



Town of Cochrane
101 Ranchehouse Rd
Cochrane AB T4C 2K8
ATTN: Richard Gaida

Date: 15-SEP-18
PO No.:
WO No.: L2146467
Project Ref: SCHEDULE 4 MONITORING + CDWQG (BI-ANNUAL)
Sample ID: WTP
Sampled By:
Date Collected: 14-AUG-18
Lab Sample ID: L2146467-1
Matrix: water

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Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Chloramines						
Chlorine, Total	<0.10		mg/L			14-AUG-18
Chlorine, Free	<0.10		mg/L			14-AUG-18
Total Chloramines (as Cl ₂)	<0.20		mg/L			15-AUG-18
Chlorate and Chlorite in Water						
Chlorate	0.071		mg/L	1.0		27-AUG-18
Chlorite	<0.010	U	mg/L	1.0		23-AUG-18
Diquat and Paraquat by LC/MS-MS						
Paraquat in Water by LC/MS-MS						
Paraquat	<1.0		ug/L	7		18-AUG-18
Diquat by LC/MS-MS						
Diquat	<1.0		ug/L	70		18-AUG-18
Herb Screen GC/MS						
Miscellaneous Pesticides						
Trifluralin	<0.00010		mg/L	0.045		22-AUG-18
Triallate	<0.00010		mg/L			22-AUG-18
Fluazifop-p-butyl	<0.00010		mg/L			22-AUG-18
Diclofop-methyl	<0.00010		mg/L	0.009		22-AUG-18
Ethalfuralin	<0.00010		mg/L			22-AUG-18
Surr: D14-Terphenyl	92.2		%			22-AUG-18
Herbicides in Water						
Clpyralid	<0.00010		mg/L			21-AUG-18
Dicamba	<0.00010		mg/L	0.12		21-AUG-18
Mecoprop	<0.00010		mg/L			21-AUG-18
MCPA	<0.00010		mg/L			21-AUG-18
2,4-D	<0.00010		mg/L	0.1		21-AUG-18
Bromoxynil	<0.00010		mg/L	0.005		21-AUG-18
Triclopyr	<0.00010		mg/L			21-AUG-18
2,4,5-T	<0.00010		mg/L			21-AUG-18
2,4,5-TP	<0.00010		mg/L			21-AUG-18
Picloram	<0.00010		mg/L	0.19		21-AUG-18
2,4-DB	<0.00010		mg/L			21-AUG-18
2,4-DP (Dichlorprop)	<0.00010		mg/L			21-AUG-18
Dinoseb	<0.00010		mg/L			21-AUG-18
MCPB	<0.00010		mg/L			21-AUG-18
Surr: 2,4-Dichlorophenylacetic Acid	92.2		%			21-AUG-18
Total Metals (ABT1)						
Total Metals in Water by ICPOES						
Calcium (Ca)-Total	38.9		mg/L			20-AUG-18
Iron (Fe)-Total	<0.030		mg/L		0.3	20-AUG-18
Magnesium (Mg)-Total	13.2		mg/L			20-AUG-18

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Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals (ABT1)						
Total Metals in Water by ICPOES						
Manganese (Mn)-Total	<0.0050		mg/L		0.05	20-AUG-18
Potassium (K)-Total	0.52		mg/L			20-AUG-18
Sodium (Na)-Total	3.6		mg/L		200	20-AUG-18
Total Metals in Water by CRC ICPMS						
Aluminum (Al)-Total	0.113	DLDS	mg/L		0.1	21-AUG-18
Antimony (Sb)-Total	<0.00050	DLDS	mg/L	0.006		21-AUG-18
Arsenic (As)-Total	<0.00050	DLDS	mg/L	0.01		21-AUG-18
Barium (Ba)-Total	0.0342	DLDS	mg/L	1		21-AUG-18
Boron (B)-Total	<0.050	DLDS	mg/L	5		21-AUG-18
Cadmium (Cd)-Total	<0.000025	DLDS	mg/L	0.005		21-AUG-18
Chromium (Cr)-Total	0.00247	DLDS	mg/L	0.05		21-AUG-18
Copper (Cu)-Total	<0.0025	DLDS	mg/L	2.0	1.0	21-AUG-18
Lead (Pb)-Total	<0.00025	DLDS	mg/L	0.01		21-AUG-18
Nickel (Ni)-Total	<0.0025	DLDS	mg/L			21-AUG-18
Selenium (Se)-Total	0.00039	DLDS	mg/L	0.05		21-AUG-18
Silver (Ag)-Total	<0.000050	DLDS	mg/L			21-AUG-18
Uranium (U)-Total	0.000146	DLDS	mg/L	0.02		21-AUG-18
Zinc (Zn)-Total	<0.015	DLDS	mg/L		5.0	21-AUG-18
Total Mercury in Water by CVAAS						
Mercury (Hg)-Total	0.0000282	RRV	mg/L	0.001		20-AUG-18
Routine Water Analysis						
*Nitrate and Nitrite (as N)	0.136		mg/L	10		16-AUG-18
pH, Conductivity and Total Alkalinity						
pH	8.16		pH		7-10.5	16-AUG-18
Conductivity (EC)	292		uS/cm			16-AUG-18
Bicarbonate (HCO3)	135		mg/L			16-AUG-18
Carbonate (CO3)	<5.0		mg/L			16-AUG-18
Hydroxide (OH)	<5.0		mg/L			16-AUG-18
Alkalinity, Total (as CaCO3)	111		mg/L			16-AUG-18
Sulfate in Water by IC						
Sulfate (SO4)	38.9		mg/L		500	14-AUG-18
Nitrite in Water by IC						
*Nitrite (as N)	<0.010		mg/L	1		14-AUG-18
Nitrate in Water by IC						
*Nitrate (as N)	0.136		mg/L	10		14-AUG-18
Ion Balance Calculation						
Ion Balance	100		%			25-AUG-18
TDS (Calculated)	179		mg/L		500	25-AUG-18

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Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Routine Water Analysis						
Ion Balance Calculation						
Hardness (as CaCO ₃)	162		mg/L		500	25-AUG-18
Fluoride in Water by IC						
Fluoride (F)	0.103		mg/L	1.5		14-AUG-18
Dissolved Metals by ICPOES						
Dissolved Metals	LAB					21-AUG-18
Filtration Location						
Calcium (Ca)-Dissolved	43.0		mg/L			21-AUG-18
Magnesium (Mg)-Dissolved	13.3		mg/L			21-AUG-18
Potassium (K)-Dissolved	0.53		mg/L			21-AUG-18
Sodium (Na)-Dissolved	3.5		mg/L		200	21-AUG-18
Chloride in Water by IC						
Chloride (Cl)	12.5		mg/L		250	14-AUG-18
Cyanide, Total	0.0542		mg/L	0.2		20-AUG-18
Ammonia, Total (as N)	<0.050		mg/L			25-AUG-18
Bromate	<0.010	U	mg/L	0.01		27-AUG-18
Colour, True	<5.0		CU		15	14-AUG-18
Diuron	<1.0		ug/L	150		20-AUG-18
Total cyanobacterial cell count	<1		cells/mL			21-AUG-18
Note: No cyanobacteria observed.						
Glyphosate	<5.0		ug/L	280		20-AUG-18
Methyl tert-butyl ether	<0.0050		mg/L		0.015	16-AUG-18
Microcystin	<0.20		ug/L	1.5		21-AUG-18
Nitritotriacetic Acid (NTA)	<0.20		mg/L	0.4		16-AUG-18
Methoxychlor	<0.10		ug/L			21-AUG-18
Sulphide (as S)	<0.0015		mg/L		0.05	16-AUG-18
Xylenes	<0.0014		mg/L	0.09	0.02	22-AUG-18
Total Organic Carbon	<1.0		mg/L			19-AUG-18
Trihalomethanes						
Chloroform	0.0043		mg/L			16-AUG-18
Bromodichloromethane	0.0010		mg/L			16-AUG-18
Dibromochloromethane	<0.0010		mg/L			16-AUG-18
Bromoform	<0.0050		mg/L			16-AUG-18
Surr: 1,4-Difluorobenzene	92.2		%			16-AUG-18
Surr: 4-Bromofluorobenzene	86.2		%			16-AUG-18
Surr: 3,4-Dichlorotoluene	122.1		%			16-AUG-18

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Trihalomethanes						
Total THMs	0.00530		mg/L	0.1		16-AUG-18
N-Nitrosodimethylamine by HRMS						
N-Nitrosodimethylamine	<5.7	U	ng/L	40		07-SEP-18
Surr: N-Nitrosodimethylamine (Surr.)	62.0		%			07-SEP-18
Miscellaneous Pesticides						
Alachlor	<0.10		ug/L			22-AUG-18
Ametryn	<0.10		ug/L			22-AUG-18
Atrazine	<0.10		ug/L			22-AUG-18
Atrazine Desethyl	<0.10		ug/L			22-AUG-18
Azinphos-methyl	<0.10		ug/L	20		22-AUG-18
Bendiocarb	<0.50		ug/L			22-AUG-18
Benzo(a)pyrene	<0.010		ug/L	0.04		22-AUG-18
Carbaryl	<0.50		ug/L	90		22-AUG-18
Carbofuran	<0.50		ug/L	90		22-AUG-18
Chlorpyrifos	<0.10		ug/L	90		22-AUG-18
Cyanazine	<0.10		ug/L			22-AUG-18
Diazinon	<0.10		ug/L	20		22-AUG-18
Diclofop-methyl	<0.10		ug/L	9		22-AUG-18
Dimethoate	<0.10		ug/L	20		22-AUG-18
Malathion	<0.10		ug/L	190		22-AUG-18
Methyl Parathion	<0.10		ug/L			22-AUG-18
Metolachlor	<0.10		ug/L	50		22-AUG-18
Metribuzin	<1.0		ug/L	80		22-AUG-18
Parathion	<0.10		ug/L	50		22-AUG-18
Phorate	<0.10		ug/L	2		22-AUG-18
Prometon	<0.10		ug/L			22-AUG-18
Prometryne	<0.10		ug/L			22-AUG-18
Propazine	<0.10		ug/L			22-AUG-18
Simazine	<0.10		ug/L	10		22-AUG-18
Temephos	<1.0		ug/L			22-AUG-18
Terbufos	<0.10		ug/L	1		22-AUG-18
Terbutryn	<0.10		ug/L			22-AUG-18
Triallate	<0.10		ug/L			22-AUG-18
Trifluralin	<0.10		ug/L	45		22-AUG-18
Atrazine+N-Dealkylated Metabolites	<0.20		ug/L	5		22-AUG-18
Surr: 2-Fluorobiphenyl	87.6		%			22-AUG-18
Surr: d14-Terphenyl	92.2		%			22-AUG-18
EPA 8260 Volatile Organics						
Dichlorodifluoromethane	<0.0010		mg/L			16-AUG-18
Chloromethane	<0.010		mg/L			16-AUG-18
Vinyl chloride	<0.00050		mg/L			16-AUG-18

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Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
EPA 8260 Volatile Organics						
Bromomethane	<0.010		mg/L	0.002		16-AUG-18
Chloroethane	<0.010		mg/L			16-AUG-18
Trichlorofluoromethane	<0.0010		mg/L			16-AUG-18
1,1-Dichloroethene	<0.0010		mg/L	0.014		16-AUG-18
Methylene chloride	<0.0010		mg/L	0.05		16-AUG-18
trans-1,2-Dichloroethene	<0.0010		mg/L			16-AUG-18
1,1-Dichloroethane	<0.0010		mg/L			16-AUG-18
2,2-Dichloropropane	<0.0010		mg/L			16-AUG-18
cis-1,2-Dichloroethene	<0.0010		mg/L			16-AUG-18
Chloroform	0.0043		mg/L			16-AUG-18
Bromochloromethane	<0.0010		mg/L			16-AUG-18
1,2-Dichloroethane	<0.0010		mg/L	0.005		16-AUG-18
1,1,1-Trichloroethane	<0.0010		mg/L			16-AUG-18
1,1-Dichloropropene	<0.0010		mg/L			16-AUG-18
Carbon tetrachloride	<0.0010		mg/L	0.005		16-AUG-18
Benzene	<0.0010		mg/L	0.005		16-AUG-18
Trichloroethene	<0.0010		mg/L	0.005		16-AUG-18
1,2-Dichloropropane	<0.0010		mg/L			16-AUG-18
Bromodichloromethane	0.0010		mg/L			16-AUG-18
Dibromomethane	<0.0010		mg/L			16-AUG-18
cis-1,3-Dichloropropene	<0.0010		mg/L			16-AUG-18
trans-1,3-Dichloropropene	<0.0010		mg/L			16-AUG-18
Toluene	<0.0010		mg/L	0.06	0.024	16-AUG-18
1,1,2-Trichloroethane	<0.0010		mg/L			16-AUG-18
1,3-Dichloropropane	<0.0010		mg/L			16-AUG-18
Tetrachloroethene	<0.0010		mg/L	0.03		16-AUG-18
Dibromochloromethane	<0.0010		mg/L			16-AUG-18
1,2-Dibromoethane	<0.0010		mg/L			16-AUG-18
Chlorobenzene	<0.0010		mg/L	0.08		16-AUG-18
Ethylbenzene	<0.0010		mg/L	0.14	0.0016	16-AUG-18
1,1,1,2-Tetrachloroethane	<0.0010		mg/L			16-AUG-18
m+p-Xylenes	<0.0010		mg/L			16-AUG-18
o-Xylene	<0.0010		mg/L			16-AUG-18
Styrene	<0.0010		mg/L			16-AUG-18
Bromoform	<0.0010		mg/L			16-AUG-18
Isopropylbenzene	<0.0010		mg/L			16-AUG-18
1,1,2,2-Tetrachloroethane	<0.0050		mg/L			16-AUG-18
1,2,3-Trichloropropane	<0.0020		mg/L			16-AUG-18
n-Propylbenzene	<0.0010		mg/L			16-AUG-18
Bromobenzene	<0.0010		mg/L			16-AUG-18
1,3,5-Trimethylbenzene	<0.0010		mg/L			16-AUG-18
2-Chlorotoluene	<0.0010		mg/L			16-AUG-18
4-Chlorotoluene	<0.0010		mg/L			16-AUG-18

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EPA 8260 Volatile Organics						
tert-Butylbenzene	<0.0010		mg/L			16-AUG-18
1,2,4-Trimethylbenzene	<0.0010		mg/L			16-AUG-18
sec-Butylbenzene	<0.0010		mg/L			16-AUG-18
p-Isopropyltoluene	<0.0010		mg/L			16-AUG-18
1,3-Dichlorobenzene	<0.0010		mg/L			16-AUG-18
1,4-Dichlorobenzene	<0.0010		mg/L	0.005	0.001	16-AUG-18
n-Butylbenzene	<0.0010		mg/L			16-AUG-18
1,2-Dichlorobenzene	<0.0010		mg/L	0.2	0.003	16-AUG-18
1,2-Dibromo-3-chloropropane	<0.0010		mg/L			16-AUG-18
1,2,4-Trichlorobenzene	<0.0010		mg/L			16-AUG-18
Hexachlorobutadiene	<0.0010		mg/L			16-AUG-18
1,2,3-Trichlorobenzene	<0.0010		mg/L			16-AUG-18
Surr: 1,4-Difluorobenzene	92.2		%			16-AUG-18
Surr: 4-Bromofluorobenzene	86.2		%			16-AUG-18
Surr: 3,4-Dichlorotoluene	122.1		%			16-AUG-18
Chlorinated Aromatics - Phenolic Comp						
2,4,6-Trichlorophenol	<0.00010		mg/L	0.005	0.002	17-AUG-18
2,4 & 2,5 Dichlorophenol	<0.00010		mg/L			17-AUG-18
2,3,4,6-Tetrachlorophenol	<0.00010		mg/L	0.1	0.001	17-AUG-18
Pentachlorophenol	<0.00010		mg/L	0.06	0.03	17-AUG-18
Phenol	<0.00050		mg/L			17-AUG-18
Surr: 2-Fluorophenol	81.1		%			17-AUG-18
Surr: Phenol d5	60.3		%			17-AUG-18
Surr: 2,4,6-Tribromophenol	82.6		%			17-AUG-18
CDWQG = Health Canada Guideline Limits updated MAY 2018 * CDWQG for Nitrate+Nitrite-N is the limit for nitrate only. If present as Nitrate then the limit is 10mg/L < or N.D. = less than detection limit. * Turbidity guideline based on membrane filtration. For guidelines on conventional treatment and slow sand or diatomaceous earth filtration please see Summary Table of Guidelines for Canadian Drinking Water Quality - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQG MAC and/ or Aesthetic Objective.						
Approved by  Nelson Kwan, B.Sc. Account Manager						

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Guidelines & Objectives

Sample Parameter Qualifier key listed:

Qualifier	Description
RRV	Reported Result Verified By Repeat Analysis
U	Not Detected.
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.

Health Canada MAC Health Related Criteria Limits

Nitrate/Nitrite-N*	Criteria limit is 10 mg/L (1.0 mg/L if present as all Nitrite-N). High concentrations may contribute to blue baby syndrome in infants.
Lead*	A cumulative body poison, uncommon in naturally occurring hard waters.
Fluoride*	Present in fluoridated water supplies at 0.8 mg/L to reduce dental caries. Elevated levels causes fluorosis (mottling of teeth).
Total Coliforms*	Criteria is 0 CFU/100mL. Adverse health effects.
E. Coli*	Criteria is 0 CFU/100 mL. Certain E. Coli bacteria can be life threatening.

*Health Canada Canadian Drinking Water Quality Guidelines (MAC limit)

Aesthetic Objective Concentration Levels

Alkalinity	Acid neutralizing capacity. Usually a measure of carbonate and bicarbonates and calculated and reported as calcium carbonate.
Balance	Quality control parameter ratioing cations to anions
Bicarbonate	See Alkalinity. Report as the anion HCO ₃ -1
Carbonate	See Alkalinity. Reported at the anion CO ₃ -2
Calcium	See Hardness. Common major cation of water chemistry.
Chloride	Common major anion of water chemistry.
Conductance	Physical test measuring water salinity (dissolved ions or solids)
Hardness	Classical measure or capacity of water to precipitate soap (chiefly calcium and magnesium ions). Causes scaling tendency in water if carbonates/bicarbonates are present (if >200 mg/L). For drinking water purposes waters with results <200 mg/L are considered acceptable, results >200 mg/L are considered poor but can be tolerated. Results >500 mg/L are unacceptable.
Hydroxide	See alkalinity
Magnesium	See hardness. Common major cation of water chemistry. Elevated levels (>125 mg/L) may exert a cathartic or diuretic action.
pH	Measure of water acidity/alkalinity. Normal range is 7.0-8.5.
Potassium	Common major cation of water chemistry.
Sodium	Common major cation of water chemistry. Measure of salinity (saltiness).The aesthetic objective (not related to health) for sodium in drinking water is 200 mg/L. However, where sodium concentration of the drinking water exceeds 20 mg/L, it is recommended that any person on a sodium restricted diet consult with his/her physician or Medical Officer of Health concerning the use of that water.
Sulphate	Common major anion of water chemistry. Elevated levels may exert a cathartic or diuretic action.
Total Dissolved Solids	A measure of water salinity.
Iron	Causes staining to laundry and porcelain and astringent taste. Oxidizes to red-brown precipitate on exposure to air.
Manganese	Elevated levels may cause staining of laundry and porcelain.
Heterotrophic Plate Count	Criteria is 500 cfu/mL Measure of heterotrophic bacteria present.

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
COLOUR-TRUE-CL		Water						
Batch	R4169666							
WG2850044-3	DUP	L2146467-1						
Colour, True		<5.0	<5.0	RPD-NA	CU	N/A	20	14-AUG-18
WG2850044-2	LCS		99.5		%		85-115	14-AUG-18
Colour, True								
WG2850044-1	MB		<5.0		CU		5	14-AUG-18
Colour, True								
DIQUAT-WT		Water						
Batch	R4175971							
WG2852107-2	LCS							
Diquat			93.6		%		70-130	17-AUG-18
WG2852107-1	MB		<1.0		ug/L		1	17-AUG-18
Diquat								
DIURON-WT		Water						
Batch	R4179165							
WG2854329-6	LCS							
Diuron			96.3		%		70-130	20-AUG-18
WG2854329-5	MB		<1.0		ug/L		1	20-AUG-18
Diuron								
F-IC-N-CL		Water						
Batch	R4169825							
WG2850188-12	DUP	L2146467-1						
Fluoride (F)		0.103	0.094		mg/L	9.4	20	14-AUG-18
WG2850188-10	LCS		103.9		%		90-110	14-AUG-18
Fluoride (F)								
WG2850188-9	MB		<0.020		mg/L		0.02	14-AUG-18
Fluoride (F)								
WG2850188-11	MS	L2146467-1	121.7		%		75-125	14-AUG-18
Fluoride (F)								
GLYPHOSATE-WT		Water						
Batch	R4180066							
WG2856414-2	LCS							
Glyphosate			122.8		%		50-150	20-AUG-18
WG2856414-1	MB		<5.0		ug/L		5	20-AUG-18
Glyphosate								
HERBSCR-LCMS-WT		Water						

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HERBSCR-LCMS-WT		Water						
Batch	R4180270							
WG2854615-3	DUP	L2146467-1						
Clpyralid		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
Dicamba		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
Mecoprop		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
MCPA		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
2,4-D		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
Bromoxynil		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
Triclopyr		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
2,4,5-T		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
2,4,5-TP		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
Picloram		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
2,4-DB		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
2,4-DP (Dichlorprop)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
Dinoseb		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
MCPB		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	21-AUG-18
WG2854615-2	LCS							
Clpyralid			101.2		%		50-150	21-AUG-18
Dicamba			92.6		%		50-150	21-AUG-18
Mecoprop			88.0		%		50-150	21-AUG-18
MCPA			101.4		%		50-150	21-AUG-18
2,4-D			89.8		%		50-150	21-AUG-18
Bromoxynil			99.4		%		50-150	21-AUG-18
Triclopyr			81.8		%		50-150	21-AUG-18
2,4,5-T			98.0		%		50-150	21-AUG-18
2,4,5-TP			94.4		%		50-150	21-AUG-18
Picloram			101.2		%		50-150	21-AUG-18
2,4-DB			90.8		%		50-150	21-AUG-18
2,4-DP (Dichlorprop)			91.4		%		50-150	21-AUG-18
Dinoseb			102.6		%		50-150	21-AUG-18
MCPB			95.8		%		50-150	21-AUG-18
WG2854615-1	MB							
Clpyralid			<0.00010		mg/L		0.0001	21-AUG-18
Dicamba			<0.00010		mg/L		0.0001	21-AUG-18
Mecoprop			<0.00010		mg/L		0.0001	21-AUG-18
MCPA			<0.00010		mg/L		0.0001	21-AUG-18
2,4-D			<0.00010		mg/L		0.0001	21-AUG-18



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HERBSCR-LCMS-WT		Water						
Batch	R4180270							
WG2854615-1	MB							
Bromoxynil			<0.00010		mg/L		0.0001	21-AUG-18
Triclopyr			<0.00010		mg/L		0.0001	21-AUG-18
2,4,5-T			<0.00010		mg/L		0.0001	21-AUG-18
2,4,5-TP			<0.00010		mg/L		0.0001	21-AUG-18
Picloram			<0.00010		mg/L		0.0001	21-AUG-18
2,4-DB			<0.00010		mg/L		0.0001	21-AUG-18
2,4-DP (Dichlorprop)			<0.00010		mg/L		0.0001	21-AUG-18
Dinoseb			<0.00010		mg/L		0.0001	21-AUG-18
MCPB			<0.00010		mg/L		0.0001	21-AUG-18
Surrogate: 2,4-Dichlorophenylacetic Acid			85.8		%		50-150	21-AUG-18
WG2854615-4	MS	L2146467-1						
Clopyralid			103.2		%		50-150	21-AUG-18
Dicamba			96.0		%		50-150	21-AUG-18
Mecoprop			91.2		%		50-150	21-AUG-18
MCPA			103.8		%		50-150	21-AUG-18
2,4-D			93.2		%		50-150	21-AUG-18
Bromoxynil			73.7		%		50-150	21-AUG-18
Triclopyr			93.7		%		50-150	21-AUG-18
2,4,5-T			99.0		%		50-150	21-AUG-18
2,4,5-TP			90.6		%		50-150	21-AUG-18
Picloram			93.7		%		50-150	21-AUG-18
2,4-DB			89.3		%		50-150	21-AUG-18
2,4-DP (Dichlorprop)			96.6		%		50-150	21-AUG-18
Dinoseb			94.9		%		50-150	21-AUG-18
MCPB			89.7		%		50-150	21-AUG-18
HG-T-CVAA-CL		Water						
Batch	R4178548							
WG2854667-2	LCS							
Mercury (Hg)-Total			110.0		%		80-120	20-AUG-18
WG2854667-1	MB							
Mercury (Hg)-Total			<0.000005C		mg/L		0.000005	20-AUG-18
MET-DIS-ICP-CL		Water						

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MET-DIS-ICP-CL		Water						
Batch	R4179309							
WG2855527-3	DUP	L2146467-1						
Calcium (Ca)-Dissolved		43.0	42.3		mg/L	1.6	20	21-AUG-18
Magnesium (Mg)-Dissolved		13.3	13.2		mg/L	0.5	20	21-AUG-18
Potassium (K)-Dissolved		0.53	0.52		mg/L	0.8	20	21-AUG-18
Sodium (Na)-Dissolved		3.5	3.5		mg/L	0.4	20	21-AUG-18
WG2855527-2	LCS	TMRM						
Calcium (Ca)-Dissolved			98.5		%		80-120	21-AUG-18
Magnesium (Mg)-Dissolved			97.7		%		80-120	21-AUG-18
Potassium (K)-Dissolved			98.1		%		80-120	21-AUG-18
Sodium (Na)-Dissolved			98.5		%		80-120	21-AUG-18
WG2855527-1	MB							
Calcium (Ca)-Dissolved			<0.10		mg/L		0.1	21-AUG-18
Magnesium (Mg)-Dissolved			<0.10		mg/L		0.1	21-AUG-18
Potassium (K)-Dissolved			<0.50		mg/L		0.5	21-AUG-18
Sodium (Na)-Dissolved			<1.0		mg/L		1	21-AUG-18
MET-T-CCMS-CL		Water						
Batch	R4172850							
WG2850181-2	LCS	TMRM						
Aluminum (Al)-Total			106.4		%		80-120	16-AUG-18
Antimony (Sb)-Total			113.3		%		80-120	16-AUG-18
Arsenic (As)-Total			108.2		%		80-120	16-AUG-18
Barium (Ba)-Total			100.6		%		80-120	16-AUG-18
Boron (B)-Total			109.7		%		80-120	16-AUG-18
Cadmium (Cd)-Total			104.2		%		80-120	16-AUG-18
Chromium (Cr)-Total			101.4		%		80-120	16-AUG-18
Copper (Cu)-Total			102.8		%		80-120	16-AUG-18
Lead (Pb)-Total			105.9		%		80-120	16-AUG-18
Nickel (Ni)-Total			106.0		%		80-120	16-AUG-18
Selenium (Se)-Total			101.5		%		80-120	16-AUG-18
Silver (Ag)-Total			106.7		%		80-120	16-AUG-18
Uranium (U)-Total			101.6		%		80-120	16-AUG-18
Zinc (Zn)-Total			107.6		%		80-120	16-AUG-18
WG2850181-1	MB							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	16-AUG-18
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	16-AUG-18
Arsenic (As)-Total			<0.00010		mg/L		0.0001	16-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-CL								
Water								
Batch	R4172850							
WG2850181-1 MB								
Barium (Ba)-Total			<0.00010		mg/L		0.0001	16-AUG-18
Boron (B)-Total			<0.010		mg/L		0.01	16-AUG-18
Cadmium (Cd)-Total			<0.000005C		mg/L		0.000005	16-AUG-18
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	16-AUG-18
Copper (Cu)-Total			<0.00050		mg/L		0.0005	16-AUG-18
Lead (Pb)-Total			<0.000050		mg/L		0.00005	16-AUG-18
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	16-AUG-18
Selenium (Se)-Total			<0.000050		mg/L		0.00005	16-AUG-18
Silver (Ag)-Total			<0.000010		mg/L		0.00001	16-AUG-18
Uranium (U)-Total			<0.000010		mg/L		0.00001	16-AUG-18
Zinc (Zn)-Total			<0.0030		mg/L		0.003	16-AUG-18
Batch	R4179594							
WG2850181-6 LCS		TMRM						
Aluminum (Al)-Total			105.3		%		80-120	21-AUG-18
Antimony (Sb)-Total			96.1		%		80-120	21-AUG-18
Arsenic (As)-Total			107.2		%		80-120	21-AUG-18
Barium (Ba)-Total			95.8		%		80-120	21-AUG-18
Boron (B)-Total			99.5		%		80-120	21-AUG-18
Cadmium (Cd)-Total			104.0		%		80-120	21-AUG-18
Chromium (Cr)-Total			107.4		%		80-120	21-AUG-18
Copper (Cu)-Total			103.0		%		80-120	21-AUG-18
Lead (Pb)-Total			92.9		%		80-120	21-AUG-18
Nickel (Ni)-Total			104.8		%		80-120	21-AUG-18
Selenium (Se)-Total			95.7		%		80-120	21-AUG-18
Silver (Ag)-Total			103.5		%		80-120	21-AUG-18
Uranium (U)-Total			99.5		%		80-120	21-AUG-18
Zinc (Zn)-Total			103.1		%		80-120	21-AUG-18
WG2850181-5 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	21-AUG-18
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	21-AUG-18
Arsenic (As)-Total			<0.00010		mg/L		0.0001	21-AUG-18
Barium (Ba)-Total			<0.00010		mg/L		0.0001	21-AUG-18
Boron (B)-Total			<0.010		mg/L		0.01	21-AUG-18
Cadmium (Cd)-Total			<0.000005C		mg/L		0.000005	21-AUG-18
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	21-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-CL	Water							
Batch R4179594								
WG2850181-5 MB								
Copper (Cu)-Total			<0.00050		mg/L		0.0005	21-AUG-18
Lead (Pb)-Total			<0.000050		mg/L		0.00005	21-AUG-18
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	21-AUG-18
Selenium (Se)-Total			<0.000050		mg/L		0.00005	21-AUG-18
Silver (Ag)-Total			<0.000010		mg/L		0.00001	21-AUG-18
Uranium (U)-Total			<0.000010		mg/L		0.00001	21-AUG-18
Zinc (Zn)-Total			<0.0030		mg/L		0.003	21-AUG-18
WG2850181-16 MS		L2146467-1						
Aluminum (Al)-Total			104.5		%		70-130	21-AUG-18
Antimony (Sb)-Total			105.1		%		70-130	21-AUG-18
Arsenic (As)-Total			109.0		%		70-130	21-AUG-18
Barium (Ba)-Total			99.0		%		70-130	21-AUG-18
Boron (B)-Total			99.2		%		70-130	21-AUG-18
Cadmium (Cd)-Total			109.1		%		70-130	21-AUG-18
Chromium (Cr)-Total			107.6		%		70-130	21-AUG-18
Copper (Cu)-Total			107.6		%		70-130	21-AUG-18
Lead (Pb)-Total			92.6		%		70-130	21-AUG-18
Nickel (Ni)-Total			106.9		%		70-130	21-AUG-18
Selenium (Se)-Total			98.9		%		70-130	21-AUG-18
Silver (Ag)-Total			102.5		%		70-130	21-AUG-18
Uranium (U)-Total			102.7		%		70-130	21-AUG-18
Zinc (Zn)-Total			101.6		%		70-130	21-AUG-18
Batch R4180309								
WG2850181-13 LCS		TMRM						
Aluminum (Al)-Total			99.8		%		80-120	22-AUG-18
Antimony (Sb)-Total			114.9		%		80-120	22-AUG-18
Arsenic (As)-Total			96.4		%		80-120	22-AUG-18
Barium (Ba)-Total			95.6		%		80-120	22-AUG-18
Boron (B)-Total			104.5		%		80-120	22-AUG-18
Cadmium (Cd)-Total			97.7		%		80-120	22-AUG-18
Chromium (Cr)-Total			95.1		%		80-120	22-AUG-18
Copper (Cu)-Total			95.2		%		80-120	22-AUG-18
Lead (Pb)-Total			97.2		%		80-120	22-AUG-18
Nickel (Ni)-Total			95.8		%		80-120	22-AUG-18
Selenium (Se)-Total			93.9		%		80-120	22-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-CL	Water							
Batch	R4180309							
WG2850181-13 LCS		TMRM						
Silver (Ag)-Total			86.2		%		80-120	22-AUG-18
Uranium (U)-Total			99.2		%		80-120	22-AUG-18
Zinc (Zn)-Total			97.2		%		80-120	22-AUG-18
WG2850181-9 LCS		TMRM						
Aluminum (Al)-Total			98.5		%		80-120	22-AUG-18
Antimony (Sb)-Total			112.9		%		80-120	22-AUG-18
Arsenic (As)-Total			95.4		%		80-120	22-AUG-18
Barium (Ba)-Total			97.4		%		80-120	22-AUG-18
Boron (B)-Total			89.3		%		80-120	22-AUG-18
Cadmium (Cd)-Total			97.0		%		80-120	22-AUG-18
Chromium (Cr)-Total			95.1		%		80-120	22-AUG-18
Copper (Cu)-Total			94.0		%		80-120	22-AUG-18
Lead (Pb)-Total			95.8		%		80-120	22-AUG-18
Nickel (Ni)-Total			95.6		%		80-120	22-AUG-18
Selenium (Se)-Total			93.8		%		80-120	22-AUG-18
Silver (Ag)-Total			85.9		%		80-120	22-AUG-18
Uranium (U)-Total			97.8		%		80-120	22-AUG-18
Zinc (Zn)-Total			92.5		%		80-120	22-AUG-18
WG2850181-12 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	22-AUG-18
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	22-AUG-18
Arsenic (As)-Total			<0.00010		mg/L		0.0001	22-AUG-18
Barium (Ba)-Total			<0.00010		mg/L		0.0001	22-AUG-18
Boron (B)-Total			<0.010		mg/L		0.01	22-AUG-18
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	22-AUG-18
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	22-AUG-18
Copper (Cu)-Total			<0.00050		mg/L		0.0005	22-AUG-18
Lead (Pb)-Total			<0.000050		mg/L		0.00005	22-AUG-18
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	22-AUG-18
Selenium (Se)-Total			<0.000050		mg/L		0.00005	22-AUG-18
Silver (Ag)-Total			<0.000010		mg/L		0.00001	22-AUG-18
Uranium (U)-Total			<0.000010		mg/L		0.00001	22-AUG-18
Zinc (Zn)-Total			<0.0030		mg/L		0.003	22-AUG-18
WG2850181-8 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	22-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-CL		Water						
Batch	R4180309							
WG2850181-8 MB								
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	22-AUG-18
Arsenic (As)-Total			<0.00010		mg/L		0.0001	22-AUG-18
Barium (Ba)-Total			<0.00010		mg/L		0.0001	22-AUG-18
Boron (B)-Total			<0.010		mg/L		0.01	22-AUG-18
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	22-AUG-18
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	22-AUG-18
Copper (Cu)-Total			<0.00050		mg/L		0.0005	22-AUG-18
Lead (Pb)-Total			<0.000050		mg/L		0.00005	22-AUG-18
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	22-AUG-18
Selenium (Se)-Total			<0.000050		mg/L		0.00005	22-AUG-18
Silver (Ag)-Total			<0.000010		mg/L		0.00001	22-AUG-18
Uranium (U)-Total			<0.000010		mg/L		0.00001	22-AUG-18
Zinc (Zn)-Total			<0.0030		mg/L		0.003	22-AUG-18
MET-TOT-ICP-CL		Water						
Batch	R4175404							
WG2850181-2 LCS		TMRM						
Calcium (Ca)-Total			94.4		%		80-120	17-AUG-18
Iron (Fe)-Total			94.3		%		80-120	17-AUG-18
Magnesium (Mg)-Total			108.8		%		80-120	17-AUG-18
Manganese (Mn)-Total			97.1		%		80-120	17-AUG-18
Potassium (K)-Total			93.5		%		80-120	17-AUG-18
Sodium (Na)-Total			101.4		%		80-120	17-AUG-18
WG2850181-1 MB								
Calcium (Ca)-Total			<0.10		mg/L		0.1	17-AUG-18
Iron (Fe)-Total			<0.030		mg/L		0.03	17-AUG-18
Magnesium (Mg)-Total			<0.10		mg/L		0.1	17-AUG-18
Manganese (Mn)-Total			<0.0050		mg/L		0.005	17-AUG-18
Potassium (K)-Total			<0.50		mg/L		0.5	17-AUG-18
Sodium (Na)-Total			<1.0		mg/L		1	17-AUG-18
Batch	R4178525							
WG2850181-14 DUP		L2146467-1						
Calcium (Ca)-Total		38.9	39.4		mg/L	1.3	20	20-AUG-18
Iron (Fe)-Total		<0.030	<0.030	RPD-NA	mg/L	N/A	20	20-AUG-18
Magnesium (Mg)-Total		13.2	13.4		mg/L	1.4	20	20-AUG-18
Manganese (Mn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	20-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-ICP-CL	Water							
Batch	R4178525							
WG2850181-14 DUP		L2146467-1						
Potassium (K)-Total		0.52	0.57		mg/L	9.4	20	20-AUG-18
Sodium (Na)-Total		3.6	3.6		mg/L	2.2	20	20-AUG-18
WG2850181-6 LCS		TMRM						
Calcium (Ca)-Total			96.1		%		80-120	20-AUG-18
Iron (Fe)-Total			112.0		%		80-120	20-AUG-18
Magnesium (Mg)-Total			94.0		%		80-120	20-AUG-18
Manganese (Mn)-Total			93.6		%		80-120	20-AUG-18
Potassium (K)-Total			91.5		%		80-120	20-AUG-18
Sodium (Na)-Total			92.2		%		80-120	20-AUG-18
WG2850181-9 LCS		TMRM						
Calcium (Ca)-Total			94.1		%		80-120	20-AUG-18
Iron (Fe)-Total			96.3		%		80-120	20-AUG-18
Magnesium (Mg)-Total			99.3		%		80-120	20-AUG-18
Manganese (Mn)-Total			95.7		%		80-120	20-AUG-18
Potassium (K)-Total			98.3		%		80-120	20-AUG-18
Sodium (Na)-Total			104.4		%		80-120	20-AUG-18
WG2850181-5 MB								
Calcium (Ca)-Total			<0.10		mg/L		0.1	20-AUG-18
Iron (Fe)-Total			<0.030		mg/L		0.03	20-AUG-18
Magnesium (Mg)-Total			<0.10		mg/L		0.1	20-AUG-18
Manganese (Mn)-Total			<0.0050		mg/L		0.005	20-AUG-18
Potassium (K)-Total			<0.50		mg/L		0.5	20-AUG-18
Sodium (Na)-Total			<1.0		mg/L		1	20-AUG-18
WG2850181-8 MB								
Calcium (Ca)-Total			<0.10		mg/L		0.1	20-AUG-18
Iron (Fe)-Total			<0.030		mg/L		0.03	20-AUG-18
Magnesium (Mg)-Total			<0.10		mg/L		0.1	20-AUG-18
Manganese (Mn)-Total			<0.0050		mg/L		0.005	20-AUG-18
Potassium (K)-Total			<0.50		mg/L		0.5	20-AUG-18
Sodium (Na)-Total			<1.0		mg/L		1	20-AUG-18
MICROCYSTIN-WP	Water							
Batch	R4179232							
WG2855299-2 LCS								
Microcystin			104.9		%		70-130	21-AUG-18
WG2855299-1 MB								

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MICROCYSTIN-WP								
Water								
Batch	R4179232							
WG2855299-1	MB							
Microcystin			<0.20		ug/L		0.2	21-AUG-18
MISCSCR-WT								
Water								
Batch	R4179986							
WG2852138-2	LCS							
Trifluralin			94.3		%		60-130	22-AUG-18
Triallate			102.8		%		60-130	22-AUG-18
Fluazifop-p-butyl			108.6		%		50-150	22-AUG-18
Diclofop-methyl			96.4		%		60-140	22-AUG-18
Ethalfuralin			94.2		%		50-150	22-AUG-18
WG2852138-3	LCSD	WG2852138-2						
Trifluralin		94.3	92		%	2.6	50	22-AUG-18
Triallate		102.8	99		%	3.4	50	22-AUG-18
Fluazifop-p-butyl		108.6	104		%	4.0	50	22-AUG-18
Diclofop-methyl		96.4	95		%	1.3	50	22-AUG-18
Ethalfuralin		94.2	93		%	1.4	50	22-AUG-18
WG2852138-1	MB							
Trifluralin			<0.00010		mg/L		0.0001	22-AUG-18
Triallate			<0.00010		mg/L		0.0001	22-AUG-18
Fluazifop-p-butyl			<0.00010		mg/L		0.0001	22-AUG-18
Diclofop-methyl			<0.00010		mg/L		0.0001	22-AUG-18
Ethalfuralin			<0.00010		mg/L		0.0001	22-AUG-18
Surrogate: D14-Terphenyl			92.3		%		40-130	22-AUG-18
MTBE-CL								
Water								
Batch	R4175542							
WG2852957-3	DUP	L2146467-1						
Methyl tert-butyl ether		<0.0050	<0.0050	RPD-NA	mg/L	N/A	30	16-AUG-18
WG2852957-2	LCS							
Methyl tert-butyl ether			85.4		%		70-130	16-AUG-18
WG2852957-9	LCS							
Methyl tert-butyl ether			97.1		%		70-130	17-AUG-18
WG2852957-1	MB							
Methyl tert-butyl ether			<0.0050		mg/L		0.005	16-AUG-18
WG2852957-8	MB							
Methyl tert-butyl ether			<0.0050		mg/L		0.005	17-AUG-18
WG2852957-6	MS	L2146467-1						

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MTBE-CL								
Water								
Batch	R4175542							
WG2852957-6 MS		L2146467-1						
Methyl tert-butyl ether			90.7		%		50-150	16-AUG-18
NDMA-IHM-HRMS-BU								
Water								
Batch	R4206789							
WG2850410-2 LCS								
N-Nitrosodimethylamine			95.0		%		60-135	07-SEP-18
WG2850410-1 MB								
N-Nitrosodimethylamine			1.33	M	ng/L		2	07-SEP-18
Surrogate: N-Nitrosodimethylamine (Surr.)			69.0		%		13-109	07-SEP-18
NH3-F-CL								
Water								
Batch	R4183250							
WG2860039-20 DUP		L2146467-1						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	25-AUG-18
WG2860039-18 LCS								
Ammonia, Total (as N)			106.7		%		85-115	25-AUG-18
WG2860039-17 MB								
Ammonia, Total (as N)			<0.050		mg/L		0.05	25-AUG-18
WG2860039-19 MS		L2146467-1						
Ammonia, Total (as N)			109.1		%		75-125	25-AUG-18
NO2-IC-N-CL								
Water								
Batch	R4169825							
WG2850188-12 DUP		L2146467-1						
Nitrite (as N)		<0.010	<0.010	RPD-NA	mg/L	N/A	20	14-AUG-18
WG2850188-10 LCS								
Nitrite (as N)			99.1		%		90-110	14-AUG-18
WG2850188-9 MB								
Nitrite (as N)			<0.010		mg/L		0.01	14-AUG-18
WG2850188-11 MS		L2146467-1						
Nitrite (as N)			107.5		%		75-125	14-AUG-18
NO3-IC-N-CL								
Water								
Batch	R4169825							
WG2850188-12 DUP		L2146467-1						
Nitrate (as N)		0.136	0.140		mg/L	2.2	20	14-AUG-18
WG2850188-10 LCS								
Nitrate (as N)			99.8		%		90-110	14-AUG-18
WG2850188-9 MB								

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-N-CL	Water							
Batch	R4169825							
WG2850188-9 MB								
Nitrate (as N)			<0.020		mg/L		0.02	14-AUG-18
WG2850188-11 MS		L2146467-1						
Nitrate (as N)			122.2		%		75-125	14-AUG-18
NTA-WT	Water							
Batch	R4173247							
WG2851662-2 LCS								
Nitrilotriacetic Acid (NTA)			106.1		%		75-125	16-AUG-18
WG2851662-1 MB								
Nitrilotriacetic Acid (NTA)			<0.20		mg/L		0.2	16-AUG-18
PARAQUAT-WT	Water							
Batch	R4175971							
WG2852107-2 LCS								
Paraquat			100.4		%		50-150	17-AUG-18
WG2852107-1 MB								
Paraquat			<1.0		ug/L		1	17-AUG-18
PEST-MISC-WT	Water							
Batch	R4179986							
WG2852138-2 LCS								
Alachlor			110.0		%		60-130	22-AUG-18
Ametryn			97.3		%		60-130	22-AUG-18
Atrazine			96.4		%		60-130	22-AUG-18
Atrazine Desethyl			58.6		%		50-130	22-AUG-18
Azinphos-methyl			89.9		%		60-140	22-AUG-18
Bendiocarb			110.1		%		50-140	22-AUG-18
Benzo(a)pyrene			89.2		%		60-130	22-AUG-18
Carbaryl			132.0		%		50-140	22-AUG-18
Carbofuran			100.7		%		60-140	22-AUG-18
Chlorpyrifos			91.4		%		60-130	22-AUG-18
Cyanazine			106.0		%		60-140	22-AUG-18
Diazinon			78.8		%		60-130	22-AUG-18
Diclofop-methyl			96.4		%		60-140	22-AUG-18
Dimethoate			80.6		%		60-130	22-AUG-18
Malathion			94.3		%		60-130	22-AUG-18
Methyl Parathion			86.0		%		60-130	22-AUG-18
Metolachlor			108.0		%		60-130	22-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-MISC-WT		Water						
Batch	R4179986							
WG2852138-2	LCS							
Metribuzin			101.9		%		60-130	22-AUG-18
Parathion			102.8		%		60-140	22-AUG-18
Phorate			83.6		%		30-140	22-AUG-18
Prometon			85.1		%		60-130	22-AUG-18
Prometryne			97.8		%		60-130	22-AUG-18
Propazine			98.1		%		60-130	22-AUG-18
Simazine			106.0		%		60-130	22-AUG-18
Temephos			75.7		%		50-150	22-AUG-18
Terbufos			84.4		%		60-130	22-AUG-18
Terbutryn			93.7		%		60-130	22-AUG-18
Triallate			102.8		%		60-130	22-AUG-18
Trifluralin			94.3		%		60-130	22-AUG-18
WG2852138-3	LCSD	WG2852138-2						
Alachlor		110.0	112		%	1.4	50	22-AUG-18
Ametryn		97.3	101		%	3.9	50	22-AUG-18
Atrazine		96.4	97		%	0.7	50	22-AUG-18
Atrazine Desethyl		58.6	66		%	11	50	22-AUG-18
Azinphos-methyl		89.9	98		%	9.0	50	22-AUG-18
Bendiocarb		110.1	113		%	2.5	50	22-AUG-18
Benzo(a)pyrene		89.2	85		%	5.2	50	22-AUG-18
Carbaryl		132.0	137		%	3.7	50	22-AUG-18
Carbofuran		100.7	104		%	3.4	50	22-AUG-18
Chlorpyrifos		91.4	91		%	0.6	50	22-AUG-18
Cyanazine		106.0	115		%	8.3	50	22-AUG-18
Diazinon		78.8	81		%	2.8	50	22-AUG-18
Diclofop-methyl		96.4	95		%	1.3	50	22-AUG-18
Dimethoate		80.6	84		%	4.1	50	22-AUG-18
Malathion		94.3	101		%	6.8	50	22-AUG-18
Methyl Parathion		86.0	90		%	5.0	50	22-AUG-18
Metolachlor		108.0	111		%	2.7	50	22-AUG-18
Metribuzin		101.9	104		%	1.9	50	22-AUG-18
Parathion		102.8	107		%	4.2	50	22-AUG-18
Phorate		83.6	75		%	11	50	22-AUG-18
Prometon		85.1	80		%	5.6	50	22-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-MISC-WT		Water						
Batch	R4179986							
WG2852138-3	LCSD	WG2852138-2						
Prometryne		97.8	103		%	5.2	50	22-AUG-18
Propazine		98.1	103		%	4.9	50	22-AUG-18
Simazine		106.0	104		%	2.1	50	22-AUG-18
Temephos		75.7	76		%	0.8	50	22-AUG-18
Terbufos		84.4	74		%	13	50	22-AUG-18
Terbutryn		93.7	100		%	6.1	50	22-AUG-18
Triallate		102.8	99		%	3.4	50	22-AUG-18
Trifluralin		94.3	92		%	2.6	50	22-AUG-18
WG2852138-1	MB							
Alachlor			<0.10		ug/L		0.1	22-AUG-18
Ametryn			<0.10		ug/L		0.1	22-AUG-18
Atrazine			<0.10		ug/L		0.1	22-AUG-18
Atrazine Desethyl			<0.10		ug/L		0.1	22-AUG-18
Azinphos-methyl			<0.10		ug/L		0.1	22-AUG-18
Bendiocarb			<0.50		ug/L		0.5	22-AUG-18
Benzo(a)pyrene			<0.010		ug/L		0.01	22-AUG-18
Carbaryl			<0.50		ug/L		0.5	22-AUG-18
Carbofuran			<0.50		ug/L		0.5	22-AUG-18
Chlorpyrifos			<0.10		ug/L		0.1	22-AUG-18
Cyanazine			<0.10		ug/L		0.1	22-AUG-18
Diazinon			<0.10		ug/L		0.1	22-AUG-18
Diclofop-methyl			<0.10		ug/L		0.1	22-AUG-18
Dimethoate			<0.10		ug/L		0.1	22-AUG-18
Malathion			<0.10		ug/L		0.1	22-AUG-18
Methyl Parathion			<0.10		ug/L		0.1	22-AUG-18
Metolachlor			<0.10		ug/L		0.1	22-AUG-18
Metribuzin			<1.0		ug/L		1	22-AUG-18
Parathion			<0.10		ug/L		0.1	22-AUG-18
Phorate			<0.10		ug/L		0.1	22-AUG-18
Prometon			<0.10		ug/L		0.1	22-AUG-18
Prometryne			<0.10		ug/L		0.1	22-AUG-18
Propazine			<0.10		ug/L		0.1	22-AUG-18
Simazine			<0.10		ug/L		0.1	22-AUG-18
Temephos			<1.0		ug/L		1	22-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PEST-MISC-WT		Water						
Batch R4179986								
WG2852138-1 MB								
Terbufos			<0.10		ug/L		0.1	22-AUG-18
Terbutryn			<0.10		ug/L		0.1	22-AUG-18
Triallate			<0.10		ug/L		0.1	22-AUG-18
Trifluralin			<0.10		ug/L		0.1	22-AUG-18
Surrogate: 2-Fluorobiphenyl			89.4		%		40-130	22-AUG-18
Surrogate: d14-Terphenyl			92.3		%		40-130	22-AUG-18
PEST-OC-WT		Water						
Batch R4179108								
WG2852138-2 LCS								
Methoxychlor			152.2	LCS-H	%		50-150	21-AUG-18
WG2852138-1 MB								
Methoxychlor			<0.10		ug/L		0.1	21-AUG-18
PH/EC/ALK-CL		Water						
Batch R4175666								
WG2852273-11 LCS								
Conductivity (EC)			97.9		%		90-110	16-AUG-18
Alkalinity, Total (as CaCO3)			100.2		%		85-115	16-AUG-18
WG2852273-10 MB								
Conductivity (EC)			<2.0		uS/cm		2	16-AUG-18
Bicarbonate (HCO3)			<5.0		mg/L		5	16-AUG-18
Carbonate (CO3)			<5.0		mg/L		5	16-AUG-18
Hydroxide (OH)			<5.0		mg/L		5	16-AUG-18
Alkalinity, Total (as CaCO3)			<5.0		mg/L		5	16-AUG-18
PHN-ABT1-ED		Water						
Batch R4175417								
WG2851029-3 LCS								
2,4,6-Trichlorophenol			78.1		%		50-130	16-AUG-18
2,4 & 2,5 Dichlorophenol			78.2		%		50-150	16-AUG-18
2,3,4,6-Tetrachlorophenol			80.4		%		60-130	16-AUG-18
Pentachlorophenol			81.9		%		60-130	16-AUG-18
Phenol			63.2		%		30-130	16-AUG-18
WG2851029-2 MB								
2,4,6-Trichlorophenol			<0.00010		mg/L		0.0001	16-AUG-18
2,4 & 2,5 Dichlorophenol			<0.00010		mg/L		0.0001	16-AUG-18
2,3,4,6-Tetrachlorophenol			<0.00010		mg/L		0.0001	16-AUG-18

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PHN-ABT1-ED Water								
Batch R4175417								
WG2851029-2 MB								
Pentachlorophenol			<0.00010		mg/L		0.0001	16-AUG-18
Phenol			<0.00050		mg/L		0.0005	16-AUG-18
Surrogate: 2-Fluorophenol			77.5		%		20-130	16-AUG-18
Surrogate: Phenol d5			65.5		%		30-130	16-AUG-18
Surrogate: 2,4,6-Tribromophenol			84.4		%		40-130	16-AUG-18
SO4-IC-N-CL Water								
Batch R4169825								
WG2850188-12 DUP		L2146467-1						
Sulfate (SO4)		38.9	43.3		mg/L	11	20	14-AUG-18
WG2850188-10 LCS								
Sulfate (SO4)			99.5		%		90-110	14-AUG-18
WG2850188-9 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	14-AUG-18
WG2850188-11 MS		L2146467-1						
Sulfate (SO4)			115.7		%		75-125	14-AUG-18
SULPHIDE-CFA-ED Water								
Batch R4175663								
WG2853011-6 LCS								
Sulphide (as S)			79.9		%		75-125	17-AUG-18
WG2853011-5 MB								
Sulphide (as S)			<0.0015		mg/L		0.0015	16-AUG-18
THM-PT-MS-CL Water								
Batch R4175542								
WG2852957-3 DUP		L2146467-1						
Chloroform		0.0043	0.0042		mg/L	2.4	30	16-AUG-18
Bromodichloromethane		0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Dibromochloromethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Bromoform		<0.0050	<0.0050	RPD-NA	mg/L	N/A	30	16-AUG-18
WG2852957-2 LCS								
Chloroform			80.4		%		70-130	16-AUG-18
Bromodichloromethane			80.0		%		70-130	16-AUG-18
Dibromochloromethane			83.8		%		70-130	16-AUG-18
Bromoform			85.4		%		70-130	16-AUG-18
WG2852957-9 LCS								
Chloroform			100.7		%		70-130	17-AUG-18
Bromodichloromethane			93.5		%		70-130	17-AUG-18

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THM-PT-MS-CL		Water						
Batch	R4175542							
WG2852957-9	LCS							
Dibromochloromethane			89.7		%		70-130	17-AUG-18
Bromoform			85.0		%		70-130	17-AUG-18
WG2852957-1	MB							
Chloroform			<0.0010		mg/L		0.001	16-AUG-18
Bromodichloromethane			<0.0010		mg/L		0.001	16-AUG-18
Dibromochloromethane			<0.0010		mg/L		0.001	16-AUG-18
Bromoform			<0.0050		mg/L		0.005	16-AUG-18
WG2852957-8	MB							
Chloroform			<0.0010		mg/L		0.001	17-AUG-18
Bromodichloromethane			<0.0010		mg/L		0.001	17-AUG-18
Dibromochloromethane			<0.0010		mg/L		0.001	17-AUG-18
Bromoform			<0.0050		mg/L		0.005	17-AUG-18
WG2852957-6	MS	L2146467-1						
Chloroform			79.4		%		50-140	16-AUG-18
Bromodichloromethane			77.7		%		50-140	16-AUG-18
Dibromochloromethane			78.4		%		50-140	16-AUG-18
Bromoform			81.1		%		50-140	16-AUG-18
VOC-8260-CL		Water						
Batch	R4175542							
WG2852957-3	DUP	L2146467-1						
Dichlorodifluoromethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Chloromethane		<0.010	<0.010	RPD-NA	mg/L	N/A	30	16-AUG-18
Vinyl chloride		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	16-AUG-18
Bromomethane		<0.010	<0.010	RPD-NA	mg/L	N/A	30	16-AUG-18
Chloroethane		<0.010	<0.010	RPD-NA	mg/L	N/A	30	16-AUG-18
Trichlorofluoromethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,1-Dichloroethene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Methylene chloride		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
trans-1,2-Dichloroethene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,1-Dichloroethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
2,2-Dichloropropane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
cis-1,2-Dichloroethene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Chloroform		0.0043	0.0042		mg/L	2.4	30	16-AUG-18
Bromochloromethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,2-Dichloroethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL		Water						
Batch	R4175542							
WG2852957-3 DUP		L2146467-1						
1,1,1-Trichloroethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,1-Dichloropropene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Carbon tetrachloride		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Benzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Trichloroethene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,2-Dichloropropane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Bromodichloromethane		0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Dibromomethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
cis-1,3-Dichloropropene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
trans-1,3-Dichloropropene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Toluene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,1,2-Trichloroethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,3-Dichloropropane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Tetrachloroethene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Dibromochloromethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,2-Dibromoethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Chlorobenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Ethylbenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,1,1,2-Tetrachloroethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
m+p-Xylenes		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
o-Xylene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Styrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Bromoform		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Isopropylbenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,1,2,2-Tetrachloroethane		<0.0050	<0.0050	RPD-NA	mg/L	N/A	30	16-AUG-18
1,2,3-Trichloropropane		<0.0020	<0.0020	RPD-NA	mg/L	N/A	30	16-AUG-18
n-Propylbenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Bromobenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,3,5-Trimethylbenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
2-Chlorotoluene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
4-Chlorotoluene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
tert-Butylbenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,2,4-Trimethylbenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
sec-Butylbenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL		Water						
Batch	R4175542							
WG2852957-3 DUP		L2146467-1						
p-Isopropyltoluene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	16-AUG-18
1,3-Dichlorobenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,4-Dichlorobenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
n-Butylbenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,2-Dichlorobenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,2-Dibromo-3-chloropropane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,2,4-Trichlorobenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
Hexachlorobutadiene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
1,2,3-Trichlorobenzene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	16-AUG-18
WG2852957-2 LCS								
Dichlorodifluoromethane			90.2		%		60-140	16-AUG-18
Chloromethane			102.3		%		60-140	16-AUG-18
Vinyl chloride			92.3		%		60-140	16-AUG-18
Bromomethane			103.1		%		60-140	16-AUG-18
Chloroethane			95.9		%		60-140	16-AUG-18
Trichlorofluoromethane			77.9		%		60-140	16-AUG-18
1,1-Dichloroethene			82.8		%		70-130	16-AUG-18
Methylene chloride			80.7		%		60-140	16-AUG-18
trans-1,2-Dichloroethene			91.5		%		70-130	16-AUG-18
1,1-Dichloroethane			81.2		%		70-130	16-AUG-18
2,2-Dichloropropane			86.8		%		70-130	16-AUG-18
cis-1,2-Dichloroethene			85.2		%		70-130	16-AUG-18
Chloroform			80.4		%		70-130	16-AUG-18
Bromochloromethane			80.8		%		70-130	16-AUG-18
1,2-Dichloroethane			86.1		%		70-130	16-AUG-18
1,1,1-Trichloroethane			78.6		%		70-130	16-AUG-18
1,1-Dichloropropene			76.1		%		70-130	16-AUG-18
Carbon tetrachloride			74.6		%		70-130	16-AUG-18
Benzene			80.0		%		70-130	16-AUG-18
Trichloroethene			78.6		%		70-130	16-AUG-18
1,2-Dichloropropane			84.6		%		70-130	16-AUG-18
Bromodichloromethane			80.0		%		70-130	16-AUG-18
Dibromomethane			80.8		%		70-130	16-AUG-18
cis-1,3-Dichloropropene			90.3		%		70-130	16-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL		Water						
Batch	R4175542							
WG2852957-2	LCS							
trans-1,3-Dichloropropene			85.6		%		70-130	16-AUG-18
Toluene			73.1		%		70-130	16-AUG-18
1,1,2-Trichloroethane			87.2		%		70-130	16-AUG-18
1,3-Dichloropropane			85.5		%		70-130	16-AUG-18
Tetrachloroethene			72.1		%		70-130	16-AUG-18
Dibromochloromethane			83.8		%		70-130	16-AUG-18
1,2-Dibromoethane			82.5		%		70-130	16-AUG-18
Chlorobenzene			85.8		%		70-130	16-AUG-18
Ethylbenzene			82.7		%		70-130	16-AUG-18
1,1,1,2-Tetrachloroethane			85.4		%		70-130	16-AUG-18
m+p-Xylenes			84.9		%		70-130	16-AUG-18
o-Xylene			81.1		%		70-130	16-AUG-18
Styrene			79.7		%		70-130	16-AUG-18
Bromoform			85.4		%		70-130	16-AUG-18
Isopropylbenzene			83.8		%		70-130	16-AUG-18
1,1,2,2-Tetrachloroethane			102.5		%		70-130	16-AUG-18
1,2,3-Trichloropropane			98.6		%		70-130	16-AUG-18
n-Propylbenzene			74.8		%		70-130	16-AUG-18
Bromobenzene			84.0		%		70-130	16-AUG-18
1,3,5-Trimethylbenzene			73.3		%		70-130	16-AUG-18
2-Chlorotoluene			84.2		%		70-130	16-AUG-18
4-Chlorotoluene			81.9		%		70-130	16-AUG-18
tert-Butylbenzene			77.0		%		70-130	16-AUG-18
1,2,4-Trimethylbenzene			76.6		%		70-130	16-AUG-18
sec-Butylbenzene			82.1		%		70-130	16-AUG-18
p-Isopropyltoluene			70.5		%		50-150	16-AUG-18
1,3-Dichlorobenzene			91.1		%		70-130	16-AUG-18
1,4-Dichlorobenzene			86.3		%		70-130	16-AUG-18
n-Butylbenzene			73.2		%		70-130	16-AUG-18
1,2-Dichlorobenzene			86.0		%		70-130	16-AUG-18
1,2-Dibromo-3-chloropropane			89.4		%		70-130	16-AUG-18
1,2,4-Trichlorobenzene			85.7		%		70-130	16-AUG-18
Hexachlorobutadiene			74.7		%		70-130	16-AUG-18
1,2,3-Trichlorobenzene			90.7		%		70-130	16-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL	Water							
Batch	R4175542							
WG2852957-9	LCS							
Dichlorodifluoromethane			128.3		%		60-140	17-AUG-18
Chloromethane			137.5		%		60-140	17-AUG-18
Vinyl chloride			128.1		%		60-140	17-AUG-18
Bromomethane			136.0		%		60-140	17-AUG-18
Chloroethane			129.8		%		60-140	17-AUG-18
Trichlorofluoromethane			108.7		%		60-140	17-AUG-18
1,1-Dichloroethene			115.2		%		70-130	17-AUG-18
Methylene chloride			97.6		%		60-140	17-AUG-18
trans-1,2-Dichloroethene			122.5		%		70-130	17-AUG-18
1,1-Dichloroethane			104.8		%		70-130	17-AUG-18
2,2-Dichloropropane			112.2		%		70-130	17-AUG-18
cis-1,2-Dichloroethene			104.4		%		70-130	17-AUG-18
Chloroform			100.7		%		70-130	17-AUG-18
Bromochloromethane			91.7		%		70-130	17-AUG-18
1,2-Dichloroethane			95.1		%		70-130	17-AUG-18
1,1,1-Trichloroethane			104.5		%		70-130	17-AUG-18
1,1-Dichloropropene			101.0		%		70-130	17-AUG-18
Carbon tetrachloride			101.9		%		70-130	17-AUG-18
Benzene			102.2		%		70-130	17-AUG-18
Trichloroethene			100.5		%		70-130	17-AUG-18
1,2-Dichloropropane			98.6		%		70-130	17-AUG-18
Bromodichloromethane			93.5		%		70-130	17-AUG-18
Dibromomethane			84.1		%		70-130	17-AUG-18
cis-1,3-Dichloropropene			101.1		%		70-130	17-AUG-18
trans-1,3-Dichloropropene			91.5		%		70-130	17-AUG-18
Toluene			88.5		%		70-130	17-AUG-18
1,1,2-Trichloroethane			92.9		%		70-130	17-AUG-18
1,3-Dichloropropane			89.7		%		70-130	17-AUG-18
Tetrachloroethene			96.3		%		70-130	17-AUG-18
Dibromochloromethane			89.7		%		70-130	17-AUG-18
1,2-Dibromoethane			89.1		%		70-130	17-AUG-18
Chlorobenzene			102.3		%		70-130	17-AUG-18
Ethylbenzene			101.8		%		70-130	17-AUG-18
1,1,1,2-Tetrachloroethane			104.6		%		70-130	17-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL		Water						
Batch	R4175542							
WG2852957-9	LCS							
m+p-Xylenes			108.6		%		70-130	17-AUG-18
o-Xylene			93.1		%		70-130	17-AUG-18
Styrene			93.1		%		70-130	17-AUG-18
Bromoform			85.0		%		70-130	17-AUG-18
Isopropylbenzene			105.0		%		70-130	17-AUG-18
1,1,2,2-Tetrachloroethane			96.1		%		70-130	17-AUG-18
1,2,3-Trichloropropane			94.3		%		70-130	17-AUG-18
n-Propylbenzene			95.2		%		70-130	17-AUG-18
Bromobenzene			94.5		%		70-130	17-AUG-18
1,3,5-Trimethylbenzene			88.0		%		70-130	17-AUG-18
2-Chlorotoluene			101.3		%		70-130	17-AUG-18
4-Chlorotoluene			101.4		%		70-130	17-AUG-18
tert-Butylbenzene			97.4		%		70-130	17-AUG-18
1,2,4-Trimethylbenzene			91.8		%		70-130	17-AUG-18
sec-Butylbenzene			112.7		%		70-130	17-AUG-18
p-Isopropyltoluene			89.6		%		50-150	17-AUG-18
1,3-Dichlorobenzene			102.9		%		70-130	17-AUG-18
1,4-Dichlorobenzene			97.3		%		70-130	17-AUG-18
n-Butylbenzene			95.0		%		70-130	17-AUG-18
1,2-Dichlorobenzene			90.7		%		70-130	17-AUG-18
1,2-Dibromo-3-chloropropane			85.3		%		70-130	17-AUG-18
1,2,4-Trichlorobenzene			93.1		%		70-130	17-AUG-18
Hexachlorobutadiene			94.9		%		70-130	17-AUG-18
1,2,3-Trichlorobenzene			89.7		%		70-130	17-AUG-18
WG2852957-1	MB							
Dichlorodifluoromethane			<0.0010		mg/L		0.001	16-AUG-18
Chloromethane			<0.010		mg/L		0.01	16-AUG-18
Vinyl chloride			<0.00050		mg/L		0.0005	16-AUG-18
Bromomethane			<0.010		mg/L		0.01	16-AUG-18
Chloroethane			<0.010		mg/L		0.01	16-AUG-18
Trichlorofluoromethane			<0.0010		mg/L		0.001	16-AUG-18
1,1-Dichloroethene			<0.0010		mg/L		0.001	16-AUG-18
Methylene chloride			<0.0010		mg/L		0.001	16-AUG-18
trans-1,2-Dichloroethene			<0.0010		mg/L		0.001	16-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL	Water							
Batch	R4175542							
WG2852957-1 MB								
1,1-Dichloroethane			<0.0010		mg/L		0.001	16-AUG-18
2,2-Dichloropropane			<0.0010		mg/L		0.001	16-AUG-18
cis-1,2-Dichloroethene			<0.0010		mg/L		0.001	16-AUG-18
Chloroform			<0.0010		mg/L		0.001	16-AUG-18
Bromochloromethane			<0.0010		mg/L		0.001	16-AUG-18
1,2-Dichloroethane			<0.0010		mg/L		0.001	16-AUG-18
1,1,1-Trichloroethane			<0.0010		mg/L		0.001	16-AUG-18
1,1-Dichloropropene			<0.0010		mg/L		0.001	16-AUG-18
Carbon tetrachloride			<0.0010		mg/L		0.001	16-AUG-18
Benzene			<0.0010		mg/L		0.001	16-AUG-18
Trichloroethene			<0.0010		mg/L		0.001	16-AUG-18
1,2-Dichloropropane			<0.0010		mg/L		0.001	16-AUG-18
Bromodichloromethane			<0.0010		mg/L		0.001	16-AUG-18
Dibromomethane			<0.0010		mg/L		0.001	16-AUG-18
cis-1,3-Dichloropropene			<0.0010		mg/L		0.001	16-AUG-18
trans-1,3-Dichloropropene			<0.0010		mg/L		0.001	16-AUG-18
Toluene			<0.0010		mg/L		0.001	16-AUG-18
1,1,2-Trichloroethane			<0.0010		mg/L		0.001	16-AUG-18
1,3-Dichloropropane			<0.0010		mg/L		0.001	16-AUG-18
Tetrachloroethene			<0.0010		mg/L		0.001	16-AUG-18
Dibromochloromethane			<0.0010		mg/L		0.001	16-AUG-18
1,2-Dibromoethane			<0.0010		mg/L		0.001	16-AUG-18
Chlorobenzene			<0.0010		mg/L		0.001	16-AUG-18
Ethylbenzene			<0.0010		mg/L		0.001	16-AUG-18
1,1,1,2-Tetrachloroethane			<0.0010		mg/L		0.001	16-AUG-18
m+p-Xylenes			<0.0010		mg/L		0.001	16-AUG-18
o-Xylene			<0.0010		mg/L		0.001	16-AUG-18
Styrene			<0.0010		mg/L		0.001	16-AUG-18
Bromoform			<0.0010		mg/L		0.001	16-AUG-18
Isopropylbenzene			<0.0010		mg/L		0.001	16-AUG-18
1,1,2,2-Tetrachloroethane			<0.0050		mg/L		0.005	16-AUG-18
1,2,3-Trichloropropane			<0.0020		mg/L		0.002	16-AUG-18
n-Propylbenzene			<0.0010		mg/L		0.001	16-AUG-18
Bromobenzene			<0.0010		mg/L		0.001	16-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL		Water						
Batch	R4175542							
WG2852957-1 MB								
1,3,5-Trimethylbenzene			<0.0010		mg/L		0.001	16-AUG-18
2-Chlorotoluene			<0.0010		mg/L		0.001	16-AUG-18
4-Chlorotoluene			<0.0010		mg/L		0.001	16-AUG-18
tert-Butylbenzene			<0.0010		mg/L		0.001	16-AUG-18
1,2,4-Trimethylbenzene			<0.0010		mg/L		0.001	16-AUG-18
sec-Butylbenzene			<0.0010		mg/L		0.001	16-AUG-18
p-Isopropyltoluene			<0.0010		mg/L		0.001	16-AUG-18
1,3-Dichlorobenzene			<0.0010		mg/L		0.001	16-AUG-18
1,4-Dichlorobenzene			<0.0010		mg/L		0.001	16-AUG-18
n-Butylbenzene			<0.0010		mg/L		0.001	16-AUG-18
1,2-Dichlorobenzene			<0.0010		mg/L		0.001	16-AUG-18
1,2-Dibromo-3-chloropropane			<0.0010		mg/L		0.001	16-AUG-18
1,2,4-Trichlorobenzene			<0.0010		mg/L		0.001	16-AUG-18
Hexachlorobutadiene			<0.0010		mg/L		0.001	16-AUG-18
1,2,3-Trichlorobenzene			<0.0010		mg/L		0.001	16-AUG-18
Surrogate: 1,4-Difluorobenzene			93.1		%		70-130	16-AUG-18
Surrogate: 4-Bromofluorobenzene			83.0		%		70-130	16-AUG-18
Surrogate: 3,4-Dichlorotoluene			116.1		%		70-130	16-AUG-18
WG2852957-8 MB								
Dichlorodifluoromethane			<0.0010		mg/L		0.001	17-AUG-18
Chloromethane			<0.010		mg/L		0.01	17-AUG-18
Vinyl chloride			<0.00050		mg/L		0.0005	17-AUG-18
Bromomethane			<0.010		mg/L		0.01	17-AUG-18
Chloroethane			<0.010		mg/L		0.01	17-AUG-18
Trichlorofluoromethane			<0.0010		mg/L		0.001	17-AUG-18
1,1-Dichloroethene			<0.0010		mg/L		0.001	17-AUG-18
Methylene chloride			<0.0010		mg/L		0.001	17-AUG-18
trans-1,2-Dichloroethene			<0.0010		mg/L		0.001	17-AUG-18
1,1-Dichloroethane			<0.0010		mg/L		0.001	17-AUG-18
2,2-Dichloropropane			<0.0010		mg/L		0.001	17-AUG-18
cis-1,2-Dichloroethene			<0.0010		mg/L		0.001	17-AUG-18
Chloroform			<0.0010		mg/L		0.001	17-AUG-18
Bromochloromethane			<0.0010		mg/L		0.001	17-AUG-18
1,2-Dichloroethane			<0.0010		mg/L		0.001	17-AUG-18

Quality Control Report

Workorder: L2146467

Report Date: 15-SEP-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL	Water							
Batch	R4175542							
WG2852957-8 MB								
1,1,1-Trichloroethane			<0.0010		mg/L		0.001	17-AUG-18
1,1-Dichloropropene			<0.0010		mg/L		0.001	17-AUG-18
Carbon tetrachloride			<0.0010		mg/L		0.001	17-AUG-18
Benzene			<0.0010		mg/L		0.001	17-AUG-18
Trichloroethene			<0.0010		mg/L		0.001	17-AUG-18
1,2-Dichloropropane			<0.0010		mg/L		0.001	17-AUG-18
Bromodichloromethane			<0.0010		mg/L		0.001	17-AUG-18
Dibromomethane			<0.0010		mg/L		0.001	17-AUG-18
cis-1,3-Dichloropropene			<0.0010		mg/L		0.001	17-AUG-18
trans-1,3-Dichloropropene			<0.0010		mg/L		0.001	17-AUG-18
Toluene			<0.0010		mg/L		0.001	17-AUG-18
1,1,2-Trichloroethane			<0.0010		mg/L		0.001	17-AUG-18
1,3-Dichloropropane			<0.0010		mg/L		0.001	17-AUG-18
Tetrachloroethene			<0.0010		mg/L		0.001	17-AUG-18
Dibromochloromethane			<0.0010		mg/L		0.001	17-AUG-18
1,2-Dibromoethane			<0.0010		mg/L		0.001	17-AUG-18
Chlorobenzene			<0.0010		mg/L		0.001	17-AUG-18
Ethylbenzene			<0.0010		mg/L		0.001	17-AUG-18
1,1,1,2-Tetrachloroethane			<0.0010		mg/L		0.001	17-AUG-18
m+p-Xylenes			<0.0010		mg/L		0.001	17-AUG-18
o-Xylene			<0.0010		mg/L		0.001	17-AUG-18
Styrene			<0.0010		mg/L		0.001	17-AUG-18
Bromoform			<0.0010		mg/L		0.001	17-AUG-18
Isopropylbenzene			<0.0010		mg/L		0.001	17-AUG-18
1,1,2,2-Tetrachloroethane			<0.0050		mg/L		0.005	17-AUG-18
1,2,3-Trichloropropane			<0.0020		mg/L		0.002	17-AUG-18
n-Propylbenzene			<0.0010		mg/L		0.001	17-AUG-18
Bromobenzene			<0.0010		mg/L		0.001	17-AUG-18
1,3,5-Trimethylbenzene			<0.0010		mg/L		0.001	17-AUG-18
2-Chlorotoluene			<0.0010		mg/L		0.001	17-AUG-18
4-Chlorotoluene			<0.0010		mg/L		0.001	17-AUG-18
tert-Butylbenzene			<0.0010		mg/L		0.001	17-AUG-18
1,2,4-Trimethylbenzene			<0.0010		mg/L		0.001	17-AUG-18
sec-Butylbenzene			<0.0010		mg/L		0.001	17-AUG-18

Quality Control Report

Workorder: L2146467

Report Date: 15-SEP-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL	Water							
Batch	R4175542							
WG2852957-8 MB								
p-Isopropyltoluene			<0.0010		mg/L		0.001	17-AUG-18
1,3-Dichlorobenzene			<0.0010		mg/L		0.001	17-AUG-18
1,4-Dichlorobenzene			<0.0010		mg/L		0.001	17-AUG-18
n-Butylbenzene			<0.0010		mg/L		0.001	17-AUG-18
1,2-Dichlorobenzene			<0.0010		mg/L		0.001	17-AUG-18
1,2-Dibromo-3-chloropropane			<0.0010		mg/L		0.001	17-AUG-18
1,2,4-Trichlorobenzene			<0.0010		mg/L		0.001	17-AUG-18
Hexachlorobutadiene			<0.0010		mg/L		0.001	17-AUG-18
1,2,3-Trichlorobenzene			<0.0010		mg/L		0.001	17-AUG-18
Surrogate: 1,4-Difluorobenzene			91.8		%		70-130	17-AUG-18
Surrogate: 4-Bromofluorobenzene			81.9		%		70-130	17-AUG-18
Surrogate: 3,4-Dichlorotoluene			109.4		%		70-130	17-AUG-18
WG2852957-6 MS		L2146467-1						
Dichlorodifluoromethane			97.7		%		50-140	16-AUG-18
Chloromethane			108.8		%		50-140	16-AUG-18
Vinyl chloride			102.1		%		50-140	16-AUG-18
Bromomethane			108.2		%		50-140	16-AUG-18
Chloroethane			103.2		%		50-140	16-AUG-18
Trichlorofluoromethane			84.0		%		50-140	16-AUG-18
1,1-Dichloroethene			90.1		%		50-140	16-AUG-18
Methylene chloride			80.5		%		50-140	16-AUG-18
trans-1,2-Dichloroethene			96.3		%		50-140	16-AUG-18
1,1-Dichloroethane			83.1		%		50-140	16-AUG-18
2,2-Dichloropropane			88.9		%		50-150	16-AUG-18
cis-1,2-Dichloroethene			88.4		%		50-140	16-AUG-18
Chloroform			79.4		%		50-140	16-AUG-18
Bromochloromethane			78.0		%		50-150	16-AUG-18
1,2-Dichloroethane			81.7		%		50-140	16-AUG-18
1,1,1-Trichloroethane			83.5		%		50-140	16-AUG-18
1,1-Dichloropropene			82.8		%		50-150	16-AUG-18
Carbon tetrachloride			79.3		%		50-140	16-AUG-18
Benzene			83.7		%		50-140	16-AUG-18
Trichloroethene			83.7		%		50-140	16-AUG-18
1,2-Dichloropropane			84.4		%		50-140	16-AUG-18

Quality Control Report

Workorder: L2146467

Report Date: 15-SEP-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL	Water							
Batch	R4175542							
WG2852957-6 MS		L2146467-1						
Bromodichloromethane			77.7		%		50-140	16-AUG-18
Dibromomethane			77.3		%		50-140	16-AUG-18
cis-1,3-Dichloropropene			89.3		%		50-140	16-AUG-18
trans-1,3-Dichloropropene			83.1		%		50-140	16-AUG-18
Toluene			78.2		%		50-140	16-AUG-18
1,1,2-Trichloroethane			81.1		%		50-140	16-AUG-18
1,3-Dichloropropane			81.3		%		50-150	16-AUG-18
Tetrachloroethene			75.7		%		50-140	16-AUG-18
Dibromochloromethane			78.4		%		50-140	16-AUG-18
1,2-Dibromoethane			78.8		%		50-140	16-AUG-18
Chlorobenzene			90.3		%		50-140	16-AUG-18
Ethylbenzene			93.2		%		50-140	16-AUG-18
1,1,1,2-Tetrachloroethane			83.7		%		50-150	16-AUG-18
m+p-Xylenes			92.5		%		50-140	16-AUG-18
o-Xylene			87.3		%		50-140	16-AUG-18
Styrene			6.8	K	%		50-140	16-AUG-18
Bromoform			81.1		%		50-140	16-AUG-18
Isopropylbenzene			79.0		%		50-150	16-AUG-18
1,1,1,2,2-Tetrachloroethane			92.9		%		50-140	16-AUG-18
1,2,3-Trichloropropane			88.8		%		70-130	16-AUG-18
n-Propylbenzene			82.0		%		50-150	16-AUG-18
Bromobenzene			81.1		%		50-150	16-AUG-18
1,3,5-Trimethylbenzene			11.3	K	%		50-150	16-AUG-18
2-Chlorotoluene			83.0		%		50-150	16-AUG-18
4-Chlorotoluene			87.5		%		50-150	16-AUG-18
tert-Butylbenzene			83.6		%		50-150	16-AUG-18
1,2,4-Trimethylbenzene			72.5		%		50-150	16-AUG-18
sec-Butylbenzene			93.5		%		50-150	16-AUG-18
p-Isopropyltoluene			77.6		%		50-150	16-AUG-18
1,3-Dichlorobenzene			93.2		%		50-140	16-AUG-18
1,4-Dichlorobenzene			87.5		%		50-140	16-AUG-18
n-Butylbenzene			80.7		%		50-150	16-AUG-18
1,2-Dichlorobenzene			92.5		%		50-140	16-AUG-18
1,2-Dibromo-3-chloropropane			91.6		%		50-150	16-AUG-18

Quality Control Report

Workorder: L2146467

Report Date: 15-SEP-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-8260-CL	Water							
Batch	R4175542							
WG2852957-6 MS		L2146467-1						
1,2,4-Trichlorobenzene			88.5		%		50-150	16-AUG-18
Hexachlorobutadiene			84.3		%		50-150	16-AUG-18
1,2,3-Trichlorobenzene			87.8		%		50-150	16-AUG-18

Quality Control Report

Workorder: L2146467

Report Date: 15-SEP-18

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
K	Matrix Spike recovery outside ALS DQO due to sample matrix effects.
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
M	A peak has been manually integrated.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L2146467

Report Date: 15-SEP-18

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Inorganic Parameters							
Chlorine, Free	1	14-AUG-18 08:00	14-AUG-18 14:00	0.25	6.0	hours	EHTR-FM
Chlorine, Total	1	14-AUG-18 08:00	14-AUG-18 14:00	0.25	6.0	hours	EHTR-FM

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2146467 were received on 14-AUG-18 14:24.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



August 30, 2018

Service Request No:K1807940

Nelson Kwan, B.Sc.
ALS Environmental - Canada
2559 29 Street NE
Calgary, AB T1Y 7B5

Laboratory Results for: L2146467

Dear Nelson,

Enclosed are the results of the sample(s) submitted to our laboratory August 21, 2018
For your reference, these analyses have been assigned our service request number **K1807940**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3342. You may also contact me via email at Amanda.Juell@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Amanda Juell
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: ALS Environmental - Canada
Project: L2146467
Sample Matrix: Water

Service Request: K1807940
Date Received: 08/21/2018

CASE NARRATIVE

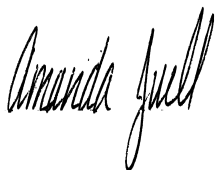
All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 08/21/2018. The sample was received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry:

No significant anomalies were noted with this analysis.



Approved by _____

Date 08/30/2018



SAMPLE DETECTION SUMMARY

CLIENT ID: L2146467-1 WTP			Lab ID: K1807940-001			
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Analyte	Results	Flag	MDL	MRL	Units	Method
Chlorate	71			20	ug/L	300.1



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: ALS Environmental - Canada
Project: L2146467

Service Request:K1807940

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K1807940-001	L2146467-1 WTP	8/14/2018	

**L2146467**

CALGARY

K1807940

Subcontract Request Form**Subcontract To:****ALS ENVIRONMENTAL - KELSO, WASHINGTON, USA**1317 S. 13TH AVE
KELSO, WA 98626

NOTES: Please reference on final report and invoice: PO# L2146467
ALS requires QC data to be provided with your final results.

Please see enclosed 1 sample(s) in 1 Container(s)

SAMPLE NUMBER	ANALYTICAL REQUIRED	DATE SAMPLED	Priority Flag
		DUE DATE	
L2146467-1 WTP		8/14/2018	
	Bromate analysis in water (BROMATE-KL 1)	9/4/2018	
	Chlorate analysis in water (CHLORATE-KL 1)	9/4/2018	
	Chlorite analysis in water (CHLORITE-KL 1)	9/4/2018	

Subcontract Info Contact: John Forbes (403) 291-9897

Analysis and reporting info contact: Nelson Kwan, B.Sc.
2559 29 STREET NE
CALGARY, AB T1Y 7B5

Phone: (403) 291-9897

Email: nelson.kwan@alsglobal.com

Please email confirmation of receipt to: **nelson.kwan@alsglobal.com**

Shipped By: _____ Date Shipped: _____

Received By: [Signature] Date Received: 8-21-18 0945

Verified By: _____ Date Verified: _____

Temperature: _____

Sample Integrity Issues: _____

PC AS

Cooler Receipt and Preservation Form

Client ALS - Canada Service Request K1807940Received: 8-21-18 Opened: 8-21-18 By: ASP Unloaded: 8-21-18 By: ASP

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
- If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
<u>7.6</u>	<u>7.4</u>	<u>NA</u>	<u>NA</u>	<u>-0.2</u>	<u>385</u>	<u>NA</u>	<u>7730 1369 6666</u>		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: ALS Environmental - Canada
Project: L2146467

Service Request: K1807940

Sample Name: L2146467-1 WTP
Lab Code: K1807940-001
Sample Matrix: Water

Date Collected: 08/14/18
Date Received: 08/21/18

Analysis Method
300.1

Extracted/Digested By

Analyzed By
MRODRIGUEZ



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



General Chemistry

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - Canada
Project: L2146467
Sample Matrix: Water

Sample Name: L2146467-1 WTP
Lab Code: K1807940-001

Service Request: K1807940
Date Collected: 08/14/18
Date Received: 08/21/18 09:45

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Bromate	300.1	ND U	ug/L	10	2	08/27/18 21:09	
Chlorate	300.1	71	ug/L	20	2	08/27/18 21:09	
Chlorite	300.1	ND U	ug/L	10	1	08/23/18 22:50	



QC Summary Forms

ALS Environmental—Kelso Laboratory
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General Chemistry

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - Canada
Project: L2146467
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: K1807940-MB

Service Request: K1807940
Date Collected: NA
Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Bromate	300.1	ND U	ug/L	5.0	1	08/27/18 17:47	
Chlorate	300.1	ND U	ug/L	10	1	08/27/18 17:47	
Chlorite	300.1	ND U	ug/L	10	1	08/23/18 16:52	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - Canada
Project: L2146467
Sample Matrix: Water

Service Request: K1807940
Date Collected: N/A
Date Received: N/A
Date Analyzed: 8/27/18

Duplicate Matrix Spike Summary
General Chemistry Parameters

Sample Name: Batch QC
Lab Code: K1807939-001

Units: ug/L
Basis: NA

Matrix Spike K1807939-001MS						Duplicate Matrix Spike K1807939-001DMS					
Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Chlorate	300.1	196	401	200	102	405	200	104	75-125	1	20
Bromate	300.1	ND U	85	80	107	83	80	103	75-125	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - Canada
Project: L2146467
Sample Matrix: Water

Service Request: K1807940
Date Collected: N/A
Date Received: N/A
Date Analyzed: 08/23/18
Date Extracted: NA

Duplicate Matrix Spike Summary
Chlorite

Sample Name: Batch QC
Lab Code: K1807943-001
Analysis Method: 300.1
Prep Method: None

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike		Result	Duplicate Matrix Spike		% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec		Spike Amount	% Rec			
Chlorite	ND U	192	200	96	195	200	98	75-125	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - Canada
Project: L2146467
Sample Matrix: Water

Service Request: K1807940
Date Collected: N/A
Date Received: N/A
Date Analyzed: 08/24/18
Date Extracted: NA

Duplicate Matrix Spike Summary
Chlorite

Sample Name: Batch QC
Lab Code: K1807947-002
Analysis Method: 300.1
Prep Method: None

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Result	Matrix Spike		Result	Duplicate Matrix Spike		% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec		Spike Amount	% Rec			
Chlorite	ND U	194	200	97	197	200	98	75-125	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: ALS Environmental - Canada
Project L2146467
Sample Matrix: Water

Service Request: K1807940
Date Collected: NA
Date Received: NA
Date Analyzed: 08/27/18

Replicate Sample Summary
General Chemistry Parameters

Sample Name: Batch QC
Lab Code: K1807939-001

Units: ug/L
Basis: NA

Duplicate Sample K1807939- 001DUP							
Analyte Name	Analysis Method	MRL	Sample Result	Result	Average	RPD	RPD Limit
Bromate	300.1	10	ND U	ND U	NC	NC	20
Chlorate	300.1	20	196	197	197	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: ALS Environmental - Canada
Project L2146467
Sample Matrix: Water

Service Request: K1807940
Date Collected: NA
Date Received: NA
Date Analyzed: 08/23/18

Replicate Sample Summary
General Chemistry Parameters

Sample Name: Batch QC
Lab Code: K1807943-001

Units: ug/L
Basis: NA

Duplicate Sample K1807943- 001DUP							
Analyte Name	Analysis Method	MRL	Sample Result	Result	Average	RPD	RPD Limit
Chlorite	300.1	20	ND U	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: ALS Environmental - Canada
Project L2146467
Sample Matrix: Water

Service Request: K1807940
Date Collected: NA
Date Received: NA
Date Analyzed: 08/24/18

Replicate Sample Summary
General Chemistry Parameters

Sample Name: Batch QC
Lab Code: K1807947-002

Units: ug/L
Basis: NA

Duplicate Sample K1807947- 002DUP							
Analyte Name	Analysis Method	MRL	Sample Result	Result	Average	RPD	RPD Limit
Chlorite	300.1	20	ND U	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: ALS Environmental - Canada
Project: L2146467
Sample Matrix: Water

Service Request: K1807940
Date Analyzed: 08/23/18 - 08/27/18

Lab Control Sample Summary
General Chemistry Parameters

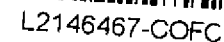
Units:ug/L**Basis:**NA**Lab Control Sample**

K1807940-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Bromate	300.1	23.8	25.0	95	75-125
Chlorate	300.1	47	50	94	85-115
Chlorite	300.1	44.4	50	89	85-115



Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

NA-EM-0320d v07 Front / 19 August 2013

Municipal Drinking Water Facility Sample Request Form – Facility to Lab (Ver2009-01)

(as per Alberta Environment and Parks (AEP) Approval/Registration) (one sample per form)

LABORATORY INFORMATION:

Name:			
Address:			
Phone:		FAX:	



L2146467-COFC

Lab: Please email receipt of this sample to: dwg.datacoord@gov.ab.ca

☐ done, DATE:

FOR LAB USE:

Lab Sample Number:		Date Received:	
Account:			

BILLING / SAMPLE REQUESTER INFORMATION:

Contact Name:	Richard Gaida		
Mailing Address:	101 RancheHouse Rd, Cochrane AB, T4C 2K8		
Phone:	403-851-2590	FAX:	
E-mail:	richard.gaida@cochrane.ca		

Send Report to: same as above OR

Name:	
Mailing Address:	

Send Invoice to: same as above OR

Name:	
Mailing Address:	

FACILITY WATER SAMPLING (Annual/Quarterly/Semi-annual/Monthly); Project Code: ABMDWQ

Facility Sample Identifier (Sample No.)	WTP	MUST match label on bottle(s)	Date Sent:	Aug 14 / 18		
Sample Date:	2018	1	Aug	1	14	
	YYYY	/	MMM	/	DD	
AEP Approval/Registration #	545					
Facility Name:	COCHRANE WATERWORKS SYSTEM					
Sampled at Station No.	AB05BH1592	Station Description:	DISTRIBUTION: RANDOM LOCATIONS			
Sample Matrix:	TREATED WATER (10)		Raw Water Source: ☒ Ground Water ☒ Surface Water ☐ Ground Water under Influence of Surface Water			
Sample Type:	DISCRETE SAMPLE (GRAB (1))					
Sample Frequency:	(2 Samples per ANNUM) (ANNUL)					
Sample Location / Comments:						
Send results to AEP electronically:	☒ YES	☐ NO				

ANALYSIS TYPE: (check which is appropriate for this sample) see reverse for details.

☒ Physical	☒ Inorganic	☒ Organics & Pesticide
☒ Trihalomethanes	☐ Fluoride Only	☐ Giardia / Cryptosporidium / Viruses
☐ Other:	☐ Other:	

All Municipal Drinking Water Facilities, regulated by AEP, must have their annual, semi annual, and / or specific monthly samples analyzed at an ISO/IEC 17025 accredited laboratory. AEP will only accept data in their specific electronic format. Billing / payment is the responsibility of the facility. The above information must be submitted by the facility and recorded by the laboratory to insure that it is forwarded with the sample data.

As per:

STANDARDS AND GUIDELINES FOR MUNICIPAL WATERWORKS, WASTEWATER AND STORM DRAINAGE SYSTEMS January 2006 Environmental Assurance Division

1.1 Potable Water Quality Standards

Potable water in the waterworks system shall meet the health related concentration limits (Maximum Acceptable Concentrations) in the Guidelines for Canadian Drinking Water Quality, published by Health Canada, as amended or replaced from time to time, for the parameters listed in Section 1.10.3 of this document, with the exception noted in Section 1.5.2 (2) (ie. Removal of Fluoride that is naturally occurring in groundwater)

The Regional Director at his discretion may establish more stringent limits for the parameters listed, or establish additional parameters not listed in Section 1.10.3.

1.10.3.2 Physical Parameters, Organic & Inorganic Chemicals and Pesticides	Check off	Typical Sample Frequencies for different Water Sources				
		Surface Water or GWUI*		High Quality Ground Water		Treated Water
1. Parameters to be monitored		Raw	Treat-ed	Raw	Treat-ed	Treated
A complete analysis shall consist of the primary and secondary substances and should include all physical parameters, organic and inorganic chemicals and pesticides. The primary substances are those substances with MACs in the GCDWQ and which are known to cause adverse effects on health. The secondary substances are those substances with AOs in the GCDWQ with limits below those considered to constitute no health hazard and the parameters with Operational Guidance Value, and some of the parameters without guidelines identified in the GCDWQ:						
a. Physical parameters (Primary and Secondary)	Physical	AN	AN	AN OR E3YR	AN OR E3YR	
colour, pH, total dissolved solids, turbidity and UV absorbance (not in the GCDWQ);						
b. Inorganic chemicals (Primary)	Inorganic	AN	AN	AN OR E3YR	AN OR E3YR	AN
antimony, arsenic, barium, boron, bromate, cadmium, chloramines, chromium, cyanide, fluoride, lead, mercury, nitrate and nitrite, selenium, and uranium;		AN	AN			Lead only
c. Inorganic and Organic Chemicals (Secondary)	Inorganic	AN	AN	AN OR E3YR	AN OR E3YR	
aluminum, ammonia, calcium, chloride, copper, hardness, iron, magnesium, manganese, silver, sodium, sulphate, sulphide, total organic carbon, xylenes (total) and zinc		AN	AN			
d. Organic Chemicals and Pesticides (Primary)	Organic & Pesticides	AN	AN	AN OR E5YR	AN OR E5YR	
Atrazine +metabolites, benzene, benzo(a)pyrene, bromoxynil, carbon tetrachloride, chlorpyrifos, cyanazine, cyanobacterial toxins (as microcystin – LR – for surface water systems only), diazinon, dicamba, dichlorobenzene 1, 2-, dichlorobenzene 1,4-, dichloroethane 1, 2-, dichloromethane, 2, 4- dichlorophenol, 2, 4-D, diclofop-methyl, diuron, dimethoate, ethylbenzene, glyphosate, malathion, methoxychlor, metolachlor, metribuzin, monochlorobenzene, nitrilotriacetic acid (NTA), pentachlorophenol, picloram, simazine, terbufos, tetrachloroethylene, tetrachlorophenol 2, 3, 4, 6-, toluene, triallate, trichloroethylene, trichlorophenol 2, 4, 6-, trifluralin, vinyl chloride.						
1.10.3.4 Fluoride	Fluoride only		MN			
1.10.3.6 Trihalomethanes (total) and Bromodichloromethane	Trihalomethanes	AN	AN		AN	AN
1.10.3.7 Disinfection (<i>Giardia</i> , <i>Cryptosporidium</i> , Viruses)	<i>Giardia</i> , <i>Cryptosporidium</i> , Viruses					

* GWUI -- Ground Water Under the Influence of surface water

1.10.3.6 #of Samples (usually 4 to 12) per year vary depending on code / approval and the type & amount of disinfection needed
Frequency Codes for above chart: Annual = AN, Monthly = MN, Every 2 years = E2YR, Every 3 years = E3YR, Every 5 years = E5YR

ALSO: The above list(s) was accurate as of the published date but does not include any new parameters or any specific parameters for any one specific facility. It is the facility's responsibility to be current to their approval or code of practice and to the Standards and Guidelines and to the GCDWQ (Guidelines for Canadian Drinking Water Quality) at http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/sum_guide-res

