoethane	69364	9381836	<0.3	<0.3	NA	< 0.3	99%	80%	120%				94%	70%	130%
Tetrachloroethylene	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				81%	70%	130%
1,1,1,2-Tetrachloroethane	69364	9381836	<1	<1	NA	< 1	100%	80%	120%				90%	70%	130%
Chlorobenzene	69364	9381836	<1	<1	NA	< 1	99%	80%	120%				90%	70%	130%
Bromoform	69364	9381836	<1	<1	NA	< 1	100%	80%	120%				92%	70%	130%
1,1,2,2-Tetrachloroethane	69364	9381836	<0.8	<0.8	NA	< 0.8	99%	80%	120%				93%	70%	130%
1,3-Dichlorobenzene	69364	9381836	<0.5	<0.5	NA	< 0.5	99%	80%	120%				90%	70%	130%
1,4-Dichlorobenzene	69364	9381836	<0.5	<0.5	NA	< 0.5	99%	80%	120%				91%	70%	130%



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 12, 2018			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,2-Dichlorobenzene	69364	9381836	<0.5	<0.5	NA	< 0.5	99%	80%	120%				93%	70%	130%
1,2,4-Trichlorobenzene	69364	9381836	<1	<1	NA	< 1	100%	80%	120%				95%	70%	130%
Bromofluorobenzene	69364	9381836	96	87	9.8%		96%	70%	130%				101%	70%	130%
Dibromofluoromethane	69364	9381836	112	104	7.4%		95%	70%	130%				107%	70%	130%
Toluene - d8	69364	9381836	115	104	10.0%		94%	70%	130%				109%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

CCME BTEX/F1-F4 (Water)

Benzene	69366	9379114	<0.5	<0.5	NA	< 0.5	100%	80%	120%				92%	70%	130%
Ethylbenzene	69366	9379114	<0.5	<0.5	NA	< 0.5	100%	80%	120%				92%	70%	130%
Toluene	69366	9379114	<0.5	<0.5	NA	< 0.5	100%	80%	120%				93%	70%	130%
m&p-Xylene	69366	9379114	<0.5	<0.5	NA	< 0.5	98%	80%	120%				92%	70%	130%
o-Xylene	69366	9379114	<0.5	<0.5	NA	< 0.5	98%	80%	120%				92%	70%	130%
F1 (C6-C10)	69366	9379114	<100	<100	NA	< 100									
F1 minus BTEX (C6-C10)	69366	9379114	<100	<100	NA	< 100									
F2 (C10-C16)	69368	W-MS1	5250	5330	1.5%	< 100	94%	80%	120%				82%	70%	130%
F3 (C16-C34)	69368	W-MS1	21000	21100	0.5%	< 100	96%	80%	120%				91%	70%	130%
F4 (C34-C50)	69368	W-MS1	2630	2620	0.4%	< 100	88%	80%	120%				70%	70%	130%
Bromofluorobenzene	69366	9379114	94	103	9.1%		100%	70%	130%				94%	70%	130%
Dibromofluoromethane	69366	9379114	104	113	8.3%		101%	70%	130%				93%	70%	130%
Toluene - d8	69366	9379114	88	95	7.7%		100%	70%	130%				95%	70%	130%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

Water Analysis																
RPT Date: Jul 12, 2018				DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

Physical Tests Package

pH	9378777		2.58	2.59	0.4%		100%	95%	105%						
Electrical Conductivity	9379960		1020	1030	0.8%	< 1	98%	90%	110%						
Total Dissolved Solids	9378777		8960	9060	1.1%	< 5				105%	85%	115%			
Alkalinity (pH 4.5)	9378777		< 1	< 1	NA	< 1	98%	90%	110%						

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Anions and Nutrients

Chloride	9378814		0.08	0.09	NA	< 0.05	105%	90%	110%	96%	90%	110%			
Nitrate-N	9378814		0.149	0.146	2.6%	< 0.005	102%	90%	110%	103%	90%	110%			
Nitrite-N	9378814		<0.005	<0.005	NA	< 0.005				98%	90%	110%			
Sulphate	9378814		74.5	73.8	1.0%	< 0.5	96%	90%	110%	103%	90%	110%			
Fluoride	9378814		0.06	0.06	NA	< 0.02	100%	85%	115%	103%	90%	110%			
Bromide	9378814		<0.05	<0.05	NA	< 0.05	104%	85%	115%	99%	90%	110%			
Ammonia-N	9378777		0.41	0.41	0.7%	< 0.01	99%	85%	115%	103%	90%	110%			
Nitrogen - Total	9378811		0.54	0.54	0.8%	< 0.05	96%	85%	115%	107%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

BC CSR Omnibus Dissolved Metals

Aluminum Dissolved	9376656		13	13	3.9%	< 2	95%	90%	110%	98%	90%	110%			
Antimony Dissolved	9376656		<0.2	<0.2	NA	< 0.2	103%	90%	110%	100%	90%	110%			
Arsenic Dissolved	9376656		0.7	0.7	1.9%	< 0.1	102%	90%	110%	100%	90%	110%			
Barium Dissolved	9376656		17.8	17.8	0.2%	< 0.2	98%	90%	110%	100%	90%	110%			
Beryllium Dissolved	9376656		<0.01	<0.01	NA	< 0.01	101%	90%	110%	100%	90%	110%			
Boron Dissolved	9376656		4	3	NA	< 2	90%	90%	110%	97%	90%	110%			
Cadmium Dissolved	9376656		<0.01	<0.01	NA	< 0.01	101%	90%	110%	100%	90%	110%			
Calcium Dissolved	9378821		424000	424000	0.0%	< 50	99%	90%	110%	101%	90%	110%			
Chromium Dissolved	9376656		<0.5	<0.5	NA	< 0.5	96%	90%	110%	91%	90%	110%			
Cobalt Dissolved	9376656		0.16	0.17	NA	< 0.05	103%	90%	110%	100%	90%	110%			
Copper Dissolved	9376656		0.4	0.5	NA	< 0.2	98%	90%	110%	94%	90%	110%			
Iron Dissolved	9378821		82900	83800	1.2%	< 10	103%	90%	110%	101%	90%	110%			
Lead Dissolved	9376656		<0.05	<0.05	NA	< 0.05	96%	90%	110%	94%	90%	110%			
Lithium Dissolved	9376656		4.8	4.9	0.6%	< 0.5				100%	90%	110%			
Magnesium Dissolved	9378821		187000	188000	0.5%	< 50	101%	90%	110%	100%	90%	110%			
Manganese Dissolved	9378821		4320	4370	1.1%	< 1	103%	90%	110%	101%	90%	110%			
Mercury Dissolved	9378777		<0.01	<0.01	NA	< 0.01	106%	90%	110%	110%	90%	110%			
Molybdenum Dissolved	9376656		0.42	0.41	2.8%	< 0.05	101%	90%	110%	104%	90%	110%			
Nickel Dissolved	9376656		2.1	2.1	0.2%	< 0.2	98%	90%	110%	98%	90%	110%			
Potassium Dissolved	9378821		9660	9700	0.4%	< 50	94%	90%	110%	101%	90%	110%			
Selenium Dissolved	9376656		<0.5	<0.5	NA	< 0.5	110%	90%	110%	99%	90%	110%			
Silver Dissolved	9376656		<0.02	<0.02	NA	< 0.02				101%	90%	110%			

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Jul 12, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Sodium Dissolved	9378821		5700	5730	0.4%	< 50	96%	90%	110%	98%	90%	110%			
Strontium Dissolved	9376656		63.1	63.3	0.3%	< 0.1	102%	90%	110%	104%	90%	110%			
Thallium Dissolved	9376656		<0.01	<0.01	NA	< 0.01	99%	90%	110%	92%	90%	110%			
Tin Dissolved	9376656		0.12	0.11	NA	< 0.05				99%	90%	110%			
Titanium Dissolved	9376656		0.8	0.8	NA	< 0.5				99%	90%	110%			
Tungsten Dissolved	9376656		0.20	0.20	2.4%	< 0.01				97%	90%	110%			
Uranium Dissolved	9376656		0.44	0.43	2.3%	< 0.01	98%	90%	110%	97%	90%	110%			
Vanadium Dissolved	9376656		<0.5	<0.5	NA	< 0.5	99%	90%	110%	93%	90%	110%			
Zinc Dissolved	9376656		<2	<2	NA	< 2	98%	90%	110%	98%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Physical Tests Package

pH	9378830		7.41	7.39	0.3%		101%	95%	105%						
Electrical Conductivity	9378830		1050	1060	0.7%	< 1	98%	90%	110%						
Total Dissolved Solids	9378831		402	415	3.1%	< 5				90%	85%	115%			
Alkalinity (pH 4.5)	9378830		270	276	1.9%	< 1	101%	90%	110%						

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Anions and Nutrients

Chloride	9378840		0.78	0.77	1.5%	< 0.05	102%	90%	110%	98%	90%	110%			
Nitrate-N	9378840		0.108	0.101	7.1%	< 0.005	99%	90%	110%	100%	90%	110%			
Nitrite-N	9378840		<0.005	<0.005	NA	< 0.005				94%	90%	110%			
Sulphate	9378840		61.1	61.1	0.0%	< 0.5	98%	90%	110%	94%	90%	110%			
Fluoride	9378840		0.12	0.12	0.9%	< 0.02	98%	85%	115%	101%	90%	110%			
Bromide	9378840		<0.05	<0.05	NA	< 0.05	98%	85%	115%	96%	90%	110%			
Ammonia-N	9378830		0.11	0.11	1.4%	< 0.01	99%	85%	115%	102%	90%	110%			
Nitrogen - Total	9378823		0.35	0.35	0.8%	< 0.05	91%	85%	115%	108%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

BC CSR Omnibus Dissolved Metals

Aluminum Dissolved	9378821		<2	<2	NA	< 2	90%	90%	110%	98%	90%	110%			
Antimony Dissolved	9378821		<0.2	<0.2	NA	< 0.2	108%	90%	110%	98%	90%	110%			
Arsenic Dissolved	9378821		0.9	0.8	4.9%	< 0.1	96%	90%	110%	101%	90%	110%			
Barium Dissolved	9378821		12.9	14.0	8.3%	< 0.2	104%	90%	110%	101%	90%	110%			
Beryllium Dissolved	9378821		<0.01	<0.01	NA	< 0.01	101%	90%	110%	103%	90%	110%			
Boron Dissolved	9378821		23	23	0.2%	< 2	90%	90%	110%	109%	90%	110%			
Cadmium Dissolved	9378821		0.43	0.43	0.7%	< 0.01	102%	90%	110%	100%	90%	110%			
Calcium Dissolved	9378330		62200	62300	0.0%	< 50	101%	90%	110%	101%	90%	110%			
Chromium Dissolved	9378821		<0.5	<0.5	NA	< 0.5	95%	90%	110%	93%	90%	110%			
Cobalt Dissolved	9378821		22.3	22.2	0.5%	< 0.05	101%	90%	110%	100%	90%	110%			



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Jul 12, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Copper Dissolved	9378821		0.4	<0.2	NA	< 0.2	110%	90%	110%	96%	90%	110%			
Iron Dissolved	9378330		32	30	NA	< 10	105%	90%	110%	103%	90%	110%			
Lead Dissolved	9378821		<0.05	<0.05	NA	< 0.05	97%	90%	110%	99%	90%	110%			
Lithium Dissolved	9378821		34.5	35.4	2.7%	< 0.5				104%	90%	110%			
Magnesium Dissolved	9378330		18900	18900	0.0%	< 50	106%	90%	110%	104%	90%	110%			
Manganese Dissolved	9378330		19	18	0.9%	< 1	104%	90%	110%	101%	90%	110%			
Mercury Dissolved	9378829		<0.01	<0.01	NA	< 0.01	102%	90%	110%	94%	90%	110%			
Molybdenum Dissolved	9378821		0.14	0.15	NA	< 0.05	103%	90%	110%	103%	90%	110%			
Nickel Dissolved	9378821		29.2	28.6	2.3%	< 0.2	99%	90%	110%	96%	90%	110%			
Potassium Dissolved	9378330		3660	3640	0.4%	< 50	96%	90%	110%	101%	90%	110%			
Selenium Dissolved	9378821		<0.5	<0.5	NA	< 0.5	109%	90%	110%	97%	90%	110%			
Silver Dissolved	9378821		<0.02	<0.02	NA	< 0.02				101%	90%	110%			
Sodium Dissolved	9378330		120000	119000	0.7%	< 50	97%	90%	110%	98%	90%	110%			
Strontium Dissolved	9378821		981	997	1.6%	< 0.1	109%	90%	110%	97%	90%	110%			
Thallium Dissolved	9378821		0.04	0.04	NA	< 0.01	95%	90%	110%	109%	90%	110%			
Tin Dissolved	9378821		<0.05	<0.05	NA	< 0.05				99%	90%	110%			
Titanium Dissolved	9378821		1.3	1.4	NA	< 0.5				104%	90%	110%			
Tungsten Dissolved	9378821		0.11	0.11	0.8%	< 0.01				103%	90%	110%			
Uranium Dissolved	9378821		3.92	4.01	2.4%	< 0.01	110%	90%	110%	107%	90%	110%			
Vanadium Dissolved	9378821		<0.5	<0.5	NA	< 0.5	99%	90%	110%	96%	90%	110%			
Zinc Dissolved	9378821		14	14	1.9%	< 2	101%	90%	110%	95%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide, Strong Acid Dissociable (SAD)

Cyanide (SAD)	9378777	<0.002	<0.002	NA	< 0.002	87%	85%	115%	95%	90%	110%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Water Analysis - Phenols

Phenols	9387088	<0.002	0.003	NA	< 0.002	97%	80%	120%	103%	80%	120%	100%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Ethylbenzene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
Toluene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
m&p-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
o-Xylene	ORG-180-5130	EPA SW-846 8260	GC/MS/FID
F1 (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F1 minus BTEX (C6-C10)	ORG-180-5130	CCME Tier 1 Method	GC/MS/FID
F2 (C10-C16)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F3 (C16-C34)	ORG-180-5134	CCME Tier 1 Method	GC/FID
F4 (C34-C50)	ORG-180-5134	CCME Tier 1 Method	GC/FID
Bromofluorobenzene		EPA SW-846 8260	GC/MS
Dibromofluoromethane		EPA SW-846 8260	GC/MS
Toluene - d8		EPA SW-846 8260	GC/MS
Naphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Quinoline	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acenaphthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluorene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Phenanthrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Acridine	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chrysene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(b)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(j)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(k)fluoranthene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(a)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D	GC/MS
Indeno(1,2,3-c,d)pyrene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Dibenzo(a,h)anthracene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Benzo(g,h,i)perylene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
1-Methylnaphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
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SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
2-Methylnaphthalene	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Naphthalene - d8			GC/MS
2-Fluorobiphenyl	ORG-180-5133	Modified from BCMOE Lab Manual Section D (PAH)	GC/MS
P-Terphenyl - d14	ORG-180-5133	Modified from BC MOE Lab Manual Section D (PAH)	GC/MS
Chloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Vinyl Chloride	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromomethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Chloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Trichlorofluoromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Acetone	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1-Dichloroethylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dichloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
2-Butanone (MEK)	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
trans-1,2-Dichloroethylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1-Dichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
cis-1,2-Dichloroethylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Chloroform	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,1-Trichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Carbon Tetrachloride	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichloropropane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Trichloroethene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromodichloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
trans-1,3-Dichloropropene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
4-Methyl-2-pentanone (MIBK)	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
cis-1,3-Dichloropropene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,2-Trichloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dibromochloromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dibromoethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Tetrachloroethylene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,1,2-Tetrachloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D	GC/MS
Chlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromoform	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,1,2,2-Tetrachloroethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,3-Dichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,4-Dichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2-Dichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
1,2,4-Trichlorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Bromofluorobenzene	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Dibromofluoromethane	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS
Toluene - d8	ORG-180-5131	Modified from BC MOE Lab Manual Section D (VOC)	GC/MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Chloride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Bromide	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Ammonia-N	INOR-181-6001	Modified from SM 4500-NH3 G	CONTINUOUS FLOW ANALYZER
Nitrogen - Total	INOR-181-6006	Modified from SM 4500-N	COMBUSTION
Aluminum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Antimony Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Arsenic Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Barium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Beryllium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Boron Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cadmium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Calcium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Chromium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cobalt Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Copper Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Iron Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Lead Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Lithium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Magnesium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Manganese Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Mercury Dissolved	MET-181-6103, LAB-181-4015	Modified from EPA 245.7	CV/AA
Molybdenum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Nickel Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Potassium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Selenium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Silver Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Sodium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y358442
ATTENTION TO: Stephan Klump/Tania Perzoff
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Strontium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Thallium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Tin Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Titanium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Tungsten Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Uranium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Vanadium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Zinc Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cyanide (SAD)	INOR-181-6010	EPA 335.3	CONTINUOUS FLOW ANALYZER
pH	INOR-181-6000	Modified from SM 4500-H+	PH METER
Electrical Conductivity	INOR-181-6000	Modified from SM 2510 B	PC TITRATE
Total Dissolved Solids	INOR-181-6007	SM 2540 C, D & E	GRAVIMETRIC
Alkalinity (pH 4.5)	INOR-181-6000	Modified from SM 2320 B	PC TITRATE
Phenols	INST 0300	SM 420.2	CONTINUOUS FLOW ANALYZER

Laboratory Use Only

Arrival Temperature: 3°C

AGAT Job Number: 184358442

Notes: JUL 5 AM 9:56

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com
2. Name: Tania Perzoff
Email: Tania.Perzoff@tetrattech.com

Report Format

☐ Single Sample per page
☒ Multiple Samples per page
☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days
Rush TAT ☐ Day 2 - 100%
☐ Day 3 - 50%
☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Phone: 867-335-4695 Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL-LD ☐ RL-HD
☐ WL-N ☐ WL-R

Schedule 3.3 (Please Specify)

CCME (Please Specify) Groundwater standard

Other (Please Specify) _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	pH, EC, TDS, Alk, Anions	TSS, BOD	Dissolved Metals (inc. Hg)	Cyanide	Ammonia	Total Nitrogen	TOC	Phenols	VOC	BTEX	F1-F4	PAH	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
9378777	RMW1	Water	1110 02/07/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
811	17A32MW1	Water	0919 02/07/18		☒	☒	☒	☒	☒	☒				☒	☒	☒	12	Y		
812	NLMW3	Water	0735 02/07/18		☒	☒	☒	☒	☒	☒		☒		☒	☒		12	Y		
813	NLMW1	Water	0650 02/07/18		☒	☒	☒	☒	☒	☒		☒		☒	☒		12	Y		
814	S4-27-18	Water	1455 1/07/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
815	OLBMW1	Water	1640 30/06/18		☒	☒	☒	☒	☒	☒		☒		☒	☒		12	Y		
816	OLMW1	Water	0805 1/07/18		☒	☒	☒	☒	☒	☒		☒		☒	☒		12	Y		
817	OLMW2	Water	0830 1/07/18		☒	☒	☒	☒	☒	☒		☒		☒	☒		12	Y		
819	RMW2	Water	1100 29/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
820	RMW4	Water	0755 29/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
821	RMW7	Water	0930 29/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		

Samples Relinquished By (Print Name and Sign):

Cole Fischer

Date/Time

5/07/18 0900

Samples Received By (Print Name and Sign):

Ann

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Page 1 of 3

V115464



Laboratory Use Only

Arrival Temperature: 7°C

AGAT Job Number: 184358442

Notes: JUL 5 AM 9:56

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com
2. Name: Tania Perzoff
Email: Tania.Perzoff@tetrattech.com

Report Format

☐ Single
Sample per page
☒ Multiple
Samples per page
☒ Excel Format
Included

Requirements (Please Check)

☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL-LD ☐ RL-HD
☐ WL-N ☐ WL-R

Schedule 3.3 (Please Specify)

CCME (Please Specify) CCME Groundwater S

Other (Please Specify)

Invoice To

Same as above Yes ☒ / No ☐

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Phone: 867 335 4695 Fax: _____
PO/AFE#:

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	pH, EC, TDS, Alk, Anions	TSS, BOD	Dissolved Metals (inc. Hg)	Cyanide	Ammonia	Total Nitrogen	TOC	Phenols	VOC	BTEX	F1-F4	PAH	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
<u>822</u>	GH12-I	Water	1315 30/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
<u>823</u>	GH12-J	Water	1435 30/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
<u>824</u>	17BMW-01	Water	1230 1/07/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
<u>825</u>	17A1MW1	Water	1223 29/06/18		☒	☒	☒	☒	☒	☒		☒	☒	☒	☒		12	Y		
<u>826</u>	17A2MW3	Water	0930 1/07/18		☒	☒	☒	☒	☒	☒		☒	☒	☒	☒		12	Y		
<u>827</u>	17A2MW4	Water	1045 1/07/18		☒	☒	☒	☒	☒	☒		☒	☒	☒	☒		12	Y		
<u>828</u>	17A3MW1	Water	1615 1/07/18		☒	☒	☒	☒	☒	☒		☒	☒	☒	☒		12	Y		
<u>829</u>	17A4MW2	Water	1540 30/06/18		☒	☒	☒	☒	☒	☒		☒	☒	☒	☒		12	Y		
<u>830</u>	17A13MW2	Water	0800 30/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
<u>831</u>	17A14MW1	Water	0645 1/07/18		☒	☒	☒	☒	☒	☒				☒	☒	☒	12	Y		
<u>832</u>	17A16MW2	Water	0630 30/06/18		☒	☒	☒	☒	☒	☒				☒	☒	☒	12	Y		

Samples Relinquished By (Print Name and Sign):

Cole Fischer

Date/Time

5/07/18 0900

Samples Received By (Print Name and Sign):

Ann

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Page 2 of 2

V115466



Laboratory Use Only

Arrival Temperature: 3°C

AGAT Job Number: 184358442

Notes: JUL 5 9:58

Chain of Custody Record

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: 867-335-4695 Fax: _____
LSD: 181940YG
Client Project #: ENW.WENW03039-03.002

Report Information

1. Name: Stephan Klump
Email: Stephan.Klump@tetrattech.com
2. Name: Tania Perzoff
Email: Tania.Perzoff@tetrattech.com

Report Format

☐ Single
☐ Sample per page
☒ Multiple
☒ Samples per page
☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Invoice To

Same as above Yes ☒ / No ☐

Company: Tetra Tech Canada
Contact: Stephan Klump/Tania Perzoff
Address: 61 Wasson Place, Whitehorse, YT
Phone: 867 335 4695 Fax: _____
PO/AFE#: _____

Requirements (Please Check)

☐ BC CSR Soil ☐ BC CSR - Water
☐ AL ☐ DW
☐ IL ☐ AW
☐ PL ☐ IW
☐ CL ☐ LW
☐ RL-LD ☐ RL-HD
☐ WL-N ☐ WL-R

Schedule 3.3 (Please Specify)

CCME (Please Specify) CCME Groundwater S

Other (Please Specify) _____

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	pH, EC, TDS, Alk, Anions	TSS, BOD	Dissolved Metals (inc. Hg)	Cyanide	Ammonia	Total Nitrogen	TOC	Phenols	VOC	BTEX	F1-F4	PAH	NUMBER OF CONTAINERS	PRESERVED (Y/N)	HAZARDOUS (Y/N)	Hold for: ☐ 60 DAYS
<u>733</u>	17A17MW2	Water	1400 29/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
<u>834</u>	17A23MW5	Water	1120 30/06/18		☒	☒	☒	☒	☒	☒				☒	☒	☒	12	Y		
<u>835</u>	17A33MW1	Water	1230 29/06/18		☒	☒	☒	☒	☒	☒				☒	☒	☒	12	Y		
<u>836</u>	17A33MW2	Water	1000 30/06/18		☒	☒	☒	☒	☒	☒				☒	☒	☒	12	Y		
<u>837</u>	DUP1	Water	29/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
<u>838</u>	DUP2	Water	30/06/18		☒	☒	☒	☒	☒	☒				☒	☒	☒	12	Y		
<u>840</u>	DUP3	Water	30/06/18		☒	☒	☒	☒	☒	☒				☒	☒		12	Y		
<u>7 842</u>	DUP4	Water	1/07/18		☒	☒	☒	☒	☒	☒		☒	☒	☒	☒		12	Y		
<u>9 112</u>	Field Blank	Water															12	Y		
<u>9 114</u>	Trip Blank	Water															12	Y		
		Water																		

Samples Relinquished By (Print Name and Sign):

Cole Fischer

Date/Time

5/07/18 0900

Samples Received By (Print Name and Sign):

Ann

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Samples Relinquished By (Print Name and Sign):

Date/Time

Samples Received By (Print Name and Sign):

Date/Time

Page 2 of 3

V115465

Wh. 9ehorse, Y.T

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech
Courier: Airnorth Prepaid ☒ Collect
Waybill# 287 04065386
Branch: EDM GP FM FM RD VAN LYD FSJ EST Other: _____
If multiple sites were submitted at once: Yes No
Custody Seal Intact: Yes No NA
TAT: <24hr 24-48hr 48-72hr Reg Other _____
Cooler Quantity: 15

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No
Inorganic Tests (Please Circle): Mibi, BOD, Nitrate/Nitrite, Turbidity, Microtox, Ortho PO4, Tedlar Bag, Residual Chlorine, Chlorophyll*, Chloroamines*
Earliest Expiry: _____
Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
Legal Samples: Yes No
International Samples: Yes No
Tape Sealed: Yes No
Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 7.1 + 8.1 + 9.4 = 8.2 °C 2 (Bottle/Jar) 8.1 + 7.4 + 8.2 = 7.9 °C
3 (Bottle/Jar) 8.2 + 6.8 + 8.3 = 7.7 °C 4 (Bottle/Jar) 8.4 + 6.7 + 8.6 = 7.2 °C
5 (Bottle/Jar) 6.8 + 8.9 + 7.4 = 7.7 °C 6 (Bottle/Jar) _____ °C
7 (Bottle/Jar) _____ °C 8 (Bottle/Jar) _____ °C
9 (Bottle/Jar) _____ °C 10 (Bottle/Jar) _____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____
Samples Damaged: Yes No If YES why?
No Bubble Wrap Frozen Courier
Other: _____
Account Project Manager: _____ have they been notified of the above issues: Yes No
Whom spoken to: _____ Date/Time: _____
CPM Initial _____
General Comments: _____

Date issued: October 05, 2015
Document ID: SR-9505.003

* Subcontracted Analysis (See CPM)

Page 1 of 1

2 of 2



SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 184358442

RECEIVING BASICS:

Received From: NOVEX - 2

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 10 Containers: 384

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Jun 29, 2018

ALREADY EXCEEDED? Yes No

Add time exceeded for NO₂, NO₃ for all samples except: "RMW1", "IA32MW1", "2MW3", "LMW1".

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 7 + 4 + 7 = 7 °C (2) 7 + 2 + 2 = 2 °C (3) 7 + 7 + 7 = 7 °C (4) 7 + 4 + 7 = 7 °C

Was ice or ice pack present: Yes No

Integrity Issues:

5) 7 + 7 + 7 = 7°C
6) 7 + 4 + 4 = 4°C
7) 7 + 5 + 5 = 5°C
8) 7 + 7 + 7 = 7°C

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____

Date and Time: _____

ADDITIONAL NOTES:

TR: p Blank without custody seal received, but was not listed on the CoC.

PLANT SAMPLE CERTIFICATES

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Stephan Klump

PROJECT: ENW.WENW03039-03.002

AGAT WORK ORDER: 18Y379812

SOIL ANALYSIS REVIEWED BY: Angela Bond, Technical Reviewer

WATER ANALYSIS REVIEWED BY: Dana Solari, Lab Reporter

DATE REPORTED: Sep 11, 2018

PAGES (INCLUDING COVER): 22

VERSION*: 2

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 2: Sample receipt temperature 2°C.

Version 2 is issued to report complete results. Version 2 is an amendment to Version 1.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 18Y379812

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Cyanide in Soil (WAD)

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-11

				18PL(A20)-01		18PL(A43)-02		18PL(A43)-02		18PL(A23)-01		18PL(A23)-01		18PL(A21)-01		18PL(A21)-01	
				SAMPLE DESCRIPTION: (Willow)		18PL(A20)-01 (Willow)		18PL(A43)-02 (Soap Berry)		18PL(A23)-01 (Willow)		18PL(A23)-01 (Soap Berry)		18PL(A21)-01 (Willow)		18PL(A21)-01 (Soap Berry)	
				SAMPLE TYPE: Tissue		Tissue		Tissue		Tissue		Tissue		Tissue		Tissue	
				DATE SAMPLED: 2018-08-27		2018-08-27		2018-08-28		2018-08-28		2018-08-27		2018-08-27		2018-08-26	
Parameter	Unit	G / S	RDL	9510603	9510604	9510622	9510623	9510624	9510625	9510626	9510627						
Cyanide (WAD)	µg/g	10	<10	<10	<10	<10	<10	<10	<10	<10	<10						
				18PL(A20)-02		18PL(A20)-02		18PL(A20)-03		18PL(A20)-03		18PL(A19)-01		18PL(A37)-03		18PL(A37)-03	
				SAMPLE DESCRIPTION: (Willow)		18PL(A20)-02 (Labrador Tea)		18PL(A20)-03 (Willow)		18PL(A20)-03 (Labrador Tea)		18PL(A19)-01 (Willow)		18PL(A19)-01 (Soap Berry)		18PL(A37)-03 (Soap Berry)	
				SAMPLE TYPE: Tissue		Tissue		Tissue		Tissue		Tissue		Tissue		Tissue	
				DATE SAMPLED: 2018-08-28		2018-08-28		2018-08-28		2018-08-28		2018-08-27		2018-08-28		2018-08-28	
Parameter	Unit	G / S	RDL	9510628	9510629	9510630	9510631	9511559	9511582	9511696	9511749						
Cyanide (WAD)	µg/g	10	<10	<10	<10	<10	<10	<10	<10	<10	<10						
				18PL(A37)-01		18PL(A37)-01		18PL(A43)-01		18PL(A43)-01							
				SAMPLE DESCRIPTION: (Willow)		18PL(A37)-01 (Willow)		18PL(A43)-01 (Willow)		18PL(A43)-01 (Bunch Berry)							
				SAMPLE TYPE: Tissue		Tissue		Tissue		Tissue							
				DATE SAMPLED: 2018-08-28		2018-08-28		2018-08-28		2018-08-28							
Parameter	Unit	G / S	RDL	9511812	9511813	9511814	9511815										
Cyanide (WAD)	µg/g	10	<10	<10	<10	<10	<10										

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (AL) (Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
9510603-9511815 Due to matrix interferences sample was diluted for cyanide analysis, detection limits have been adjusted accordingly.

Certified By:

Angela Bond



Certificate of Analysis

AGAT WORK ORDER: 18Y379812

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Metals in Tissue (Dry Weight)																			
DATE RECEIVED: 2018-08-30						DATE REPORTED: 2018-09-11													
				18PL(A20)-01		18PL(A43)-02		18PL(A43)-02		18PL(A23)-01		18PL(A23)-01		18PL(A21)-01		18PL(A21)-01			
SAMPLE DESCRIPTION:				(Willow)		18PL(A20)-01		(Willow)		(Soap Berry)		(Willow)		(Soap Berry)		(Willow)		(Soap Berry)	
SAMPLE TYPE:				Tissue		Tissue		Tissue		Tissue		Tissue		Tissue		Tissue		Tissue	
DATE SAMPLED:				2018-08-27		2018-08-27		2018-08-28		2018-08-28		2018-08-27		2018-08-27		2018-08-26		2018-08-26	
Parameter		Unit	G / S	RDL	9510603	9510604	9510622	9510623	9510624	9510625	9510626	9510627	9510627	9510627	9510627	9510627	9510627	9510627	9510627
Antimony (Dry Weight)		µg/g		0.01	0.01	0.03	<0.01	<0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic (Dry Weight)		µg/g		0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Barium (Dry Weight)		µg/g		0.05	4.45	1.19	2.29	1.83	10.5	10.4	8.19	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
Beryllium (Dry Weight)		µg/g		0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Dry Weight)		µg/g		0.01	2.10	0.03	5.97	0.12	4.09	0.16	2.02	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Chromium (Dry Weight)		µg/g		0.05	2.51	0.30	0.45	0.36	0.29	2.44	1.09	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Cobalt (Dry Weight)		µg/g		0.02	0.76	0.09	1.49	0.11	0.59	0.30	0.99	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Copper (Dry Weight)		µg/g		0.1	22.2	7.8	5.8	5.8	8.7	12.8	13.5	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Lead (Dry Weight)		µg/g		0.02	0.23	0.07	0.07	0.04	0.06	0.14	0.12	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Molybdenum (Dry Weight)		µg/g		0.05	0.23	1.02	0.32	0.49	0.21	1.32	0.23	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Nickel (Dry Weight)		µg/g		0.1	1.8	1.4	2.4	2.2	1.4	2.7	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Selenium (Dry Weight)		µg/g		0.1	0.2	0.1	0.3	0.2	0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Silver (Dry Weight)		µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium (Dry Weight)		µg/g		0.005	0.006	<0.005	0.007	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vanadium (Dry Weight)		µg/g		0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (Dry Weight)		µg/g		2	318	14	392	25	263	23	127	13	13	13	13	13	13	13	13

Certified By:

Angela Bond



Certificate of Analysis

AGAT WORK ORDER: 18Y379812

PROJECT: ENW.WENW03039-03.002

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TEL (778)452-4000
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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Metals in Tissue (Dry Weight)										
DATE RECEIVED: 2018-08-30				DATE REPORTED: 2018-09-11						
SAMPLE DESCRIPTION:				18PL(A20)-02	18PL(A20)-02	18PL(A20)-03	18PL(A20)-03	18PL(A19)-01	18PL(A37)-03	18PL(A37)-03
SAMPLE TYPE:				(Willow)	(Labrador Tea)	(Willow)	(Labrador Tea)	(Willow)	(Soap Berry)	(Soap Berry)
DATE SAMPLED:				2018-08-28	2018-08-28	2018-08-28	2018-08-28	2018-08-27	2018-08-28	2018-08-28
Parameter	Unit	G / S	RDL	9510628	9510629	9510630	9510631	9511559	9511582	9511696
Antimony (Dry Weight)	µg/g	0.01	0.01	0.02	0.01	0.01	<0.01	<0.01	<0.01	0.01
Arsenic (Dry Weight)	µg/g	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Barium (Dry Weight)	µg/g	0.05	3.60	51.3	8.72	54.8	10.6	26.1	82.9	221
Beryllium (Dry Weight)	µg/g	0.01	<0.01	<0.01	0.05	0.02	0.02	<0.01	0.01	<0.01
Cadmium (Dry Weight)	µg/g	0.01	5.56	0.03	1.73	0.07	1.18	0.11	0.12	12.6
Chromium (Dry Weight)	µg/g	0.05	1.81	3.91	3.21	1.16	0.36	0.28	0.27	0.35
Cobalt (Dry Weight)	µg/g	0.02	0.39	0.12	0.98	0.28	0.51	0.16	0.28	1.23
Copper (Dry Weight)	µg/g	0.1	17.4	24.9	24.4	12.8	7.9	6.0	8.6	7.5
Lead (Dry Weight)	µg/g	0.02	0.11	0.07	0.22	0.08	0.09	0.07	0.08	0.07
Molybdenum (Dry Weight)	µg/g	0.05	0.38	0.07	0.56	0.05	0.70	1.39	0.82	0.33
Nickel (Dry Weight)	µg/g	0.1	1.3	2.1	1.8	0.8	0.9	1.1	1.4	4.7
Selenium (Dry Weight)	µg/g	0.1	0.1	0.2	0.2	<0.1	<0.1	0.1	0.1	0.2
Silver (Dry Weight)	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium (Dry Weight)	µg/g	0.005	<0.005	0.053	0.012	0.030	<0.005	0.005	0.006	<0.005
Vanadium (Dry Weight)	µg/g	0.1	0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc (Dry Weight)	µg/g	2	201	38	122	28	126	18	19	253

Certified By:

Angela Bond



Certificate of Analysis

AGAT WORK ORDER: 18Y379812

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Metals in Tissue (Dry Weight)									
DATE RECEIVED: 2018-08-30					DATE REPORTED: 2018-09-11				
		18PL(A37)-01		18PL(A37)-01		18PL(A43)-01		18PL(A43)-01	
SAMPLE DESCRIPTION:		(Willow)		18PL(A37)-01		(Willow)		18PLDUP	
SAMPLE TYPE:		Tissue		Tissue		Tissue		Tissue	
DATE SAMPLED:		2018-08-28		2018-08-28		2018-08-28		2018-08-28	
Parameter	Unit	G / S	RDL	9511812	9511813	9511814	9511815	9511819	9511821
Antimony (Dry Weight)	µg/g		0.01	<0.01	<0.01	<0.01	0.06	0.01	0.02
Arsenic (Dry Weight)	µg/g		0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1
Barium (Dry Weight)	µg/g		0.05	20.8	21.9	1.68	36.0	2.46	15.9
Beryllium (Dry Weight)	µg/g		0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01
Cadmium (Dry Weight)	µg/g		0.01	1.56	1.33	4.19	0.30	9.50	0.30
Chromium (Dry Weight)	µg/g		0.05	0.59	0.87	0.87	3.63	0.49	2.23
Cobalt (Dry Weight)	µg/g		0.02	0.72	0.66	0.90	0.63	1.60	0.17
Copper (Dry Weight)	µg/g		0.1	7.2	11.1	12.6	16.9	11.2	12.7
Lead (Dry Weight)	µg/g		0.02	0.05	0.05	0.04	0.54	0.06	0.14
Molybdenum (Dry Weight)	µg/g		0.05	0.21	0.21	0.26	0.84	0.50	0.35
Nickel (Dry Weight)	µg/g		0.1	4.7	3.3	5.9	2.4	2.9	1.5
Selenium (Dry Weight)	µg/g		0.1	<0.1	<0.1	0.1	0.2	0.2	0.3
Silver (Dry Weight)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium (Dry Weight)	µg/g		0.005	<0.005	<0.005	<0.005	0.017	<0.005	<0.005
Vanadium (Dry Weight)	µg/g		0.1	<0.1	<0.1	<0.1	1.5	<0.1	0.3
Zinc (Dry Weight)	µg/g		2	86	99	193	48	414	41

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (AL) (Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By:

Angela Bond



Certificate of Analysis

AGAT WORK ORDER: 18Y379812

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Total Mercury- Tissue (Dry Weight)											
DATE RECEIVED: 2018-08-30						DATE REPORTED: 2018-09-11					
				18PL(A20)-01		18PL(A43)-02		18PL(A43)-02		18PL(A23)-01	
				SAMPLE DESCRIPTION: (Willow)		18PL(A20)-01 (Willow)		18PL(A43)-02 (Soap Berry)		18PL(A23)-01 (Willow)	
				SAMPLE TYPE: Tissue		Tissue		Tissue		Tissue	
				DATE SAMPLED: 2018-08-27		2018-08-27		2018-08-28		2018-08-27	
Parameter	Unit	G / S	RDL	9510603	9510604	9510622	9510623	9510624	9510625	9510626	9510627
Mercury (Dry Weight)	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
				18PL(A20)-02		18PL(A20)-02		18PL(A20)-03		18PL(A19)-01	
				SAMPLE DESCRIPTION: (Willow)		18PL(A20)-02 (Labrador Tea)		18PL(A20)-03 (Labrador Tea)		18PL(A19)-01 (Willow)	
				SAMPLE TYPE: Tissue		Tissue		Tissue		Tissue	
				DATE SAMPLED: 2018-08-28		2018-08-28		2018-08-28		2018-08-27	
Parameter	Unit	G / S	RDL	9510628	9510629	9510630	9510631	9511559	9511582	9511696	9511749
Mercury (Dry Weight)	µg/g		0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	0.01	<0.01
				18PL(A37)-01		18PL(A37)-01		18PL(A43)-01		18PL(A43)-01	
				SAMPLE DESCRIPTION: (Willow)		18PL(A37)-01 (Willow)		18PL(A43)-01 (Bunch Berry)			
				SAMPLE TYPE: Tissue		Tissue		Tissue			
				DATE SAMPLED: 2018-08-28		2018-08-28		2018-08-28			
Parameter	Unit	G / S	RDL	9511812	9511813	9511814	9511815				
Mercury (Dry Weight)	µg/g		0.01	0.01	<0.01	<0.01	<0.01				

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (AL) (Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By:

Angela Bond



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y379812

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-11

SAMPLE DESCRIPTION: 18-SW-US-PUG

SAMPLE TYPE: Water

DATE SAMPLED: 2018-08-26

Parameter	Unit	G / S	RDL	9511817
Aluminum Dissolved	µg/L		2	4
Antimony Dissolved	µg/L		0.2	<0.2
Arsenic Dissolved	µg/L	5	0.1	2.5
Barium Dissolved	µg/L		0.2	2.2
Beryllium Dissolved	µg/L		0.01	<0.01
Boron Dissolved	µg/L	1500	2	<2
Cadmium Dissolved	µg/L	0.09	0.01	<0.01
Calcium Dissolved	µg/L		50	38100
Chromium Dissolved	µg/L		0.5	<0.5
Cobalt Dissolved	µg/L		0.05	<0.05
Copper Dissolved	µg/L		0.2	<0.2
Iron Dissolved	µg/L	300	10	105
Lead Dissolved	µg/L		0.05	<0.05
Lithium Dissolved	µg/L		0.5	0.8
Magnesium Dissolved	µg/L		50	5560
Manganese Dissolved	µg/L		1	<1
Mercury Dissolved	µg/L	0.026	0.01	<0.01
Molybdenum Dissolved	µg/L	73	0.05	0.39
Nickel Dissolved	µg/L		0.2	<0.2
Potassium Dissolved	µg/L		50	943
Selenium Dissolved	µg/L	1	0.5	<0.5
Silver Dissolved	µg/L	0.1	0.02	<0.02
Sodium Dissolved	µg/L		50	665
Strontium Dissolved	µg/L		0.1	53.8
Thallium Dissolved	µg/L	0.8	0.01	<0.01
Tin Dissolved	µg/L		0.05	<0.05
Titanium Dissolved	µg/L		0.5	<0.5
Tungsten Dissolved	µg/L		0.01	0.09
Uranium Dissolved	µg/L	15	0.01	0.80
Vanadium Dissolved	µg/L		0.5	<0.5

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

BC CSR Omnibus Dissolved Metals

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-11

SAMPLE DESCRIPTION: 18-SW-US-PUG

SAMPLE TYPE: Water

DATE SAMPLED: 2018-08-26

Parameter	Unit	G / S	RDL	9511817
Zinc Dissolved	µg/L	30	2	<2
Hardness (calc)	ug CaCO3/L	100	100	118000

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME(FWAL)ug/L(Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By:

D. Solari



Certificate of Analysis

AGAT WORK ORDER: 18Y379812

PROJECT: ENW.WENW03039-03.002

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CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

BC CSR Omnibus Total Metals

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-11

SAMPLE DESCRIPTION: 18-SW-US-PUG

SAMPLE TYPE: Water

DATE SAMPLED: 2018-08-26

Parameter	Unit	G / S	RDL	9511817
Aluminum Total	µg/L		5	7
Antimony Total	µg/L		0.5	<0.5
Arsenic Total	µg/L	5	0.1	2.4
Barium Total	µg/L		0.5	2.5
Beryllium Total	µg/L		0.05	<0.05
Boron Total	µg/L	1500	5	<5
Cadmium Total	µg/L	0.09	0.01	0.03
Chromium Total	µg/L		0.5	<0.5
Cobalt Total	µg/L		0.05	<0.05
Copper Total	µg/L		0.5	1.4
Lead Total	µg/L		0.05	<0.05
Lithium Total	µg/L		0.5	0.9
Mercury Total	µg/L	0.026	0.01	<0.01
Molybdenum Total	µg/L	73	0.1	0.4
Nickel Total	µg/L		0.5	<0.5
Selenium Total	µg/L	1	0.5	<0.5
Silver Total	µg/L	0.1	0.01	<0.01
Strontium Total	µg/L		0.1	53.4
Thallium Total	µg/L	0.8	0.02	<0.02
Tin Total	µg/L		0.05	<0.05
Titanium Total	µg/L		1	<1
Tungsten Total	µg/L		0.1	0.4
Uranium Total	µg/L	15	0.01	0.84
Vanadium Total	µg/L		1	<1
Zinc Total	µg/L	30	5	<5

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME(FWAL)µg/L(Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
9511817 Some total metal results are less than the dissolved metal results; results are within the precision of the method.

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 18Y379812

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

ATTENTION TO: Stephan Klump

SAMPLING SITE:

SAMPLED BY:

Routine Chemistry Water Analysis

DATE RECEIVED: 2018-08-30

DATE REPORTED: 2018-09-11

SAMPLE DESCRIPTION: 18-SW-US-PUG

SAMPLE TYPE: Water

DATE SAMPLED: 2018-08-26

Parameter	Unit	G / S	RDL	9511817
pH	pH units	6.5-9.0	0.01	7.34
p-Alkalinity	mg CaCO3/L		1	<1
Alkalinity (pH 4.5)	mg CaCO3/L		1	80
Alkalinity, Bicarbonate	mg CaCO3/L		1	80
Alkalinity, Carbonate	mg CaCO3/L		1	<1
Alkalinity, Hydroxide	mg CaCO3/L		1	<1
Electrical Conductivity	uS/cm		1	461
Chloride	mg/L	120	0.05	0.10
Fluoride	mg/L	0.12	0.02	0.05
Nitrate-N	mg/L	13	0.005	0.145
Nitrite-N	mg/L	0.06	0.005	<0.005
Sulphate	mg/L		0.5	69.4
Calcium Total	mg/L		0.05	40.5
Magnesium Total	mg/L		0.05	6.10
Sodium Total	mg/L		0.1	0.7
Potassium Total	mg/L		0.1	1.1
Iron Total	mg/L	0.3	0.01	<0.01
Manganese Total	mg/L		0.001	<0.001
Calculated TDS	mg/L		1	166
Nitrate + Nitrite-N	mg/L		0.01	0.15
Total Hardness (calc)	mg CaCO3/L		1	126

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME(FWAL)mg/L(Van)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
9511817 Literature holding time exceeded for pH, Nitrate, Nitrite analysis.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379812
ATTENTION TO: Stephan Klump
SAMPLED BY:

Soil Analysis															
RPT Date: Sep 11, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Metals in Tissue (Dry Weight)

Antimony (Dry Weight)	9510603		0.01	0.02	NA	< 0.01	81%	70%	130%	96%	90%	110%			
Arsenic (Dry Weight)	9510603		0.2	<0.1	NA	< 0.1	124%	70%	130%	96%	90%	110%			
Barium (Dry Weight)	9510603		4.45	4.24	4.8%	< 0.05	108%	70%	130%	91%	90%	110%			
Beryllium (Dry Weight)	9510603		0.03	0.03	NA	< 0.01	107%	70%	130%	109%	90%	110%			
Cadmium (Dry Weight)	9510603		2.10	1.99	5.5%	< 0.01	100%	70%	130%	100%	90%	110%			
Chromium (Dry Weight)	9510603		2.51	2.36	6.0%	< 0.05	99%	70%	130%	96%	90%	110%			
Cobalt (Dry Weight)	9510603		0.76	0.66	13.0%	< 0.02	114%	70%	130%	103%	90%	110%			
Copper (Dry Weight)	9510603		22.2	19.8	11.1%	< 0.1	102%	70%	130%	96%	90%	110%			
Lead (Dry Weight)	9510603		0.23	0.23	2.4%	< 0.02	107%	70%	130%	105%	90%	110%			
Molybdenum (Dry Weight)	9510603		0.23	0.21	NA	< 0.05	114%	70%	130%	97%	90%	110%			
Nickel (Dry Weight)	9510603		1.8	1.7	3.6%	< 0.1	102%	70%	130%	95%	90%	110%			
Selenium (Dry Weight)	9510603		0.2	0.4	NA	< 0.1	119%	70%	130%	103%	90%	110%			
Silver (Dry Weight)	9510603		<0.05	<0.05	NA	< 0.05	113%	70%	130%	107%	90%	110%			
Thallium (Dry Weight)	9510603		0.006	0.005	NA	< 0.005				104%	90%	110%			
Vanadium (Dry Weight)	9510603		0.2	0.2	NA	< 0.1	105%	70%	130%	98%	90%	110%			
Zinc (Dry Weight)	9510603		318	284	11.6%	< 2	102%	70%	130%	94%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Total Mercury- Tissue (Dry Weight)

Mercury (Dry Weight)	9510603		<0.01	<0.01	NA	< 0.01	93%	70%	130%	100%	90%	110%	112%	85%	115%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide in Soil (WAD)

Cyanide (WAD)	9510603		<0.5	<0.5	NA	< 0.5				94%	90%	110%	110%	80%	120%

Metals in Tissue (Dry Weight)

Antimony (Dry Weight)	9511815		0.06	0.06	5.6%	< 0.01	106%	70%	130%	97%	90%	110%			
Arsenic (Dry Weight)	9511815		0.5	0.4	NA	< 0.1	128%	70%	130%	99%	90%	110%			
Barium (Dry Weight)	9511815		36.0	36.5	1.4%	< 0.05	100%	70%	130%	91%	90%	110%			
Beryllium (Dry Weight)	9511815		0.04	0.04	NA	< 0.01	105%	70%	130%	101%	90%	110%			
Cadmium (Dry Weight)	9511815		0.30	0.29	3.3%	< 0.01	100%	70%	130%	102%	90%	110%			
Chromium (Dry Weight)	9511815		3.63	3.40	6.5%	< 0.05	105%	70%	130%	94%	90%	110%			
Cobalt (Dry Weight)	9511815		0.63	0.58	8.5%	< 0.02	114%	70%	130%	100%	90%	110%			
Copper (Dry Weight)	9511815		16.9	16.4	3.3%	< 0.1	103%	70%	130%	96%	90%	110%			
Lead (Dry Weight)	9511815		0.54	0.56	3.2%	< 0.02	107%	70%	130%	107%	90%	110%			
Molybdenum (Dry Weight)	9511815		0.84	0.71	16.2%	< 0.05	116%	70%	130%	102%	90%	110%			
Nickel (Dry Weight)	9511815		2.4	2.2	7.7%	< 0.1	106%	70%	130%	94%	90%	110%			
Selenium (Dry Weight)	9511815		0.2	0.2	NA	< 0.1	126%	70%	130%	106%	90%	110%			
Silver (Dry Weight)	9511815		< 0.05	< 0.05	NA	< 0.05	101%	70%	130%	100%	90%	110%			
Thallium (Dry Weight)	9511815		0.017	0.015	NA	< 0.005				105%	90%	110%			



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379812
ATTENTION TO: Stephan Klump
SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Sep 11, 2018			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Vanadium (Dry Weight)	9511815		1.5	1.6	9.9%	< 0.1	107%	70%	130%	96%	90%	110%			
Zinc (Dry Weight)	9511815		48	44	9.1%	< 2	103%	70%	130%	94%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By:

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379812
ATTENTION TO: Stephan Klump
SAMPLED BY:

Water Analysis															
RPT Date: Sep 11, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Routine Chemistry Water Analysis

pH	9507233		7.53	7.70	2.2%		100%	95%	105%						
p-Alkalinity	9507233		<1	<1	NA	< 1									
Alkalinity (pH 4.5)	9507233		387	408	5.3%	< 1	104%	90%	110%						
Electrical Conductivity	9507233		1140	1140	0.7%	< 1	101%	90%	110%						
Chloride	9511817		0.10	0.10	NA	< 0.05	104%	85%	115%	105%	90%	110%			
Fluoride	9511817		0.05	0.05	NA	< 0.02	96%	85%	115%	99%	90%	110%			
Nitrate-N	9511817		0.145	0.142	1.5%	< 0.005	102%	85%	115%	101%	90%	110%			
Nitrite-N	9511817		<0.005	<0.005	NA	< 0.005				101%	90%	110%			
Sulphate	9511817		69.4	69.0	0.6%	< 0.5	96%	85%	115%	104%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

BC CSR Omnibus Dissolved Metals

Aluminum Dissolved	9510585		46	46	0.0%	< 2	105%	90%	110%	109%	90%	110%			
Antimony Dissolved	9510585		<0.2	<0.2	NA	< 0.2	105%	90%	110%	101%	90%	110%			
Arsenic Dissolved	9510585		<0.1	<0.1	NA	< 0.1	107%	90%	110%	108%	90%	110%			
Barium Dissolved	9510585		11.7	11.5	1.8%	< 0.2	96%	90%	110%	99%	90%	110%			
Beryllium Dissolved	9510585		0.03	0.04	NA	< 0.01	100%	90%	110%	103%	90%	110%			
Boron Dissolved	9510585		27	28	4.0%	< 2	95%	90%	110%	106%	90%	110%			
Cadmium Dissolved	9510585		0.58	0.57	2.3%	< 0.01	102%	90%	110%	101%	90%	110%			
Calcium Dissolved	9510585		496000	510000	2.8%	< 50	100%	90%	110%	101%	90%	110%			
Chromium Dissolved	9510585		<0.5	<0.5	NA	< 0.5	97%	90%	110%	95%	90%	110%			
Cobalt Dissolved	9510585		0.21	0.22	NA	< 0.05	104%	90%	110%	103%	90%	110%			
Copper Dissolved	9510585		8.7	8.8	1.0%	< 0.2	92%	90%	110%	95%	90%	110%			
Iron Dissolved	9510585		921	973	5.5%	< 10	103%	90%	110%	98%	90%	110%			
Lead Dissolved	9510585		<0.05	<0.05	NA	< 0.05	102%	90%	110%	102%	90%	110%			
Lithium Dissolved	9510585		11.7	11.3	3.1%	< 0.5				104%	90%	110%			
Magnesium Dissolved	9510585		41600	42700	2.7%	< 50	105%	90%	110%	101%	90%	110%			
Manganese Dissolved	9510585		5	5	1.6%	< 1	108%	90%	110%	103%	90%	110%			
Mercury Dissolved	9510326		0.02	0.02	NA	< 0.01	102%	90%	110%	106%	90%	110%			
Molybdenum Dissolved	9510585		0.34	0.39	12.7%	< 0.05	105%	90%	110%	102%	90%	110%			
Nickel Dissolved	9510585		3.8	3.7	1.5%	< 0.2	95%	90%	110%	97%	90%	110%			
Potassium Dissolved	9510585		7390	7210	2.5%	< 50	94%	90%	110%	100%	90%	110%			
Selenium Dissolved	9510585		<0.5	1.9	NA	< 0.5	104%	90%	110%	99%	90%	110%			
Silver Dissolved	9510585		<0.02	<0.02	NA	< 0.02				102%	90%	110%			
Sodium Dissolved	9510585		3270	3170	3.1%	< 50	95%	90%	110%	97%	90%	110%			
Strontium Dissolved	9510585		376	374	0.6%	< 0.1	100%	90%	110%	94%	90%	110%			
Thallium Dissolved	9510585		0.03	0.02	NA	< 0.01	101%	90%	110%	102%	90%	110%			
Tin Dissolved	9510585		2.00	2.03	1.2%	< 0.05				101%	90%	110%			
Titanium Dissolved	9510585		1.2	1.1	NA	< 0.5				102%	90%	110%			

Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379812
ATTENTION TO: Stephan Klump
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Sep 11, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Tungsten Dissolved	9510585		0.75	0.77	3.0%	< 0.01				102%	90%	110%			
Uranium Dissolved	9510585		5.90	5.90	0.0%	< 0.01	101%	90%	110%	102%	90%	110%			
Vanadium Dissolved	9510585		1.1	1.4	NA	< 0.5	97%	90%	110%	96%	90%	110%			
Zinc Dissolved	9510585		28	27	2.3%	< 2	91%	90%	110%	96%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

BC CSR Omnibus Total Metals

Aluminum Total	9510162		1200	1140	5.1%	< 5	110%	85%	115%	110%	90%	110%			
Antimony Total	9510162		<0.5	<0.5	NA	< 0.5	108%	85%	115%	100%	90%	110%			
Arsenic Total	9510162		3.6	3.4	3.6%	< 0.1	88%	85%	115%	95%	90%	110%			
Barium Total	9510162		118	119	0.4%	< 0.5	94%	85%	115%	99%	90%	110%			
Beryllium Total	9510162		0.09	0.07	NA	< 0.05	96%	85%	115%	103%	90%	110%			
Boron Total	9510162		12	12	NA	< 5	86%	85%	115%	106%	90%	110%			
Cadmium Total	9510162		0.22	0.20	11.4%	< 0.01	98%	85%	115%	101%	90%	110%			
Chromium Total	9510162		2.3	2.3	NA	< 0.5	92%	85%	115%	96%	90%	110%			
Cobalt Total	9510162		1.91	1.70	11.9%	< 0.05	106%	85%	115%	102%	90%	110%			
Copper Total	9510162		2.7	2.7	0.0%	< 0.5	98%	85%	115%	97%	90%	110%			
Lead Total	9510162		1.92	1.94	1.2%	< 0.05	87%	85%	115%	103%	90%	110%			
Lithium Total	9510162		13.1	13.1	0.1%	< 0.5				103%	90%	110%			
Mercury Total	9514446		<0.01	<0.01	NA	< 0.01	102%	85%	115%	108%	90%	110%			
Molybdenum Total	9510162		0.9	0.8	12.4%	< 0.1	101%	85%	115%	101%	90%	110%			
Nickel Total	9510162		5.3	5.5	4.4%	< 0.5	101%	85%	115%	94%	90%	110%			
Selenium Total	9510162		<0.5	2.8	NA	< 0.5	95%	85%	115%	99%	90%	110%			
Silver Total	9510162		0.08	0.08	5.4%	< 0.01				98%	90%	110%			
Strontium Total	9510162		132	130	1.7%	< 0.1	89%	85%	115%	97%	90%	110%			
Thallium Total	9510162		0.08	0.06	NA	< 0.02	100%	85%	115%	103%	90%	110%			
Tin Total	9510162		0.31	0.30	4.1%	< 0.05				102%	90%	110%			
Titanium Total	9510162		46	47	2.3%	< 1				101%	90%	110%			
Tungsten Total	9510162		5.6	4.9	13.7%	< 0.1				104%	90%	110%			
Uranium Total	9510162		2.30	2.26	1.8%	< 0.01	102%	85%	115%	102%	90%	110%			
Vanadium Total	9510162		8	8	5.4%	< 1	92%	85%	115%	94%	90%	110%			
Zinc Total	9510162		30	32	4.5%	< 5	89%	85%	115%	94%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Certified By: 

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379812
ATTENTION TO: Stephan Klump
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Cyanide (WAD)	LAB-181-4013, INOR-181-6010	Modified from EPA 9013A and EPA 335.3	CONTINUOUS FLOW ANALYZER
Antimony (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Arsenic (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Barium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Beryllium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Cadmium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Chromium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Cobalt (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Copper (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Lead (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Molybdenum (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Nickel (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Selenium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Silver (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Thallium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Vanadium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Zinc (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Mercury (Dry Weight)	MET-181-6100, LAB-181-4007	Modified from EPA 3050B/7470A	CV/AA



Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379812
ATTENTION TO: Stephan Klump
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Aluminum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Antimony Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Arsenic Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Barium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Beryllium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Boron Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cadmium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Calcium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Chromium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Cobalt Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Copper Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Iron Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Lead Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Lithium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Magnesium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Manganese Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Mercury Dissolved	MET-181-6103, LAB-181-4015	Modified from EPA 245.7	CV/AA
Molybdenum Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Nickel Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Potassium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Selenium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Silver Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Sodium Dissolved	MET-181-6101, LAB-181-4015	Modified from SM 3120 B	ICP/OES
Strontium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Thallium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Tin Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Titanium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS



Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:AGAT WORK ORDER: 18Y379812
ATTENTION TO: Stephan Klump
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Tungsten Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Uranium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Vanadium Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Zinc Dissolved	MET-181-6102, LAB-181-4015	Modified from SM 3125 B	ICP-MS
Aluminum Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Antimony Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Arsenic Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Barium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Beryllium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Boron Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Cadmium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Chromium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Cobalt Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Copper Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Lead Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Lithium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Mercury Total	MET-181-6103	Modified from EPA 245.7	CV/AA
Molybdenum Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Nickel Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Selenium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Silver Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Strontium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Thallium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Tin Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Titanium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Tungsten Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Uranium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
Vanadium Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y379812
ATTENTION TO: Stephan Klump
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Zinc Total	MET-181-6102, LAB-181-4009	Modified from SM 3125 B	ICP-MS
pH	INOR-181-6000	Modified from SM 4500-H+	PH METER
p-Alkalinity	INOR-181-6000	Modified from SM 2320 B	PC TITRATE
Alkalinity (pH 4.5)	INOR-181-6000	Modified from SM 2320 B	PC TITRATE
Alkalinity, Bicarbonate	INOR-181-6000	Modified from SM 2320 B	PC TITRATE
Alkalinity, Carbonate	INOR-181-6000	Modified from SM 2320 B	PC TITRATE
Alkalinity, Hydroxide	INOR-181-6000	Modified from SM 2320 B	PC TITRATE
Electrical Conductivity	INOR-181-6000	Modified from SM 2510B	PC TITRATE
Chloride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-181-6002	Modified from SM 4110 B	ION CHROMATOGRAPH
Calcium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Magnesium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Sodium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Potassium Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Iron Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES
Manganese Total	MET-181-6101, LAB-181-4009	Modified from SM 3120 B	ICP/OES



120 - 8600 Glenlyon Parkway
Burnaby, BC
V5J 0B6

Laboratory Use Only

Arrival Temperature:

AGAT Job Number:

Notes:

Aug 30 10:51 am

Report Information

Company: Tetra Tech Canada
Contact: Stephan Klump
Address: 61 Wasson Place, Whitehorse, YT
Y1A 0H7
Phone: (867) 668-3068 Fax: _____
LSD: _____
Client Project #: ENW.WENW03039-03.002

Invoice To

Same as above Yes ☒ / No ☐

Company: _____
Contact: _____
Address: _____

Phone: _____ Fax: _____
PO/AFE#: _____

Report Information

1. Name: Stephan Klump
Email: stephan.klump@tetrattech.com
2. Name: Tania Perzoff
Email: Tania.Perzoff@tetrattech.com

Requirements (Please Check)

☐ **BC CSR Soil**

☐ AL

☐ IL

☐ PL

☐ CL

☐ RL-LD ☐ RL-HD

☐ WL-N ☐ WL-R

☐ **BC CSR - Water**

☐ DW

☐ AW

☐ IW

☐ LW

Schedule 3.3 (Please Specify)

CCME (Please Specify) Freshwater AL

Other (Please Specify)

Report Format

☒ Single Sample per page

☐ Multiple Samples per page

☒ Excel Format Included

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Day 2 - 100%

☐ Day 3 - 50%

☐ Day 4 - 25%

Date Required: _____

PLEASE CONTACT LABORATORY IF RUSH REQUIRED SAMPLE
SUBMISSION CUT OFF FOR EFFECTIVE DATE BY 3 PM

Samples Relinquished By (Print Name and Sign): Cole Fischer	Date/Time 29/08/2024 08:00	Samples Received By (Print Name and Sign):	Date/Time	Page ____ of ____ V115851
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time	

Page _____ of _____

V115851

Whitehorse, YT



AGAT Laboratories

**SAMPLE INTEGRITY RECEIPT
FORM**

RECEIVING BASICS - Shipping

Company/Consultant: Tetra Tech

Courier: Air North Prepaid Collect

Waybill# 287 04065854

Branch: EDM GP FM FM RD VAN LYD FSJ EST Other: _____

If multiple sites were submitted at once: Yes No

Custody Seal Intact: Yes No NA

TAT: <24hr 24-48hr 48-72hr Reg Other _____

Cooler Quantity: 7

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No

Inorganic Tests (Please Circle): Mibi , BOD , Nitrate/Nitrite , Turbidity , Microtox , Ortho PO4 , Fedlar Bag , Residual Chlorine , Chlorophyll* , Chloroamines*

Earliest Expiry: _____

Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____

Legal Samples: Yes No

International Samples: Yes No

Tape Sealed: Yes No

Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) <u>8.6+8.3+8.5=8.5</u> °C	2 (Bottle/Jar) <u>6.9+7.4+7.9=7.4</u> °C
3 (Bottle/Jar) <u>8.7+7.9+9.1=8.6</u> °C	4 (Bottle/Jar) <u>7.6+7.4+6.7=7.2</u> °C
5 (Bottle/Jar) <u>7.4+7.5+6.7=7.2</u> °C	6 (Bottle/Jar) <u>6.9+9.1+8.7=8.2</u> °C
7 (Bottle/Jar) <u>7.6+6.7+7.1=7.2</u> °C	8 (Bottle/Jar) _____ °C
9 (Bottle/Jar) _____ °C	10 (Bottle/Jar) _____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: _____

Samples Damaged: Yes No If YES why?

No Bubble Wrap Frozen Courier

Other: _____

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date/Time: _____

CPM Initial _____

General Comments: _____

* Subcontracted Analysis (See CPM)

Date issued: October 05, 2015
Document ID: SR-9505.008

Page 1 of 1



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 18Y379812

RECEIVING BASICS:

Received From: NOVEX #13 Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 7 Containers: 28

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Aug. 26, 2018 ALREADY EXCEEDED? ☒ Yes ☐ No

Hold time exceeded for #817A

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 2 + 2 + 1 = 2 °C (2) 3 + 3 + 0 = 2 °C (3) 1 + 0 + 8 = 3 °C (4) 0 + 0 + 0 = 0 °C

Was ice or ice pack present: Yes No 2 °C

Integrity Issues: (5) 0 + 0 + 0 = 0 °C (6) 0 + 0 + 1 = 0 °C (7) 2 + 3 + 3 = 3 °C

Account Project Manager: _____ have they been notified of the above issues: Yes No

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

CLIENT NAME: TETRA TECH EBA
61 WASSON PLACE
WHITEHORSE, YT Y1A0H7
(867) 668-9225

ATTENTION TO: Stephan Klump

PROJECT: ENW.WENW03039-03.002

AGAT WORK ORDER: 18Y381428

SOIL ANALYSIS REVIEWED BY: Dana Solari, Lab Reporter

DATE REPORTED: Sep 12, 2018

PAGES (INCLUDING COVER): 9

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 2°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y381428

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Cyanide in Tissue (WAD)

DATE RECEIVED: 2018-09-04

DATE REPORTED: 2018-09-12

		18PL(A37)-04		18PL(A37)-04		18PL(A37)-02		18PL(A37)-02		18PL(A19)-03		18PL(A19)-03		18PL(A52)-01		18PL(A52)-01	
SAMPLE DESCRIPTION:		Willow		Raspberry		Willow		Soapberry		Willow		Soapberry		Willow		18PL(A52)-01	
SAMPLE TYPE:		Leaves		Leaves		Leaves		Leaves		Leaves		Leaves		Leaves		Leaves	
DATE SAMPLED:		2018-08-30		2018-08-30		2018-08-30		2018-08-30		2018-08-29		2018-08-29		2018-08-30		2018-08-30	
Parameter	Unit	G / S	RDL	9522636	9522642	9522644	9522645	9522646	9522648	9522650	9522651	9522650	9522651	9522650	9522651	9522650	9522651
Cyanide (WAD)	µg/g	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
		18PL(A2)-02		18PL(A2)-02		18PL(A19)-04		18PL(A19)-04		18PL(A19)-02		18PL(A19)-02		19PL(A2)-01		19PL(A2)-01	
SAMPLE DESCRIPTION:		Willow		Soapberry		Willow		Soapberry		Willow		Soapberry		Willow		Soapberry	
SAMPLE TYPE:		Leaves		Leaves		Leaves		Leaves		Leaves		Leaves		Leaves		Leaves	
DATE SAMPLED:		2018-08-29		2018-08-29		2018-08-29		2018-08-29		2018-08-29		2018-08-29		2018-08-29		2018-08-29	
Parameter	Unit	G / S	RDL	9522654	9522655	9522659	9522668	9522669	9522670	9522671	9522681	9522670	9522671	9522671	9522681	9522671	9522681
Cyanide (WAD)	µg/g	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

9522636-9522681 Due to matrix interferences sample was diluted for cyanide (WAD) analysis, detection limits have been adjusted accordingly.

Certified By:

D. Solari



Certificate of Analysis

AGAT WORK ORDER: 18Y381428

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Metals in Tissue (Dry Weight)											
DATE RECEIVED: 2018-09-04					DATE REPORTED: 2018-09-12						
SAMPLE DESCRIPTION: SAMPLE TYPE: DATE SAMPLED:				18PL(A37)-04	18PL(A37)-04	18PL(A37)-02	18PL(A37)-02	18PL(A19)-03	18PL(A19)-03	18PL(A52)-01	
				Willow	Raspberry	Willow	Soapberry	Willow	Soapberry	Willow	18PL(A52)-01
				Leaves	Leaves	Leaves	Leaves	Leaves	Leaves	Leaves	Leaves
Parameter	Unit	G / S	RDL	2018-08-30	2018-08-30	2018-08-30	2018-08-30	2018-08-29	2018-08-29	2018-08-30	2018-08-30
				9522636	9522642	9522644	9522645	9522646	9522648	9522650	9522651
Antimony (Dry Weight)	µg/g		0.01	0.05	0.16	0.02	0.03	<0.01	0.01	0.02	0.03
Arsenic (Dry Weight)	µg/g		0.1	<0.1	0.7	0.1	0.2	<0.1	<0.1	<0.1	0.2
Barium (Dry Weight)	µg/g		0.05	178	220	65.4	19.0	19.3	5.59	15.2	57.5
Beryllium (Dry Weight)	µg/g		0.01	<0.01	0.03	0.01	0.04	0.01	0.02	<0.01	<0.01
Cadmium (Dry Weight)	µg/g		0.01	1.52	0.20	4.62	0.22	0.32	0.09	1.54	0.05
Chromium (Dry Weight)	µg/g		0.05	1.14	13.2	0.56	1.50	0.17	0.93	0.38	8.44
Cobalt (Dry Weight)	µg/g		0.02	2.22	0.49	2.14	1.00	1.05	0.47	1.10	0.23
Copper (Dry Weight)	µg/g		0.1	7.8	44.5	12.5	28.4	7.0	14.3	5.4	58.2
Lead (Dry Weight)	µg/g		0.02	0.09	0.95	0.16	0.16	0.04	0.09	0.64	0.19
Molybdenum (Dry Weight)	µg/g		0.05	0.92	1.74	0.40	0.36	0.59	0.91	0.69	0.29
Nickel (Dry Weight)	µg/g		0.1	5.0	7.6	4.2	1.7	2.4	2.1	0.8	4.8
Selenium (Dry Weight)	µg/g		0.1	<0.1	0.2	0.2	0.4	0.2	0.2	0.1	0.3
Silver (Dry Weight)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium (Dry Weight)	µg/g		0.005	0.018	0.042	0.011	0.010	<0.005	<0.005	0.006	<0.005
Vanadium (Dry Weight)	µg/g		0.1	0.3	22.8	0.2	0.4	<0.1	0.1	0.2	0.4
Zinc (Dry Weight)	µg/g		2	188	55	212	27	86	23	171	46

Certified By:

D. Solari



Certificate of Analysis

AGAT WORK ORDER: 18Y381428

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Metals in Tissue (Dry Weight)										
DATE RECEIVED: 2018-09-04				DATE REPORTED: 2018-09-12						
SAMPLE DESCRIPTION:				18PL(A2)-02	18PL(A2)-02	18PL(A19)-04	18PL(A19)-04	18PL(A19)-02	18PL(A19)-02	19PL(A2)-01
SAMPLE TYPE:				Willow	Soapberry	Willow	Soapberry	Willow	Soapberry	Willow
DATE SAMPLED:				2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29
Parameter	Unit	G / S	RDL	9522654	9522655	9522659	9522668	9522669	9522670	9522671
Antimony (Dry Weight)	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic (Dry Weight)	µg/g		0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.1
Barium (Dry Weight)	µg/g		0.05	30.0	19.7	14.6	7.71	17.2	8.37	17.5
Beryllium (Dry Weight)	µg/g		0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01
Cadmium (Dry Weight)	µg/g		0.01	2.05	0.04	0.18	0.05	2.46	0.04	7.48
Chromium (Dry Weight)	µg/g		0.05	11.3	0.47	11.8	0.60	0.30	2.56	0.45
Cobalt (Dry Weight)	µg/g		0.02	0.71	0.09	0.78	0.18	2.86	0.15	0.22
Copper (Dry Weight)	µg/g		0.1	91.1	6.7	103	12.4	8.8	20.7	12.6
Lead (Dry Weight)	µg/g		0.02	0.09	0.05	0.12	0.05	0.04	0.09	0.04
Molybdenum (Dry Weight)	µg/g		0.05	1.25	0.92	0.34	0.52	0.24	1.05	0.68
Nickel (Dry Weight)	µg/g		0.1	7.4	1.7	8.7	1.8	2.0	2.5	4.1
Selenium (Dry Weight)	µg/g		0.1	<0.1	<0.1	0.2	0.1	0.1	<0.1	0.1
Silver (Dry Weight)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium (Dry Weight)	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vanadium (Dry Weight)	µg/g		0.1	0.1	<0.1	0.1	0.1	<0.1	<0.1	<0.1
Zinc (Dry Weight)	µg/g		2	331	17	131	30	131	18	425

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:

D. Solari



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18Y381428

PROJECT: ENW.WENW03039-03.002

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: TETRA TECH EBA

SAMPLING SITE:

ATTENTION TO: Stephan Klump

SAMPLED BY:

Total Mercury- Tissue (Dry Weight)										
DATE RECEIVED: 2018-09-04					DATE REPORTED: 2018-09-12					
		18PL(A37)-04		18PL(A37)-04	18PL(A37)-02	18PL(A37)-02	18PL(A19)-03	18PL(A19)-03	18PL(A52)-01	
SAMPLE DESCRIPTION:		Willow		Raspberry	Willow	Soapberry	Willow	Soapberry	Willow	18PL(A52)-01
SAMPLE TYPE:		Leaves		Leaves	Leaves	Leaves	Leaves	Leaves	Leaves	Leaves
DATE SAMPLED:		2018-08-30		2018-08-30	2018-08-30	2018-08-30	2018-08-29	2018-08-29	2018-08-30	2018-08-30
Parameter	Unit	G / S	RDL	9522636	9522642	9522644	9522645	9522646	9522648	9522650
Mercury (Dry Weight)	µg/g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
		18PL(A2)-02		18PL(A2)-02	18PL(A19)-04	18PL(A19)-04	18PL(A19)-02	18PL(A19)-02	19PL(A2)-01	19PL(A2)-01
SAMPLE DESCRIPTION:		Willow		Soapberry	Willow	Soapberry	Willow	Soapberry	Willow	Soapberry
SAMPLE TYPE:		Leaves		Leaves	Leaves	Leaves	Leaves	Leaves	Leaves	Leaves
DATE SAMPLED:		2018-08-29		2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29	2018-08-29
Parameter	Unit	G / S	RDL	9522654	9522655	9522659	9522668	9522669	9522670	9522671
Mercury (Dry Weight)	µg/g	0.01	<0.01	0.01	<0.01	0.01	0.01	0.01	0.01	<0.01

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:

D. Solari



Quality Assurance

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y381428
ATTENTION TO: Stephan Klump
SAMPLED BY:

Soil Analysis															
RPT Date: Sep 12, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Metals in Tissue (Dry Weight)

Arsenic (Dry Weight)	9522636		<0.1	<0.1	NA	< 0.1	129%	70%	130%	101%	90%	110%			
Barium (Dry Weight)	9522636		178	172	3.4%	< 0.05	102%	70%	130%	106%	90%	110%			
Beryllium (Dry Weight)	9522636		<0.01	<0.01	NA	< 0.01	94%	70%	130%	101%	90%	110%			
Cadmium (Dry Weight)	9522636		1.52	1.48	2.7%	< 0.01	105%	70%	130%	102%	90%	110%			
Chromium (Dry Weight)	9522636		1.14	0.91	22.2%	< 0.05	103%	70%	130%	99%	90%	110%			
Cobalt (Dry Weight)	9522636		2.22	2.22	0.0%	< 0.02	104%	70%	130%	100%	90%	110%			
Copper (Dry Weight)	9522636		7.8	8.0	2.5%	< 0.1	101%	70%	130%	101%	90%	110%			
Lead (Dry Weight)	9522636		0.09	0.09	NA	< 0.02	95%	70%	130%	97%	90%	110%			
Molybdenum (Dry Weight)	9522636		0.92	0.93	0.5%	< 0.05	106%	70%	130%	100%	90%	110%			
Nickel (Dry Weight)	9522636		5.0	5.2	4.0%	< 0.1	101%	70%	130%	102%	90%	110%			
Selenium (Dry Weight)	9522636		<0.1	0.1	NA	< 0.1	129%	70%	130%	100%	90%	110%			
Silver (Dry Weight)	9522636		<0.05	<0.05	NA	< 0.05	88%	70%	130%	99%	90%	110%			
Thallium (Dry Weight)	9522636		0.018	0.018	NA	< 0.005				102%	90%	110%			
Vanadium (Dry Weight)	9522636		0.3	0.3	NA	< 0.1	101%	70%	130%	98%	90%	110%			
Zinc (Dry Weight)	9522636		188	176	6.5%	< 2	104%	70%	130%	99%	90%	110%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Total Mercury- Tissue (Dry Weight)

Mercury (Dry Weight)	9522636		<0.01	<0.01	NA	< 0.01	100%	70%	130%	98%	90%	110%	104%	85%	115%

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Cyanide in Tissue (WAD)

Cyanide (WAD)	9522636		<10	<10	NA	< 0.5				103%	90%	110%	113%	80%	120%

Certified By:

D. Soliman

Method Summary

CLIENT NAME: TETRA TECH EBA
PROJECT: ENW.WENW03039-03.002
SAMPLING SITE:

AGAT WORK ORDER: 18Y381428
ATTENTION TO: Stephan Klump
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Cyanide (WAD)	LAB-181-4013, INOR-181-6010	Modified from EPA 9013A and EPA 335.3	CONTINUOUS FLOW ANALYZER
Antimony (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Arsenic (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Barium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Beryllium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Cadmium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Chromium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Cobalt (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Copper (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Lead (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Molybdenum (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Nickel (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Selenium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Silver (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Thallium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Vanadium (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Zinc (Dry Weight)	MET-181-6102, LAB-181-4007	Modified from EPA 3050B and EPA 6020A	ICP-MS
Mercury (Dry Weight)	MET-181-6100, LAB-181-4007	Modified from EPA 3050B/7470A	CV/AA



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 184 381428

RECEIVING BASICS:

Received From: novex #2

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 3 Containers: 16

TIME SENSITIVE ISSUES:

Earliest Date Sampled: 8/29/2013

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 3 + 0 + 1 = 2 °C (2) 0 + 0 + 0 = 0 °C (3) 1 + 2 + 5 = 3 °C (4) _____ + _____ + _____ = _____ °C

Was ice or ice pack present: ☒ Yes ☐ No

Integrity Issues:

2°C

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

Sample "VEG-DNF-1" is listed on CoC but was not received.

APPENDIX G

LABORATORY QA/QC DATA

Table G1a: 2017 Soil Analytical Results QA/QC

Area		A10				A14				A16				A17				A18											
		17A10TP2		RPD (%)	17A14TP14		RPD (%)	17A16TP2		RPD (%)	17A16BH2		RPD (%)	17A16TP5		RPD (%)	17A17BH4		RPD (%)	17A17TP3		RPD (%)	17A17TP4		RPD (%)	17A18TP1		RPD (%)	
		17A10TP2-1	17A10DUp1		17A14TP14-2	17A14DUp3		17A14TP2-1	17A14DUP1		17A16BH2-6	17A16BHDUP1		17A16DUp1	17A16TP5-2		17A17BH4-1	17A17BHDUP3		17A17DUp1	17A17TP3-1		17A17DUp2	17A17TP4-3		17A18DUp1	17A18TP1-1		
		Sample Depth	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date
		Lab Report Number	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code
Parameter	Unit	0.25 m	-		2.1 m	-		0.6 m	-		19.5 m	-		1.3 m	-		0.9 m	-		0.15 m	-		1.1 m	-		0.25 m	-		
Asbestos Fibres	%	-	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		
Cyanide	mg/kg	-	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		
Cyanide (SAD)	mg/kg	-	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		
Cyanide (WAD)	mg/kg	-	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		
Routine / Salinity	pH Units	7.37	7.51	2	7.33	7.58	3	7.48	7.33	2	7.43	7.48	1	7.62	7.63	0	-	-	-	-	7.07	-	7.63	7.56	1	7.76	7.48	4	
pH	%	4.47	6.3	34	9.07	8.47	7	8.76	8.16	7	13.6	12.8	6	7.19	8.82	20	7.13	4.26	50	5.9	6.6	11	15.9	17.7	11	11.4	6.82	50	
Metals	mg/kg	1.4	1.8	25	4.3	4.3	0	0.7	0.7	0	1	0.9	11	5.5	5.5	0	-	-	-	-	0.9	-	0.6	0.6	0	0.7	0.8	13	
Antimony	mg/kg	10.9	12.4	13	24.7	28.4	14	21.3	20.9	2	20.9	23.2	10	27.4	31.1	13	-	-	-	-	11.7	-	8.9	7.9	12	14.8	21.1	35	
Arsenic	mg/kg	503	874	54	2880	2520	13	243	225	8	486	630	26	2670	3210	18	-	-	-	-	107	-	497	558	12	214	456	72	
Barium	mg/kg	1	0.9	11	0.5	0.6	18	0.6	0.6	0	0.8	0.9	12	0.7	0.7	0	-	-	-	-	1.6	-	0.8	0.8	0	0.5	0.8	46	
Beryllium	mg/kg	1.87	1.54	19	4.33	4.57	5	0.81	0.76	6	0.94	1	6	3.47	3.83	10	-	-	-	-	3.34	-	0.84	0.83	1	0.7	0.89	24	
Cadmium	mg/kg	27	21	25	26	23	12	20	21	5	31	31	0	23	24	4	-	-	-	-	20	-	21	21	0	16	20	22	
Chromium	mg/kg	21.2	17.6	19	15.6	15.2	3	11.1	12.4	11	14.5	16.2	11	21	20.6	2	-	-	-	-	25.9	-	13.3	13.8	4	9	14.5	47	
Cobalt	mg/kg	973	601	47	56.6	58.8	4	27.4	37	30	50.3	53.2	6	207	363	55	-	-	-	-	843	-	103	103	0	30.4	196	146	
Copper	mg/kg	20.9	28.1	29	24.8	26.5	7	11.9	11.7	2	24	27.5	14	64.5	71	10	-	-	-	-	24.3	-	13.2	13.3	1	9.7	12.2	23	
Lead	mg/kg	2.92	0.32	160	0.13	0.11	17	0.05	0.28	-	0.05	0.07	-	0.51	0.49	4	-	-	-	-	1.14	-	0.35	0.4	13	0.05	0.23	-	
Mercury	mg/kg	7.1	5.5	25	5.7	6.3	10	1.3	1.3	0	2.5	2.3	8	10.5	9.9	6	-	-	-	-	15.8	-	1.5	1.6	6	0.8	1.8	77	
Molybdenum	mg/kg	29.3	28.7	2	77.1	76.1	1	27.4	28.3	3	41.4	46	11	78.2	85.5	9	-	-	-	-	19.2	-	27.7	27.2	2	22.3	26.7	18	
Nickel	mg/kg	2.6	2.7	4	1.2	1.3	8	0.9	0.8	12	0.6	0.7	15	2	2.2	10	-	-	-	-	3.1	-	1	1.1	10	0.6	1.2	67	
Selenium	mg/kg	0.6	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	-	-	0.7	-	<0.5	<0.5	-	<0.5	<0.5	-	
Silver	mg/kg	0.4	0.3	29	0.4	0.5	22	0.2	0.2	0	0.2	0.3	40	0.5	0.5	0	-	-	-	-	0.6	-	0.2	0.2	0	0.2	0.2	0	
Thallium	mg/kg	3.4	2.8	19	0.3	0.4	29	0.6	0.7	15	0.7	0.7	0	1.1	1.2	9	-	-	-	-	7.2	-	1.4	1.5	7	0.5	1	67	
Tin	mg/kg	2.8	2.2	24	1.5	1.8	18	1.2	1.2	0	1.2	1.2	0	2.6	3	14	-	-	-	-	2.3	-	1.6	1.5	6	0.9	1.3	36	
Uranium	mg/kg	38	46	19	97	92	5	36	36	0	46	47	2	110	113	3	-	-	-	-	28	-	31	30	3	28	30	7	
Vanadium	mg/kg	279	294	5	421	441	5	89	93	4	150	155	3	505	552	9	-	-	-	-	429	-	105	97	8	84	126	40	
Zinc	mg/kg	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-	
Benzene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	
Toluene	mg/kg	<0.01	<0.01	-	<0.01	<0.01	-	0.52	0.62	18	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	0.02	0.01	-	<0.01	<0.01	-	
Ethylbenzene	mg/kg	<0.05	<0.05	-	<0.05	0.06	-	0.46	0.78	52	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	
Xylenes Total	mg/kg	<10	<10	-	<10	<10	-	164	182	10	<10	<10	-	<10	<10	-	<10	<10	-	<10	<10	-	47	80	-	<10	<10	-	
F1 (C6-C10 / BTEX CORRECTED)	mg/kg	<20	<20	-	<20	<20	-	4770	5080	6	<20	<20	-	44	38	15	37	23	-	94	174	-	5020	4200	18	<20	<20	-	
F2 (C10-C16)	mg/kg	558	236	81	<20	<20	-	655	712	8	<20	<20	-	1080	1090	1	3390	1440	81	9480	14600	43	2220	1830	19	<20	75	-	
F3 (C16-C34)	mg/kg	373	165	77	<20	<20	-	<20	32	-	<20	<20	-	441	441	0	963	454	72	4770	6170	26	46	39	8	<20	37	-	
F4: (C34-C50)	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-	-	<10	-	<10	<10	-	<10	<10	-	
Diethylene glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-	-	<10	-	<10	<10	-	<10	<10	-	
Ethylene glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-	-	<10	-	<10	<10	-	<10	<10	-	
Propylene glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-	-	<10	-	<10	<10	-	<10	<10	-	
Tetraethylene Glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-	-	<10	-	<10	<10	-	<10	<10	-	
Triethylene Glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-	-	<10	-	<10	<10	-	<10	<10	-	
Polycyclic Aromatic Hydrocarbons (PAHs)	mg/kg	<0.6	<0.6	-	<0.6	<0.6	-	<0.6	<0.6	-	<0.6	-	-	<0.6	<0.6	-	-	-	-	<6	<6	-	<0.6	<0.6	-	<0.6	<0.6	-	
IACR (CCME)	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.5	<0.5	-	<0.05	<0.05	-	<0.05	<0.05	-	
B(a)P Total Potency Equivalent	mg/kg	<0.005	<0.005	-	0.008	0.005	-	17.4	18.3	5	<0.005	-	-	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	<0.05	<0.05	-	<0.005	<0.005	-	
2-methylnaphthalene	mg/kg	<0.005	<0.005	-	<0.005	<0.005	-	<0.5	<0.5	-	<0.005	-	-	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	<0.05	<0.05	-	<0.005	<0.005	-	
Acenaphthene	mg/kg	<0.005	<0.005	-	<0.005	<0.005	-	<0.5	<0.5	-	<0.005	-	-	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	<0.05	<0.05	-	<0.005	<0.005	-	
Acenaphthylene	mg/kg	<0.004	<0.004	-	<0.004	<0.004	-	<0.4	<0.4	-	<0.004	-	-	<0.004	<0.004	-	-	-	-	<0.004	<0.004	-	<0.04	<0.04	-	<0.004	<0.004	-	
Anthracene	mg/kg	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	-	-	<0.03	<0.03	-	-	-	-	<0.3	<0.3	-	<0.03	<0.03	-	<0.03	<0.03	-	
Benzo(a)anthracene	mg/kg	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	-	-	<0.03	<0.03	-	-	-	-	<0.3	<0.3	-	<0.03	<0.03	-	<0.03	<0.03	-	
Benzo(a) pyrene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.5	<0.5	-	<0.05	<0.05	-	<0.05	<0.05	-	
Benzo(b)fluoranthene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.5	<0.5	-	<0.05	<0.05	-	<0.05	<0.05	-	
Benzo(k)fluoranthene	mg/kg	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(e)pyrene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.5	<0.5	-	<0.05	<0.05	-	<0.05	<0.05	-	
Benzo(g,h,i)perylene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.5	<0.5	-	<0.05	<0.05	-	<0.05	<0.05	-	
Benzo(k)fluoranthene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-																						

Table G1a: 2017 Soil Analytical Results QA/QC

Area		A10				A14				A16				A17				A18											
		17A10TP2		RPD (%)	17A14TP14		RPD (%)	17A14TP2		RPD (%)	17A16BH2		RPD (%)	17A16TP5		RPD (%)	17A17BH4		RPD (%)	17A17TP3		RPD (%)	17A17TP4		RPD (%)	17A18TP1		RPD (%)	
		17A10TP2-1	17A10Dup1		17A14TP14-2	17A14DUP3		17A14TP2-1	17A14DUP1		17A16BH2-6	17A16BHDUP1		17A16Dup1	17A16TP5-2		17A17BH4-1	17A17BHDUP3		17A17Dup1	17A17TP3-1		17A17Dup2	17A17TP4-3		17A18Dup1	17A18TP1-1		
		Sample Depth	0.25 m		-	2.1 m		-	0.6 m		-	19.5 m		-	-		1.3 m	0.9 m		-	-		0.15 m	-		1.1 m	-		0.25 m
		Sample Date	22-Sep-2017		22-Sep-2017	16-Sep-2017		16-Sep-2017	15-Sep-2017		15-Sep-2017	23-Sep-2017		23-Sep-2017	14-Sep-2017		14-Sep-2017	28-Sep-2017		28-Sep-2017	11-Sep-2017		11-Sep-2017	11-Sep-2017		11-Sep-2017	20-Sep-2017		19-Sep-2017
Lab Report Number	17Y264351	17Y264351	17Y262775	17Y262775	17Y262409	17Y262409	17Y266562	17Y266562	17Y262211	17Y262211	17Y267774	17Y267774	17Y260731	17Y260731	17Y260731	17Y260731	17Y260731	17Y263896	17Y263896										
Sample Code	8756244	8756260	8740863	8740873	8738044	8738159	8774133	8774134	8736051	8736047	8783877	8783878	8722102	8722095	8722114	8722079	8751722	8751615											
Parameter	Unit																												
Polychlorinated Biphenyls (PCBs)																													
Aroclor 1242	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Aroclor 1254	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Aroclor 1260	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Aroclor 1262	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
PCBs (Sum of total)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Phenols																													
2,3,4,5-tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,3,4,6-tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,3,4-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,3,5,6-Tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,3,5-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,3,6-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,4,5-trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,4,6-trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,4-dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,4-dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,4-dinitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,6-dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2-chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
2-nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
3-&4-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
3,4,5-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4-chloro-3-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4-nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Cresol Total	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Pentachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Phenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Organochlorine Pesticides																													
2,4-DDT	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4,4-DDE	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
a-BHC	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Aldrin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
b-BHC	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
chlordanane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
DDE	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
DDT	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Dieldrin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Endosuffan I	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Endrin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
gamma-Chlordane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Heptachlor	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Heptachlor epoxide	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Methoxychlor	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
o,p'-DDE	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

Notes:
N/A - Not applicable
Blank - Not analyzed
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
*- Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the
Bold - RPD exceeds 40%

Table G1a: 2017 Soil Analytical Results QA/QC

Area		A10				A14				A16				A17				A18										
		17A10TP2		RPD (%)	17A14TP14		RPD (%)	17A14TP2		RPD (%)	17A16BH2		RPD (%)	17A16TP5		RPD (%)	17A17BH4		RPD (%)	17A17TP3		RPD (%)	17A17TP4		RPD (%)	17A18TP1		RPD (%)
		17A10TP2-1	17A10DUP1		17A14TP14-2	17A14DUP3		17A14TP2-1	17A14DUP1		17A16BH2-6	17A16BHDUP1		17A16TP5-1	17A16TP5-2		17A17BH4-1	17A17BHDUP3		17A17TP3-1	17A17TP3-1		17A17TP4-2	17A17TP4-3		17A18TP1-1		
		Sample Depth	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date		Sample Date	Sample Date	
		Lab Report Number	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code		Sample Code	Sample Code	
		Parameter	Unit		Parameter	Unit		Parameter	Unit		Parameter	Unit		Parameter	Unit		Parameter	Unit		Parameter	Unit		Parameter	Unit		Parameter	Unit	
		Volatile Organic Compounds (VOCs)																										
Carbon	%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1-Methylnaphthalene	mg/kg	<0.005	<0.005	-	0.007	0.005	17	11	11.8	4	<0.005	-	-	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	<0.05	<0.05	-	<0.005	<0.005	-
Acetone	mg/kg	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Bromodichloromethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Bromoform	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Bromomethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
2-Butanone	mg/kg	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Carbon tetrachloride	mg/kg	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	-	-	<0.02	<0.02	-	-	-	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-
Chlorobenzene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Chloroethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Chloroform	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Chloromethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Dibromochloromethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,2-Dibromoethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,2-Dichlorobenzene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,3-Dichlorobenzene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,4-Dichlorobenzene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,1-Dichloroethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,2-Dichloroethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,1-Dichloroethene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,2-Dichloroethene (cis)	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,2-Dichloroethene (trans)	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,2-Dichloropropane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,3-Dichloropropene [cis]	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,3-Dichloropropene [trans]	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Methyl t-Butyl Ether (MTBE)	mg/kg	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	-	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
Methylene Chloride	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
4-Methyl-2-pentanone	mg/kg	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Styrene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,1,1,2-Tetrachloroethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,1,2,2-Tetrachloroethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Tetrachloroethene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	0.36	0.25	18	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,2,4-Trichlorobenzene	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,1,1-Trichloroethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
1,1,2-Trichloroethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Trichloroethene	mg/kg	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	-	-	<0.01	<0.01	-	-	-	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-
Trichlorofluoromethane	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Vinyl chloride	mg/kg	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	-	-	<0.05	<0.05	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Dioxins and Furans																												
Total PCDDs	ng/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCDFs	ng/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8-Penta CDD (TEF 1.0)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1																												

Table G1a: 2017 Soil Analytical Results QA/QC

Area Location Field ID Sample Depth Sample Date Lab Report Number Sample Code		A1		17A20HA2				17A20HA30				17A20HA5		A21				A22			
		17A1TP1		17A20DUP1		17A20HA2-1		17A20DUP4		17A20HA30-1		17A20DUP2		17A20HA5-2		17A21TP2		17A22BH1			
		17A1DUP1	17A1TP1-1	17A20DUP1	17A20HA2-1	17A20DUP4	17A20HA30-1	17A20DUP2	17A20HA5-2	17A21DUP1	17A21TP2-2	17A22BH1-1	17A22BHDUP1								
		-	0.25 m	-	0.15 m	-	0.15 m	-	0.30 m	-	1.0 m	2.05 m	-								
		17-Sep-2017	17-Sep-2017	9-Sep-2017	9-Sep-2017	9-Sep-2017	9-Sep-2017	9-Sep-2017	9-Sep-2017	20-Sep-2017	20-Sep-2017	29-Sep-2017	29-Sep-2017								
17Y263066	17Y263066	17Y261467	17Y261467	17Y261467	17Y261467	17Y261467	17Y261467	17Y265105	17Y265105	17V269663	17V269663										
8742853	8742817	8728947	8728900	8728950	8728942	8728948	8728906	8762369	8762362	8799478	8799493										
Parameter	Unit																				
Asbestos Fibres																					
Asbestos fibres	%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide																					
Cyanide (SAD)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide (WAD)	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Routine / Salinity																					
pH	pH Units	6.96	7.37	6	2.89	3.17	9	2.69	2.92	8	7.33	7.37	1	7.96	7.92	1	7.83	7.86	0		
Moisture	%	4.68	3.8	21	-	-	-	-	-	-	-	-	-	6.13	5.47	11	8.4	6.8	21		
Metals																					
Antimony	mg/kg	0.6	0.6	0	4.3	4.5	5	0.3	0.3	0	0.8	0.8	0	0.8	0.7	13	1	1.4	33		
Arsenic	mg/kg	7.5	7.3	3	32.1	26.2	20	20.5	13.6	40	22.2	34.2	43	28.8	23	22	46.1	51	10		
Barium	mg/kg	255	242	5	163	501	102	26.3	32.9	22	55.2	56.4	2	297	256	15	771	1050	31		
Beryllium	mg/kg	1	1.7	52	0.4	0.3	29	0.6	0.8	29	1.1	1.1	0	0.7	0.7	0	1	1	0		
Cadmium	mg/kg	1.66	2.52	41	1.13	1.16	3	1.26	1.31	4	1.31	1.48	12	1.12	1.14	2	0.93	1.15	21		
Chromium	mg/kg	14	17	19	16	16	0	6	8	29	26	26	0	20	19	5	21	23	9		
Cobalt	mg/kg	11.1	13.1	17	37.3	17.7	71	73.2	80.6	10	20.2	21	4	12.6	11.3	11	12.5	13.1	5		
Copper	mg/kg	374	575	42	1940	602	105	5330	5390	1	708	783	10	69.6	58	18	136	141	4		
Lead	mg/kg	16.8	26.2	44	21.6	20.3	6	5.3	6.1	14	17	18.5	8	12.3	10.5	16	16.3	15.6	4		
Mercury	mg/kg	0.25	<0.01	-	<0.01	0.09	-	<0.01	0.05	-	0.58	0.36	47	0.23	0.18	24	0.85	0.68	22		
Molybdenum	mg/kg	3.4	3.1	9	7.2	7.5	4	1.4	1.7	19	4.8	7.5	44	1.3	1.2	8	2.6	3.4	27		
Nickel	mg/kg	15.9	14.2	11	43.6	49.8	13	9.9	11.2	12	32.8	32.2	2	28.2	24.8	13	30.6	33.2	8		
Selenium	mg/kg	1.8	2	11	11.5	4.9	80	9.5	10.8	13	2.6	2.8	7	0.9	0.9	0	0.9	1.1	20		
Silver	mg/kg	<0.5	<0.5	-	1.5	0.7	-	1.8	2	11	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-		
Thallium	mg/kg	0.5	0.5	0	0.5	0.4	22	0.3	0.3	0	0.4	0.4	0	0.3	0.2	40	0.3	0.3	0		
Tin	mg/kg	3.6	5.8	47	3.6	1.5	82	6	6.9	14	1.9	2.2	15	1	0.8	22	1.2	1.3	8		
Uranium	mg/kg	2.9	3.5	19	1.4	1.3	7	0.7	0.8	13	1.9	2.7	35	1.3	1.1	17	4	2.6	42		
Vanadium	mg/kg	27	29	7	88	83	6	10	12	18	80	79	1	38	38	0	41	52	24		
Zinc	mg/kg	196	248	23	314	314	0	238	274	14	129	136	5	129	129	0	126	145	14		
Hydrocarbons																					
Benzene	mg/kg	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	<0.005	<0.005	-		
Toluene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-		
Ethylbenzene	mg/kg	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	<0.01	-		
Xylenes Total	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-		
F1 (C6-C10 / BTEX CORRECTED)	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	<10	<10	-		
F2 (C10-C16)	mg/kg	<20	<20	-	-	-	-	-	-	-	-	-	-	<20	<20	-	<20	<20	-		
F3 (C16-C34)	mg/kg	334	229	37	-	-	-	-	-	-	-	-	-	<20	<20	-	25	27	8		
F4: (C34-C50)	mg/kg	123	76	-	-	-	-	-	-	-	-	-	-	<20	<20	-	<20	<20	-		
Glycols																					
Diethylene glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-		
Ethylene glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-		
Propylene glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-		
Tetraethylene Glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-		
Triethylene Glycol	mg/kg	<10	<10	-	-	-	-	-	-	-	-	-	-	<10	<10	-	-	-	-		
Polycyclic Aromatic Hydrocarbons (PAHs)																					
IACR (CCME)	mg/kg	<0.6	<0.6	-	-	-	-	-	-	-	-	-	-	<0.6	<0.6	-	<0.6	<0.6	-		
B(a)P Total Potency Equivalent	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-		
2-methylnaphthalene	mg/kg	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	<0.005	<0.005	-		
Acenaphthene	mg/kg	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	<0.005	<0.005	-		
Acenaphthylene	mg/kg	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	<0.005	<0.005	-		
Anthracene	mg/kg	<0.004	<0.004	-	-	-	-	-	-	-	-	-	-	<0.004	<0.004	-	<0.004	<0.004	-		
Benz(a)anthracene	mg/kg	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	<0.03	<0.03	-	<0.03	<0.03	-		
Benzo(a) pyrene	mg/kg	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	<0.03	<0.03	-	<0.03	<0.03	-		
Benzo(b)fluoranthene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-		
Benzo(b+g)fluoranthene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-		
Benzo(e)pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Benzo(g,h,i)perylene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-		
Benzo(k)fluoranthene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-		
Chrysene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-		
Dibenz(a,h)anthracene	mg/kg	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	<0.005	<0.005	-		
Fluoranthene	mg/kg	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	<0.01	-		
Fluorene	mg/kg	0.04	<0.02	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02	-	<0.02	<0.02	-		
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02	-	<0.02	<0.02	-		
Naphthalene	mg/kg	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	<0.005	<0.005	-		
Phenanthrene	mg/kg	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02	-	<0.02	<0.02	-		
Pyrene	mg/kg	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	<0.01	<0.01	-		
Benzo(j)fluoranthene	ug/g	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	<0.05	<0.05	-		

Notes:
N/A - Not applicable
Blank - Not analyzed
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
"- " Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the
Bold - RPD exceeds 40%

Table G1a: 2017 Soil Analytical Results QA/QC

Area		A1		RPD (%)		A20HA2		RPD (%)		A20		RPD (%)		A20HA5		RPD (%)		A21		RPD (%)		A22		RPD (%)	
		17A1TP1				17A20HA2-1				17A20HA30-1				17A20HA5-2				17A21TP2				17A22BH1			
		17A1DUP1	17A1TP1-1			17A20DUP1	17A20HA2-1			17A20DUP4	17A20HA30-1			17A20DUP2	17A20HA5-2			17A21DUP1	17A21TP2-2			17A22BH1-1	17A22BH1-2		
		Sample Depth	0.25 m			-	0.15 m			-	0.15 m			-	0.30 m			-	1.0 m			2.05 m	-		
		Sample Date	17-Sep-2017			17-Sep-2017	9-Sep-2017			9-Sep-2017	9-Sep-2017			9-Sep-2017	9-Sep-2017			9-Sep-2017	20-Sep-2017			20-Sep-2017	29-Sep-2017		
Lab Report Number	17Y263066	17Y263066	17Y261467	17Y261467	17Y261467	17Y261467	17Y261467	17Y261467	17Y265105	17Y265105	17Y269663	17Y269663													
Sample Code	8742853	8742817	8728947	8728900	8728950	8728942	8728948	8728906	8762369	8762362	8799478	8799493													
Parameter	Unit																								
Volatile Organic Compounds (VOCs)																									
Carbon	%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1-Methylnaphthalene	mg/kg	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	-	<0.005	<0.005	-	-				
Acetone	mg/kg	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	-	-	-	-	-	-				
Bromodichloromethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Bromoform	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Bromomethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
2-Butanone	mg/kg	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	-	-	-	-	-	-				
Carbon tetrachloride	mg/kg	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02	-	-	-	-	-	-				
Chlorobenzene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Chloroethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Chloroform	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Chloromethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Dibromochloromethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,2-Dibromoethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,2-Dichlorobenzene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,3-Dichlorobenzene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,4-Dichlorobenzene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,1-Dichloroethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,2-Dichloroethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,1-Dichloroethene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,2-Dichloroethene (cis)	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,2-Dichloroethene (trans)	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,2-Dichloropropane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,3-Dichloropropene [cis]	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,3-Dichloropropene [trans]	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Methyl t-Butyl Ether (MTBE)	mg/kg	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-				
Methylene Chloride	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
4-Methyl-2-pentanone	mg/kg	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	-	-	-	-	-	-				
Styrene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,1,1,2-Tetrachloroethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,1,2,2-Tetrachloroethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Tetrachloroethene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,2,4-Trichlorobenzene	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,1,1-Trichloroethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
1,1,2-Trichloroethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Trichloroethene	mg/kg	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	-	-	-	-	-				
Trichlorofluoromethane	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Vinyl chloride	mg/kg	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	-	-	-	-	-	-				
Dioxins and Furans																									
Total PCDDs	ng/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total PCDFs	ng/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,7,8-Penta CDD (TEF 1.0)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Octa CDD (TEF 0.0003)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
2,3,7,8-Tetra CDF (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,7,8-Penta CDF (TEF 0.03)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
2,3,4,7,8-Penta CDF (TEF 0.3)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Octa CDF (TEF 0.0003)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total PCDDs and PCDFs (TEQ)	TEQ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				

Notes:
N/A - Not applicable
Blank - Not analyzed
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
"- " Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the
Bold - RPD exceeds 40%

Table G1a: 2017 Soil Analytical Results QA/QC

Area		A3				A49				A6					
		Location		RPD (%)		17A49TP4		RPD (%)		17A6TP11		17A6TP2		RPD (%)	
		Field ID	17A3HA1-1			17A6DUP2	17A6TP11-1			17A6DUP1	17A6TP2-1				
		Sample Depth	0.25 m			-	0.35 m			-	0.3 m				
		Sample Date	19-Sep-2017			19-Sep-2017	14-Sep-2017			14-Sep-2017	18-Sep-2017	18-Sep-2017			
Lab Report Number	17Y263896	17Y263896	17Y262211	17Y262211	17Y262746	17Y262746	17Y262746	17Y262746							
Sample Code	8751650	8751565	8736081	8736073	8740304	8740272	8740303	8740253							
Parameter	Unit														
Asbestos Fibres															
Asbestos fibres	%	-	-		-	-		-	-		-	-	-		
Cyanide															
Cyanide (SAD)	mg/kg	-	-		-	-		-	-		-	-	-		
Cyanide (WAD)	mg/kg	-	-		-	-		-	-		-	-	-		
Routine / Salinity															
pH	pH Units	8.22	-	-	6.89	6.92	0	-	-	-	-	-	-		
Moisture	%	8.47	-	-	5.67	5.59	1	8.3	8.1	1	13	15.8	10		
Metals															
Antimony	mg/kg	5.3	-	-	1	0.9	11	-	-	-	-	-	-		
Arsenic	mg/kg	25	-	-	13.3	14.5	9	-	-	-	-	-	-		
Barium	mg/kg	3420	-	-	208	203	2	-	-	-	-	-	-		
Beryllium	mg/kg	0.8	-	-	1.7	1.8	6	-	-	-	-	-	-		
Cadmium	mg/kg	4.31	-	-	3.53	3.17	11	-	-	-	-	-	-		
Chromium	mg/kg	22	-	-	14	14	0	-	-	-	-	-	-		
Cobalt	mg/kg	20.4	-	-	26.8	30.1	12	-	-	-	-	-	-		
Copper	mg/kg	53	-	-	1560	1690	8	-	-	-	-	-	-		
Lead	mg/kg	26.9	-	-	10.7	11.7	9	-	-	-	-	-	-		
Mercury	mg/kg	0.08	-	-	0.84	0.99	16	-	-	-	-	-	-		
Molybdenum	mg/kg	7.8	-	-	4.5	4.4	2	-	-	-	-	-	-		
Nickel	mg/kg	81.6	-	-	17.4	20	14	-	-	-	-	-	-		
Selenium	mg/kg	1.1	-	-	4.2	4.6	9	-	-	-	-	-	-		
Silver	mg/kg	<0.5	-	-	1	1.1	10	-	-	-	-	-	-		
Thallium	mg/kg	0.4	-	-	0.4	0.4	0	-	-	-	-	-	-		
Tin	mg/kg	0.3	-	-	4.3	4	7	-	-	-	-	-	-		
Uranium	mg/kg	1.8	-	-	2.1	2.2	5	-	-	-	-	-	-		
Vanadium	mg/kg	94	-	-	26	25	4	-	-	-	-	-	-		
Zinc	mg/kg	445	-	-	393	399	2	-	-	-	-	-	-		
Hydrocarbons															
Benzene	mg/kg	<0.005	-	-	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-		
Toluene	mg/kg	<0.05	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-		
Ethylbenzene	mg/kg	<0.01	-	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-		
Xylenes Total	mg/kg	<0.05	-	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-		
F1 (C6-C10 / BTEX CORRECTED)	mg/kg	<10	-	-	<10	<10	-	<10	<10	-	<10	<10	-		
F2 (C10-C16)	mg/kg	<20	-	-	<20	<20	-	<20	<20	-	556	263	72		
F3 (C16-C34)	mg/kg	<20	-	-	246	250	2	<20	<20	-	616	421	38		
F4: (C34-C50)	mg/kg	<20	-	-	59	54	9	<20	<20	-	<20	<20	-		
Glycols															
Diethylene glycol	mg/kg	<10	-	-	-	-	-	-	-	-	-	-	-		
Ethylene glycol	mg/kg	<10	-	-	-	-	-	-	-	-	-	-	-		
Propylene glycol	mg/kg	<10	-	-	-	-	-	-	-	-	-	-	-		
Tetraethylene Glycol	mg/kg	<10	-	-	-	-	-	-	-	-	-	-	-		
Triethylene Glycol	mg/kg	<10	-	-	-	-	-	-	-	-	-	-	-		
Polycyclic Aromatic Hydrocarbons (PAHs)															
IACR (CCME)	mg/kg	<0.6	-	-	<0.6	<0.6	-	-	<0.6	-	-	0.6	-		
B(a)P Total Potency Equivalent	mg/kg	<0.05	-	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	-		
2-methylnaphthalene	mg/kg	<0.005	-	-	<0.005	<0.005	-	-	<0.005	-	-	0.07	-		
Acenaphthene	mg/kg	<0.005	-	-	<0.005	0.005	-	-	<0.005	-	-	<0.05	-		
Acenaphthylene	mg/kg	<0.005	-	-	<0.005	<0.005	-	-	<0.005	-	-	<0.05	-		
Anthracene	mg/kg	<0.004	-	-	<0.004	<0.004	-	-	<0.004	-	-	<0.04	-		
Benz(a)anthracene	mg/kg	<0.03	-	-	<0.03	<0.03	-	-	<0.03	-	-	<0.03	-		
Benzo(a) pyrene	mg/kg	<0.03	-	-	<0.03	<0.03	-	-	<0.03	-	-	<0.03	-		
Benzo(b)fluoranthene	mg/kg	<0.05	-	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	-		
Benzo(b+g)fluoranthene	mg/kg	<0.05	-	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	-		
Benzo(e)pyrene	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Benzo(g,h,i)perylene	mg/kg	<0.05	-	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	-		
Benzo(k)fluoranthene	mg/kg	<0.05	-	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	-		
Chrysene	mg/kg	<0.05	-	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	-		
Dibenz(a,h)anthracene	mg/kg	<0.005	-	-	<0.005	<0.005	-	-	<0.005	-	-	0.011	-		
Fluoranthene	mg/kg	<0.01	-	-	<0.01	<0.01	-	-	<0.01	-	-	0.01	-		
Fluorene	mg/kg	<0.02	-	-	<0.02	<0.02	-	-	<0.02	-	-	<0.2	-		
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.02	-	-	<0.02	<0.02	-	-	<0.02	-	-	0.03	-		
Naphthalene	mg/kg	<0.005	-	-	<0.005	<0.005	-	-	<0.005	-	-	<0.05	-		
Phenanthrene	mg/kg	<0.02	-	-	<0.02	<0.02	-	-	<0.02	-	-	<0.2	-		
Pyrene	mg/kg	<0.01	-	-	<0.01	<0.01	-	-	<0.01	-	-	0.02	-		
Benzo(j)fluoranthene	ug/g	<0.05	-	-	<0.05	<0.05	-	-	<0.05	-	-	<0.05	-		

Notes

N/A - Not applicable

Blank - Not analyzed

RPD - Relative percent difference calculated as $(\text{abs}(C1-C2)/\text{average}(C1+))$

-" Indicates RPD not calculated. RPD cannot be calculated if one or more

of the analytical results are less than detection limits or within 5 times the

Bold - RPD exceeds 40%

Table G1a: 2017 Soil Analytical Results QA/QC

Area		Location		A3				A49				A6			
				17A3HA1		17A49TP4		17A6TP11		17A6TP2					
		Field ID	17A3Dup1	17A3HA1-1	RPD (%)	17A49Dup1	17A49TP4-1	RPD (%)	17A6DUP2	17A6TP11-1	RPD (%)	17A6DUP1	17A6TP2-1	RPD (%)	
		Sample Depth	-	0.25 m		-	0.25 m		-	0.35 m		-	0.3 m		
		Sample Date	19-Sep-2017	19-Sep-2017		14-Sep-2017	14-Sep-2017		18-Sep-2017	18-Sep-2017		18-Sep-2017	18-Sep-2017		
Lab Report Number	17Y263896	17Y263896	17Y262211	17Y262211	17Y262746	17Y262746	17Y262746	17Y262746							
Sample Code	8751650	8751565	8736081	8736073	8740304	8740272	8740303	8740253							
Parameter	Unit														
Polychlorinated Biphenyls (PCBs)															
Aroclor 1242	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-		
Aroclor 1254	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-		
Aroclor 1260	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-		
Aroclor 1262	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
PCBs (Sum of total)	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-		
Phenols															
2,3,4,5-tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,3,4,6-tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,3,4-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,3,5,6-Tetrachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,3,5-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,3,6-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,4,5-trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,4,6-trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,4-dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,4-dimethylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,4-dinitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2,6-dichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2-chlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
2-nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
3-&4-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
3,4,5-Trichlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
4-chloro-3-methylphenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
4-nitrophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Cresol Total	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Pentachlorophenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Phenol	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Organochlorine Pesticides															
2,4-DDT	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
4,4-DDE	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
a-BHC	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Aldrin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
b-BHC	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
chlordanane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
DDE	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
DDT	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Dieldrin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Endosulfan I	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Endrin	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
gamma-Chlordane	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Heptachlor	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Heptachlor epoxide	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
Methoxychlor	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		
o,p'-DDE	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-		

Notes:
N/A - Not applicable
Blank - Not analyzed
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+
"-" Indicates RPD not calculated. RPD cannot be calculated if one or more
of the analytical results are less than detection limits or within 5 times the
Bold - RPD exceeds 40%

Table G1a: 2017 Soil Analytical Results QA/QC

Area		A3				A49				A6			
		Location		RPD (%)		17A49TP4		RPD (%)		17A6TP11		RPD (%)	
		Field ID	17A3HA1-1			17A6TP2-1							
		Sample Depth	0.25 m			0.35 m							
		Sample Date	19-Sep-2017			14-Sep-2017	18-Sep-2017						
Lab Report Number	17Y263896	17Y263896	17Y262211	17Y262211	17Y262746	17Y262746							
Sample Code	8751650	8751565	8736081	8736073	8740304	8740272	8740303	8740253					
Parameter	Unit												
Volatile Organic Compounds (VOCs)													
Carbon	%	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	mg/kg	<0.005	-	-	<0.005	<0.005	-	-	<0.005	-	-	<0.05	-
Acetone	mg/kg	<0.5	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	mg/kg	<0.5	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	<0.02	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene [cis]	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene [trans]	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Methyl t-Butyl Ether (MTBE)	mg/kg	<0.1	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	mg/kg	<0.5	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	mg/kg	<0.01	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	<0.05	-	-	-	-	-	-	-	-	-	-	-
Dioxins and Furans													
Total PCDDs	ng/kg	-	20	-	-	-	-	-	-	-	-	-	-
Total PCDFs	ng/kg	-	34.7	-	-	-	-	-	-	-	-	-	-
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ	-	0	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8-Penta CDD (TEF 1.0)	TEQ	-	0.211	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ	-	0	-	-	-	-	-	-	-	-	-	-
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ	-	0.0354	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	TEQ	-	0	-	-	-	-	-	-	-	-	-	-
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	TEQ	-	0.03	-	-	-	-	-	-	-	-	-	-
Octa CDD (TEF 0.0003)	TEQ	-	0.00151	-	-	-	-	-	-	-	-	-	-
2,3,7,8-Tetra CDF (TEF 0.1)	TEQ	-	0	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8-Penta CDF (TEF 0.03)	TEQ	-	0.0204	-	-	-	-	-	-	-	-	-	-
2,3,4,7,8-Penta CDF (TEF 0.3)	TEQ	-	0.186	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	TEQ	-	0.117	-	-	-	-	-	-	-	-	-	-
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	TEQ	-	0.0807	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	TEQ	-	0.0328	-	-	-	-	-	-	-	-	-	-
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	TEQ	-	0.125	-	-	-	-	-	-	-	-	-	-
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	TEQ	-	0.0535	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	TEQ	-	0.00345	-	-	-	-	-	-	-	-	-	-
Octa CDF (TEF 0.0003)	TEQ	-	0.000907	-	-	-	-	-	-	-	-	-	-
Total PCDDs and PCDFs (TEQ)	TEQ	-	0.899	-	-	-	-	-	-	-	-	-	-

Notes:
N/A - Not applicable
Blank - Not analyzed
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+
*-) Indicates RPD not calculated. RPD cannot be calculated if one or more
of the analytical results are less than detection limits or within 5 times the
Bold - RPD exceeds 40%

Table G1b: 2018 Soil Analytical Results QA/QC

			Field ID	BS1806d	Dup1	RPD (%)	BS1813d	Dup2	RPD (%)	BS1820s	Dup3	RPD (%)	BS1826d	Dup4	RPD (%)	BS1817d	Dup5	RPD (%)	18A5TP3-1	18A5BTP3-1	RPD (%)
			Sample Date	4-Jul-2018	7-Jul-2018		5-Jul-2018	7-Jul-2018		6-Jul-2018	7-Jul-2018		7-Jul-2018	7-Jul-2018		6-Jul-2018	7-Jul-2018		26-Jun-2018	26-Jun-2018	
			Laboratory Report Number	18Y360293	18Y360293		18Y360293	18Y360293		18Y360293	18Y360293		18Y360293	18Y360293		18Y360293	18Y360293		18Y357306	18Y357306	
			Laboratory Sample ID	9388742	9388788		9388760	9388789		9388773	9388790		9388783	9388791		9388766	9388792		9372314	9372315	
Parameter	Unit	RDL																			
Routine																					
pH (1:2)	pH Units	0.1	7.9	8.0	1	7.6	7.7	1	8.2	8.2	0	6.1	6.4	5	8.1	8.0	1	-	-	-	
Metals																					
Antimony	mg/kg	0.1	0.2	0.5	-	0.3	0.2	-	0.1	0.2	-	0.4	0.3	-	0.2	0.2	-	-	-	-	
Arsenic	mg/kg	0.1	7.5	11	38	18.2	14.7	21	14.9	12.2	20	15.8	16	1	18.6	13.9	29	-	-	-	
Barium	mg/kg	0.5	291	269	8	88.4	79	11	65.8	68.5	4	107	108	1	38.6	32	19	-	-	-	
Beryllium	mg/kg	0.1	0.5	0.5	0	1.2	1	18	0.6	0.5	18	1.1	1.3	17	0.6	0.5	18	-	-	-	
Cadmium	mg/kg	0.01	0.9	0.5	57	0.3	0.24	22	0.29	0.27	7	0.21	0.28	29	0.51	0.34	40	-	-	-	
Chromium	mg/kg	1	17	16	6	29	22	27	18	17	6	40	37	8	19	16	17	-	-	-	
Cobalt	mg/kg	0.1	6.6	7.2	9	13.6	11.2	19	7.3	7.1	3	16.5	15.4	7	9.7	6.2	44	-	-	-	
Copper	mg/kg	0.2	25.7	11.8	74	45.5	35.6	24	22.7	24.7	8	14.9	14.1	6	19.7	17	15	-	-	-	
Lead	mg/kg	0.1	8.6	7.3	16	11.6	8.7	29	5.5	6.5	17	15.6	13.6	14	8	8.2	2	-	-	-	
Mercury	mg/kg	0.01	0.02	0.02	-	0.05	0.03	-	0.06	0.04	-	<0.01	0.02	-	0.12	0.03	-	-	-	-	
Molybdenum	mg/kg	0.2	0.3	0.7	-	0.8	0.6	-	0.5	0.5	-	0.9	0.8	-	1.6	0.9	-	-	-	-	
Nickel	mg/kg	0.5	14.7	18.1	21	24.9	20.4	20	14.4	14.5	1	30.1	25.8	15	13	10.6	20	-	-	-	
Selenium	mg/kg	0.1	0.5	0.8	46	0.4	0.4	-	0.6	0.4	-	0.2	0.3	-	0.6	0.2	-	-	-	-	
Silver	mg/kg	0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	-	-	-	
Thallium	mg/kg	0.1	0.2	0.2	-	0.4	0.4	-	0.2	0.2	-	0.2	0.1	-	0.2	0.2	-	-	-	-	
Tin	mg/kg	0.2	0.3	0.4	-	1.7	1.8	6	1	1.1	10	0.8	0.9	-	1.5	1.1	31	-	-	-	
Uranium	mg/kg	0.2	0.8	0.8	-	1.6	1.3	21	1.2	1.2	0	1.1	1.3	17	2.7	2.2	20	-	-	-	
Vanadium	mg/kg	1	16	27	51	38	31	20	24	23	4	65	57	13	25	19	27	-	-	-	
Zinc	mg/kg	1	39	56	36	61	57	7	29	29	0	67	56	18	80	444	139	-	-	-	
Hydrocarbons																					
F2 (C10-C16)	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	-	
F3 (C16-C34)	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<20	-	
F4 (C34-C50)	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	79	-	
Moisture	%	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.2	7.0	16	
Polycyclic Aromatic Hydrocarbons (PAHs)																					
IACR (CCME)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
B(a)P Total Potency Equivalent	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1-Methylnaphthalene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2-methylnaphthalene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acenaphthene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acenaphthylene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Anthracene	mg/kg	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benz(a)anthracene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(a) pyrene	mg/kg	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(b)fluoranthene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(b+)fluoranthene	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(g,h,i)perylene	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(j)fluoranthene	ug/g	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(k)fluoranthene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chrysene	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dibenz(a,h)anthracene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fluoranthene	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fluorene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Indeno(1,2,3-c,d)pyrene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Naphthalene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenanthrene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pyrene	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Quinoline	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes:
RDL - Reportable detection limit
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
*- Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the detection limits.
BOLD - RPD value greater than 30%

Table G1b: 2018 Soil Analytical Results QA/QC

			Field ID	18A6TP20-2	18A6BTP20-2	RPD (%)	18A10TP4-1	18A10BTP4-1	RPD (%)	18A14TP15-2	18A14BTP15-2	RPD (%)	18A14TP22-2	18A14BTP22-2	RPD (%)	18A14TP26-3	18A14BTP26-3	RPD (%)	18A16TP7-3	18A16BTP7-3	RPD (%)			
			Sample Date	27-Jun-2018	27-Jun-2018		3-Jul-2018	3-Jul-2018		1-Jul-2018	1-Jul-2018		1-Jul-2018	1-Jul-2018		2-Jul-2018	2-Jul-2018		30-Jun-2018	30-Jun-2018				
			Laboratory Report Number	18Y357306	18Y357306		18Y358151	18Y358151		18Y358151	18Y358151		18Y358151	18Y358151		18Y358151	18Y358151		18Y358151	18Y358151				
			Laboratory Sample ID	9372331	9372332		9376876	9376882		9376792	9376793		9376814	9376815		9376834	9376835		9376749	9376750				
Parameter	Unit	RDL																						
Routine																								
pH (1:2)	pH Units	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Metals																								
Antimony	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Arsenic	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Barium	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Beryllium	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Cadmium	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Chromium	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Cobalt	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Copper	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Lead	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Mercury	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Molybdenum	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Nickel	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Selenium	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Silver	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Thallium	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Tin	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Uranium	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Vanadium	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Zinc	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Hydrocarbons																								
F2 (C ₁₀ -C ₁₆)	mg/kg	20	<20	<20	-	<20	<20	-	581	724	22	1600	1580	1	95	75	-	<20	<20	-				
F3 (C ₁₆ -C ₃₄)	mg/kg	20	36	<20	-	730	611	18	464	562	19	841	784	7	690	520	28	<20	<20	-				
F4 (C ₃₄ -C ₅₀)	mg/kg	20	76	61	-	483	359	29	101	119	16	83	59	-	305	235	26	<20	<20	-				
Moisture	%	0.5	11.2	7.5	40	12.5	4.8	89	6.7	7.7	14	10.8	10.6	2	14.4	14.6	1	11.9	8.5	33				
Polycyclic Aromatic Hydrocarbons (PAHs)																								
IACR (CCME)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
B(a)P Total Potency Equivalent	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1-Methylnaphthalene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
2-methylnaphthalene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Acenaphthene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Acenaphthylene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Anthracene	mg/kg	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Benz(a)anthracene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Benzo(a) pyrene	mg/kg	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Benzo(b)fluoranthene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Benzo(b+)fluoranthene	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Benzo(g,h,i)perylene	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Benzo(j)fluoranthene	ug/g	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Benzo(k)fluoranthene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Chrysene	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Dibenz(a,h)anthracene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Fluoranthene	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Fluorene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Indeno(1,2,3-c,d)pyrene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Naphthalene	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Phenanthrene	mg/kg	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Pyrene	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Quinoline	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				

Notes:
RDL - Reportable detection limit
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
*- Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the detection limits.
BOLD - RPD value greater than 30%

Table G1b: 2018 Soil Analytical Results QA/QC

			Field ID	18A16TP11-1	18A16BTP11-1	RPD (%)	18A17TP9-3	18A17BTP9-3	RPD (%)	18A17TP11-2	18A17BTP11-2	RPD (%)	18A17TP17-2	18A17BTP17-2	RPD (%)	18A23TP7-2	18A23BTP7-2	RPD (%)					
			Sample Date	30-Jun-2018	30-Jun-2018		28-Jun-2018	28-Jun-2018		28-Jun-2018	28-Jun-2018		29-Jun-2018	29-Jun-2018		27-Jun-2018	27-Jun-2018						
			Laboratory Report Number	18Y358151	18Y358151		18Y357306	18Y357306		18Y357306	18Y357306		18Y358151	18Y358151		18Y357306	18Y357306						
			Laboratory Sample ID	9376760	9376761		9372370	9372371		9372376	9372377		9376712	9376713		9372348	9372349						
Parameter	Unit	RDL																					
Routine																							
pH (1:2)	pH Units	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Metals																							
Antimony	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Arsenic	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Barium	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Beryllium	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Cadmium	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Chromium	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Cobalt	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Copper	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Lead	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Mercury	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Molybdenum	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Nickel	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Selenium	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Silver	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Thallium	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Tin	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Uranium	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Vanadium	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Zinc	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Hydrocarbons																							
F2 (C ₁₀ -C ₁₆)	mg/kg	20	74	72	-	<20	<20	-	1140	978	15	1180	1050	12	<20	3080	-	-					
F3 (C ₁₆ -C ₂₄)	mg/kg	20	2060	2080	1	79	73	-	2290	2100	9	12,200	12,200	0	68	2160	188	-					
F4 (C ₂₄ -C ₅₀)	mg/kg	20	583	630	8	<20	<20	-	587	557	5	13,300	12,900	3	<20	156	-	-					
Moisture	%	0.5	7.4	6.2	18	9.1	9.4	3	5.1	6.1	18	22.3	23.5	5	4.0	5.3	28	-					
Polycyclic Aromatic Hydrocarbons (PAHs)																							
IACR (CCME)	N/A	N/A	-	-	-	-	-	-	<0.6	-	-	-	-	-	-	-	-	-					
B(a)P Total Potency Equivalent	mg/kg	0.05	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-					
1-Methylnaphthalene	mg/kg	0.005	-	-	-	-	-	-	0.472	-	-	-	-	-	-	-	-	-					
2-methylnaphthalene	mg/kg	0.005	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-					
Acenaphthene	mg/kg	0.005	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-					
Acenaphthylene	mg/kg	0.005	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-					
Anthracene	mg/kg	0.004	-	-	-	-	-	-	<0.004	-	-	-	-	-	-	-	-	-					
Benz(a)anthracene	mg/kg	0.02	-	-	-	-	-	-	<0.03	-	-	-	-	-	-	-	-	-					
Benzo(a) pyrene	mg/kg	0.03	-	-	-	-	-	-	<0.03	-	-	-	-	-	-	-	-	-					
Benzo(b)fluoranthene	mg/kg	0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-					
Benzo(b+)fluoranthene	mg/kg	0.05	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-					
Benzo(g,h,i)perylene	mg/kg	0.05	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-					
Benzo(j)fluoranthene	ug/g	0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-					
Benzo(k)fluoranthene	mg/kg	0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-					
Chrysene	mg/kg	0.05	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-					
Dibenz(a,h)anthracene	mg/kg	0.005	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-					
Fluoranthene	mg/kg	0.01	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-					
Fluorene	mg/kg	0.02	-	-	-	-	-	-	0.09	-	-	-	-	-	-	-	-	-					
Indeno(1,2,3-c,d)pyrene	mg/kg	0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-	-	-					
Naphthalene	mg/kg	0.005	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-					
Phenanthrene	mg/kg	0.02	-	-	-	-	-	-	0.13	-	-	-	-	-	-	-	-	-					
Pyrene	mg/kg	0.01	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-					
Quinoline	mg/kg	0.05	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-					

Notes:
RDL - Reportable detection limit
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
*- Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the detection limits.
BOLD - RPD value greater than 30%

Table G1b: 2018 Soil Analytical Results QA/QC

			Field ID	18A31TP8-3	18A31BTP8-3	RPD (%)	18A31TP10-1	18A31BTP10-1	RPD (%)	18A32TP2-2	18A32BTP2-2	RPD (%)	18A50TP2-1	18A50BTP2-1	RPD (%)
			Sample Date	2-Jul-2018	2-Jul-2018		2-Jul-2018	2-Jul-2018		2-Jul-2018	2-Jul-2018		29-Jun-2018	29-Jun-2018	
			Laboratory Report Number	18Y358151	18Y358151		18Y358151	18Y358151		18Y358151	18Y358151		18Y358151	18Y358151	
			Laboratory Sample ID	9376847	9376848										
Parameter	Unit	RDL													
Routine															
pH (1:2)	pH Units	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals															
Antimony	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydrocarbons															
F2 (C ₁₀ -C ₁₆)	mg/kg	20	2970	2390	22	624	443	34	<20	<20	-	<20	<20	-	-
F3 (C ₁₆ -C ₃₄)	mg/kg	20	758	714	6	1230	815	41	166	153	8	138	123	11	-
F4 (C ₃₄ -C ₅₀)	mg/kg	20	41	46	-	310	171	58	28	40	-	45	47	-	-
Moisture	%	0.5	8.5	9.9	15	7.7	6.9	11	9.0	9.8	9	8.7	9.8	12	-
Polycyclic Aromatic Hydrocarbons (PAHs)															
IACR (CCME)	N/A	N/A	<0.6	<0.6	-	-	-	-	-	-	-	-	-	-	-
B(a)P Total Potency Equivalent	mg/kg	0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	mg/kg	0.005	0.64	0.42	42	-	-	-	-	-	-	-	-	-	-
2-methylnaphthalene	mg/kg	0.005	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	0.005	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	mg/kg	0.005	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg	0.004	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-
Benz(a)anthracene	mg/kg	0.02	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-
Benzo(a) pyrene	mg/kg	0.03	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.02	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Benzo(j)fluoranthene	ug/g	0.02	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.02	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.005	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	0.01	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Fluorene	mg/kg	0.02	0.28	0.19	38	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.02	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	mg/kg	0.005	0.8	0.58	32	-	-	-	-	-	-	-	-	-	-
Phenanthrene	mg/kg	0.02	0.25	0.18	33	-	-	-	-	-	-	-	-	-	-
Pyrene	mg/kg	0.01	<0.02	<0.02	-	-	-	-	-	-	-	-	-	-	-
Quinoline	mg/kg	0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-

Notes:
RDL - Reportable detection limit
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
"- " Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the detection limits.
BOLD - RPD value greater than 30%

Table G2a: 2017 Groundwater Analytical Results QA/QC

Parameter	Unit	RDL	17A1MW1	17DUPLICATE1	RPD (%)	GH12-J	17DUPLICATE2	RPD (%)	GH12-I	17DUPLICATE3	RPD (%)	RMW10	17DUPLICATE4	RPD (%)
			1-Oct-2017	1-Oct-2017		3-Oct-2017	3-Oct-2017		4-Oct-2017	4-Oct-2017		4-Oct-2017	5-Oct-2017	
Cyanide														
Cyanide (SAD)	mg/L	0.002	0.013	0.012	8.0	-	-	-	-	-	-	-	-	-
Cyanide (WAD)	mg/L	0.002	<0.002	0.004	NC	-	-	-	-	-	-	-	-	-
Routine / Salinity														
pH	pH Units	0.01	7.7	7.81	1.4	7.67	7.74	0.9	7.81	7.8	0.1	7.77	7.79	0.3
Electrical Conductivity (EC)	µS/cm	1	780	781	0.1	501	499	0.4	394	391	0.8	624	621	0.5
Total Dissolved Solids (TDS)	mg/L	5	502	492	2.0	320	332	3.7	238	242	1.7	395	388	1.8
Hardness as CaCO3	mg/L	0.1	415	409	1.5	257	264	2.7	197	198	0.5	340	325	4.5
Alkalinity (total as CaCO3)	mg/L	1	210	212	0.9	166	165	0.6	122	119	2.5	234	235	0.4
Bromide	mg/L	0.05	<0.05	<0.05	NC	<0.05	<0.05	NC	<0.05	<0.05	NC	<0.05	<0.05	NC
Chloride	mg/L	0.05	2.05	2.08	1.5	1.42	1.42	0.0	0.91	0.89	2.2	3.07	3.07	0.0
Fluoride	mg/L	0.02	0.13	0.14	7.4	0.04	0.04	0.0	0.11	0.12	8.7	0.05	0.04	NC
Sulphate	mg/L	0.5	218	221	1.4	102	102	0.0	89.7	89.8	0.1	114	114	0.0
Nutrients														
Nitrate (as NO3-N)	mg/L	0.005	0.352	0.358	1.7	0.405	0.417	2.9	0.16	0.156	NC	<0.005	<0.005	NC
Nitrite (as NO2-N)	mg/L	0.005	<0.005	<0.005	NC	<0.005	<0.005	NC	<0.005	<0.005	NC	<0.005	<0.005	NC
Dissolved Metals														
Aluminum	mg/L	0.002	<0.002	<0.002	NC	0.003	0.005	NC	<0.002	<0.002	NC	0.007	0.003	NC
Antimony	mg/L	0.0002	<0.0002	<0.0002	NC	<0.0002	<0.0002	NC	<0.0002	<0.0002	NC	<0.0002	<0.0002	NC
Arsenic	mg/L	0.0001	0.0002	0.0002	NC	0.0001	0.0001	NC	0.0002	0.0002	NC	0.0002	0.0003	NC
Barium	mg/L	0.0002	0.0401	0.046	13.7	0.113	0.115	1.8	0.0368	0.0381	3.5	0.044	0.043	2.3
Beryllium	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Boron	mg/L	0.002	0.015	0.018	18.2	0.008	0.007	NC	0.006	0.006	NC	0.003	0.003	NC
Cadmium	mg/L	0.00001	0.00007	0.00007	NC	0.00032	0.0003	6.5	0.00004	0.00005	NC	0.00038	0.00034	11.1
Calcium	mg/L	0.05	120	118	1.7	76.2	78	2.3	60.6	61.1	0.8	97.8	93.5	4.5
Chromium	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Cobalt	mg/L	0.00005	0.00034	0.00036	5.7	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC	0.00013	0.00015	NC
Copper	mg/L	0.0002	0.0006	0.0009	NC	0.0005	0.0006	NC	0.0005	0.0005	NC	<0.0002	<0.0002	NC
Iron	mg/L	0.01	<0.01	<0.01	NC	0.02	0.012	NC	<0.01	<0.01	NC	0.024	0.012	NC
Lead	mg/L	0.00005	<0.00005	0.00006	NC	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC
Lithium	mg/L	0.0005	0.0137	0.0154	11.7	0.0068	0.0062	9.2	0.01	0.01	0.0	0.0053	0.0049	7.8
Magnesium	mg/L	0.05	27.9	27.7	0.7	16.2	16.7	3.0	11	11	0.0	23.2	22.3	4.0
Manganese	mg/L	0.001	0.045	0.045	0.0	<0.001	<0.001	NC	<0.001	<0.001	NC	0.012	0.013	8.0
Mercury	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	0.00002	<0.00001	NC	<0.00001	<0.00001	NC
Molybdenum	mg/L	0.00005	0.00033	0.00042	24.0	0.00118	0.0012	1.7	0.00174	0.00188	7.7	0.00046	0.0005	8.3
Nickel	mg/L	0.0002	0.0009	0.0009	NC	0.0006	0.0006	NC	0.0003	0.0003	NC	0.0006	0.0007	NC
Potassium	mg/L	0.05	1.86	1.89	1.6	0.893	0.871	2.5	0.696	0.677	2.8	1.67	1.63	2.4
Selenium	mg/L	0.0005	<0.0005	<0.0005	NC	0.0016	0.0016	NC	<0.0005	0.0006	NC	<0.0005	<0.0005	NC
Silver	mg/L	0.00002	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC
Sodium	mg/L	0.05	2.95	3	1.7	1.67	1.63	2.4	1.21	1.2	0.8	1.12	1.09	2.7
Thallium	mg/L	0.00001	0.00003	<0.00001	NC	<0.00001	0.00002	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Titanium	mg/L	0.0005	0.0006	0.0009	NC	<0.0005	<0.0005	NC	0.0005	0.0006	NC	0.0008	0.0005	NC
Uranium	mg/L	0.00001	0.00249	0.0026	4.3	0.00338	0.00346	2.3	0.00595	0.00592	0.5	0.00195	0.00221	12.5
Vanadium	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Zinc	mg/L	0.002	<0.002	<0.002	NC	0.003	0.003	NC	0.002	<0.002	NC	0.003	0.004	NC
Hydrocarbons														
Benzene	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Volatile Hydrocarbons (VH6-10)	mg/L	0.1	-	-	-	-	-	-	-	-	-	<0.1	<0.1	NC
Toluene	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Ethylbenzene	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Xylene (m)	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Xylene (o)	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Xylenes Total	mg/L	0.001	<0.001	<0.001	NC	<0.001	<0.001	NC	<0.001	<0.001	NC	<0.001	<0.001	NC
F1 (C6-C10)	mg/L	0.1	<0.1	<0.1	NC	<0.1	<0.1	NC	<0.1	<0.1	NC	<0.1	<0.1	NC
TVH: (C6-C10 / BTEX CORRECTED)	mg/L	0.1	<0.1	<0.1	NC	<0.1	<0.1	NC	<0.1	<0.1	NC	<0.1	<0.1	NC
F2 (C10-C16)	mg/L	0.1	<0.1	<0.1	NC	<0.1	<0.1	NC	<0.1	<0.1	NC	<0.1	<0.1	NC
TEH: (C16-C34)	mg/L	0.1	<0.1	<0.1	NC	<0.1	<0.1	NC	0.16	0.29	NC	<0.1	<0.1	NC
F4: (C34-C50)	mg/L	0.1	<0.1	<0.1	NC	<0.1	<0.1	NC	<0.1	0.19	NC	<0.1	<0.1	NC
VPHs	mg/L	0.1	-	-	-	-	-	-	-	-	-	<0.1	<0.1	NC
Glycols														
Diethylene glycol	mg/L	5	<5	<5	NC	-	-	-	-	-	-	<5	<5	NC
Ethylene glycol	mg/L	10	<10	<10	NC	-	-	-	-	-	-	<10	<10	NC
Propylene glycol	mg/L	10	<10	<10	NC	-	-	-	-	-	-	<10	<10	NC
Tetraethylene Glycol	mg/L	10	<10	<10	NC	-	-	-	-	-	-	<10	<10	NC
Triethylene Glycol	mg/L	10	<10	<10	NC	-	-	-	-	-	-	<10	<10	NC

Notes:
RDL - Reported Detection Limit
RPD - Relative Percentage Difference calculated as $RPD = \frac{C2 - C1}{(C1 + C2) / 2} \times 100$ where C1, C2 = concentrations of parameters in 1st and 2nd sample, respectively.
RPDs have only been calculated when both concentrations are greater than 5 times the RDL.
mg/L - milligrams per litre.
< - concentration is less than the laboratory RDL, therefore an RPD was not calculated
- means parameter was not analyzed, therefore no RPD was calculated.
NC - RPD Not Calculated
BOLD Black and Shaded - RPD exceeds the target 30% screening threshold.

Table G2a: 2017 Groundwater Analytical Results QA/QC

Parameter	Unit	RDL	17A1MW1	17DUPLICATE1	RPD (%)	GH12-J	17DUPLICATE2	RPD (%)	GH12-I	17DUPLICATE3	RPD (%)	RMW10	17DUPLICATE4	RPD (%)
			1-Oct-2017	1-Oct-2017		3-Oct-2017	3-Oct-2017		4-Oct-2017	4-Oct-2017		4-Oct-2017	5-Oct-2017	
Polycyclic Aromatic Hydrocarbons (PAHs)														
Acenaphthene	mg/L	0.00002	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC
Acenaphthylene	mg/L	0.00002	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC
Acridine	mg/L	0.00005	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC
Anthracene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Benz(a)anthracene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Benzo(a) pyrene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Benzo(b)fluoranthene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Benzo(b+)]fluoranthene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Benzo(g,h,i)perylene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Benzo(k)fluoranthene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Chrysene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Dibenz(a,h)anthracene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Fluoranthene	mg/L	0.00002	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC
Fluorene	mg/L	0.00002	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC
Indeno(1,2,3-c,d)pyrene	mg/L	0.00001	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC	<0.00001	<0.00001	NC
Naphthalene	mg/L	0.00005	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC
Phenanthrene	mg/L	0.00004	<0.00004	<0.00004	NC	<0.00004	<0.00004	NC	<0.00004	<0.00004	NC	<0.00004	<0.00004	NC
Pyrene	mg/L	0.00002	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC	<0.00002	<0.00002	NC
Quinoline	mg/L	0.0001	<0.0001	<0.0001	NC	<0.0001	<0.0001	NC	<0.0001	<0.0001	NC	<0.0001	<0.0001	NC
Benzo(j)fluoranthene	ug/L	0.01	<0.01	<0.01	NC	<0.01	<0.01	NC	<0.01	<0.01	NC	<0.01	<0.01	NC
Polychlorinated Biphenyls (PCBs)														
Aroclor 1242	mg/L	0.000009	<0.000009	<0.000009	NC	-	-	-	-	-	-	-	-	-
Aroclor 1254	mg/L	0.000009	<0.000009	<0.000009	NC	-	-	-	-	-	-	-	-	-
Aroclor 1260	mg/L	0.000009	<0.000009	<0.000009	NC	-	-	-	-	-	-	-	-	-
PCBs (Sum of total)	mg/L	0.000009	<0.000009	<0.000009	NC	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)														
Acetone	mg/L	0.01	<0.01	<0.01	NC	-	-	-	-	-	-	<0.01	<0.01	NC
Bromodichloromethane	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Bromoform	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Bromomethane	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
2-Butanone	mg/L	0.01	<0.01	<0.01	NC	-	-	-	-	-	-	<0.01	<0.01	NC
Carbon tetrachloride (Filtered)	mg/L	0.0005	<0.0005	<0.0005	NC	-	-	-	-	-	-	<0.0005	<0.0005	NC
Chlorobenzene	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Chloroethane (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Chloroform (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Chloromethane	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Dibromochloromethane	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,2-Dibromoethane	mg/L	0.0003	<0.0003	<0.0003	NC	-	-	-	-	-	-	<0.0003	<0.0003	NC
1,2-Dichlorobenzene	mg/L	0.0005	<0.0005	<0.0005	NC	-	-	-	-	-	-	<0.0005	<0.0005	NC
1,3-Dichlorobenzene	mg/L	0.0005	<0.0005	<0.0005	NC	-	-	-	-	-	-	<0.0005	<0.0005	NC
1,4-Dichlorobenzene	mg/L	0.0005	<0.0005	<0.0005	NC	-	-	-	-	-	-	<0.0005	<0.0005	NC
1,1-Dichloroethane (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,2-Dichloroethane (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,1-Dichloroethene (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,2-Dichloroethene (cis) (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,2-Dichloroethene (trans) (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,2-Dichloropropane	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,3-Dichloropropene [cis]	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,3-Dichloropropene [trans]	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Methyl t-Butyl Ether (MTBE)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Methylene Chloride (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
4-Methyl-2-pentanone	mg/L	0.01	<0.01	<0.01	NC	-	-	-	-	-	-	<0.01	<0.01	NC
Styrene	mg/L	0.0005	<0.0005	<0.0005	NC	-	-	-	-	-	-	<0.0005	<0.0005	NC
1,1,1,2-Tetrachloroethane	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,1,2,2-Tetrachloroethane	mg/L	0.0008	<0.0008	<0.0008	NC	-	-	-	-	-	-	<0.0008	<0.0008	NC
Tetrachloroethene (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,2,4-Trichlorobenzene	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,1,1-Trichloroethane (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
1,1,2-Trichloroethane (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Trichloroethene (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Trichlorofluoromethane	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC
Trihalomethanes	mg/L	0.002	<0.002	<0.002	NC	-	-	-	-	-	-	<0.002	<0.002	NC
Vinyl chloride (Filtered)	mg/L	0.001	<0.001	<0.001	NC	-	-	-	-	-	-	<0.001	<0.001	NC

Notes:
RDL - Reported Detection Limit
RPD - Relative Percentage Difference calculated as $RPD = [C2 - C1] / [(C1 + C2) / 2] * 100$ where C1, C2 = concentrations of parameters in 1st and 2nd sample, respectively.
RPDs have only been calculated when both concentrations are greater than 5 times the RDL.
mg/L - milligrams per litre.
< - concentration is less than the laboratory RDL, therefore an RPD was not calculated.
- means parameter was not analyzed, therefore no RPD was calculated.
NC - RPD Not Calculated
BOLD Black and Shaded - RPD exceeds the target 30% screening threshold.

Table G2b: 2018 Groundwater Analytical Results QA/QC

QAQC Type Field ID Sample Date Laboratory Report Number Laboratory Sample ID			BLANKS					DUPLICATES										
			FB1	TB1	Trip Blank	Field Blank	17A17MW2	DUP1	RPD (%)	17A33MW2	DUP2	RPD (%)	GH12-I	DUP3	RPD (%)	17A2MW3	DUP4	RPD (%)
			28-Jun-2018	28-Jun-2018	-	2-Jul-2018	29-Jun-2018	30-Jun-2018		30-Jun-2018	30-Jun-2018		1-Jul-2018					
			18V357100	18V357100	18Y358442	18Y358442	18Y358442	18Y358442		18Y358442	18Y358442		18Y358442					
			9370755	9370754	9379114	9379112	9378833	9378837		9378836	9378838		9378822	9378840		9378826	9378842	
Parameter	Unit	RDL																
Routine																		
pH	pH Units	0.01	3.84	3.95	-	-	7.28	7.32	0.5	7.36	7.34	0.3	6.97	7.34	5.2	7.16	7.25	1.2
Electrical Conductivity (EC)	µS/cm	1	1	2	10	10	1360	1350	0.7	663	707	6.4	346	387	11.2	823	875	6.1
Total Dissolved Solids (TDS)	mg/L	1	<5	<5	<5	<5	1060	1000	5.8	425	478	11.7	180	205	13.0	495	505	2.0
Hardness as CaCO ₃	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	778	780	0.3	359	355	1.1	172	178	3.4	451	471	4.3
Alkalinity (total as CaCO ₃)	mg/L	1	<1	<1	<1	<1	321	309	3.8	155	162	4.4	120	122	1.7	317	308	2.9
Bromide	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Chloride	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	1.17	1.12	4.4	1.73	1.69	2.3	0.83	0.78	6.2	0.35	0.43	20.5
Fluoride	mg/L	0.02	<0.02	<0.02	<0.02	<0.02	0.2	0.21	4.9	0.11	0.11	0.0	0.11	0.12	8.7	0.02	<0.02	-
Sulphate	mg/L	0.5	<0.5	<0.5	<0.5	<0.5	505	481	4.9	196	189	3.6	64.1	61.1	4.8	171	159	7.3
Nutrients																		
Ammonia	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-
Nitrate (as NO ₃ -N)	mg/L	0.005	<0.005	0.016	<0.005	<0.005	0.215	0.239	10.6	0.963	1	3.8	0.1	0.108	7.7	0.229	0.216	5.8
Nitrite (as NO ₂ -N)	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-
Nitrogen (Total)	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	0.36	0.36	0.0	1.03	0.98	5.0	0.1	0.12	18.2	0.24	0.33	31.6
Cyanide																		
Cyanide (SAD)	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-	-	-	-	-	<0.002	<0.002	-
Dissolved Metals																		
Aluminum	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	-	<0.002	<0.002	-	<0.002	<0.002	-
Antimony	mg/L	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	<0.0002	<0.0002	-	<0.0002	<0.0002	-
Arsenic	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0004	0.0003	28.6	0.0004	0.0004	0.0	0.0002	0.0002	0.0	0.0002	0.0002	0.0
Barium	mg/L	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0299	0.0297	0.7	0.012	0.0108	10.5	0.034	0.0324	4.8	0.12	0.112	6.9
Beryllium	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-
Boron	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	0.03	0.033	9.5	0.006	0.006	0.0	<0.002	0.005	-	0.02	0.022	9.5
Cadmium	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	0.00002	0.00001	66.7	0.00004	0.00004	0.0	0.00002	0.00002	0.0
Calcium	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	235	236	0.4	109	107	1.9	52.9	54.7	3.3	104	109	4.7
Chromium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Cobalt	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	0.00011	58.8	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00017	0.00017	0.0
Copper	mg/L	0.0002	<0.0002	<0.0002	<0.0002	0.0002	0.0007	0.0006	15.4	0.0003	0.0003	0.0	0.003	0.0006	133.3	0.0004	0.0006	40.0
Iron	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	0.035	0.038	8.2	<0.01	<0.01	-	0.321	<0.01	-	0.03	<0.01	-
Lead	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00011	<0.00005	-	<0.00005	<0.00005	-
Lithium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0225	0.0228	1.3	0.0076	0.0085	11.2	0.0095	0.0103	8.1	0.0005	0.0006	18.2
Magnesium	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	46.4	46.2	0.4	21	21.3	1.4	9.73	10.1	3.7	46.4	48.2	3.8
Manganese	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	0.02	0.033	49.1	<0.001	<0.001	-	<0.001	<0.001	-	0.002	0.001	66.7
Mercury	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-
Molybdenum	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00077	0.00072	6.7	0.00047	0.0005	6.2	0.00189	0.00183	3.2	0.00044	0.00036	20.0
Nickel	mg/L	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	0.0006	0.0	<0.0002	<0.0002	-	0.0002	0.0002	0.0	0.0002	0.0003	40.0
Potassium	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	3.2	3.29	2.8	1.81	1.84	1.6	0.632	0.676	6.7	1.16	1.2	3.4
Selenium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	0.0005	-	<0.0005	<0.0005	-
Silver	mg/L	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	<0.00002	<0.00002	-	<0.00002	<0.00002	-
Sodium	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	7.23	7.35	1.6	1.73	1.77	2.3	1.06	1.13	6.4	1.92	2.03	5.6
Strontium	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.495	0.47	5.2	0.156	0.148	5.3	0.0852	0.0792	7.3	0.072	0.0684	5.1
Thallium	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-
Tin	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-
Titanium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0019	0.0018	5.4	0.0005	0.0005	0.0	0.0009	0.0009	0.0	0.0011	0.0013	16.7
Tungsten	mg/L	0.00001	0.00002	<0.00001	<0.00001	<0.00001	0.00076	0.00082	7.6	0.00072	0.00074	2.7	0.00024	0.00029	18.9	0.00007	0.00007	0.0
Uranium	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00361	0.00407	12.0	0.00198	0.00195	1.5	0.00571	0.00624	8.9	0.00139	0.00127	9.0
Vanadium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Zinc	mg/L	0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	-	0.004	<0.002	-	<0.002	<0.002	-
Hydrocarbons																		
Benzene	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Toluene	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Ethylbenzene	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Xylene (m)	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Xylene (o)	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000										

Table G2b: 2018 Groundwater Analytical Results QA/QC

QAQC Type Field ID Sample Date Laboratory Report Number Laboratory Sample ID			BLANKS						DUPLICATES										
			RPD (%)	17A33MW2		DUP2		RPD (%)	GH12-I		DUP3		RPD (%)	17A2MW3		DUP4		RPD (%)	
				30-Jun-2018	30-Jun-2018	30-Jun-2018	30-Jun-2018		30-Jun-2018	30-Jun-2018	1-Jul-2018	1-Jul-2018							
				18Y358442	18Y358442	18Y358442	18Y358442		18Y358442	18Y358442	18Y358442	18Y358442							
				9378836	9378838	9378822	9378840		9378826	9378842									
Parameter	Unit	RDL	FB1	TB1	Trip Blank	Field Blank	17A17MW2	DUP1	RPD (%)	17A33MW2	DUP2	RPD (%)	GH12-I	DUP3	RPD (%)	17A2MW3	DUP4	RPD (%)	
			28-Jun-2018	28-Jun-2018	-	2-Jul-2018	29-Jun-2018	29-Jun-2018		30-Jun-2018	30-Jun-2018		30-Jun-2018	30-Jun-2018		1-Jul-2018	1-Jul-2018		
			18V357100	18V357100	18Y358442	18Y358442	18Y358442	18Y358442		18Y358442	18Y358442		18Y358442	18Y358442		18Y358442	18Y358442		
			9370755	9370754	9379114	9379112	9378833	9378837		9378836	9378838		9378822	9378840		9378826	9378842		
Polycyclic Aromatic Hydrocarbons (PAHs)																			
Acenaphthene	mg/L	0.00002	<0.00002	<0.00002	-	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-	
Acenaphthylene	mg/L	0.00002	<0.00002	<0.00002	-	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-	
Acridine	mg/L	0.00005	<0.00005	<0.00005	-	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-	
Anthracene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Benzo(a)anthracene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Benzo(a) pyrene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Benzo(b)fluoranthene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Benzo(b+j)fluoranthene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Benzo(g,h,i)perylene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Benzo(j)fluoranthene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Benzo(k)fluoranthene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Chrysene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Dibenz(a,h)anthracene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
Fluoranthene	mg/L	0.00002	<0.00002	<0.00002	-	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-	
Fluorene	mg/L	0.00002	<0.00002	<0.00002	-	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-	
Indeno(1,2,3-c,d)pyrene	mg/L	0.00001	<0.00001	<0.00001	-	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-	
1-Methylnaphthalene	mg/L	0.00005	<0.00005	<0.00005	-	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-	
2-Methylnaphthalene	mg/L	0.00005	<0.00005	<0.00005	-	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-	
Naphthalene	mg/L	0.00005	<0.00005	<0.00005	-	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-	
Phenanthrene	mg/L	0.00004	<0.00004	<0.00004	-	-	-	-	-	<0.00004	<0.00004	-	-	-	-	-	-	-	
Pyrene	mg/L	0.00002	<0.00002	<0.00002	-	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-	
Quinoline	mg/L	0.00005	<0.00005	<0.00005	-	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-	
Phenols																			
Phenols	mg/L	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004	-	-	
Volatile Organic Compounds (VOCs)																			
Acetone	mg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	
Bromodichloromethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Bromoform	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Bromomethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
2-Butanone (MEK)	mg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	
Carbon tetrachloride	mg/L	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	
Chlorobenzene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Chloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Chloroform	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Chloromethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Dibromochloromethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,2-Dibromoethane	mg/L	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0003	-	
1,2-Dichlorobenzene	mg/L	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	
1,3-Dichlorobenzene	mg/L	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	
1,4-Dichlorobenzene	mg/L	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	
1,1-Dichloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,2-Dichloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,1-Dichloroethene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,2-Dichloroethene (cis)	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,2-Dichloroethene (trans)	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,2-Dichloropropane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,3-Dichloropropene [cis]	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,3-Dichloropropene [trans]	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Methylene Chloride	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
4-Methyl-2-pentanone (MIBK)	mg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	
1,1,1,2-Tetrachloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,1,2,2-Tetrachloroethane	mg/L	0.0008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0008	-	
Tetrachloroethene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,2,4-Trichlorobenzene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,1,1-Trichloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
1,1,2-Trichloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Trichloroethene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Trichlorofluoromethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	
Trihalomethanes	mg/L	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	-	
Vinyl chloride	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	

Notes:
RDL - Reportable detection limit
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
*- Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the detection limits.
N/A - Not applicable
BOLD - RPD value greater than 30%

Table G3: Sediment Analytical Results QA/QC

Parameter	Unit	A8		RPD (%)
		17A8SS3	17A8SSDUP1	
		10/3/2017	10/3/2017	
		Sand, fine, grey (Tailings)		
Routine / Salinity				
pH	pH Units	7.54	7.33	3
Moisture	%	24.3	28.2	15
Nutrients				
Nitrogen (Total)	%	0.03	0.03	0
Metals				
Antimony	mg/kg	0.6	0.5	18
Arsenic	mg/kg	8.1	7.6	6
Barium	mg/kg	191	193	1
Beryllium	mg/kg	1.6	1.5	6
Cadmium	mg/kg	2.21	2.09	6
Chromium	mg/kg	21	19	10
Cobalt	mg/kg	23.4	22.5	4
Copper	mg/kg	1160	1130	3
Lead	mg/kg	16.5	13.7	19
Mercury	mg/kg	0.5	0.2	86
Molybdenum	mg/kg	5.6	5.1	9
Nickel	mg/kg	16.1	15.4	4
Phosphorus	mg/kg	512	603	16
Selenium	mg/kg	3.3	3.2	3
Silver	mg/kg	0.6	0.6	0
Thallium	mg/kg	0.5	0.5	0
Tin	mg/kg	4.5	4.1	9
Uranium	mg/kg	2.4	2.4	0
Vanadium	mg/kg	30	30	0
Zinc	mg/kg	296	274	8
Hydrocarbons				
Benzene	mg/kg	<0.005	<0.005	-
Toluene	mg/kg	<0.05	<0.05	-
Ethylbenzene	mg/kg	<0.01	<0.01	-
Xylene (m)	mg/kg	<0.02	<0.02	-
Xylene (o)	mg/kg	<0.02	<0.02	-
Xylenes Total	mg/kg	<0.05	<0.05	-
F1 (C6-C10)	mg/kg	<10	<10	-
F1 (C6-C10 / BTEX CORRECTED)	mg/kg	<10	<10	-
F2 (C10-C16)	mg/kg	115	164	35
F3 (C16-C34)	mg/kg	4680	5950	24
F4: (C34-C50)	mg/kg	3640	6040	50
Polycyclic Aromatic Hydrocarbons (PAHs)				
IACR (CCME)	mg/kg	<3	<3	-
B(a)P Total Potency Equivalent	mg/kg	<0.2	<0.2	-
1-Methylnaphthalene	mg/kg	<0.02	<0.02	-
2-methylnaphthalene	mg/kg	<0.02	<0.02	-
Acenaphthene	mg/kg	<0.02	<0.02	-
Acenaphthylene	mg/kg	<0.02	<0.02	-
Anthracene	mg/kg	<0.02	<0.02	-
Benz(a)anthracene	mg/kg	<0.2	<0.2	-
Benzo(a) pyrene	mg/kg	<0.2	<0.2	-
Benzo(b)fluoranthene	mg/kg	<0.2	<0.2	-
Benzo(b+j)fluoranthene	mg/kg	<0.05	<0.05	-
Benzo(g,h,i)perylene	mg/kg	<0.2	<0.2	-
Benzo(k)fluoranthene	mg/kg	<0.2	<0.2	-
Chrysene	mg/kg	<0.2	<0.2	-
Dibenz(a,h)anthracene	mg/kg	<0.02	<0.02	-
Fluoranthene	mg/kg	0.24	0.19	23
Fluorene	mg/kg	<0.1	<0.1	-
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	-
Naphthalene	mg/kg	<0.02	<0.02	-
Phenanthrene	mg/kg	<0.1	<0.1	-
Pyrene	mg/kg	0.29	0.33	13
Benzo(j)fluoranthene	ug/g	<0.2	<0.2	-
Sample Code		8800421	8800425	
Lab Report Number		17Y269763	17Y269763	

Notes:

N/A - Not applicable

Blank - Not analyzed

RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100

"-" Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the detection limits.

Bold - RPD exceeds 40%

Table G4: Surface Water Analytical Results QA/QC

Parameter	Unit	17A8SW3		17A8SWDUP1		RPD (%)
		2017-10-03	2017-10-05	2017-10-03	2017-10-05	
Cyanide						
Cyanide (SAD)	mg/L	-	<0.002	-	<0.002	NC
Cyanide (WAD)	mg/L	-	<0.002	-	<0.002	NC
Routine / Salinity						
pH	pH Units	8.08	-	8.07	-	0.1
Electrical Conductivity (EC)	µS/cm	1450	-	1430	-	1.4
Total Suspended Solids (TSS)	mg/L	-	5	-	8	NC
Total Dissolved Solids (TDS)	mg/L	1090	-	1100	-	0.9
Hardness as CaCO3	mg/L	674	-	658	-	2.4
Alkalinity (total as CaCO3)	mg/L	126	-	127	-	0.8
Bromide	mg/L	<0.05	-	<0.05	-	NC
Calcium Carbonate	mg/L	206	-	201	-	2.5
Chloride	mg/L	12.3	-	12.3	-	0.0
Fluoride	mg/L	3.07	-	3.04	-	1.0
Sulphate	mg/L	667	-	660	-	1.1
Nutrients						
Nitrate (as NO3-N)	mg/L	0.539	-	0.533	-	1.1
Nitrite (as NO2-N)	mg/L	0.007	-	0.006	-	NC
Nitrogen (Total)	mg/L	0.75	-	0.72	-	4.1
Demand Parameters						
Biochemical Oxygen Demand (BOD)	mg/L	-	4	-	<4	NC
Biological						
Total Coliforms	MPN/100mL	222	-	79.4	-	94.6
E. Coli	MPN/100mL	<1	-	<1	-	NC
Total Metals						
Aluminum	mg/L	0.071	-	0.034	-	70.5
Antimony	mg/L	<0.0005	-	<0.0005	-	NC
Arsenic	mg/L	0.0007	-	0.0008	-	13.3
Barium	mg/L	0.009	-	0.0077	-	15.6
Beryllium	mg/L	<0.005	-	<0.005	-	NC
Boron - soluble	mg/L	1.09	-	0.981	-	10.5
Cadmium	mg/L	0.00004	-	0.00004	-	NC
Chromium	mg/L	<0.0005	-	<0.0005	-	NC
Cobalt	mg/L	0.00054	-	0.0005	-	7.7
Copper	mg/L	0.0017	-	0.0013	-	NC
Iron	mg/L	2.95	-	2.12	-	32.7
Lead	mg/L	0.00011	-	0.00006	-	NC
Lithium	mg/L	1.02	-	0.818	-	22.0
Magnesium	mg/L	38.8	-	37.8	-	2.6
Manganese	mg/L	0.845	-	0.797	-	5.8
Mercury	mg/L	<0.00001	-	<0.00001	-	NC
Molybdenum	mg/L	0.0025	-	0.0025	-	0.0
Nickel	mg/L	0.0009	-	0.0009	-	NC
Phosphorus	mg/L	0.009	-	0.009	-	NC
Potassium	mg/L	3.67	-	3.66	-	0.3
Selenium	mg/L	<0.0005	-	<0.0005	-	NC
Silver	mg/L	<0.00002	-	<0.00002	-	NC
Sodium	mg/L	79.7	-	78.4	-	1.6
Thallium	mg/L	<0.00002	-	<0.00002	-	NC
Titanium	mg/L	0.005	-	0.003	-	NC
Uranium	mg/L	0.00886	-	0.00861	-	2.9
Vanadium	mg/L	<0.001	-	<0.001	-	NC
Zinc	mg/L	0.025	-	0.02	-	NC
Hydrocarbons						
Benzene	mg/L	<0.0005	-	<0.0005	-	NC
Toluene	mg/L	<0.0005	-	<0.0005	-	NC
Ethylbenzene	mg/L	<0.0005	-	<0.0005	-	NC
Xylene (m)	mg/L	<0.0005	-	<0.0005	-	NC
Xylene (o)	mg/L	<0.0005	-	<0.0005	-	NC
Xylenes Total	mg/L	<0.001	-	<0.001	-	NC
F1 (C6-C10)	mg/L	<0.1	-	<0.1	-	NC
TVH: (C6-C10 / BTEX CORRECTED)	mg/L	<0.1	-	<0.1	-	NC
F2 (C10-C16)	mg/L	<0.1	-	<0.1	-	NC
TEH: (C16-C34)	mg/L	<0.1	-	<0.1	-	NC
F4: (C34-C50)	mg/L	<0.1	-	<0.1	-	NC
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	<0.00002	-	<0.00002	-	NC
Acenaphthylene	mg/L	<0.00002	-	<0.00002	-	NC
Acridine	mg/L	<0.00005	-	<0.00005	-	NC
Anthracene	mg/L	<0.00001	-	<0.00001	-	NC
Benz(a)anthracene	mg/L	<0.00001	-	<0.00001	-	NC
Benzo(a) pyrene	mg/L	<0.00001	-	<0.00001	-	NC
Benzo(b)fluoranthene	mg/L	<0.00001	-	<0.00001	-	NC
Benzo(b+j)fluoranthene	mg/L	<0.00001	-	<0.00001	-	NC
Benzo(g,h,i)perylene	mg/L	<0.00001	-	<0.00001	-	NC
Benzo(k)fluoranthene	mg/L	<0.00001	-	<0.00001	-	NC
Chrysene	mg/L	<0.00001	-	<0.00001	-	NC
Dibenz(a,h)anthracene	mg/L	<0.00001	-	<0.00001	-	NC
Fluoranthene	mg/L	<0.00002	-	<0.00002	-	NC
Fluorene	mg/L	<0.00002	-	<0.00002	-	NC
Indeno(1,2,3-c,d)pyrene	mg/L	<0.00001	-	<0.00001	-	NC
Naphthalene	mg/L	<0.00005	-	<0.00005	-	NC
Phenanthrene	mg/L	<0.00004	-	<0.00004	-	NC
Pyrene	mg/L	<0.00002	-	<0.00002	-	NC
Quinoline	mg/L	<0.0001	-	<0.0001	-	NC
Benzo(j)fluoranthene	ug/L	<0.01	-	<0.01	-	NC
Polychlorinated Biphenyls (PCBs)						
Aroclor 1242	mg/L	-	<0.000009	-	<0.000009	NC
Aroclor 1254	mg/L	-	<0.000009	-	<0.000009	NC
Aroclor 1260	mg/L	-	<0.000009	-	<0.000009	NC
PCBs (Sum of total)	mg/L	-	<0.000009	-	<0.000009	NC

Notes:
RDL - Reported Detection Limit
RPD - Relative Percentage Difference calculated as $RPD = \frac{C2 - C1}{[(C1 + C2) / 2]} \times 100$ where C1, C2 = concentrations of parameters in 1st and 2nd sample, respectively.
RPDs have only been calculated when both concentrations are greater than 5 times the RDL.
mg/L - milligrams per litre.
< - concentration is less than the laboratory RDL, therefore an RPD was not calculated
- means parameter was not analyzed, therefore no RPD was calculated.
NC - RPD Not Calculated

BOLD Black and Shaded - RPD exceeds the target 30% screening threshold.

Table G5: 2018 Groundwater Quality Assurance/Quality Control Analytical Results

QAQC Type Field ID Sample Date Laboratory Report Number Laboratory Sample ID			BLANKS				DUPLICATES											
			FB1	Field Blank	TB1	Trip Blank	17A17MW2	DUP1	RPD (%)	17A33MW2	DUP2	RPD (%)	GH12-I	DUP3	RPD (%)	17A2MW3	DUP4	RPD (%)
			28-Jun-2018	2-Jul-2018	28-Jun-2018	-	29-Jun-2018	29-Jun-2018		30-Jun-2018	30-Jun-2018		30-Jun-2018	30-Jun-2018		1-Jul-2018	1-Jul-2018	
			18V357100	18Y358442	18V357100	18Y358442	18Y358442	18Y358442		18Y358442	18Y358442		18Y358442	18Y358442		18Y358442	18Y358442	
			9370755	9379112	9370754	9379114	9378833	9378837		9378836	9378838		9378822	9378840		9378826	9378842	
Parameter	Unit	RDL																
Routine																		
pH	pH Units	0.01	3.84	-	3.95	-	7.28	7.32	0.5	7.36	7.34	0.3	6.97	7.34	5.2	7.16	7.25	1.2
Electrical Conductivity (EC)	µS/cm	1	1	10	2	10	1360	1350	0.7	663	707	6.4	346	387	11.2	823	875	6.1
Total Dissolved Solids (TDS)	mg/L	5	<5	<5	<5	<5	1060	1000	5.8	425	478	11.7	180	205	13.0	495	505	2.0
Hardness as CaCO ₃	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	778	780	0.3	359	355	1.1	172	178	3.4	451	471	4.3
Alkalinity (total as CaCO ₃)	mg/L	1	<1	<1	<1	<1	321	309	3.8	155	162	4.4	120	122	1.7	317	308	2.9
Calcium	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	235	236	0.4	109	107	1.9	52.9	54.7	3.3	104	109	4.7
Magnesium	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	46.4	46.2	0.4	21.0	21.3	1.4	9.73	10.1	3.7	46.4	48.2	3.8
Potassium	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	3.20	3.29	2.8	1.81	1.84	1.6	0.632	0.676	6.7	1.16	1.20	3.4
Sodium	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	7.23	7.35	1.6	1.73	1.77	2.3	1.06	1.13	6.4	1.92	2.03	5.6
Bromide	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-
Chloride	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	1.17	1.12	4.4	1.73	1.69	2.3	0.83	0.78	6.2	0.35	0.43	20.5
Fluoride	mg/L	0.02	<0.02	<0.02	<0.02	<0.02	0.20	0.21	4.9	0.11	0.11	0.0	0.11	0.12	8.7	0.02	<0.02	-
Sulphate	mg/L	0.5	<0.5	<0.5	<0.5	<0.5	505	481	4.9	196	189	3.6	64.1	61.1	4.8	171	159	7.3
Nutrients																		
Ammonia	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-
Nitrate (as NO ₃ -N)	mg/L	0.005	<0.005	<0.005	0.016	<0.005	0.215	0.239	10.6	0.963	1.0	3.8	0.100	0.108	7.7	0.229	0.216	5.8
Nitrite (as NO ₂ -N)	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	-
Nitrogen (Total)	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	0.36	0.36	0.0	1.03	0.98	5.0	0.10	0.12	-	0.24	0.33	-
Phenols																		
Phenols	mg/L	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004	-	-
Cyanide																		
Cyanide (SAD)	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-	-	-	-	-	<0.002	<0.002	-
Dissolved Metals																		
Aluminum	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	-	<0.002	<0.002	-	<0.002	<0.002	-
Antimony	mg/L	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	<0.0002	<0.0002	-	<0.0002	<0.0002	-
Arsenic	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0004	0.0003	-	0.0004	0.0004	-	0.0002	0.0002	-	0.0002	0.0002	-
Barium	mg/L	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0299	0.0297	0.7	0.012	0.0108	10.5	0.034	0.0324	4.8	0.12	0.112	6.9
Beryllium	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-
Boron	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	0.03	0.033	9.5	0.006	0.006	-	<0.002	0.005	-	0.02	0.022	9.5
Cadmium	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	0.00002	0.00001	-	0.00004	0.00004	0.0	0.00002	0.00002	-
Chromium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Cobalt	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	0.00011	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00017	0.00017	-
Copper	mg/L	0.0002	<0.0002	0.0002	<0.0002	<0.0002	0.0007	0.0006	-	0.0003	0.0003	-	0.003	0.0006	-	0.0004	0.0006	-
Iron	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	0.035	0.038	-	<0.01	<0.01	-	0.321	<0.01	-	0.03	<0.01	-
Lead	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00011	<0.00005	-	<0.00005	<0.00005	-
Lithium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0225	0.0228	1.3	0.0076	0.0085	11.2	0.0095	0.0103	8.1	0.0005	0.0006	-
Manganese	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	0.02	0.033	49.1	<0.001	<0.001	-	<0.001	<0.001	-	0.002	0.001	-
Mercury	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-
Molybdenum	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00077	0.00072	6.7	0.00047	0.0005	6.2	0.00189	0.00183	3.2	0.00044	0.00036	20.0
Nickel	mg/L	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	0.0006	-	<0.0002	<0.0002	-	0.0002	0.0002	-	0.0002	0.0003	-
Selenium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	0.0005	-	<0.0005	<0.0005	-
Silver	mg/L	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	<0.00002	<0.00002	-	<0.00002	<0.00002	-
Strontium	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.495	0.47	5.2	0.156	0.148	5.3	0.0852	0.0792	7.3	0.072	0.0684	5.1
Thallium	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	-
Tin	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-
Titanium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0019	0.0018	-	0.0005	0.0005	-	0.0009	0.0009	0.0	0.0011	0.0013	-
Tungsten	mg/L	0.00001	0.00002	<0.00001	<0.00001	<0.00001	0.00076	0.00082	7.6	0.00072	0.00074	2.7	0.00024	0.00029	18.9	0.00007	0.00007	0.0
Uranium	mg/L	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00361	0.00407	12.0	0.00198	0.00195	1.5	0.00571	0.00624	8.9	0.00139	0.00127	9.0
Vanadium	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Zinc	mg/L	0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	-	0.004	<0.002	-	<0.002	<0.002	-

Notes:
RDL - Reportable detection limit
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
"- " Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the detection limits.
N/A - Not applicable
BOLD - RPD value greater than 30%

Table G5: 2018 Groundwater Quality Assurance/Quality Control Analytical Results

QAQC Type Field ID Sample Date Laboratory Report Number Laboratory Sample ID			BLANKS				DUPLICATES											
			FB1	Field Blank	TB1	Trip Blank	17A17MW2	DUP1	RPD (%)	17A33MW2	DUP2	RPD (%)	GH12-I	DUP3	RPD (%)	17A2MW3	DUP4	RPD (%)
			28-Jun-2018	2-Jul-2018	28-Jun-2018	-	29-Jun-2018	29-Jun-2018		30-Jun-2018	30-Jun-2018		30-Jun-2018	30-Jun-2018		1-Jul-2018	1-Jul-2018	
			18V357100	18Y358442	18V357100	18Y358442	18Y358442	18Y358442		18Y358442	18Y358442		18Y358442	18Y358442		18Y358442	18Y358442	
			9370755	9379112	9370754	9379114	9378833	9378837		9378836	9378838		9378822	9378840		9378826	9378842	
Parameter	Unit	RDL																
Hydrocarbons																		
Benzene	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Toluene	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Ethylbenzene	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Xylene (m)	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Xylene (o)	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	-
Xylenes Total	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-
F1 (C ₆ -C ₁₀)	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
F1 (C ₆ -C ₁₀) - BTEX	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
F2 (C ₁₀ -C ₁₆)	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-
F3 (C ₁₆ -C ₃₄)	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.25	0.1	<0.1	<0.1	-	<0.1	<0.1	-	0.14	0.14	-
F4 (C ₃₄ -C ₅₀)	mg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	0.25	0.2	-
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene	mg/L	0.00002	<0.00002	-	<0.00002	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-
Acenaphthylene	mg/L	0.00002	<0.00002	-	<0.00002	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-
Acridine	mg/L	0.00005	<0.00005	-	<0.00005	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-
Anthracene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Benz(a)anthracene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Benzo(a) pyrene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Benzo(b+)fluoranthene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Benzo(j)fluoranthene	µg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Chrysene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
Fluoranthene	mg/L	0.00002	<0.00002	-	<0.00002	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-
Fluorene	mg/L	0.00002	<0.00002	-	<0.00002	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/L	0.00001	<0.00001	-	<0.00001	-	-	-	-	<0.00001	<0.00001	-	-	-	-	-	-	-
1-Methylnaphthalene	mg/L	0.00005	<0.00005	-	<0.00005	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-
2-Methylnaphthalene	mg/L	0.00005	<0.00005	-	<0.00005	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-
Naphthalene	mg/L	0.00005	<0.00005	-	<0.00005	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-
Phenanthrene	mg/L	0.00004	<0.00004	-	<0.00004	-	-	-	-	<0.00004	<0.00004	-	-	-	-	-	-	-
Pyrene	mg/L	0.00002	<0.00002	-	<0.00002	-	-	-	-	<0.00002	<0.00002	-	-	-	-	-	-	-
Quinoline	mg/L	0.00005	<0.00005	-	<0.00005	-	-	-	-	<0.00005	<0.00005	-	-	-	-	-	-	-

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			28-Jun-2018	2-Jul-2018	28-Jun-2018	-	29-Jun-2018	29-Jun-2018		30-Jun-2018	30-Jun-2018		30-Jun-2018	30-Jun-2018		1-Jul-2018	1-Jul-2018	
			18V357100	18Y358442	18V357100	18Y358442	18Y358442	18Y358442		18Y358442	18Y358442		18Y358442	18Y358442		18Y358442	18Y358442	
			9370755	9379112	9370754	9379114	9378833	9378837		9378836	9378838		9378822	9378840		9378826	9378842	
Parameter	Unit	RDL																
Volatile Organic Compounds (VOCs)																		
Acetone	mg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-
Bromodichloromethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Bromoform	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Bromomethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
2-Butanone (MEK)	mg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-
Carbon tetrachloride	mg/L	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-
Chlorobenzene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Chloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Chloroform	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Chloromethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Dibromochloromethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,2-Dibromoethane	mg/L	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0003	-
1,2-Dichlorobenzene	mg/L	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-
1,3-Dichlorobenzene	mg/L	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-
1,4-Dichlorobenzene	mg/L	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-
1,1-Dichloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,2-Dichloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,1-Dichloroethene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,2-Dichloroethene (cis)	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,2-Dichloroethene (trans)	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,2-Dichloropropane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,3-Dichloropropene [cis]	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,3-Dichloropropene [trans]	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Methylene Chloride	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
4-Methyl-2-pentanone (MIBK)	mg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-
1,1,1,2-Tetrachloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,1,2,2-Tetrachloroethane	mg/L	0.0008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0008	-
Tetrachloroethene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,2,4-Trichlorobenzene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,1,1-Trichloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
1,1,2-Trichloroethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Trichloroethene	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Trichlorofluoromethane	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-
Trihalomethanes	mg/L	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	-
Vinyl chloride	mg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-

Notes:
RDL - Reportable detection limit
RPD - Relative percent difference calculated as (abs(C1-C2)/average(C1+C2))*100
"-" Indicates RPD not calculated. RPD cannot be calculated if one or more of the analytical results are less than detection limits or within 5 times the detection limits.
N/A - Not applicable
BOLD - RPD value greater than 30%

APPENDIX H

TETRA TECH'S LIMITATIONS ON THE USE OF THIS DOCUMENT

LIMITATIONS ON USE OF THIS DOCUMENT

GEOENVIRONMENTAL

1.1 USE OF DOCUMENT AND OWNERSHIP

This document pertains to a specific site, a specific development, and a specific scope of work. The document may include plans, drawings, profiles and other supporting documents that collectively constitute the document (the "Professional Document").

The Professional Document is intended for the sole use of TETRA TECH's Client (the "Client") as specifically identified in the TETRA TECH Services Agreement or other Contractual Agreement entered into with the Client (either of which is termed the "Contract" herein). TETRA TECH does not accept any responsibility for the accuracy of any of the data, analyses, recommendations or other contents of the Professional Document when it is used or relied upon by any party other than the Client, unless authorized in writing by TETRA TECH.

Any unauthorized use of the Professional Document is at the sole risk of the user. TETRA TECH accepts no responsibility whatsoever for any loss or damage where such loss or damage is alleged to be or, is in fact, caused by the unauthorized use of the Professional Document.

Where TETRA TECH has expressly authorized the use of the Professional Document by a third party (an "Authorized Party"), consideration for such authorization is the Authorized Party's acceptance of these Limitations on Use of this Document as well as any limitations on liability contained in the Contract with the Client (all of which is collectively termed the "Limitations on Liability"). The Authorized Party should carefully review both these Limitations on Use of this Document and the Contract prior to making any use of the Professional Document. Any use made of the Professional Document by an Authorized Party constitutes the Authorized Party's express acceptance of, and agreement to, the Limitations on Liability.

The Professional Document and any other form or type of data or documents generated by TETRA TECH during the performance of the work are TETRA TECH's professional work product and shall remain the copyright property of TETRA TECH.

The Professional Document is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of TETRA TECH. Additional copies of the Document, if required, may be obtained upon request.

1.2 ALTERNATIVE DOCUMENT FORMAT

Where TETRA TECH submits electronic file and/or hard copy versions of the Professional Document or any drawings or other project-related documents and deliverables (collectively termed TETRA TECH's "Instruments of Professional Service"), only the signed and/or sealed versions shall be considered final. The original signed and/or sealed electronic file and/or hard copy version archived by TETRA TECH shall be deemed to be the original. TETRA TECH will archive a protected digital copy of the original signed and/or sealed version for a period of 10 years.

Both electronic file and/or hard copy versions of TETRA TECH's Instruments of Professional Service shall not, under any circumstances, be altered by any party except TETRA TECH. TETRA TECH's Instruments of Professional Service will be used only and exactly as submitted by TETRA TECH.

Electronic files submitted by TETRA TECH have been prepared and submitted using specific software and hardware systems. TETRA TECH makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

1.3 STANDARD OF CARE

Services performed by TETRA TECH for the Professional Document have been conducted in accordance with the Contract, in a manner

consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions in the jurisdiction in which the services are provided. Professional judgment has been applied in developing the conclusions and/or recommendations provided in this Professional Document. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of the Professional Document.

If any error or omission is detected by the Client or an Authorized Party, the error or omission must be immediately brought to the attention of TETRA TECH.

1.4 DISCLOSURE OF INFORMATION BY CLIENT

The Client acknowledges that it has fully cooperated with TETRA TECH with respect to the provision of all available information on the past, present, and proposed conditions on the site, including historical information respecting the use of the site. The Client further acknowledges that in order for TETRA TECH to properly provide the services contracted for in the Contract, TETRA TECH has relied upon the Client with respect to both the full disclosure and accuracy of any such information.

1.5 INFORMATION PROVIDED TO TETRA TECH BY OTHERS

During the performance of the work and the preparation of this Professional Document, TETRA TECH may have relied on information provided by persons other than the Client.

While TETRA TECH endeavours to verify the accuracy of such information, TETRA TECH accepts no responsibility for the accuracy or the reliability of such information even where inaccurate or unreliable information impacts any recommendations, design or other deliverables and causes the Client or an Authorized Party loss or damage.

1.6 GENERAL LIMITATIONS OF DOCUMENT

This Professional Document is based solely on the conditions presented and the data available to TETRA TECH at the time the data were collected in the field or gathered from available databases.

The Client, and any Authorized Party, acknowledges that the Professional Document is based on limited data and that the conclusions, opinions, and recommendations contained in the Professional Document are the result of the application of professional judgment to such limited data.

The Professional Document is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site conditions present, or variation in assumed conditions which might form the basis of design or recommendations as outlined in this report, at or on the development proposed as of the date of the Professional Document requires a supplementary investigation and assessment.

TETRA TECH is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment or development of the property, the decisions on which are the sole responsibility of the Client.

1.7 NOTIFICATION OF AUTHORITIES

In certain instances, the discovery of hazardous substances or conditions and materials may require that regulatory agencies and other persons be informed and the client agrees that notification to such bodies or persons as required may be done by TETRA TECH in its reasonably exercised discretion.