



Defence Research and Development  
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Date Received: 01-AUG-18  
Report Date: 22-AUG-18 14:19 (MT)  
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Client Phone: 613-998-2052

## Certificate of Analysis

Lab Work Order #: L2140121

Project P.O. #: E6TOR-15RM11/003/KIN\_W7714-4501793417

Job Reference:

C of C Numbers:

Legal Site Desc:

Nellie Gudzak  
Account Manager

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-1 17-67587-DEEP Sampled By: DRDC on 13-JUL-18 @ 10:37 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	14.0		0.10	%	08-AUG-18	09-AUG-18	R4161752
pH	7.58		0.10	pH units		09-AUG-18	R4162216
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	45	PEHR	10	mg/kg	07-AUG-18	07-AUG-18	R4160295
Chloride	935		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.108		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	273		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	12800		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Antimony (Sb)	0.18		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Arsenic (As)	8.45		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Barium (Ba)	81.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Beryllium (Be)	1.01		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160774
Boron (B)	12.2		5.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Cadmium (Cd)	0.114		0.020	ug/g	03-AUG-18	07-AUG-18	R4160774
Calcium (Ca)	5270		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Chromium (Cr)	26.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Cobalt (Co)	12.3		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Copper (Cu)	22.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Iron (Fe)	29400		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Lead (Pb)	11.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Lithium (Li)	18.5		2.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Magnesium (Mg)	4660		20	ug/g	03-AUG-18	07-AUG-18	R4160774
Manganese (Mn)	317		1.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Mercury (Hg)	0.0294		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160076
Molybdenum (Mo)	0.66		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Nickel (Ni)	26.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Phosphorus (P)	538		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Potassium (K)	1800		100	ug/g	03-AUG-18	07-AUG-18	R4160774
Selenium (Se)	0.27		0.20	ug/g	03-AUG-18	07-AUG-18	R4160774
Silver (Ag)	<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Sodium (Na)	685		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Strontium (Sr)	64.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Sulfur (S)	<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160774
Thallium (Tl)	0.081		0.050	ug/g	03-AUG-18	07-AUG-18	R4160774
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Titanium (Ti)	98.9		1.0	ug/g	03-AUG-18	07-AUG-18	R4160774

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-1	17-67587-DEEP							
Sampled By:	DRDC on 13-JUL-18 @ 10:37							
Matrix:	SOIL							
<b>Metals</b>								
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Uranium (U)		0.851		0.050	ug/g	03-AUG-18	07-AUG-18	R4160774
Vanadium (V)		50.1		0.20	ug/g	03-AUG-18	07-AUG-18	R4160774
Zinc (Zn)		66.9		2.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Zirconium (Zr)		14.2		1.0	ug/g	03-AUG-18	07-AUG-18	R4160774
<b>Speciated Metals</b>								
Chromium, Hexavalent		<0.20		0.20	ug/g	07-AUG-18	08-AUG-18	R4160920
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	07-AUG-18	07-AUG-18	R4161186
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)		<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene		<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-1	17-67587-DEEP							
Sampled By:	DRDC on 13-JUL-18 @ 10:37							
Matrix:	SOIL							
<b>Volatile Organic Compounds</b>								
Tetrachloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene		<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene		<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride		<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene		<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)		<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene		107.0		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene		108.9		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>								
F1 (C6-C10)		<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX		<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)		<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)		<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)		<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)		<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50		YES				07-AUG-18	08-AUG-18	R4161415
Surrogate: 2-Bromobenzotrifluoride		108.4		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene		98.4		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>								
8:2 Fluorotelomer sulfonic acid(8:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-1 17-67587-DEEP Sampled By: DRDC on 13-JUL-18 @ 10:37 Matrix: SOIL								
<b>Perfluorinated Compounds</b>								
Perfluorobutanoic acid (PFBA)		<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)		<0.12	DLB	0.12	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>								
Aroclor 1242		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs		<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl		92.5		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-2 17-67575 Sampled By: DRDC on 13-JUL-18 @ 11:34 Matrix: SOIL								
<b>Physical Tests</b>								
% Moisture		15.6		0.10	%	08-AUG-18	09-AUG-18	R4161712
pH		7.53		0.10	pH units		09-AUG-18	R4162216
<b>Leachable Anions &amp; Nutrients</b>								
Ammonia as N		79	PEHR	10	mg/kg	07-AUG-18	07-AUG-18	R4160295
Chloride		486		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen		0.132		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>								
Nitrate and Nitrite as N		<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N		<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N		<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate		236		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>								
Aluminum (Al)		14500		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Antimony (Sb)		0.17		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Arsenic (As)		9.06		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Barium (Ba)		87.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Beryllium (Be)		0.94		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Bismuth (Bi)		<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160774
Boron (B)		16.9		5.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Cadmium (Cd)		0.126		0.020	ug/g	03-AUG-18	07-AUG-18	R4160774
Calcium (Ca)		6510		50	ug/g	03-AUG-18	07-AUG-18	R4160774

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-2 17-67575								
Sampled By: DRDC on 13-JUL-18 @ 11:34								
Matrix: SOIL								
<b>Metals</b>								
Chromium (Cr)		28.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Cobalt (Co)		12.3		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Copper (Cu)		22.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Iron (Fe)		28600		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Lead (Pb)		11.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Lithium (Li)		19.1		2.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Magnesium (Mg)		4810		20	ug/g	03-AUG-18	07-AUG-18	R4160774
Manganese (Mn)		300		1.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Mercury (Hg)		0.0246		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160076
Molybdenum (Mo)		0.71		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Nickel (Ni)		25.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Phosphorus (P)		622		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Potassium (K)		2050		100	ug/g	03-AUG-18	07-AUG-18	R4160774
Selenium (Se)		0.33		0.20	ug/g	03-AUG-18	07-AUG-18	R4160774
Silver (Ag)		<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Sodium (Na)		511		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Strontium (Sr)		68.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160774
Thallium (Tl)		0.093		0.050	ug/g	03-AUG-18	07-AUG-18	R4160774
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Titanium (Ti)		119		1.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Uranium (U)		0.907		0.050	ug/g	03-AUG-18	07-AUG-18	R4160774
Vanadium (V)		52.4		0.20	ug/g	03-AUG-18	07-AUG-18	R4160774
Zinc (Zn)		68.6		2.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Zirconium (Zr)		11.3		1.0	ug/g	03-AUG-18	07-AUG-18	R4160774
<b>Speciated Metals</b>								
Chromium, Hexavalent		<0.20		0.20	ug/g	07-AUG-18	08-AUG-18	R4160920
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	07-AUG-18	07-AUG-18	R4161186
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-2 17-67575 Sampled By: DRDC on 13-JUL-18 @ 11:34 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	106.1		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	109.0		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-2 17-67575 Sampled By: DRDC on 13-JUL-18 @ 11:34 Matrix: SOIL							
<b>Hydrocarbons</b>							
Surrogate: 2-Bromobenzotrifluoride	108.7		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene	91.4		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	99.5		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-3 17-67579 Sampled By: DRDC on 13-JUL-18 @ 11:13 Matrix: SOIL							
<b>Physical Tests</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-3 17-67579								
Sampled By: DRDC on 13-JUL-18 @ 11:13								
Matrix: SOIL								
<b>Physical Tests</b>								
% Moisture		12.2		0.10	%	08-AUG-18	09-AUG-18	R4161712
pH		7.74		0.10	pH units		09-AUG-18	R4162216
<b>Leachable Anions &amp; Nutrients</b>								
Ammonia as N		58	PEHR	10	mg/kg	07-AUG-18	07-AUG-18	R4160295
Chloride		1340		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen		0.101		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>								
Nitrate and Nitrite as N		<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N		<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N		<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate		1510		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>								
Aluminum (Al)		12700		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Antimony (Sb)		0.25		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Arsenic (As)		8.34		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Barium (Ba)		90.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Beryllium (Be)		0.95		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Bismuth (Bi)		<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160774
Boron (B)		12.1		5.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Cadmium (Cd)		0.126		0.020	ug/g	03-AUG-18	07-AUG-18	R4160774
Calcium (Ca)		7300		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Chromium (Cr)		26.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Cobalt (Co)		11.9		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Copper (Cu)		22.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Iron (Fe)		28300		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Lead (Pb)		11.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Lithium (Li)		18.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Magnesium (Mg)		4890		20	ug/g	03-AUG-18	07-AUG-18	R4160774
Manganese (Mn)		326		1.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Mercury (Hg)		0.0308		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160076
Molybdenum (Mo)		0.66		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Nickel (Ni)		25.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Phosphorus (P)		559		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Potassium (K)		1790		100	ug/g	03-AUG-18	07-AUG-18	R4160774
Selenium (Se)		0.32		0.20	ug/g	03-AUG-18	07-AUG-18	R4160774
Silver (Ag)		<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160774
Sodium (Na)		1230		50	ug/g	03-AUG-18	07-AUG-18	R4160774
Strontium (Sr)		65.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Sulfur (S)		1400		1000	ug/g	03-AUG-18	07-AUG-18	R4160774
Thallium (Tl)		0.086		0.050	ug/g	03-AUG-18	07-AUG-18	R4160774
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Titanium (Ti)		115		1.0	ug/g	03-AUG-18	07-AUG-18	R4160774

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-3	17-67579							
Sampled By:	DRDC on 13-JUL-18 @ 11:13							
Matrix:	SOIL							
<b>Metals</b>								
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160774
Uranium (U)		0.852		0.050	ug/g	03-AUG-18	07-AUG-18	R4160774
Vanadium (V)		49.5		0.20	ug/g	03-AUG-18	07-AUG-18	R4160774
Zinc (Zn)		67.5		2.0	ug/g	03-AUG-18	07-AUG-18	R4160774
Zirconium (Zr)		14.4		1.0	ug/g	03-AUG-18	07-AUG-18	R4160774
<b>Speciated Metals</b>								
Chromium, Hexavalent		<0.20		0.20	ug/g	07-AUG-18	08-AUG-18	R4160920
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	07-AUG-18	07-AUG-18	R4161186
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)		<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene		<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-3 17-67579							
Sampled By: DRDC on 13-JUL-18 @ 11:13							
Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	107.7		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	110.9		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415
Surrogate: 2-Bromobenzotrifluoride	111.1		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene	77.9		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-3 17-67579 Sampled By: DRDC on 13-JUL-18 @ 11:13 Matrix: SOIL								
<b>Perfluorinated Compounds</b>								
Perfluorobutanoic acid (PFBA)		<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)		<0.16	DLB	0.16	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>								
Aroclor 1242		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs		<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl		80.1		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-4 17-67570 Sampled By: DRDC on 13-JUL-18 @ 11:27 Matrix: SOIL								
<b>Physical Tests</b>								
% Moisture		12.9		0.10	%	08-AUG-18	09-AUG-18	R4161712
pH		7.93		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>								
Ammonia as N		70	PEHR	10	mg/kg	07-AUG-18	07-AUG-18	R4160295
Chloride		650		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen		0.114		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>								
Nitrate and Nitrite as N		<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N		1.1		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N		<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate		888		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>								
Aluminum (Al)		15900		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)		0.19		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)		8.86		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)		84.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)		1.08		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)		<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)		20.4		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)		0.127		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)		7850		50	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-4 17-67570								
Sampled By: DRDC on 13-JUL-18 @ 11:27								
Matrix: SOIL								
<b>Metals</b>								
Chromium (Cr)		30.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)		12.2		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)		22.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		29100		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		12.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		22.9		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		5350		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		321		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0257		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.76		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		26.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		566		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		2480		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.33		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		891		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		74.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.118		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		158		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		1.04		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)		55.6		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		69.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		14.5		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.22		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	07-AUG-18	07-AUG-18	R4161186
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-4 17-67570 Sampled By: DRDC on 13-JUL-18 @ 11:27 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	109.3		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	112.1		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-4 17-67570 Sampled By: DRDC on 13-JUL-18 @ 11:27 Matrix: SOIL								
<b>Hydrocarbons</b>								
Surrogate: 2-Bromobenzotrifluoride		97.5		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene		82.1		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>								
8:2 Fluorotelomer sulfonic acid(8:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)		<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>								
Aroclor 1242		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs		<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl		103.1		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-5 17-67586 Sampled By: DRDC on 13-JUL-18 @ 11:19 Matrix: SOIL								
<b>Physical Tests</b>								

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-5 17-67586								
Sampled By: DRDC on 13-JUL-18 @ 11:19								
Matrix: SOIL								
<b>Physical Tests</b>								
% Moisture		17.1		0.10	%	08-AUG-18	09-AUG-18	R4161712
pH		7.70		0.10	pH units		09-AUG-18	R4161847
<b>Particle Size</b>								
% >75um		17.7		1.0	%	10-AUG-18	10-AUG-18	R4163071
<b>Leachable Anions &amp; Nutrients</b>								
Ammonia as N		81	PEHR	10	mg/kg	07-AUG-18	07-AUG-18	R4160295
Chloride		362		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen		0.140		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>								
Nitrate and Nitrite as N		<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N		<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N		<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate		116		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>								
Aluminum (Al)		11800		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)		0.16		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)		7.96		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)		76.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)		0.85		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)		<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)		13.4		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)		0.115		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)		5670		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)		23.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)		10.5		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)		20.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		25300		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		10.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		16.8		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		4040		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		276		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0221		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.64		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		22.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		498		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		1620		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.32		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		348		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		63.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.085		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-5	17-67586							
Sampled By:	DRDC on 13-JUL-18 @ 11:19							
Matrix:	SOIL							
<b>Metals</b>								
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		74.3		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		1.11		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)		44.9		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		59.4		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		9.1		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.22		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	07-AUG-18	07-AUG-18	R4161186
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)		<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene		<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-5 17-67586 Sampled By: DRDC on 13-JUL-18 @ 11:19 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	99.2		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	102.0		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415
Surrogate: 2-Bromobenzotrifluoride	108.1		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene	87.7		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10	DLB	0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<1.75		1.8	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-5 17-67586 Sampled By: DRDC on 13-JUL-18 @ 11:19 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	99.3		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-6 17-67708 Sampled By: DRDC on 13-JUL-18 @ 12:21 Matrix: WATER							
<b>Physical Tests</b>							
pH	8.03		0.10	pH units		02-AUG-18	R4157207
<b>Anions and Nutrients</b>							
Ammonia, Total (as N)	<0.020		0.020	mg/L		03-AUG-18	R4158786
Bromide (Br)	<0.50	DLM	0.50	mg/L		07-AUG-18	R4160753
Chloride (Cl)	323	DLM	2.5	mg/L		07-AUG-18	R4160753
Fluoride (F)	0.26	DLM	0.10	mg/L		09-AUG-18	R4163463
Nitrate (as N)	<0.10	DLM	0.10	mg/L		07-AUG-18	R4160753
Nitrite (as N)	<0.050	DLM	0.050	mg/L		07-AUG-18	R4160753
Total Kjeldahl Nitrogen	1.77		0.15	mg/L	03-AUG-18	07-AUG-18	R4160171
Phosphorus, Total	0.0728		0.0030	mg/L	07-AUG-18	08-AUG-18	R4160552
Sulfate (SO4)	292	DLM	1.5	mg/L		07-AUG-18	R4160753
<b>Total Metals</b>							
Aluminum (Al)-Total	0.0718		0.0050	mg/L	03-AUG-18	03-AUG-18	R4159686
Antimony (Sb)-Total	0.00016		0.00010	mg/L	03-AUG-18	03-AUG-18	R4159686
Arsenic (As)-Total	0.00121		0.00010	mg/L	03-AUG-18	03-AUG-18	R4159686
Barium (Ba)-Total	0.0291		0.00010	mg/L	03-AUG-18	03-AUG-18	R4159686
Beryllium (Be)-Total	<0.00010		0.00010	mg/L	03-AUG-18	03-AUG-18	R4159686
Bismuth (Bi)-Total	<0.000050		0.000050	mg/L	03-AUG-18	03-AUG-18	R4159686
Boron (B)-Total	0.228		0.010	mg/L	03-AUG-18	03-AUG-18	R4159686

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-6 17-67708								
Sampled By: DRDC on 13-JUL-18 @ 12:21								
Matrix: WATER								
<b>Total Metals</b>								
Cadmium (Cd)-Total		<0.0000050		0.0000050	mg/L	03-AUG-18	03-AUG-18	R4159686
Calcium (Ca)-Total		118		0.050	mg/L	03-AUG-18	03-AUG-18	R4159686
Cesium (Cs)-Total		0.000011		0.000010	mg/L	03-AUG-18	03-AUG-18	R4159686
Chromium (Cr)-Total		0.00084		0.00050	mg/L	03-AUG-18	03-AUG-18	R4159686
Cobalt (Co)-Total		0.00025		0.00010	mg/L	03-AUG-18	03-AUG-18	R4159686
Copper (Cu)-Total		0.0023		0.0010	mg/L	03-AUG-18	03-AUG-18	R4159686
Iron (Fe)-Total		0.345		0.010	mg/L	03-AUG-18	03-AUG-18	R4159686
Lead (Pb)-Total		0.000107		0.000050	mg/L	03-AUG-18	03-AUG-18	R4159686
Lithium (Li)-Total		0.0320		0.0010	mg/L	03-AUG-18	03-AUG-18	R4159686
Magnesium (Mg)-Total		48.0		0.0050	mg/L	03-AUG-18	03-AUG-18	R4159686
Manganese (Mn)-Total		0.00878		0.00050	mg/L	03-AUG-18	03-AUG-18	R4159686
Mercury (Hg)-Total		<0.000010	SRU	0.000010	mg/L		08-AUG-18	R4160906
Molybdenum (Mo)-Total		0.00106		0.000050	mg/L	03-AUG-18	03-AUG-18	R4159686
Nickel (Ni)-Total		0.00231		0.00050	mg/L	03-AUG-18	03-AUG-18	R4159686
Phosphorus (P)-Total		0.065		0.050	mg/L	03-AUG-18	03-AUG-18	R4159686
Potassium (K)-Total		7.68		0.050	mg/L	03-AUG-18	03-AUG-18	R4159686
Rubidium (Rb)-Total		0.00108		0.00020	mg/L	03-AUG-18	03-AUG-18	R4159686
Selenium (Se)-Total		0.000161		0.000050	mg/L	03-AUG-18	03-AUG-18	R4159686
Silicon (Si)-Total		0.37		0.10	mg/L	03-AUG-18	03-AUG-18	R4159686
Silver (Ag)-Total		<0.000050		0.000050	mg/L	03-AUG-18	03-AUG-18	R4159686
Sodium (Na)-Total		169	DLHC	0.50	mg/L	03-AUG-18	03-AUG-18	R4159686
Strontium (Sr)-Total		0.641		0.0010	mg/L	03-AUG-18	03-AUG-18	R4159686
Sulfur (S)-Total		101		0.50	mg/L	03-AUG-18	03-AUG-18	R4159686
Tellurium (Te)-Total		<0.00020		0.00020	mg/L	03-AUG-18	03-AUG-18	R4159686
Thallium (Tl)-Total		<0.000010		0.000010	mg/L	03-AUG-18	03-AUG-18	R4159686
Thorium (Th)-Total		<0.00010		0.00010	mg/L	03-AUG-18	03-AUG-18	R4159686
Tin (Sn)-Total		<0.00010		0.00010	mg/L	03-AUG-18	03-AUG-18	R4159686
Titanium (Ti)-Total		0.00194		0.00030	mg/L	03-AUG-18	03-AUG-18	R4159686
Tungsten (W)-Total		<0.00010		0.00010	mg/L	03-AUG-18	03-AUG-18	R4159686
Uranium (U)-Total		0.00310		0.000010	mg/L	03-AUG-18	03-AUG-18	R4159686
Vanadium (V)-Total		0.00051		0.00050	mg/L	03-AUG-18	03-AUG-18	R4159686
Zinc (Zn)-Total		0.0067		0.0030	mg/L	03-AUG-18	03-AUG-18	R4159686
Zirconium (Zr)-Total		<0.00030		0.00030	mg/L	03-AUG-18	03-AUG-18	R4159686
<b>Aggregate Organics</b>								
Phenols (4AAP)		0.0012		0.0010	mg/L		03-AUG-18	R4158731
<b>Volatile Organic Compounds</b>								
Acetone		<30		30	ug/L		03-AUG-18	R4158447
Benzene		<0.50		0.50	ug/L		03-AUG-18	R4158447
Bromodichloromethane		<2.0		2.0	ug/L		03-AUG-18	R4158447
Bromoform		<5.0		5.0	ug/L		03-AUG-18	R4158447
Bromomethane		<0.50		0.50	ug/L		03-AUG-18	R4158447

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-6 17-67708 Sampled By: DRDC on 13-JUL-18 @ 12:21 Matrix: WATER							
<b>Volatile Organic Compounds</b>							
Carbon tetrachloride	<0.20		0.20	ug/L		03-AUG-18	R4158447
Chlorobenzene	<0.50		0.50	ug/L		03-AUG-18	R4158447
Dibromochloromethane	<2.0		2.0	ug/L		03-AUG-18	R4158447
Chloroform	<1.0		1.0	ug/L		03-AUG-18	R4158447
1,2-Dibromoethane	<0.20		0.20	ug/L		03-AUG-18	R4158447
1,2-Dichlorobenzene	<0.50		0.50	ug/L		03-AUG-18	R4158447
1,3-Dichlorobenzene	<0.50		0.50	ug/L		03-AUG-18	R4158447
1,4-Dichlorobenzene	<0.50		0.50	ug/L		03-AUG-18	R4158447
Dichlorodifluoromethane	<2.0		2.0	ug/L		03-AUG-18	R4158447
1,1-Dichloroethane	<0.50		0.50	ug/L		03-AUG-18	R4158447
1,2-Dichloroethane	<0.50		0.50	ug/L		03-AUG-18	R4158447
1,1-Dichloroethylene	<0.50		0.50	ug/L		03-AUG-18	R4158447
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L		03-AUG-18	R4158447
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L		03-AUG-18	R4158447
Methylene Chloride	<5.0		5.0	ug/L		03-AUG-18	R4158447
1,2-Dichloropropane	<0.50		0.50	ug/L		03-AUG-18	R4158447
cis-1,3-Dichloropropene	<0.30		0.30	ug/L		03-AUG-18	R4158447
trans-1,3-Dichloropropene	<0.30		0.30	ug/L		03-AUG-18	R4158447
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L		03-AUG-18	R4158447
Ethylbenzene	<0.50		0.50	ug/L		03-AUG-18	R4158447
n-Hexane	<0.50		0.50	ug/L		03-AUG-18	R4158447
Methyl Ethyl Ketone	<20		20	ug/L		03-AUG-18	R4158447
Methyl Isobutyl Ketone	<20		20	ug/L		03-AUG-18	R4158447
MTBE	<2.0		2.0	ug/L		03-AUG-18	R4158447
Styrene	<0.50		0.50	ug/L		03-AUG-18	R4158447
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L		03-AUG-18	R4158447
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L		03-AUG-18	R4158447
Tetrachloroethylene	<0.50		0.50	ug/L		03-AUG-18	R4158447
Toluene	<0.50		0.50	ug/L		03-AUG-18	R4158447
1,1,1-Trichloroethane	<0.50		0.50	ug/L		03-AUG-18	R4158447
1,1,2-Trichloroethane	<0.50		0.50	ug/L		03-AUG-18	R4158447
Trichloroethylene	<0.50		0.50	ug/L		03-AUG-18	R4158447
Trichlorofluoromethane	<5.0		5.0	ug/L		03-AUG-18	R4158447
Vinyl chloride	<0.50		0.50	ug/L		03-AUG-18	R4158447
o-Xylene	<0.30		0.30	ug/L		03-AUG-18	R4158447
m+p-Xylenes	<0.40		0.40	ug/L		03-AUG-18	R4158447
Xylenes (Total)	<0.50		0.50	ug/L		03-AUG-18	R4158447
Surrogate: 4-Bromofluorobenzene	98.9		70-130	%		03-AUG-18	R4158447
Surrogate: 1,4-Difluorobenzene	99.8		70-130	%		03-AUG-18	R4158447
<b>Hydrocarbons</b>							
F1 (C6-C10)	<25		25	ug/L		03-AUG-18	R4158447

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-6 17-67708 Sampled By: DRDC on 13-JUL-18 @ 12:21 Matrix: WATER							
<b>Hydrocarbons</b>							
F1-BTEX	<25		25	ug/L		08-AUG-18	
F2 (C10-C16)	<100		100	ug/L	07-AUG-18	08-AUG-18	R4161141
F3 (C16-C34)	1480		250	ug/L	07-AUG-18	08-AUG-18	R4161141
F4 (C34-C50)	<250		250	ug/L	07-AUG-18	08-AUG-18	R4161141
Total Hydrocarbons (C6-C50)	1480		370	ug/L		08-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161141
Surrogate: 2-Bromobenzotrifluoride	89.3		60-140	%	07-AUG-18	08-AUG-18	R4161141
Surrogate: 3,4-Dichlorotoluene	77.9		60-140	%		03-AUG-18	R4158447
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.020		0.020	ug/L	09-AUG-18	09-AUG-18	R4162149
Aroclor 1248	<0.020		0.020	ug/L	09-AUG-18	09-AUG-18	R4162149
Aroclor 1254	<0.020		0.020	ug/L	09-AUG-18	09-AUG-18	R4162149
Aroclor 1260	<0.020		0.020	ug/L	09-AUG-18	09-AUG-18	R4162149
Total PCBs	<0.040		0.040	ug/L	09-AUG-18	09-AUG-18	R4162149
Surrogate: 2-fluorobiphenyl	78.5		50-150	%	09-AUG-18	09-AUG-18	R4162149
L2140121-7 17-67823 Sampled By: DRDC on 13-JUL-18 @ 09:47 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	15.6		0.10	%	08-AUG-18	09-AUG-18	R4161712
pH	7.84		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	49	PEHR	10	mg/kg	08-AUG-18	08-AUG-18	R4167629
Chloride	319		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.111		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	510		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	13900		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.18		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	8.92		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	82.8		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	1.09		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	13.9		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.124		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	5760		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	29.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	13.2		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-7	17-67823							
Sampled By:	DRDC on 13-JUL-18 @ 09:47							
Matrix:	SOIL							
<b>Metals</b>								
Copper (Cu)		24.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		31100		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		12.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		21.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		4980		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		368		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0292		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.74		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		27.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		600		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		2020		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.33		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		836		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		71.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.097		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		99.1		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		1.00		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)		53.7		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		72.8		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		15.4		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.29		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	07-AUG-18	07-AUG-18	R4161186
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-7 17-67823 Sampled By: DRDC on 13-JUL-18 @ 09:47 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	130.3		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	132.9		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415
Surrogate: 2-Bromobenzotrifluoride	106.8		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene	107.1		60-140	%	03-AUG-18	08-AUG-18	R4160917

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-7 17-67823 Sampled By: DRDC on 13-JUL-18 @ 09:47 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10	DLB	0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<1.33		1.3	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	97.1		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-8 17-67587 Sampled By: DRDC on 13-JUL-18 @ 10:37 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	13.7		0.10	%	08-AUG-18	09-AUG-18	R4161712
pH	7.89		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-8 17-67587								
Sampled By: DRDC on 13-JUL-18 @ 10:37								
Matrix: SOIL								
<b>Leachable Anions &amp; Nutrients</b>								
Ammonia as N		54	PEHR	10	mg/kg	08-AUG-18	08-AUG-18	R4167629
Chloride		946		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen		0.106		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>								
Nitrate and Nitrite as N		<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N		<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N		<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate		225		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>								
Aluminum (Al)		12000		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)		0.16		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)		7.89		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)		76.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)		0.89		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)		<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)		11.7		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)		0.105		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)		4690		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)		24.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)		10.8		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)		20.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		25700		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		10.8		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		16.4		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		4210		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		279		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0271		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.58		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		23.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		480		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		1650		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.30		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		567		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		57.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.079		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		98.1		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		0.825		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-8 17-67587								
Sampled By: DRDC on 13-JUL-18 @ 10:37								
Matrix: SOIL								
<b>Metals</b>								
Vanadium (V)		45.1		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		60.5		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		13.0		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.22		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	07-AUG-18	07-AUG-18	R4161186
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)		<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene		<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene		<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-8 17-67587							
Sampled By: DRDC on 13-JUL-18 @ 10:37							
Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	105.5		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	109.9		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415
Surrogate: 2-Bromobenzotrifluoride	103.6		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene	91.8		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-8 17-67587 Sampled By: DRDC on 13-JUL-18 @ 10:37 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	99.7		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-9 17-67581 Sampled By: DRDC on 13-JUL-18 @ 10:48 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	15.0		0.10	%	08-AUG-18	09-AUG-18	R4161712
pH	7.86		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	32	PEHR	10	mg/kg	08-AUG-18	08-AUG-18	R4167629
Chloride	1790		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.092		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	1820		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	15400		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.17		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	9.78		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	91.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	1.17		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	12.3		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.161		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	8640		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	33.8		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	14.6		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-9	17-67581							
Sampled By:	DRDC on 13-JUL-18 @ 10:48							
Matrix:	SOIL							
<b>Metals</b>								
Copper (Cu)		28.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		35400		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		13.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		22.5		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		6490		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		386		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0369		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.64		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		31.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		644		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		2020		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.37		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		0.13		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		1370		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		79.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		2700		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.094		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		113		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		1.04		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)		60.9		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		82.9		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		19.7		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.34		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	08-AUG-18	08-AUG-18	R4161646
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-9 17-67581 Sampled By: DRDC on 13-JUL-18 @ 10:48 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	103.1		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	106.6		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415
Surrogate: 2-Bromobenzotrifluoride	93.3		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene	78.6		60-140	%	03-AUG-18	08-AUG-18	R4160917

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-9 17-67581 Sampled By: DRDC on 13-JUL-18 @ 10:48 Matrix: SOIL								
<b>Perfluorinated Compounds</b>								
8:2 Fluorotelomer sulfonic acid(8:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)		<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)		<0.14	DLB	0.14	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)		<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)		<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>								
Aroclor 1242		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs		<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl		94.0		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-10 17-67574 Sampled By: DRDC on 13-JUL-18 @ 10:55 Matrix: SOIL								
<b>Physical Tests</b>								
% Moisture		12.2		0.10	%	08-AUG-18	09-AUG-18	R4161712
pH		7.93		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>								

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-10 17-67574 Sampled By: DRDC on 13-JUL-18 @ 10:55 Matrix: SOIL							
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	41	PEHR	10	mg/kg	08-AUG-18	08-AUG-18	R4167629
Chloride	2210		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.101		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	3650		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	16500		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.18		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	10.4		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	98.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	1.22		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	17.8		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.155		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	10800		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	34.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	14.6		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)	26.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)	34800		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)	13.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)	25.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)	6420		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)	385		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)	0.0321		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)	0.79		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)	30.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)	677		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)	2520		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)	0.41		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)	0.11		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)	1670		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)	85.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)	3400		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)	0.107		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)	174		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)	<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)	1.05		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-10 17-67574 Sampled By: DRDC on 13-JUL-18 @ 10:55 Matrix: SOIL							
<b>Metals</b>							
Vanadium (V)	63.1		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)	81.1		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)	20.7		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>							
Chromium, Hexavalent	0.29		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>							
Phenols (4AAP)	<0.10		0.10	mg/kg	08-AUG-18	08-AUG-18	R4161646
<b>Volatile Organic Compounds</b>							
Acetone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene	<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-10 17-67574 Sampled By: DRDC on 13-JUL-18 @ 10:55 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	102.5		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	106.2		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415
Surrogate: 2-Bromobenzotrifluoride	108.6		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene	86.2		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-10 17-67574 Sampled By: DRDC on 13-JUL-18 @ 10:55 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
Perfluorododecanoic acid (PFDoDA)	<0.50	DLB	0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.16		0.16	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	94.8		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-11 17-67574 DEEP Sampled By: DRDC on 13-JUL-18 @ 11:07 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	16.2	PEHR	0.10	%	08-AUG-18	09-AUG-18	R4161712
pH	7.82		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	47		10	mg/kg	09-AUG-18	09-AUG-18	R4162174
Chloride	963		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.108		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	704		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	14000		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.16		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	8.85		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	83.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	1.09		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	13.4		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.139		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	8570		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	29.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	13.3		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-11 17-67574 DEEP								
Sampled By: DRDC on 13-JUL-18 @ 11:07								
Matrix: SOIL								
<b>Metals</b>								
Copper (Cu)		24.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		31200		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		12.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		20.3		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		5480		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		354		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0424		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.68		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		28.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		599		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		1880		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.35		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		895		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		76.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.093		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		162		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		0.969		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)		54.8		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		75.5		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		20.5		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.33		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	08-AUG-18	08-AUG-18	R4161646
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-11 17-67574 DEEP Sampled By: DRDC on 13-JUL-18 @ 11:07 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	100.4		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	104.4		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415
Surrogate: 2-Bromobenzotrifluoride	98.6		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene	85.7		60-140	%	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-11 17-67574 DEEP Sampled By: DRDC on 13-JUL-18 @ 11:07 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10	DLB	0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	97.4		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-12 17-67646 Sampled By: DRDC on 13-JUL-18 @ 11:54 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	14.1		0.10	%	08-AUG-18	09-AUG-18	R4161712
pH	8.50		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-12 17-67646 Sampled By: DRDC on 13-JUL-18 @ 11:54 Matrix: SOIL							
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	38	PEHR	10	mg/kg	09-AUG-18	09-AUG-18	R4162174
Chloride	930		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.088		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	329		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	12600		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.15		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	9.12		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	88.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	1.03		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	11.9		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.143		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	5740		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	27.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	13.5		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)	25.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)	31500		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)	13.1		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)	19.3		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)	5490		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)	352		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)	0.0381		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)	0.67		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)	29.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)	606		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)	1880		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)	0.38		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)	0.12		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)	1950		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)	65.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)	<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)	0.082		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)	123		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)	<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)	0.981		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-12 17-67646								
Sampled By: DRDC on 13-JUL-18 @ 11:54								
Matrix: SOIL								
<b>Metals</b>								
Vanadium (V)		52.6		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		74.9		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		18.9		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.28		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	08-AUG-18	08-AUG-18	R4161646
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene		<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)		<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene		<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene		<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-12 17-67646 Sampled By: DRDC on 13-JUL-18 @ 11:54 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	113.5		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	117.4		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	07-AUG-18	08-AUG-18	R4161415
F3 (C16-C34)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
F4 (C34-C50)	<50		50	ug/g	07-AUG-18	08-AUG-18	R4161415
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				07-AUG-18	08-AUG-18	R4161415
Surrogate: 2-Bromobenzotrifluoride	106.2		60-140	%	07-AUG-18	08-AUG-18	R4161415
Surrogate: 3,4-Dichlorotoluene	94.0		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10	DLB	0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.40		0.40	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-12 17-67646 Sampled By: DRDC on 13-JUL-18 @ 11:54 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	97.0		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-13 17-67647 Sampled By: DRDC on 13-JUL-18 @ 10:10 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	23.0		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	7.90		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	54	PEHR	10	mg/kg	09-AUG-18	09-AUG-18	R4162174
Chloride	687		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.122		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	245		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	14200		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.14		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	8.28		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	87.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	1.06		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	14.4		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.122		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	5830		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	28.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	12.1		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-13	17-67647							
Sampled By:	DRDC on 13-JUL-18 @ 10:10							
Matrix:	SOIL							
<b>Metals</b>								
Copper (Cu)		22.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		29700		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		11.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		20.6		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		5000		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		303		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0282		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.65		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		25.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		574		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		1990		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.33		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		998		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		74.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.087		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		92.5		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		0.995		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)		52.6		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		68.1		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		13.9		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.28		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	08-AUG-18	08-AUG-18	R4161646
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-13 17-67647 Sampled By: DRDC on 13-JUL-18 @ 10:10 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	103.0		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	105.9		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198
Surrogate: 2-Bromobenzotrifluoride	102.8		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	90.7		60-140	%	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-13 17-67647 Sampled By: DRDC on 13-JUL-18 @ 10:10 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10	DLB	0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<1.20		1.2	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	87.3		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-14 17-67648 Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	13.7		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	8.04		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-14 17-67648 Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL							
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	31	PEHR	10	mg/kg	09-AUG-18	09-AUG-18	R4162174
Chloride	10700	DLHC	500	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.082		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	20.9		1.4	mg/kg		12-AUG-18	
Nitrate-N	20.9		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	883		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	12900		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.21		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	8.39		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	74.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	1.09		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	11.2		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.156		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	9180		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	28.8		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	12.9		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)	24.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)	31600		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)	12.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)	20.3		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)	6950		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)	360		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)	0.0342		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)	0.68		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)	27.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)	592		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)	1760		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)	0.36		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)	0.16		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)	5400		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)	79.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)	2000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)	0.084		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)	102		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)	<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)	1.18		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-14 17-67648 Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL							
<b>Metals</b>							
Vanadium (V)	51.8		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)	73.8		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)	19.9		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>							
Chromium, Hexavalent	0.40		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>							
Phenols (4AAP)	<0.10		0.10	mg/kg	08-AUG-18	08-AUG-18	R4161646
<b>Volatile Organic Compounds</b>							
Acetone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene	<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-14 17-67648 Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	105.7		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	109.1		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198
Surrogate: 2-Bromobenzotrifluoride	107.3		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	91.5		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10	DLB	0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<1.34		1.4	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-14 17-67648 Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
Perfluorododecanoic acid (PFDoDA)	<0.50	DLB	0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.11		0.11	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010	DLB	0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	97.0		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-15 17-67649 Sampled By: DRDC on 13-JUL-18 @ 10:03 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	14.6	PEHR	0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	7.83		0.10	pH units		09-AUG-18	R4161847
<b>Particle Size</b>							
% >75um	21.2		1.0	%	10-AUG-18	10-AUG-18	R4163071
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	59		10	mg/kg	09-AUG-18	09-AUG-18	R4162174
Chloride	1790		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.120		0.020	%	10-AUG-18	13-AUG-18	R4168308
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4	PEHR	1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	690		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	11800		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.18		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	7.67		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	67.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	0.83		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	13.8		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.101		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	6530		50	ug/g	03-AUG-18	07-AUG-18	R4160786

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-15 17-67649 Sampled By: DRDC on 13-JUL-18 @ 10:03 Matrix: SOIL							
<b>Metals</b>							
Chromium (Cr)	22.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	10.0		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)	18.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)	23700		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)	9.93		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)	16.9		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)	4170		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)	273		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)	0.0228		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)	0.68		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)	21.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)	492		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)	1830		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)	0.29		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)	<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)	1010		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)	57.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)	<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)	0.079		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)	99.1		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)	<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)	0.791		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)	42.1		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)	56.4		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)	10.8		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>							
Chromium, Hexavalent	0.23		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>							
Phenols (4AAP)	<0.10		0.10	mg/kg	08-AUG-18	08-AUG-18	R4161646
<b>Volatile Organic Compounds</b>							
Acetone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene	<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-15 17-67649 Sampled By: DRDC on 13-JUL-18 @ 10:03 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	106.2		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	110.6		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-15 17-67649 Sampled By: DRDC on 13-JUL-18 @ 10:03 Matrix: SOIL							
<b>Hydrocarbons</b>							
Surrogate: 2-Bromobenzotrifluoride	108.9		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	82.8		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.12	DLB	0.12	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	14-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	14-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	95.9		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-16 17-67650 Sampled By: DRDC on 13-JUL-18 @ 09:37 Matrix: SOIL							
<b>Physical Tests</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-16 17-67650 Sampled By: DRDC on 13-JUL-18 @ 09:37 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	15.1		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	7.80		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	53	PEHR	10	mg/kg	09-AUG-18	09-AUG-18	R4162174
Chloride	235		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.094		0.020	%	10-AUG-18	13-AUG-18	R4169310
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	135		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	8830		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.17		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	7.16		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	53.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	0.65		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	11.7		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.090		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	5350		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	19.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	8.81		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)	15.8		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)	21700		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)	8.53		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)	13.1		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)	3710		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)	234		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)	0.0257		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)	0.61		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)	19.1		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)	420		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)	1390		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)	0.23		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)	<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)	288		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)	47.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)	<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)	0.068		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)	123		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-16 17-67650 Sampled By: DRDC on 13-JUL-18 @ 09:37 Matrix: SOIL							
<b>Metals</b>							
Tungsten (W)	<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)	0.623		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)	37.7		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)	49.7		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)	9.9		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>							
Chromium, Hexavalent	0.21		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>							
Phenols (4AAP)	<0.10		0.10	mg/kg	09-AUG-18	10-AUG-18	R4162992
<b>Volatile Organic Compounds</b>							
Acetone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene	<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-16 17-67650 Sampled By: DRDC on 13-JUL-18 @ 09:37 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	111.4		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	116.1		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198
Surrogate: 2-Bromobenzotrifluoride	104.4		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	90.2		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-16 17-67650 Sampled By: DRDC on 13-JUL-18 @ 09:37 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	95.6		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-17 17-67651 Sampled By: DRDC on 13-JUL-18 @ 10:19 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	17.5		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	7.85		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	50	PEHR	10	mg/kg	09-AUG-18	09-AUG-18	R4162174
Chloride	4620	DLHC	100	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.113		0.020	%	10-AUG-18	13-AUG-18	R4169310
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	6.6		1.4	mg/kg		12-AUG-18	
Nitrate-N	6.6		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	1630		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	15700		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.16		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	9.11		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	83.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	0.85		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	11.6		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.147		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	4870		50	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-17 17-67651								
Sampled By: DRDC on 13-JUL-18 @ 10:19								
Matrix: SOIL								
<b>Metals</b>								
Chromium (Cr)		30.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)		12.8		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)		24.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		31200		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		10.1		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		17.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		5960		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		347		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0282		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.55		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		27.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		630		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		2320		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.34		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		1640		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		61.1		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.077		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		129		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		0.847		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)		56.4		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		73.7		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		12.7		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.29		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	09-AUG-18	10-AUG-18	R4162992
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-17 17-67651 Sampled By: DRDC on 13-JUL-18 @ 10:19 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	103.9		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	108.9		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-17 17-67651 Sampled By: DRDC on 13-JUL-18 @ 10:19 Matrix: SOIL							
<b>Hydrocarbons</b>							
Surrogate: 2-Bromobenzotrifluoride	107.4		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	87.4		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	90.7		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-18 17-67652 Sampled By: DRDC on 13-JUL-18 @ 09:28 Matrix: SOIL							
<b>Physical Tests</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-18 17-67652 Sampled By: DRDC on 13-JUL-18 @ 09:28 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	16.0		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	7.91		0.10	pH units		09-AUG-18	R4161847
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	49	PEHR	10	mg/kg	09-AUG-18	09-AUG-18	R4162174
Chloride	5630	DLHC	100	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.087		0.020	%	10-AUG-18	13-AUG-18	R4169310
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	18.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	18.4		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	1170		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	9910		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.17		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	7.51		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	62.8		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	0.76		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	11.5		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.099		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	8390		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	20.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	9.94		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)	21.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)	23600		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)	9.56		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)	14.6		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)	4590		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)	265		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)	0.0245		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)	0.62		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)	21.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)	555		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)	1470		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)	0.29		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)	<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)	2400		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)	56.8		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)	1700		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)	0.073		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)	91.6		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-18 17-67652 Sampled By: DRDC on 13-JUL-18 @ 09:28 Matrix: SOIL							
<b>Metals</b>							
Tungsten (W)	<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)	0.723		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)	39.3		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)	54.9		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)	11.6		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>							
Chromium, Hexavalent	0.27		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>							
Phenols (4AAP)	<0.10		0.10	mg/kg	09-AUG-18	10-AUG-18	R4162992
<b>Volatile Organic Compounds</b>							
Acetone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene	<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-18 17-67652 Sampled By: DRDC on 13-JUL-18 @ 09:28 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	97.3		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	101.0		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198
Surrogate: 2-Bromobenzotrifluoride	104.8		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	81.4		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-18 17-67652 Sampled By: DRDC on 13-JUL-18 @ 09:28 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	97.3		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-19 17-67653 Sampled By: DRDC on 13-JUL-18 @ 09:55 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	14.7		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	7.78		0.10	pH units		09-AUG-18	R4161940
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	41	PEHR	10	mg/kg	09-AUG-18	09-AUG-18	R4162174
Chloride	277		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.099		0.020	%	10-AUG-18	13-AUG-18	R4169310
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	269		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	11800		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.16		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	8.37		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	78.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	0.98		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	11.4		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.114		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	5170		50	ug/g	03-AUG-18	07-AUG-18	R4160786

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-19 17-67653								
Sampled By: DRDC on 13-JUL-18 @ 09:55								
Matrix: SOIL								
<b>Metals</b>								
Chromium (Cr)		26.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)		12.0		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)		22.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		28600		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		11.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		18.3		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		4440		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		334		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0336		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.72		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		25.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		556		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		1680		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.28		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		463		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		61.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.084		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		95.0		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		0.866		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)		48.5		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		66.8		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		16.4		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.26		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	09-AUG-18	10-AUG-18	R4162992
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-19 17-67653 Sampled By: DRDC on 13-JUL-18 @ 09:55 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	103.8		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	108.3		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-19 17-67653 Sampled By: DRDC on 13-JUL-18 @ 09:55 Matrix: SOIL							
<b>Hydrocarbons</b>							
Surrogate: 2-Bromobenzotrifluoride	109.9		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	80.7		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.10	DLB	0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	95.3		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-20 17-67654 Sampled By: DRDC on 13-JUL-18 @ 10:26 Matrix: SOIL							
<b>Physical Tests</b>							

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-20 17-67654 Sampled By: DRDC on 13-JUL-18 @ 10:26 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	10.4		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	7.68		0.10	pH units		09-AUG-18	R4161940
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	46	PEHR	10	mg/kg	09-AUG-18	10-AUG-18	R4163102
Chloride	1420		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.104		0.020	%	10-AUG-18	13-AUG-18	R4169310
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	530		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	12500		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.17		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	7.99		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	78.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	0.96		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	13.0		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.113		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	6400		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	25.9		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	11.2		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)	21.1		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)	27000		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)	11.8		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)	19.3		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)	4570		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)	297		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)	0.0245		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)	0.70		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)	24.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)	506		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)	1840		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)	0.30		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)	<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)	650		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)	65.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)	<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)	0.085		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)	85.7		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-20 17-67654 Sampled By: DRDC on 13-JUL-18 @ 10:26 Matrix: SOIL							
<b>Metals</b>							
Tungsten (W)	<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)	0.859		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)	47.4		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)	63.2		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)	13.3		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>							
Chromium, Hexavalent	0.20		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>							
Phenols (4AAP)	<0.10		0.10	mg/kg	09-AUG-18	10-AUG-18	R4162992
<b>Volatile Organic Compounds</b>							
Acetone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene	<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-20 17-67654 Sampled By: DRDC on 13-JUL-18 @ 10:26 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	98.0		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	103.5		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198
Surrogate: 2-Bromobenzotrifluoride	114.0		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	82.2		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<1.31	DLB	1.3	ug/kg	08-AUG-18	15-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10	DLB	1.3	ug/kg	08-AUG-18	15-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-20 17-67654 Sampled By: DRDC on 13-JUL-18 @ 10:26 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)	<0.12	DLB	0.12	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260	<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs	<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl	94.9		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-21 17-67646-DEEP Sampled By: DRDC on 13-JUL-18 @ 11:54 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	15.5		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	8.23		0.10	pH units		09-AUG-18	R4161940
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	33	PEHR	10	mg/kg	09-AUG-18	10-AUG-18	R4163102
Chloride	1120		5.0	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.088		0.020	%	10-AUG-18	13-AUG-18	R4169310
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	<1.4		1.4	mg/kg		12-AUG-18	
Nitrate-N	1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	10-AUG-18	R4165738
Sulphate	301		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	12900		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.16		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	9.02		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	86.2		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	1.07		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	13.2		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.154		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	5830		50	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-21 17-67646-DEEP								
Sampled By: DRDC on 13-JUL-18 @ 11:54								
Matrix: SOIL								
<b>Metals</b>								
Chromium (Cr)		27.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)		13.3		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)		24.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)		30400		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)		12.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)		19.1		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)		5380		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)		353		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)		0.0361		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)		0.67		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)		28.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)		599		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)		1690		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)		0.36		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)		0.12		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)		1890		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)		66.6		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)		<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)		0.087		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)		<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)		151		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)		<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)		0.919		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)		52.9		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)		73.7		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)		19.6		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>								
Chromium, Hexavalent		0.31		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>								
Phenols (4AAP)		<0.10		0.10	mg/kg	09-AUG-18	10-AUG-18	R4162992
<b>Volatile Organic Compounds</b>								
Acetone		<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Benzene		<0.0068		0.0068	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromodichloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromoform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Bromomethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Carbon tetrachloride		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dibromochloromethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Chloroform		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dibromoethane		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichlorobenzene		<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-21 17-67646-DEEP Sampled By: DRDC on 13-JUL-18 @ 11:54 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,3-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,4-Dichlorobenzene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Dichlorodifluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methylene Chloride	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,2-Dichloropropane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	03-AUG-18	08-AUG-18	R4160917
n-Hexane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Ethyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	03-AUG-18	08-AUG-18	R4160917
MTBE	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Styrene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Tetrachloroethylene	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Toluene	<0.080		0.080	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,1-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
1,1,2-Trichloroethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichloroethylene	<0.010		0.010	ug/g	03-AUG-18	08-AUG-18	R4160917
Trichlorofluoromethane	<0.050		0.050	ug/g	03-AUG-18	08-AUG-18	R4160917
Vinyl chloride	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
o-Xylene	<0.020		0.020	ug/g	03-AUG-18	08-AUG-18	R4160917
m+p-Xylenes	<0.030		0.030	ug/g	03-AUG-18	08-AUG-18	R4160917
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	102.0		50-140	%	03-AUG-18	08-AUG-18	R4160917
Surrogate: 1,4-Difluorobenzene	106.4		50-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	03-AUG-18	08-AUG-18	R4160917
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-21 17-67646-DEEP Sampled By: DRDC on 13-JUL-18 @ 11:54 Matrix: SOIL								
<b>Hydrocarbons</b>								
Surrogate: 2-Bromobenzotrifluoride		112.7		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene		82.1		60-140	%	03-AUG-18	08-AUG-18	R4160917
<b>Perfluorinated Compounds</b>								
8:2 Fluorotelomer sulfonic acid(8:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
6:2 Fluorotelomer sulfonic acid(6:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
4:2 Fluorotelomer sulfonic acid(4:2 FTS)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
10:2 Fluorotelomer sulfonic acid(10:2 F)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorobutane sulfonic acid (PFBS)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexane sulfonic acid (PFHxS)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotridecanoic acid (PFTrDA)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonic acid (PFOS)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentane sulfonic acid (PFPeS)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamide (EtFOSA)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoethanol (EtFOSE)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Et PFO sulfonamidoacetic acid(EtFOSAA)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamide (MeFOSA)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoacetic acid(MeFOSAA)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
N-Me PFO sulfonamidoethanol (MeFOSE)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptane sulfonic acid (PFHpS)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctane sulfonamide (FOSA)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecane sulfonic acid (PFDS)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorobutanoic acid (PFBA)		<300		300	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorodecanoic acid (PFDA)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorododecanoic acid (PFDoDA)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroheptanoic acid (PFHpA)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorohexanoic acid (PFHxA)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorononanoic acid (PFNA)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorooctanoic acid (PFOA)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoropentanoic acid (PFPeA)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluorotetradecanoic acid (PFTeDA)		<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170114
Perfluoroundecanoic acid (PFUnDA)		<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170114
<b>Polychlorinated Biphenyls</b>								
Aroclor 1242		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1248		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1254		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Aroclor 1260		<0.010		0.010	ug/g	13-AUG-18	13-AUG-18	R4167269
Total PCBs		<0.020		0.020	ug/g	13-AUG-18	13-AUG-18	R4167269
Surrogate: d14-Terphenyl		96.5		60-140	%	13-AUG-18	13-AUG-18	R4167269
L2140121-22 17-67648-DEEP Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL								
<b>Physical Tests</b>								

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-22 17-67648-DEEP Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	16.9		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	7.80		0.10	pH units		09-AUG-18	R4161940
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	30		10	mg/kg	09-AUG-18	10-AUG-18	R4163102
Chloride	5210		100	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.099		0.020	%	10-AUG-18	13-AUG-18	R4169310
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	4.3		1.4	mg/kg		13-AUG-18	
Nitrate-N	4.3		1.0	mg/kg	10-AUG-18	11-AUG-18	R4167222
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	11-AUG-18	R4167222
Sulphate	498		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	14200		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.15		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	8.41		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	92.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	1.01		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	11.3		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.193		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	6560		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Chromium (Cr)	30.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	13.2		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)	25.7		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)	31800		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)	12.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)	17.7		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)	5820		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)	351		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)	0.0308		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)	0.58		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)	28.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)	641		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)	1840		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)	0.34		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)	0.13		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)	2160		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)	69.0		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)	<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)	0.089		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)	119		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-22 17-67648-DEEP Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL							
<b>Metals</b>							
Tungsten (W)	<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)	1.25		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)	54.7		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)	77.2		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)	17.8		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>							
Chromium, Hexavalent	0.34		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>							
Phenols (4AAP)	<0.10		0.10	mg/kg	09-AUG-18	10-AUG-18	R4162992
<b>Volatile Organic Compounds</b>							
Acetone	<0.50		0.50	ug/g	07-AUG-18	09-AUG-18	R4161900
Benzene	<0.0068		0.0068	ug/g	07-AUG-18	09-AUG-18	R4161900
Bromodichloromethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Bromoform	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Bromomethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Carbon tetrachloride	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Chlorobenzene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Dibromochloromethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Chloroform	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,2-Dibromoethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,2-Dichlorobenzene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,3-Dichlorobenzene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,4-Dichlorobenzene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Dichlorodifluoromethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1-Dichloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,2-Dichloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1-Dichloroethylene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Methylene Chloride	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,2-Dichloropropane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	07-AUG-18	09-AUG-18	R4161900
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	07-AUG-18	09-AUG-18	R4161900
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	07-AUG-18	09-AUG-18	R4161900
n-Hexane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Methyl Ethyl Ketone	<0.50		0.50	ug/g	07-AUG-18	09-AUG-18	R4161900
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	07-AUG-18	09-AUG-18	R4161900
MTBE	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Styrene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-22 17-67648-DEEP Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
Tetrachloroethylene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Toluene	<0.080		0.080	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1,1-Trichloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1,2-Trichloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Trichloroethylene	<0.010		0.010	ug/g	07-AUG-18	09-AUG-18	R4161900
Trichlorofluoromethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Vinyl chloride	<0.020		0.020	ug/g	07-AUG-18	09-AUG-18	R4161900
o-Xylene	<0.020		0.020	ug/g	07-AUG-18	09-AUG-18	R4161900
m+p-Xylenes	<0.030		0.030	ug/g	07-AUG-18	09-AUG-18	R4161900
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	94.1		50-140	%	07-AUG-18	09-AUG-18	R4161900
Surrogate: 1,4-Difluorobenzene	96.7		50-140	%	07-AUG-18	09-AUG-18	R4161900
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	07-AUG-18	09-AUG-18	R4161900
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198
Surrogate: 2-Bromobenzotrifluoride	111.7		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	85.1		60-140	%	07-AUG-18	09-AUG-18	R4161900
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoroheptane sulfonic acid (PFHpS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-22 17-67648-DEEP Sampled By: DRDC on 13-JUL-18 @ 11:40 Matrix: SOIL							
<b>Perfluorinated Compounds</b>							
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	10-AUG-18	10-AUG-18	R4162738
Aroclor 1248	<0.010		0.010	ug/g	10-AUG-18	10-AUG-18	R4162738
Aroclor 1254	<0.010		0.010	ug/g	10-AUG-18	10-AUG-18	R4162738
Aroclor 1260	<0.010		0.010	ug/g	10-AUG-18	10-AUG-18	R4162738
Total PCBs	<0.020		0.020	ug/g	10-AUG-18	10-AUG-18	R4162738
Surrogate: d14-Terphenyl	88.6		60-140	%	10-AUG-18	10-AUG-18	R4162738
L2140121-23 17-67578 Sampled By: DRDC on 13-JUL-18 @ 12:07 Matrix: SOIL							
<b>Physical Tests</b>							
% Moisture	8.62		0.10	%	08-AUG-18	09-AUG-18	R4161695
pH	7.99		0.10	pH units		09-AUG-18	R4161940
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	34	PEHR	10	mg/kg	09-AUG-18	10-AUG-18	R4163102
Chloride	3990		100	ug/g	09-AUG-18	09-AUG-18	R4163856
Total Kjeldahl Nitrogen	0.071		0.020	%	10-AUG-18	13-AUG-18	R4169310
<b>Anions and Nutrients</b>							
Nitrate and Nitrite as N	14.5		1.4	mg/kg		13-AUG-18	
Nitrate-N	14.5		1.0	mg/kg	10-AUG-18	11-AUG-18	R4167222
Nitrite-N	<1.0		1.0	mg/kg	10-AUG-18	11-AUG-18	R4167222
Sulphate	594		20	mg/kg	09-AUG-18	10-AUG-18	R4165738
<b>Metals</b>							
Aluminum (Al)	9610		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Antimony (Sb)	0.13		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Arsenic (As)	7.78		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Barium (Ba)	52.3		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Beryllium (Be)	0.67		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Bismuth (Bi)	<0.20		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Boron (B)	14.4		5.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Cadmium (Cd)	0.069		0.020	ug/g	03-AUG-18	07-AUG-18	R4160786
Calcium (Ca)	6040		50	ug/g	03-AUG-18	07-AUG-18	R4160786

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# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-23 17-67578 Sampled By: DRDC on 13-JUL-18 @ 12:07 Matrix: SOIL							
<b>Metals</b>							
Chromium (Cr)	18.5		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Cobalt (Co)	8.90		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Copper (Cu)	15.1		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Iron (Fe)	19900		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lead (Pb)	8.75		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Lithium (Li)	15.8		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Magnesium (Mg)	3710		20	ug/g	03-AUG-18	07-AUG-18	R4160786
Manganese (Mn)	220		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Mercury (Hg)	0.0167		0.0050	ug/g	03-AUG-18	07-AUG-18	R4160078
Molybdenum (Mo)	0.63		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Nickel (Ni)	19.4		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Phosphorus (P)	391		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Potassium (K)	1910		100	ug/g	03-AUG-18	07-AUG-18	R4160786
Selenium (Se)	0.26		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Silver (Ag)	<0.10		0.10	ug/g	03-AUG-18	07-AUG-18	R4160786
Sodium (Na)	1690		50	ug/g	03-AUG-18	07-AUG-18	R4160786
Strontium (Sr)	47.8		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Sulfur (S)	<1000		1000	ug/g	03-AUG-18	07-AUG-18	R4160786
Thallium (Tl)	0.076		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Tin (Sn)	<2.0		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Titanium (Ti)	115		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Tungsten (W)	<0.50		0.50	ug/g	03-AUG-18	07-AUG-18	R4160786
Uranium (U)	0.647		0.050	ug/g	03-AUG-18	07-AUG-18	R4160786
Vanadium (V)	35.5		0.20	ug/g	03-AUG-18	07-AUG-18	R4160786
Zinc (Zn)	47.5		2.0	ug/g	03-AUG-18	07-AUG-18	R4160786
Zirconium (Zr)	9.9		1.0	ug/g	03-AUG-18	07-AUG-18	R4160786
<b>Speciated Metals</b>							
Chromium, Hexavalent	<0.20		0.20	ug/g	08-AUG-18	09-AUG-18	R4162016
<b>Aggregate Organics</b>							
Phenols (4AAP)	<0.10		0.10	mg/kg	09-AUG-18	10-AUG-18	R4162992
<b>Volatile Organic Compounds</b>							
Acetone	<0.50		0.50	ug/g	07-AUG-18	09-AUG-18	R4161900
Benzene	<0.0068		0.0068	ug/g	07-AUG-18	09-AUG-18	R4161900
Bromodichloromethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Bromoform	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Bromomethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Carbon tetrachloride	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Chlorobenzene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Dibromochloromethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Chloroform	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,2-Dibromoethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,2-Dichlorobenzene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900

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## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-23 17-67578 Sampled By: DRDC on 13-JUL-18 @ 12:07 Matrix: SOIL							
<b>Volatile Organic Compounds</b>							
1,3-Dichlorobenzene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,4-Dichlorobenzene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Dichlorodifluoromethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1-Dichloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,2-Dichloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1-Dichloroethylene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Methylene Chloride	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,2-Dichloropropane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
cis-1,3-Dichloropropene	<0.030		0.030	ug/g	07-AUG-18	09-AUG-18	R4161900
trans-1,3-Dichloropropene	<0.030		0.030	ug/g	07-AUG-18	09-AUG-18	R4161900
1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g		09-AUG-18	
Ethylbenzene	<0.018		0.018	ug/g	07-AUG-18	09-AUG-18	R4161900
n-Hexane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Methyl Ethyl Ketone	<0.50		0.50	ug/g	07-AUG-18	09-AUG-18	R4161900
Methyl Isobutyl Ketone	<0.50		0.50	ug/g	07-AUG-18	09-AUG-18	R4161900
MTBE	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Styrene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Tetrachloroethylene	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Toluene	<0.080		0.080	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1,1-Trichloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
1,1,2-Trichloroethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Trichloroethylene	<0.010		0.010	ug/g	07-AUG-18	09-AUG-18	R4161900
Trichlorofluoromethane	<0.050		0.050	ug/g	07-AUG-18	09-AUG-18	R4161900
Vinyl chloride	<0.020		0.020	ug/g	07-AUG-18	09-AUG-18	R4161900
o-Xylene	<0.020		0.020	ug/g	07-AUG-18	09-AUG-18	R4161900
m+p-Xylenes	<0.030		0.030	ug/g	07-AUG-18	09-AUG-18	R4161900
Xylenes (Total)	<0.050		0.050	ug/g		09-AUG-18	
Surrogate: 4-Bromofluorobenzene	96.4		50-140	%	07-AUG-18	09-AUG-18	R4161900
Surrogate: 1,4-Difluorobenzene	99.2		50-140	%	07-AUG-18	09-AUG-18	R4161900
<b>Hydrocarbons</b>							
F1 (C6-C10)	<5.0		5.0	ug/g	07-AUG-18	09-AUG-18	R4161900
F1-BTEX	<5.0		5.0	ug/g		09-AUG-18	
F2 (C10-C16)	<10		10	ug/g	08-AUG-18	09-AUG-18	R4162198
F3 (C16-C34)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
F4 (C34-C50)	<50		50	ug/g	08-AUG-18	09-AUG-18	R4162198
Total Hydrocarbons (C6-C50)	<72		72	ug/g		09-AUG-18	
Chrom. to baseline at nC50	YES				08-AUG-18	09-AUG-18	R4162198

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.



## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2140121-23 17-67578 Sampled By: DRDC on 13-JUL-18 @ 12:07 Matrix: SOIL							
<b>Hydrocarbons</b>							
Surrogate: 2-Bromobenzotrifluoride	114.6		60-140	%	08-AUG-18	09-AUG-18	R4162198
Surrogate: 3,4-Dichlorotoluene	89.0		60-140	%	07-AUG-18	09-AUG-18	R4161900
<b>Perfluorinated Compounds</b>							
8:2 Fluorotelomer sulfonic acid(8:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
6:2 Fluorotelomer sulfonic acid(6:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
4:2 Fluorotelomer sulfonic acid(4:2 FTS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
10:2 Fluorotelomer sulfonic acid(10:2 F)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorobutane sulfonic acid (PFBS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorohexane sulfonic acid (PFHxS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorotridecanoic acid (PFTrDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorooctane sulfonic acid (PFOS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoropentane sulfonic acid (PFPeS)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Et PFO sulfonamide (EtFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Et PFO sulfonamidoethanol (EtFOSE)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Et PFO sulfonamidoacetic acid(EtFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Me PFO sulfonamide (MeFOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Me PFO sulfonamidoacetic acid(MeFOSAA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
N-Me PFO sulfonamidoethanol (MeFOSE)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoroheptane sulfonic acid (PFHpS)	<0.22	DLB	0.22	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorooctane sulfonamide (FOSA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorodecane sulfonic acid (PFDS)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorobutanoic acid (PFBA)	<300		300	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorodecanoic acid (PFDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorododecanoic acid (PFDoDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoroheptanoic acid (PFHpA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorohexanoic acid (PFHxA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorononanoic acid (PFNA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorooctanoic acid (PFOA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoropentanoic acid (PFPeA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluorotetradecanoic acid (PFTeDA)	<0.50		0.50	ug/kg	08-AUG-18	15-AUG-18	R4170115
Perfluoroundecanoic acid (PFUnDA)	<0.10		0.10	ug/kg	08-AUG-18	15-AUG-18	R4170115
<b>Polychlorinated Biphenyls</b>							
Aroclor 1242	<0.010		0.010	ug/g	10-AUG-18	10-AUG-18	R4162738
Aroclor 1248	<0.010		0.010	ug/g	10-AUG-18	10-AUG-18	R4162738
Aroclor 1254	<0.010		0.010	ug/g	10-AUG-18	10-AUG-18	R4162738
Aroclor 1260	<0.010		0.010	ug/g	10-AUG-18	10-AUG-18	R4162738
Total PCBs	<0.020		0.020	ug/g	10-AUG-18	10-AUG-18	R4162738
Surrogate: d14-Terphenyl	87.0		60-140	%	10-AUG-18	10-AUG-18	R4162738

\* Refer to Referenced Information for Qualifiers (if any) and Methodology.

## Reference Information

## QC Samples with Qualifiers &amp; Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	6:2 Fluorotelomer sulfonic acid(6:2 FT K		L2140121-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -3, -4, -5, -7, -8, -9
Laboratory Control Sample	Perfluoropentane sulfonic acid (PFPe <sub>5</sub> )	LCS-L	L2140121-22, -23
Method Blank	6:2 Fluorotelomer sulfonic acid(6:2 FT	MB-LOR	L2140121-22, -23
Matrix Spike	Chloride (Cl)	MS-B	L2140121-6
Matrix Spike	Barium (Ba)-Total	MS-B	L2140121-6
Matrix Spike	Boron (B)-Total	MS-B	L2140121-6
Matrix Spike	Calcium (Ca)-Total	MS-B	L2140121-6
Matrix Spike	Iron (Fe)-Total	MS-B	L2140121-6
Matrix Spike	Lithium (Li)-Total	MS-B	L2140121-6
Matrix Spike	Magnesium (Mg)-Total	MS-B	L2140121-6
Matrix Spike	Potassium (K)-Total	MS-B	L2140121-6
Matrix Spike	Sodium (Na)-Total	MS-B	L2140121-6
Matrix Spike	Strontium (Sr)-Total	MS-B	L2140121-6
Matrix Spike	Sulfur (S)-Total	MS-B	L2140121-6
Matrix Spike	Uranium (U)-Total	MS-B	L2140121-6
Matrix Spike	Ammonia as N	MS-B	L2140121-1, -2, -3, -4, -5
Matrix Spike	Perfluorobutanoic acid (PFBA)	MS-B	L2140121-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -20, -21, -3, -4, -5, -7, -8, -9
Matrix Spike	Perfluorobutanoic acid (PFBA)	MS-B	L2140121-22, -23
Duplicate	Zirconium (Zr)	RRQC	L2140121-10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -20, -21, -22, -23, -4, -5, -7, -8, -9
<b>Comments:</b>			RRQC: Zr added after original analysis.

## Qualifiers for Sample Submission Listed:

Qualifier	Description
ISCR:ST	Improper Sample Container Received: Subsamples Taken

## Qualifiers for Individual Samples Listed:

Sample Number	Client ID	Qualifier	Description
L2140121-1	17-67587-DEEP	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-10	17-67574	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-11	17-67574 DEEP	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-12	17-67646	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-13	17-67647	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-14	17-67648	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-15	17-67649	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-16	17-67650	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-17	17-67651	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-18	17-67652	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-19	17-67653	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-2	17-67575	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-20	17-67654	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-21	17-67646-DEEP	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-22	17-67648-DEEP	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-23	17-67578	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-3	17-67579	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-4	17-67570	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-5	17-67586	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-6	17-67708	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-7	17-67823	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-8	17-67587	ISCR:ST	Improper Sample Container Received: Subsamples Taken
L2140121-9	17-67581	ISCR:ST	Improper Sample Container Received: Subsamples Taken

## Sample Parameter Qualifier key listed:

Qualifier	Description
DLB	Detection Limit Raised. Analyte detected at comparable level in Method Blank.

## Reference Information

DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
K	Matrix Spike recovery outside ALS DQO due to sample matrix effects.
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PEHR	Parameter Exceeded Recommended Holding Time On Receipt: Proceed With Analysis As Requested.
RRQC	Refer to report remarks for information regarding this QC result.
SRU	Sample Received Unpreserved. Results may be biased low for indicated parameter(s)

### Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BR-IC-N-WT	Water	Bromide in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
CL-IC-N-WT	Water	Chloride by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).			
CL-R511-WT	Soil	Chloride-O.Reg 153/04 (July 2011)	EPA 300.0
5 grams of dried soil is mixed with 10 grams of distilled water for a minimum of 30 minutes. The extract is filtered and analyzed by ion chromatography.			
Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).			
CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199
This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.			
Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).			
F-IC-N-WT	Water	Fluoride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L
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## Reference Information

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT      Soil      F1-O.Reg 153/04 (July 2011)      E3398/CCME TIER 1-HS

Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F1-HS-511-WT      Water      F1-O.Reg 153/04 (July 2011)      E3398/CCME TIER 1-HS

Fraction F1 is determined by analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F2-F4-511-WT      Soil      F2-F4-O.Reg 153/04 (July 2011)      CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

### Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F2-F4-511-WT      Water      F2-F4-O.Reg 153/04 (July 2011)      EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

HG-200.2-CVAA-WT      Soil      Mercury in Soil by CVAAS      EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-T-CVAA-WT      Water      Total Mercury in Water by CVAAS      EPA 1631E (mod)

Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

# Reference Information

MET-200.2-CCMS-WT      Soil      Metals in Soil by CRC ICPMS      EPA 200.2/6020A (mod)

This method uses a heated strong acid digestion with HNO<sub>3</sub> and HCl and is intended to liberate metals that may be environmentally available. Silicate minerals are not solubilized. Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. Analysis is by Collision/Reaction Cell ICPMS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MET-T-CCMS-WT      Water      Total Metals in Water by CRC ICPMS      EPA 200.2/6020A (mod)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MOISTURE-WT      Soil      % Moisture      Gravimetric: Oven Dried

N-TOTKJ-COL-SK      Soil      Total Kjeldahl Nitrogen      CSSS (2008) 22.2.3

The soil is digested with sulfuric acid in the presence of CuSO<sub>4</sub> and K<sub>2</sub>SO<sub>4</sub> catalysts. Ammonia in the soil extract is determined colorimetrically at 660 nm.

N2N3-CALC-WT      Soil      Calculate from NO<sub>2</sub> + NO<sub>3</sub>      APHA 4110 B

NH3-WT      Soil      Ammonia as N      EPA 350.1

Sample is distilled into a solution of boric acid and measured colorimetrically.

NH3-WT      Water      Ammonia, Total as N      EPA 350.1

Sample is measured colorimetrically. When sample is turbid a distillation step is required, sample is distilled into a solution of boric acid and measured colorimetrically.

NO2-IC-WT      Water      Nitrite in Water by IC      EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO2-WT      Soil      Nitrite in Soil      EPA 300.0

5 grams of soil is mixed with 50 mL of distilled water for a minimum of 30 minutes. The extract is filtered and analyzed by ion chromatography.

NO3-IC-WT      Water      Nitrate in Water by IC      EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

NO3-WT      Soil      Nitrate in Soil (NO<sub>3</sub>-N)      EPA 300.0

5 grams of soil is mixed with 50 mL of distilled water for a minimum of 30 minutes. The extract is filtered and analyzed by ion chromatography.

P-T-COL-WT      Water      Total P in Water by Colour      APHA 4500-P PHOSPHORUS

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colorimetrically after persulphate digestion of the sample.

PCB-511-WT      Soil      PCB-O.Reg 153/04 (July 2011)      SW846 3510/8082

An aliquot of a solid sample is extracted with a solvent, extract is cleaned up and analyzed on the GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

PCB-511-WT      Water      PCB-O. Reg 153/04 (July 2011)      SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

PFAS-LL-EX-LCMS-WT      Soil      Perfluorinated Compounds by LC/MS-MS      MOECC E3506

Soil sample was extracted with alkaline organic solvent. Dilute organic extract with water (10% organic/water) then passed through SPE. Final extract of Perfluorinated compounds are analyzed by LC/MS-MS.

PH-WT      Soil      pH      MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

PH-WT      Water      pH      APHA 4500 H-Electrode

## Reference Information

Water samples are analyzed directly by a calibrated pH meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011). Holdtime for samples under this regulation is 28 days

PHENOLS-4AAP-WT      Soil      Phenol (4AAP)      EPA 9066

A manual method is used to distill the sample. The distillate is then buffered to pH 9.4 and reacts with 4AAP and alkaline ferricyanide to form a red complex which is measured colorimetrically.

PHENOLS-4AAP-WT      Water      Phenol (4AAP)      EPA 9066

An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a red complex which is measured colorimetrically.

PSA-75UM-SIEVE-WT      Soil      % Particles>75um (Coarse/Fine)      CARTER CSSS 55.4 (modified)

An air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (sodium metaphosphate). The sample is washed through a 200 mesh (75 µm) sieve. The retained mass of sample is used to determine % sand fraction. If the percentage of sand is >50%, the soil is considered to be coarse textured soil. If the percentage of sand is <50%, the soil is considered to be fine textured.

SO4-IC-N-WT      Water      Sulfate in Water by IC      EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

SO4-WT      Soil      Sulphate      EPA 300.0

5 grams of soil is mixed with 50 mL of distilled water for a minimum of 30 minutes. The extract is filtered and analyzed by ion chromatography.

TKN-WT      Water      Total Kjeldahl Nitrogen      APHA 4500-Norg D

This analysis is carried out using procedures adapted from APHA Method 4500-Norg "Nitrogen (Organic)". Total Kjeldahl Nitrogen is determined by sample digestion at 380 Celsius with analysis using an automated colorimetric method.

VOC-1,3-DCP-CALC-WT      Soil      Regulation 153 VOCs      SW8260B/SW8270C

VOC-1,3-DCP-CALC-WT      Water      Regulation 153 VOCs      SW8260B/SW8270C

VOC-511-HS-WT      Soil      VOC-O.Reg 153/04 (July 2011)      SW846 8260 (511)

Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

VOC-511-HS-WT      Water      VOC by GCMS HS O.Reg 153/04 (July 2011)      SW846 8260

Liquid samples are analyzed by headspace GC/MSD.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

XYLENES-SUM-CALC-WT      Soil      Sum of Xylene Isomer Concentrations      CALCULATION

Total xylenes represents the sum of o-xylene and m&p-xylene.

XYLENES-SUM-CALC-WT      Water      Sum of Xylene Isomer Concentrations      CALCULATION

Total xylenes represents the sum of o-xylene and m&p-xylene.

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\*\* ALS test methods may incorporate modifications from specified reference methods to improve performance.

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*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

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Laboratory Definition Code	Laboratory Location
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

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**Chain of Custody Numbers:**

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## Reference Information

### 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 ww - milligrams per kilogram based on wet weight of sample*

*mg/kg lwt - milligrams per kilogram based on lipid weight of sample*

*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.*

## Quality Control Report

Workorder: L2140121

Report Date: 22-AUG-18

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>BR-IC-N-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4160753</b>							
<b>WG2842135-20</b>	<b>DUP</b>	<b>WG2842135-18</b>						
Bromide (Br)		<0.10	<0.10	RPD-NA	mg/L	N/A	20	07-AUG-18
<b>WG2842135-17</b>	<b>LCS</b>							
Bromide (Br)			98.3		%		85-115	07-AUG-18
<b>WG2842135-16</b>	<b>MB</b>							
Bromide (Br)			<0.10		mg/L		0.1	07-AUG-18
<b>WG2842135-19</b>	<b>MS</b>	<b>WG2842135-18</b>						
Bromide (Br)			101.7		%		75-125	07-AUG-18
<b>CL-IC-N-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4160753</b>							
<b>WG2842135-20</b>	<b>DUP</b>	<b>WG2842135-18</b>						
Chloride (Cl)		101	101		mg/L	0.0	20	07-AUG-18
<b>WG2842135-17</b>	<b>LCS</b>							
Chloride (Cl)			103.2		%		90-110	07-AUG-18
<b>WG2842135-16</b>	<b>MB</b>							
Chloride (Cl)			<0.50		mg/L		0.5	07-AUG-18
<b>WG2842135-19</b>	<b>MS</b>	<b>WG2842135-18</b>						
Chloride (Cl)			N/A	MS-B	%		-	07-AUG-18
<b>F-IC-N-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4163463</b>							
<b>WG2844737-4</b>	<b>DUP</b>	<b>WG2844737-3</b>						
Fluoride (F)		0.090	0.091		mg/L	0.6	20	09-AUG-18
<b>WG2844737-2</b>	<b>LCS</b>							
Fluoride (F)			100.1		%		90-110	09-AUG-18
<b>WG2844737-1</b>	<b>MB</b>							
Fluoride (F)			<0.020		mg/L		0.02	09-AUG-18
<b>WG2844737-5</b>	<b>MS</b>	<b>WG2844737-3</b>						
Fluoride (F)			99.6		%		75-125	09-AUG-18
<b>F1-HS-511-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4158447</b>							
<b>WG2835873-4</b>	<b>DUP</b>	<b>WG2835873-3</b>						
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	03-AUG-18
<b>WG2835873-1</b>	<b>LCS</b>							
F1 (C6-C10)			103.5		%		80-120	03-AUG-18
<b>WG2835873-2</b>	<b>MB</b>							
F1 (C6-C10)			<25		ug/L		25	03-AUG-18
Surrogate: 3,4-Dichlorotoluene			97.3		%		60-140	03-AUG-18



## Quality Control Report

Workorder: L2140121

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>F1-HS-511-WT</b>	<b>Water</b>							
<b>Batch</b>	<b>R4158447</b>							
<b>WG2835873-5 MS</b>		<b>WG2835873-3</b>						
F1 (C6-C10)			88.9		%		60-140	03-AUG-18
<b>F2-F4-511-WT</b>	<b>Water</b>							
<b>Batch</b>	<b>R4161141</b>							
<b>WG2843120-2 LCS</b>								
F2 (C10-C16)			76.8		%		70-130	08-AUG-18
F3 (C16-C34)			86.7		%		70-130	08-AUG-18
F4 (C34-C50)			86.7		%		70-130	08-AUG-18
<b>WG2843120-1 MB</b>								
F2 (C10-C16)			<100		ug/L		100	08-AUG-18
F3 (C16-C34)			<250		ug/L		250	08-AUG-18
F4 (C34-C50)			<250		ug/L		250	08-AUG-18
Surrogate: 2-Bromobenzotrifluoride			86.0		%		60-140	08-AUG-18
<b>HG-T-CVAA-WT</b>	<b>Water</b>							
<b>Batch</b>	<b>R4160906</b>							
<b>WG2843453-3 DUP</b>		<b>L2140864-1</b>						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	08-AUG-18
<b>WG2843453-2 LCS</b>								
Mercury (Hg)-Total			102.0		%		80-120	08-AUG-18
<b>WG2843453-1 MB</b>								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	08-AUG-18
<b>WG2843453-4 MS</b>		<b>L2140864-2</b>						
Mercury (Hg)-Total			94.8		%		70-130	08-AUG-18
<b>MET-T-CCMS-WT</b>	<b>Water</b>							
<b>Batch</b>	<b>R4159686</b>							
<b>WG2840508-4 DUP</b>		<b>WG2840508-3</b>						
Aluminum (Al)-Total		0.0718	0.0719		mg/L	0.2	20	03-AUG-18
Antimony (Sb)-Total		0.00016	0.00015		mg/L	5.6	20	03-AUG-18
Arsenic (As)-Total		0.00121	0.00120		mg/L	0.6	20	03-AUG-18
Barium (Ba)-Total		0.0291	0.0285		mg/L	2.0	20	03-AUG-18
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-18
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-18
Boron (B)-Total		0.228	0.234		mg/L	2.6	20	03-AUG-18
Cadmium (Cd)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	03-AUG-18
Calcium (Ca)-Total		118	118		mg/L	0.4	20	03-AUG-18

## Quality Control Report

Workorder: L2140121

Report Date: 22-AUG-18

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Client: Defence Research and Development Canada (Ottawa)  
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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-T-CCMS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4159686</b>							
<b>WG2840508-4</b>	<b>DUP</b>	<b>WG2840508-3</b>						
Chromium (Cr)-Total		0.00084	<0.00050	RPD-NA	mg/L	N/A	20	03-AUG-18
Cesium (Cs)-Total		0.000011	0.000012		mg/L	9.1	20	03-AUG-18
Cobalt (Co)-Total		0.00025	0.00025		mg/L	2.5	20	03-AUG-18
Copper (Cu)-Total		0.0023	0.0022		mg/L	5.7	20	03-AUG-18
Iron (Fe)-Total		0.345	0.331		mg/L	4.1	20	03-AUG-18
Lead (Pb)-Total		0.000107	0.000097		mg/L	9.4	20	03-AUG-18
Lithium (Li)-Total		0.0320	0.0323		mg/L	0.8	20	03-AUG-18
Magnesium (Mg)-Total		48.0	49.2		mg/L	2.5	20	03-AUG-18
Manganese (Mn)-Total		0.00878	0.00895		mg/L	1.9	20	03-AUG-18
Molybdenum (Mo)-Total		0.00106	0.000902		mg/L	16	20	03-AUG-18
Nickel (Ni)-Total		0.00231	0.00232		mg/L	0.4	20	03-AUG-18
Phosphorus (P)-Total		0.065	0.092	J	mg/L	0.028	0.1	03-AUG-18
Potassium (K)-Total		7.68	7.77		mg/L	1.2	20	03-AUG-18
Rubidium (Rb)-Total		0.00108	0.00102		mg/L	5.8	20	03-AUG-18
Selenium (Se)-Total		0.000161	0.000157		mg/L	2.3	20	03-AUG-18
Silicon (Si)-Total		0.37	0.33		mg/L	12	20	03-AUG-18
Silver (Ag)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	03-AUG-18
Sodium (Na)-Total		169	167		mg/L	1.2	20	03-AUG-18
Strontium (Sr)-Total		0.641	0.650		mg/L	1.3	20	03-AUG-18
Sulfur (S)-Total		101	98.2		mg/L	3.1	25	03-AUG-18
Thallium (Tl)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	03-AUG-18
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	03-AUG-18
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	03-AUG-18
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-18
Titanium (Ti)-Total		0.00194	0.00186		mg/L	4.3	20	03-AUG-18
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	03-AUG-18
Uranium (U)-Total		0.00310	0.00321		mg/L	3.3	20	03-AUG-18
Vanadium (V)-Total		0.00051	<0.00050	RPD-NA	mg/L	N/A	20	03-AUG-18
Zinc (Zn)-Total		0.0067	0.0051	J	mg/L	0.0016	0.006	03-AUG-18
Zirconium (Zr)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	03-AUG-18
<b>WG2840508-2</b>	<b>LCS</b>							
Aluminum (Al)-Total			103.7		%		80-120	03-AUG-18
Antimony (Sb)-Total			112.2		%		80-120	03-AUG-18

## Quality Control Report

Workorder: L2140121

Report Date: 22-AUG-18

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R4159686							
WG2840508-2	LCS							
Arsenic (As)-Total			103.6		%		80-120	03-AUG-18
Barium (Ba)-Total			105.2		%		80-120	03-AUG-18
Beryllium (Be)-Total			104.2		%		80-120	03-AUG-18
Bismuth (Bi)-Total			100.8		%		80-120	03-AUG-18
Boron (B)-Total			95.8		%		80-120	03-AUG-18
Cadmium (Cd)-Total			101.7		%		80-120	03-AUG-18
Calcium (Ca)-Total			101.1		%		80-120	03-AUG-18
Chromium (Cr)-Total			98.7		%		80-120	03-AUG-18
Cesium (Cs)-Total			113.1		%		80-120	03-AUG-18
Cobalt (Co)-Total			100.2		%		80-120	03-AUG-18
Copper (Cu)-Total			100.4		%		80-120	03-AUG-18
Iron (Fe)-Total			98.7		%		80-120	03-AUG-18
Lead (Pb)-Total			107.9		%		80-120	03-AUG-18
Lithium (Li)-Total			105.6		%		80-120	03-AUG-18
Magnesium (Mg)-Total			99.1		%		80-120	03-AUG-18
Manganese (Mn)-Total			102.2		%		80-120	03-AUG-18
Molybdenum (Mo)-Total			105.0		%		80-120	03-AUG-18
Nickel (Ni)-Total			99.7		%		80-120	03-AUG-18
Phosphorus (P)-Total			104.6		%		70-130	03-AUG-18
Potassium (K)-Total			99.2		%		80-120	03-AUG-18
Rubidium (Rb)-Total			106.5		%		80-120	03-AUG-18
Selenium (Se)-Total			96.2		%		80-120	03-AUG-18
Silicon (Si)-Total			104.8		%		60-140	03-AUG-18
Silver (Ag)-Total			112.0		%		80-120	03-AUG-18
Sodium (Na)-Total			100.3		%		80-120	03-AUG-18
Strontium (Sr)-Total			106.4		%		80-120	03-AUG-18
Sulfur (S)-Total			93.4		%		80-120	03-AUG-18
Thallium (Tl)-Total			106.1		%		80-120	03-AUG-18
Tellurium (Te)-Total			109.3		%		80-120	03-AUG-18
Thorium (Th)-Total			105.4		%		70-130	03-AUG-18
Tin (Sn)-Total			102.8		%		80-120	03-AUG-18
Titanium (Ti)-Total			98.0		%		80-120	03-AUG-18
Tungsten (W)-Total			105.8		%		80-120	03-AUG-18

## Quality Control Report

Workorder: L2140121

Report Date: 22-AUG-18

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WT		Water						
Batch	R4159686							
WG2840508-2		LCS						
Uranium (U)-Total			107.5		%		80-120	03-AUG-18
Vanadium (V)-Total			101.9		%		80-120	03-AUG-18
Zinc (Zn)-Total			97.5		%		80-120	03-AUG-18
Zirconium (Zr)-Total			101.8		%		80-120	03-AUG-18
WG2840508-1		MB						
Aluminum (Al)-Total			<0.0050		mg/L		0.005	03-AUG-18
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	03-AUG-18
Arsenic (As)-Total			<0.00010		mg/L		0.0001	03-AUG-18
Barium (Ba)-Total			<0.00010		mg/L		0.0001	03-AUG-18
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	03-AUG-18
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	03-AUG-18
Boron (B)-Total			<0.010		mg/L		0.01	03-AUG-18
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	03-AUG-18
Calcium (Ca)-Total			<0.050		mg/L		0.05	03-AUG-18
Chromium (Cr)-Total			<0.00050		mg/L		0.0005	03-AUG-18
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	03-AUG-18
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	03-AUG-18
Copper (Cu)-Total			<0.0010		mg/L		0.001	03-AUG-18
Iron (Fe)-Total			<0.010		mg/L		0.01	03-AUG-18
Lead (Pb)-Total			<0.000050		mg/L		0.00005	03-AUG-18
Lithium (Li)-Total			<0.0010		mg/L		0.001	03-AUG-18
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	03-AUG-18
Manganese (Mn)-Total			<0.00050		mg/L		0.0005	03-AUG-18
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	03-AUG-18
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	03-AUG-18
Phosphorus (P)-Total			<0.050		mg/L		0.05	03-AUG-18
Potassium (K)-Total			<0.050		mg/L		0.05	03-AUG-18
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	03-AUG-18
Selenium (Se)-Total			<0.000050		mg/L		0.00005	03-AUG-18
Silicon (Si)-Total			<0.10		mg/L		0.1	03-AUG-18
Silver (Ag)-Total			<0.000050		mg/L		0.00005	03-AUG-18
Sodium (Na)-Total			<0.050		mg/L		0.05	03-AUG-18
Strontium (Sr)-Total			<0.0010		mg/L		0.001	03-AUG-18
Sulfur (S)-Total			<0.50		mg/L		0.5	03-AUG-18

## Quality Control Report

Workorder: L2140121

Report Date: 22-AUG-18

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Client: Defence Research and Development Canada (Ottawa)  
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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-T-CCMS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4159686</b>							
<b>WG2840508-1 MB</b>								
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	03-AUG-18
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	03-AUG-18
Thorium (Th)-Total			<0.00010		mg/L		0.0001	03-AUG-18
Tin (Sn)-Total			<0.00010		mg/L		0.0001	03-AUG-18
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	03-AUG-18
Tungsten (W)-Total			<0.00010		mg/L		0.0001	03-AUG-18
Uranium (U)-Total			<0.000010		mg/L		0.00001	03-AUG-18
Vanadium (V)-Total			<0.00050		mg/L		0.0005	03-AUG-18
Zinc (Zn)-Total			<0.0030		mg/L		0.003	03-AUG-18
Zirconium (Zr)-Total			<0.00030		mg/L		0.0003	03-AUG-18
<b>WG2840508-5 MS</b>		<b>WG2840508-3</b>						
Aluminum (Al)-Total			92.4		%		70-130	03-AUG-18
Antimony (Sb)-Total			105.9		%		70-130	03-AUG-18
Arsenic (As)-Total			101.1		%		70-130	03-AUG-18
Barium (Ba)-Total			N/A	MS-B	%		-	03-AUG-18
Beryllium (Be)-Total			101.2		%		70-130	03-AUG-18
Bismuth (Bi)-Total			92.8		%		70-130	03-AUG-18
Boron (B)-Total			N/A	MS-B	%		-	03-AUG-18
Cadmium (Cd)-Total			96.4		%		70-130	03-AUG-18
Calcium (Ca)-Total			N/A	MS-B	%		-	03-AUG-18
Chromium (Cr)-Total			91.2		%		70-130	03-AUG-18
Cesium (Cs)-Total			107.5		%		70-130	03-AUG-18
Cobalt (Co)-Total			94.4		%		70-130	03-AUG-18
Copper (Cu)-Total			90.0		%		70-130	03-AUG-18
Iron (Fe)-Total			N/A	MS-B	%		-	03-AUG-18
Lead (Pb)-Total			98.1		%		70-130	03-AUG-18
Lithium (Li)-Total			N/A	MS-B	%		-	03-AUG-18
Magnesium (Mg)-Total			N/A	MS-B	%		-	03-AUG-18
Manganese (Mn)-Total			88.3		%		70-130	03-AUG-18
Molybdenum (Mo)-Total			101.0		%		70-130	03-AUG-18
Nickel (Ni)-Total			90.7		%		70-130	03-AUG-18
Phosphorus (P)-Total			99.6		%		70-130	03-AUG-18
Potassium (K)-Total			N/A	MS-B	%		-	03-AUG-18
Rubidium (Rb)-Total			100.7		%		70-130	03-AUG-18

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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-T-CCMS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4159686</b>							
<b>WG2840508-5 MS</b>		<b>WG2840508-3</b>						
Selenium (Se)-Total			96.8		%		70-130	03-AUG-18
Silicon (Si)-Total			91.4		%		70-130	03-AUG-18
Silver (Ag)-Total			101.6		%		70-130	03-AUG-18
Sodium (Na)-Total			N/A	MS-B	%		-	03-AUG-18
Strontium (Sr)-Total			N/A	MS-B	%		-	03-AUG-18
Sulfur (S)-Total			N/A	MS-B	%		-	03-AUG-18
Thallium (Tl)-Total			98.2		%		70-130	03-AUG-18
Tellurium (Te)-Total			104.7		%		70-130	03-AUG-18
Thorium (Th)-Total			96.0		%		70-130	03-AUG-18
Tin (Sn)-Total			99.3		%		70-130	03-AUG-18
Titanium (Ti)-Total			97.9		%		70-130	03-AUG-18
Tungsten (W)-Total			102.0		%		70-130	03-AUG-18
Uranium (U)-Total			N/A	MS-B	%		-	03-AUG-18
Vanadium (V)-Total			99.1		%		70-130	03-AUG-18
Zinc (Zn)-Total			79.8		%		70-130	03-AUG-18
Zirconium (Zr)-Total			89.2		%		70-130	03-AUG-18
<b>NH3-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4158786</b>							
<b>WG2841135-11 DUP</b>		<b>L2139231-21</b>						
Ammonia, Total (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	03-AUG-18
<b>WG2841135-10 LCS</b>								
Ammonia, Total (as N)			100.6		%		85-115	03-AUG-18
<b>WG2841135-9 MB</b>								
Ammonia, Total (as N)			<0.020		mg/L		0.02	03-AUG-18
<b>WG2841135-12 MS</b>		<b>L2139231-21</b>						
Ammonia, Total (as N)			92.0		%		75-125	03-AUG-18
<b>NO2-IC-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4160753</b>							
<b>WG2842135-20 DUP</b>		<b>WG2842135-18</b>						
Nitrite (as N)		<0.010	<0.010	RPD-NA	mg/L	N/A	25	07-AUG-18
<b>WG2842135-17 LCS</b>								
Nitrite (as N)			101.1		%		70-130	07-AUG-18
<b>WG2842135-16 MB</b>								
Nitrite (as N)			<0.010		mg/L		0.01	07-AUG-18
<b>WG2842135-19 MS</b>		<b>WG2842135-18</b>						

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>NO2-IC-WT</b>								
<b>Water</b>								
<b>Batch</b>	<b>R4160753</b>							
<b>WG2842135-19 MS</b>		<b>WG2842135-18</b>						
Nitrite (as N)			99.6		%		70-130	07-AUG-18
<b>NO3-IC-WT</b>								
<b>Water</b>								
<b>Batch</b>	<b>R4160753</b>							
<b>WG2842135-20 DUP</b>		<b>WG2842135-18</b>						
Nitrate (as N)		0.814	0.814		mg/L	0.0	25	07-AUG-18
<b>WG2842135-17 LCS</b>								
Nitrate (as N)			102.2		%		70-130	07-AUG-18
<b>WG2842135-16 MB</b>								
Nitrate (as N)			<0.020		mg/L		0.02	07-AUG-18
<b>WG2842135-19 MS</b>		<b>WG2842135-18</b>						
Nitrate (as N)			105.5		%		70-130	07-AUG-18
<b>P-T-COL-WT</b>								
<b>Water</b>								
<b>Batch</b>	<b>R4160552</b>							
<b>WG2843081-5 DUP</b>		<b>L2140064-1</b>						
Phosphorus, Total		0.0913	0.0925		mg/L	1.3	20	08-AUG-18
<b>WG2843081-2 LCS</b>								
Phosphorus, Total			90.6		%		80-120	08-AUG-18
<b>WG2843081-1 MB</b>								
Phosphorus, Total			<0.0030		mg/L		0.003	08-AUG-18
<b>WG2843081-6 MS</b>		<b>L2140064-1</b>						
Phosphorus, Total			85.0		%		70-130	08-AUG-18
<b>PCB-511-WT</b>								
<b>Water</b>								
<b>Batch</b>	<b>R4162149</b>							
<b>WG2840601-2 LCS</b>								
Aroclor 1242			69.5		%		60-140	09-AUG-18
Aroclor 1248			96.2		%		60-140	09-AUG-18
Aroclor 1254			79.1		%		60-140	09-AUG-18
Aroclor 1260			88.6		%		60-140	09-AUG-18
<b>WG2840601-3 LCSD</b>		<b>WG2840601-2</b>						
Aroclor 1242		69.5	79.6		%	14	50	09-AUG-18
Aroclor 1248		96.2	96.2		%	0.0	50	09-AUG-18
Aroclor 1254		79.1	87.4		%	10	50	09-AUG-18
Aroclor 1260		88.6	95.4		%	7.4	50	09-AUG-18
<b>WG2840601-1 MB</b>								
Aroclor 1242			<0.020		ug/L		0.02	09-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT		Water						
Batch	R4162149							
WG2840601-1	MB							
Aroclor 1248			<0.020		ug/L		0.02	09-AUG-18
Aroclor 1254			<0.020		ug/L		0.02	09-AUG-18
Aroclor 1260			<0.020		ug/L		0.02	09-AUG-18
Surrogate: 2-fluorobiphenyl			85.1		%		50-150	09-AUG-18
PH-WT		Water						
Batch	R4157207							
WG2839342-12	DUP	WG2839342-11						
pH		4.11	4.10	J	pH units	0.00	0.2	02-AUG-18
WG2839342-10	LCS							
pH			7.01		pH units		6.9-7.1	02-AUG-18
PHENOLS-4AAP-WT		Water						
Batch	R4158731							
WG2840985-3	DUP	L2139949-2						
Phenols (4AAP)		0.0023	0.0025		mg/L	9.6	20	03-AUG-18
WG2840985-2	LCS							
Phenols (4AAP)			97.1		%		85-115	03-AUG-18
WG2840985-1	MB							
Phenols (4AAP)			<0.0010		mg/L		0.001	03-AUG-18
WG2840985-4	MS	L2139949-2						
Phenols (4AAP)			101.2		%		75-125	03-AUG-18
SO4-IC-N-WT		Water						
Batch	R4160753							
WG2842135-20	DUP	WG2842135-18						
Sulfate (SO4)		30.8	30.8		mg/L	0.0	20	07-AUG-18
WG2842135-17	LCS							
Sulfate (SO4)			103.8		%		90-110	07-AUG-18
WG2842135-16	MB							
Sulfate (SO4)			<0.30		mg/L		0.3	07-AUG-18
WG2842135-19	MS	WG2842135-18						
Sulfate (SO4)			104.6		%		75-125	07-AUG-18
TKN-WT		Water						
Batch	R4160171							
WG2840636-3	DUP	L2139231-21						
Total Kjeldahl Nitrogen		<0.15	<0.15	RPD-NA	mg/L	N/A	20	07-AUG-18
WG2840636-2	LCS							
Total Kjeldahl Nitrogen			103.6		%		75-125	07-AUG-18



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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>TKN-WT</b>								
<b>Water</b>								
<b>Batch</b>	<b>R4160171</b>							
<b>WG2840636-1 MB</b>								
Total Kjeldahl Nitrogen			<0.15		mg/L		0.15	07-AUG-18
<b>WG2840636-4 MS</b>	<b>L2139231-21</b>							
Total Kjeldahl Nitrogen			123.5		%		70-130	07-AUG-18
<b>VOC-511-HS-WT</b>								
<b>Water</b>								
<b>Batch</b>	<b>R4158447</b>							
<b>WG2835873-4 DUP</b>	<b>WG2835873-3</b>							
1,1,1,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,1,2,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	03-AUG-18
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	03-AUG-18
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
Bromodichloromethane		3.1	3.2		ug/L	1.6	30	03-AUG-18
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	03-AUG-18
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	03-AUG-18
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
Chloroform		8.2	8.2		ug/L	0.0	30	03-AUG-18
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	03-AUG-18
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	03-AUG-18
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	03-AUG-18
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	03-AUG-18

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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4158447</b>							
<b>WG2835873-4 DUP</b>		<b>WG2835873-3</b>						
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	03-AUG-18
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	03-AUG-18
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	03-AUG-18
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	03-AUG-18
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	03-AUG-18
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
trans-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
trans-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	03-AUG-18
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	03-AUG-18
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	03-AUG-18
<b>WG2835873-1 LCS</b>								
1,1,1,2-Tetrachloroethane			103.0		%		70-130	03-AUG-18
1,1,2,2-Tetrachloroethane			95.1		%		70-130	03-AUG-18
1,1,1-Trichloroethane			105.2		%		70-130	03-AUG-18
1,1,2-Trichloroethane			102.4		%		70-130	03-AUG-18
1,1-Dichloroethane			107.7		%		70-130	03-AUG-18
1,1-Dichloroethylene			102.1		%		70-130	03-AUG-18
1,2-Dibromoethane			101.8		%		70-130	03-AUG-18
1,2-Dichlorobenzene			103.9		%		70-130	03-AUG-18
1,2-Dichloroethane			104.6		%		70-130	03-AUG-18
1,2-Dichloropropane			102.7		%		70-130	03-AUG-18
1,3-Dichlorobenzene			103.2		%		70-130	03-AUG-18
1,4-Dichlorobenzene			103.0		%		70-130	03-AUG-18
Acetone			107.1		%		60-140	03-AUG-18
Benzene			104.6		%		70-130	03-AUG-18
Bromodichloromethane			105.0		%		70-130	03-AUG-18
Bromoform			97.5		%		70-130	03-AUG-18
Bromomethane			85.6		%		60-140	03-AUG-18
Carbon tetrachloride			105.3		%		70-130	03-AUG-18
Chlorobenzene			102.9		%		70-130	03-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4158447</b>							
<b>WG2835873-1</b>	<b>LCS</b>							
Chloroform			105.6		%		70-130	03-AUG-18
cis-1,2-Dichloroethylene			103.6		%		70-130	03-AUG-18
cis-1,3-Dichloropropene			97.7		%		70-130	03-AUG-18
Dibromochloromethane			101.9		%		70-130	03-AUG-18
Dichlorodifluoromethane			133.3		%		50-140	03-AUG-18
Ethylbenzene			101.2		%		70-130	03-AUG-18
n-Hexane			127.2		%		70-130	03-AUG-18
m+p-Xylenes			101.0		%		70-130	03-AUG-18
Methyl Ethyl Ketone			94.5		%		60-140	03-AUG-18
Methyl Isobutyl Ketone			95.6		%		60-140	03-AUG-18
Methylene Chloride			104.7		%		70-130	03-AUG-18
MTBE			106.9		%		70-130	03-AUG-18
o-Xylene			99.7		%		70-130	03-AUG-18
Styrene			97.6		%		70-130	03-AUG-18
Tetrachloroethylene			106.3		%		70-130	03-AUG-18
Toluene			103.0		%		70-130	03-AUG-18
trans-1,2-Dichloroethylene			103.4		%		70-130	03-AUG-18
trans-1,3-Dichloropropene			98.1		%		70-130	03-AUG-18
Trichloroethylene			107.7		%		70-130	03-AUG-18
Trichlorofluoromethane			116.0		%		60-140	03-AUG-18
Vinyl chloride			104.5		%		60-140	03-AUG-18
<b>WG2835873-2</b>	<b>MB</b>							
1,1,1,2-Tetrachloroethane			<0.50		ug/L		0.5	03-AUG-18
1,1,2,2-Tetrachloroethane			<0.50		ug/L		0.5	03-AUG-18
1,1,1-Trichloroethane			<0.50		ug/L		0.5	03-AUG-18
1,1,2-Trichloroethane			<0.50		ug/L		0.5	03-AUG-18
1,1-Dichloroethane			<0.50		ug/L		0.5	03-AUG-18
1,1-Dichloroethylene			<0.50		ug/L		0.5	03-AUG-18
1,2-Dibromoethane			<0.20		ug/L		0.2	03-AUG-18
1,2-Dichlorobenzene			<0.50		ug/L		0.5	03-AUG-18
1,2-Dichloroethane			<0.50		ug/L		0.5	03-AUG-18
1,2-Dichloropropane			<0.50		ug/L		0.5	03-AUG-18
1,3-Dichlorobenzene			<0.50		ug/L		0.5	03-AUG-18
1,4-Dichlorobenzene			<0.50		ug/L		0.5	03-AUG-18

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4158447</b>							
<b>WG2835873-2 MB</b>								
Acetone			<30		ug/L		30	03-AUG-18
Benzene			<0.50		ug/L		0.5	03-AUG-18
Bromodichloromethane			<2.0		ug/L		2	03-AUG-18
Bromoform			<5.0		ug/L		5	03-AUG-18
Bromomethane			<0.50		ug/L		0.5	03-AUG-18
Carbon tetrachloride			<0.20		ug/L		0.2	03-AUG-18
Chlorobenzene			<0.50		ug/L		0.5	03-AUG-18
Chloroform			<1.0		ug/L		1	03-AUG-18
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	03-AUG-18
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	03-AUG-18
Dibromochloromethane			<2.0		ug/L		2	03-AUG-18
Dichlorodifluoromethane			<2.0		ug/L		2	03-AUG-18
Ethylbenzene			<0.50		ug/L		0.5	03-AUG-18
n-Hexane			<0.50		ug/L		0.5	03-AUG-18
m+p-Xylenes			<0.40		ug/L		0.4	03-AUG-18
Methyl Ethyl Ketone			<20		ug/L		20	03-AUG-18
Methyl Isobutyl Ketone			<20		ug/L		20	03-AUG-18
Methylene Chloride			<5.0		ug/L		5	03-AUG-18
MTBE			<2.0		ug/L		2	03-AUG-18
o-Xylene			<0.30		ug/L		0.3	03-AUG-18
Styrene			<0.50		ug/L		0.5	03-AUG-18
Tetrachloroethylene			<0.50		ug/L		0.5	03-AUG-18
Toluene			<0.50		ug/L		0.5	03-AUG-18
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	03-AUG-18
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	03-AUG-18
Trichloroethylene			<0.50		ug/L		0.5	03-AUG-18
Trichlorofluoromethane			<5.0		ug/L		5	03-AUG-18
Vinyl chloride			<0.50		ug/L		0.5	03-AUG-18
Surrogate: 1,4-Difluorobenzene			99.2		%		70-130	03-AUG-18
Surrogate: 4-Bromofluorobenzene			98.2		%		70-130	03-AUG-18
<b>WG2835873-5 MS</b>		<b>WG2835873-3</b>						
1,1,1,2-Tetrachloroethane			104.9		%		50-140	03-AUG-18
1,1,2,2-Tetrachloroethane			94.5		%		50-140	03-AUG-18
1,1,1-Trichloroethane			108.1		%		50-140	03-AUG-18

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3701 Carling Avenue  
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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4158447</b>							
<b>WG2835873-5 MS</b>		<b>WG2835873-3</b>						
1,1,2-Trichloroethane			101.5		%		50-140	03-AUG-18
1,1-Dichloroethane			109.8		%		50-140	03-AUG-18
1,1-Dichloroethylene			103.3		%		50-140	03-AUG-18
1,2-Dibromoethane			100.6		%		50-140	03-AUG-18
1,2-Dichlorobenzene			106.3		%		50-140	03-AUG-18
1,2-Dichloroethane			104.2		%		50-140	03-AUG-18
1,2-Dichloropropane			104.1		%		50-140	03-AUG-18
1,3-Dichlorobenzene			106.9		%		50-140	03-AUG-18
1,4-Dichlorobenzene			106.6		%		50-140	03-AUG-18
Acetone			102.7		%		50-140	03-AUG-18
Benzene			106.9		%		50-140	03-AUG-18
Bromodichloromethane			106.1		%		50-140	03-AUG-18
Bromoform			96.7		%		50-140	03-AUG-18
Bromomethane			86.6		%		50-140	03-AUG-18
Carbon tetrachloride			108.2		%		50-140	03-AUG-18
Chlorobenzene			105.0		%		50-140	03-AUG-18
Chloroform			107.3		%		50-140	03-AUG-18
cis-1,2-Dichloroethylene			105.8		%		50-140	03-AUG-18
cis-1,3-Dichloropropene			107.6		%		50-140	03-AUG-18
Dibromochloromethane			101.6		%		50-140	03-AUG-18
Dichlorodifluoromethane			128.5		%		50-140	03-AUG-18
Ethylbenzene			104.0		%		50-140	03-AUG-18
n-Hexane			126.9		%		50-140	03-AUG-18
m+p-Xylenes			104.5		%		50-140	03-AUG-18
Methyl Ethyl Ketone			92.4		%		50-140	03-AUG-18
Methyl Isobutyl Ketone			92.8		%		50-140	03-AUG-18
Methylene Chloride			104.6		%		50-140	03-AUG-18
MTBE			109.2		%		50-140	03-AUG-18
o-Xylene			102.0		%		50-140	03-AUG-18
Styrene			99.0		%		50-140	03-AUG-18
Tetrachloroethylene			109.3		%		50-140	03-AUG-18
Toluene			105.1		%		50-140	03-AUG-18
trans-1,2-Dichloroethylene			106.0		%		50-140	03-AUG-18

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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R4158447</b>							
<b>WG2835873-5</b>	<b>MS</b>	<b>WG2835873-3</b>						
trans-1,3-Dichloropropene			102.6		%		50-140	03-AUG-18
Trichloroethylene			111.4		%		50-140	03-AUG-18
Trichlorofluoromethane			116.6		%		50-140	03-AUG-18
Vinyl chloride			103.9		%		50-140	03-AUG-18
<b>CL-R511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4163856</b>							
<b>WG2844471-3</b>	<b>CRM</b>	<b>AN-CRM-WT</b>						
Chloride			95.6		%		70-130	09-AUG-18
<b>WG2844472-3</b>	<b>CRM</b>	<b>AN-CRM-WT</b>						
Chloride			97.7		%		70-130	09-AUG-18
<b>WG2844471-4</b>	<b>DUP</b>	<b>L2140121-10</b>						
Chloride		2210	2230		ug/g	0.8	30	09-AUG-18
<b>WG2844472-4</b>	<b>DUP</b>	<b>L2140121-22</b>						
Chloride		5210	5300		ug/g	1.6	30	09-AUG-18
<b>WG2844471-2</b>	<b>LCS</b>							
Chloride			98.5		%		80-120	09-AUG-18
<b>WG2844472-2</b>	<b>LCS</b>							
Chloride			99.2		%		80-120	09-AUG-18
<b>WG2844471-1</b>	<b>MB</b>							
Chloride			<5.0		ug/g		5	09-AUG-18
<b>WG2844472-1</b>	<b>MB</b>							
Chloride			<5.0		ug/g		5	09-AUG-18
<b>CR-CR6-IC-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160920</b>							
<b>WG2842670-1</b>	<b>CRM</b>	<b>WT-SQC012</b>						
Chromium, Hexavalent			92.5		%		70-130	08-AUG-18
<b>WG2842670-4</b>	<b>DUP</b>	<b>L2140970-15</b>						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	08-AUG-18
<b>WG2842670-3</b>	<b>LCS</b>							
Chromium, Hexavalent			90.2		%		80-120	08-AUG-18
<b>WG2842670-2</b>	<b>MB</b>							
Chromium, Hexavalent			<0.20		ug/g		0.2	08-AUG-18
<b>Batch</b>	<b>R4162016</b>							
<b>WG2844016-3</b>	<b>CRM</b>	<b>WT-SQC012</b>						
Chromium, Hexavalent			91.1		%		70-130	09-AUG-18
<b>WG2844016-4</b>	<b>DUP</b>	<b>L2140121-4</b>						

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>CR-CR6-IC-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4162016</b>							
<b>WG2844016-4</b>	<b>DUP</b>	<b>L2140121-4</b>						
Chromium, Hexavalent		0.22	0.21		ug/g	2.4	35	09-AUG-18
<b>WG2844016-2</b>	<b>LCS</b>							
Chromium, Hexavalent			99.4		%		80-120	09-AUG-18
<b>WG2844016-1</b>	<b>MB</b>							
Chromium, Hexavalent			<0.20		ug/g		0.2	09-AUG-18
<b>F1-HS-511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160917</b>							
<b>WG2840783-4</b>	<b>DUP</b>	<b>WG2840783-3</b>						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	08-AUG-18
<b>WG2840783-2</b>	<b>LCS</b>							
F1 (C6-C10)			102.7		%		80-120	08-AUG-18
<b>WG2840783-1</b>	<b>MB</b>							
F1 (C6-C10)			<5.0		ug/g		5	08-AUG-18
Surrogate: 3,4-Dichlorotoluene			108.0		%		60-140	08-AUG-18
<b>WG2840783-6</b>	<b>MS</b>	<b>L2140121-2</b>						
F1 (C6-C10)			101.1		%		60-140	08-AUG-18
<b>Batch</b>	<b>R4161900</b>							
<b>WG2842810-4</b>	<b>DUP</b>	<b>WG2842810-3</b>						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	09-AUG-18
<b>WG2842810-2</b>	<b>LCS</b>							
F1 (C6-C10)			105.2		%		80-120	09-AUG-18
<b>WG2842810-1</b>	<b>MB</b>							
F1 (C6-C10)			<5.0		ug/g		5	09-AUG-18
Surrogate: 3,4-Dichlorotoluene			97.3		%		60-140	09-AUG-18
<b>WG2842810-6</b>	<b>MS</b>	<b>L2140121-23</b>						
F1 (C6-C10)			105.4		%		60-140	09-AUG-18
<b>F2-F4-511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4161415</b>							
<b>WG2842304-5</b>	<b>DUP</b>	<b>WG2842304-1</b>						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	08-AUG-18
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	08-AUG-18
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	08-AUG-18
<b>WG2842304-3</b>	<b>LCS</b>							
F2 (C10-C16)			110.3		%		80-120	08-AUG-18
F3 (C16-C34)			107.5		%		80-120	08-AUG-18
F4 (C34-C50)			98.9		%		80-120	08-AUG-18

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Client: Defence Research and Development Canada (Ottawa)  
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Ottawa ON K2G 0R3

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>F2-F4-511-WT Soil</b>								
<b>Batch R4161415</b>								
<b>WG2842304-2 MB</b>								
F2 (C10-C16)			<10		ug/g		10	08-AUG-18
F3 (C16-C34)			<50		ug/g		50	08-AUG-18
F4 (C34-C50)			<50		ug/g		50	08-AUG-18
Surrogate: 2-Bromobenzotrifluoride			104.0		%		60-140	08-AUG-18
<b>WG2842304-4 MS</b>		<b>WG2842304-1</b>						
F2 (C10-C16)			109.7		%		60-140	08-AUG-18
F3 (C16-C34)			103.9		%		60-140	08-AUG-18
F4 (C34-C50)			98.9		%		60-140	08-AUG-18
<b>Batch R4162198</b>								
<b>WG2843815-3 DUP</b>		<b>WG2843815-5</b>						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	09-AUG-18
F3 (C16-C34)		<50	58	RPD-NA	ug/g	N/A	30	09-AUG-18
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	09-AUG-18
<b>WG2843815-2 LCS</b>								
F2 (C10-C16)			109.8		%		80-120	09-AUG-18
F3 (C16-C34)			111.4		%		80-120	09-AUG-18
F4 (C34-C50)			111.2		%		80-120	09-AUG-18
<b>WG2843815-1 MB</b>								
F2 (C10-C16)			<10		ug/g		10	09-AUG-18
F3 (C16-C34)			<50		ug/g		50	09-AUG-18
F4 (C34-C50)			<50		ug/g		50	09-AUG-18
Surrogate: 2-Bromobenzotrifluoride			104.9		%		60-140	09-AUG-18
<b>WG2843815-4 MS</b>		<b>WG2843815-5</b>						
F2 (C10-C16)			112.9		%		60-140	09-AUG-18
F3 (C16-C34)			123.6		%		60-140	09-AUG-18
F4 (C34-C50)			116.4		%		60-140	09-AUG-18
<b>HG-200.2-CVAA-WT Soil</b>								
<b>Batch R4160076</b>								
<b>WG2841071-2 CRM</b>		<b>WT-CANMET-TILL1</b>						
Mercury (Hg)			103.3		%		70-130	07-AUG-18
<b>WG2841071-6 DUP</b>		<b>WG2841071-5</b>						
Mercury (Hg)		0.0318	0.0317		ug/g	0.1	40	07-AUG-18
<b>WG2841071-3 LCS</b>								
Mercury (Hg)			106.5		%		80-120	07-AUG-18
<b>WG2841071-1 MB</b>								





**Environmental**

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>HG-200.2-CVAA-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160076</b>							
<b>WG2841071-1</b>	<b>MB</b>							
Mercury (Hg)			<0.0050		mg/kg		0.005	07-AUG-18
<b>Batch</b>	<b>R4160078</b>							
<b>WG2841251-2</b>	<b>CRM</b>	<b>WT-CANMET-TILL1</b>						
Mercury (Hg)			108.7		%		70-130	07-AUG-18
<b>WG2841251-6</b>	<b>DUP</b>	<b>WG2841251-5</b>						
Mercury (Hg)		0.0167	0.0154		ug/g	7.9	40	07-AUG-18
<b>WG2841251-3</b>	<b>LCS</b>							
Mercury (Hg)			107.5		%		80-120	07-AUG-18
<b>WG2841251-1</b>	<b>MB</b>							
Mercury (Hg)			<0.0050		mg/kg		0.005	07-AUG-18
<b>MET-200.2-CCMS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160774</b>							
<b>WG2841071-2</b>	<b>CRM</b>	<b>WT-CANMET-TILL1</b>						
Aluminum (Al)			100.7		%		70-130	07-AUG-18
Antimony (Sb)			96.8		%		70-130	07-AUG-18
Arsenic (As)			102.2		%		70-130	07-AUG-18
Barium (Ba)			98.6		%		70-130	07-AUG-18
Beryllium (Be)			98.0		%		70-130	07-AUG-18
Bismuth (Bi)			96.5		%		70-130	07-AUG-18
Boron (B)			3.2		mg/kg		0-8.2	07-AUG-18
Cadmium (Cd)			108.1		%		70-130	07-AUG-18
Calcium (Ca)			95.0		%		70-130	07-AUG-18
Chromium (Cr)			102.5		%		70-130	07-AUG-18
Cobalt (Co)			105.3		%		70-130	07-AUG-18
Copper (Cu)			105.5		%		70-130	07-AUG-18
Iron (Fe)			102.9		%		70-130	07-AUG-18
Lead (Pb)			98.0		%		70-130	07-AUG-18
Lithium (Li)			103.6		%		70-130	07-AUG-18
Magnesium (Mg)			100.2		%		70-130	07-AUG-18
Manganese (Mn)			105.4		%		70-130	07-AUG-18
Molybdenum (Mo)			99.0		%		70-130	07-AUG-18
Nickel (Ni)			104.8		%		70-130	07-AUG-18
Phosphorus (P)			102.7		%		70-130	07-AUG-18
Potassium (K)			85.2		%		70-130	07-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-200.2-CCMS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160774</b>							
<b>WG2841071-2</b>	<b>CRM</b>	<b>WT-CANMET-TILL1</b>						
Selenium (Se)			0.31		mg/kg		0.11-0.51	07-AUG-18
Silver (Ag)			0.21		mg/kg		0.13-0.33	07-AUG-18
Sodium (Na)			93.2		%		70-130	07-AUG-18
Strontium (Sr)			93.7		%		70-130	07-AUG-18
Thallium (Tl)			0.111		mg/kg		0.077-0.18	07-AUG-18
Tin (Sn)			0.9		mg/kg		0-3.1	07-AUG-18
Titanium (Ti)			99.8		%		70-130	07-AUG-18
Tungsten (W)			0.15		mg/kg		0-0.66	07-AUG-18
Uranium (U)			95.1		%		70-130	07-AUG-18
Vanadium (V)			100.9		%		70-130	07-AUG-18
Zinc (Zn)			101.0		%		70-130	07-AUG-18
Zirconium (Zr)			0.5		mg/kg		0-1.8	07-AUG-18
<b>WG2841071-6</b>	<b>DUP</b>	<b>WG2841071-5</b>						
Aluminum (Al)		27900	26800		ug/g	4.0	40	07-AUG-18
Antimony (Sb)		0.22	0.18		ug/g	20	30	07-AUG-18
Arsenic (As)		9.41	8.77		ug/g	7.1	30	07-AUG-18
Barium (Ba)		149	144		ug/g	3.3	40	07-AUG-18
Beryllium (Be)		1.24	1.16		ug/g	6.4	30	07-AUG-18
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	07-AUG-18
Boron (B)		12.4	11.1		ug/g	11	30	07-AUG-18
Cadmium (Cd)		0.132	0.115		ug/g	14	30	07-AUG-18
Calcium (Ca)		5910	5610		ug/g	5.3	30	07-AUG-18
Chromium (Cr)		40.6	39.3		ug/g	3.2	30	07-AUG-18
Cobalt (Co)		17.3	16.4		ug/g	5.6	30	07-AUG-18
Copper (Cu)		37.0	36.0		ug/g	2.7	30	07-AUG-18
Iron (Fe)		48700	46400		ug/g	4.8	30	07-AUG-18
Lead (Pb)		13.2	13.0		ug/g	1.5	40	07-AUG-18
Lithium (Li)		36.2	34.3		ug/g	5.4	30	07-AUG-18
Magnesium (Mg)		10800	10300		ug/g	4.3	30	07-AUG-18
Manganese (Mn)		814	717		ug/g	13	30	07-AUG-18
Molybdenum (Mo)		0.47	0.44		ug/g	6.6	40	07-AUG-18
Nickel (Ni)		38.2	37.4		ug/g	2.1	30	07-AUG-18
Phosphorus (P)		1050	1040		ug/g	0.9	30	07-AUG-18

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3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-200.2-CCMS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160774</b>							
<b>WG2841071-6</b>	<b>DUP</b>	<b>WG2841071-5</b>						
Potassium (K)		3980	3550		ug/g	11	40	07-AUG-18
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	07-AUG-18
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	07-AUG-18
Sodium (Na)		2050	1940		ug/g	5.2	40	07-AUG-18
Strontium (Sr)		39.1	38.6		ug/g	1.2	40	07-AUG-18
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	07-AUG-18
Thallium (Tl)		0.222	0.220		ug/g	1.0	30	07-AUG-18
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	07-AUG-18
Titanium (Ti)		522	473		ug/g	9.8	40	07-AUG-18
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	07-AUG-18
Uranium (U)		0.698	0.664		ug/g	4.9	30	07-AUG-18
Vanadium (V)		61.1	57.6		ug/g	6.0	30	07-AUG-18
Zinc (Zn)		80.0	79.5		ug/g	0.5	30	07-AUG-18
Zirconium (Zr)		6.6	5.8		ug/g	13	30	07-AUG-18
<b>WG2841071-4</b>	<b>LCS</b>							
Aluminum (Al)			97.9		%		80-120	07-AUG-18
Antimony (Sb)			102.0		%		80-120	07-AUG-18
Arsenic (As)			96.5		%		80-120	07-AUG-18
Barium (Ba)			91.1		%		80-120	07-AUG-18
Beryllium (Be)			96.3		%		80-120	07-AUG-18
Bismuth (Bi)			93.1		%		80-120	07-AUG-18
Boron (B)			88.8		%		80-120	07-AUG-18
Cadmium (Cd)			100.2		%		80-120	07-AUG-18
Calcium (Ca)			93.9		%		80-120	07-AUG-18
Chromium (Cr)			98.4		%		80-120	07-AUG-18
Cobalt (Co)			97.5		%		80-120	07-AUG-18
Copper (Cu)			97.3		%		80-120	07-AUG-18
Iron (Fe)			99.9		%		80-120	07-AUG-18
Lead (Pb)			96.0		%		80-120	07-AUG-18
Lithium (Li)			99.0		%		80-120	07-AUG-18
Magnesium (Mg)			100.3		%		80-120	07-AUG-18
Manganese (Mn)			98.2		%		80-120	07-AUG-18
Molybdenum (Mo)			97.1		%		80-120	07-AUG-18

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT		Soil						
Batch	R4160774							
WG2841071-4	LCS							
Nickel (Ni)			98.1		%		80-120	07-AUG-18
Phosphorus (P)			96.1		%		80-120	07-AUG-18
Potassium (K)			94.4		%		80-120	07-AUG-18
Selenium (Se)			95.8		%		80-120	07-AUG-18
Silver (Ag)			94.1		%		80-120	07-AUG-18
Sodium (Na)			99.1		%		80-120	07-AUG-18
Strontium (Sr)			95.8		%		80-120	07-AUG-18
Sulfur (S)			97.1		%		80-120	07-AUG-18
Thallium (Tl)			90.3		%		80-120	07-AUG-18
Tin (Sn)			96.7		%		80-120	07-AUG-18
Titanium (Ti)			94.8		%		80-120	07-AUG-18
Tungsten (W)			95.5		%		80-120	07-AUG-18
Uranium (U)			94.9		%		80-120	07-AUG-18
Vanadium (V)			99.4		%		80-120	07-AUG-18
Zinc (Zn)			92.9		%		80-120	07-AUG-18
Zirconium (Zr)			94.5		%		80-120	07-AUG-18
WG2841071-1	MB							
Aluminum (Al)			<50		mg/kg		50	07-AUG-18
Antimony (Sb)			<0.10		mg/kg		0.1	07-AUG-18
Arsenic (As)			<0.10		mg/kg		0.1	07-AUG-18
Barium (Ba)			<0.50		mg/kg		0.5	07-AUG-18
Beryllium (Be)			<0.10		mg/kg		0.1	07-AUG-18
Bismuth (Bi)			<0.20		mg/kg		0.2	07-AUG-18
Boron (B)			<5.0		mg/kg		5	07-AUG-18
Cadmium (Cd)			<0.020		mg/kg		0.02	07-AUG-18
Calcium (Ca)			<50		mg/kg		50	07-AUG-18
Chromium (Cr)			<0.50		mg/kg		0.5	07-AUG-18
Cobalt (Co)			<0.10		mg/kg		0.1	07-AUG-18
Copper (Cu)			<0.50		mg/kg		0.5	07-AUG-18
Iron (Fe)			<50		mg/kg		50	07-AUG-18
Lead (Pb)			<0.50		mg/kg		0.5	07-AUG-18
Lithium (Li)			<2.0		mg/kg		2	07-AUG-18
Magnesium (Mg)			<20		mg/kg		20	07-AUG-18
Manganese (Mn)			<1.0		mg/kg		1	07-AUG-18

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-200.2-CCMS-WT</b>		<b>Soil</b>						
<b>Batch R4160774</b>								
<b>WG2841071-1 MB</b>								
	Molybdenum (Mo)		<0.10		mg/kg		0.1	07-AUG-18
	Nickel (Ni)		<0.50		mg/kg		0.5	07-AUG-18
	Phosphorus (P)		<50		mg/kg		50	07-AUG-18
	Potassium (K)		<100		mg/kg		100	07-AUG-18
	Selenium (Se)		<0.20		mg/kg		0.2	07-AUG-18
	Silver (Ag)		<0.10		mg/kg		0.1	07-AUG-18
	Sodium (Na)		<50		mg/kg		50	07-AUG-18
	Strontium (Sr)		<0.50		mg/kg		0.5	07-AUG-18
	Sulfur (S)		<1000		mg/kg		1000	07-AUG-18
	Thallium (Tl)		<0.050		mg/kg		0.05	07-AUG-18
	Tin (Sn)		<2.0		mg/kg		2	07-AUG-18
	Titanium (Ti)		<1.0		mg/kg		1	07-AUG-18
	Tungsten (W)		<0.50		mg/kg		0.5	07-AUG-18
	Uranium (U)		<0.050		mg/kg		0.05	07-AUG-18
	Vanadium (V)		<0.20		mg/kg		0.2	07-AUG-18
	Zinc (Zn)		<2.0		mg/kg		2	07-AUG-18
	Zirconium (Zr)		<1.0		mg/kg		1	07-AUG-18
<b>Batch R4160786</b>								
<b>WG2841251-2 CRM</b>		<b>WT-CANMET-TILL1</b>						
	Aluminum (Al)		102.0		%		70-130	07-AUG-18
	Antimony (Sb)		93.9		%		70-130	07-AUG-18
	Arsenic (As)		103.3		%		70-130	07-AUG-18
	Barium (Ba)		101.2		%		70-130	07-AUG-18
	Beryllium (Be)		97.7		%		70-130	07-AUG-18
	Bismuth (Bi)		100.0		%		70-130	07-AUG-18
	Boron (B)		2.9		mg/kg		0-8.2	07-AUG-18
	Cadmium (Cd)		104.8		%		70-130	07-AUG-18
	Calcium (Ca)		92.8		%		70-130	07-AUG-18
	Chromium (Cr)		101.1		%		70-130	07-AUG-18
	Cobalt (Co)		103.1		%		70-130	07-AUG-18
	Copper (Cu)		104.6		%		70-130	07-AUG-18
	Iron (Fe)		100.1		%		70-130	07-AUG-18
	Lead (Pb)		100.9		%		70-130	07-AUG-18
	Lithium (Li)		100.6		%		70-130	07-AUG-18

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Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-200.2-CCMS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160786</b>							
<b>WG2841251-2</b>	<b>CRM</b>	<b>WT-CANMET-TILL1</b>						
Magnesium (Mg)			102.4		%		70-130	07-AUG-18
Manganese (Mn)			101.5		%		70-130	07-AUG-18
Molybdenum (Mo)			99.4		%		70-130	07-AUG-18
Nickel (Ni)			103.5		%		70-130	07-AUG-18
Phosphorus (P)			99.1		%		70-130	07-AUG-18
Potassium (K)			98.7		%		70-130	07-AUG-18
Selenium (Se)			0.32		mg/kg		0.11-0.51	07-AUG-18
Silver (Ag)			0.22		mg/kg		0.13-0.33	07-AUG-18
Sodium (Na)			122.0		%		70-130	07-AUG-18
Strontium (Sr)			97.5		%		70-130	07-AUG-18
Thallium (Tl)			0.111		mg/kg		0.077-0.18	07-AUG-18
Tin (Sn)			1.0		mg/kg		0-3.1	07-AUG-18
Titanium (Ti)			102.0		%		70-130	07-AUG-18
Tungsten (W)			0.14		mg/kg		0-0.66	07-AUG-18
Uranium (U)			96.6		%		70-130	07-AUG-18
Vanadium (V)			100.7		%		70-130	07-AUG-18
Zinc (Zn)			99.8		%		70-130	07-AUG-18
Zirconium (Zr)			1.2		mg/kg		0-1.8	07-AUG-18
<b>WG2841251-6</b>	<b>DUP</b>	<b>WG2841251-5</b>						
Aluminum (Al)		9610	7580		ug/g	24	40	07-AUG-18
Antimony (Sb)		0.13	0.12		ug/g	5.5	30	07-AUG-18
Arsenic (As)		7.78	7.08		ug/g	9.4	30	07-AUG-18
Barium (Ba)		52.3	46.0		ug/g	13	40	07-AUG-18
Beryllium (Be)		0.67	0.52		ug/g	24	30	07-AUG-18
Bismuth (Bi)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	07-AUG-18
Boron (B)		14.4	10.8		ug/g	28	30	07-AUG-18
Cadmium (Cd)		0.069	0.075		ug/g	8.0	30	07-AUG-18
Calcium (Ca)		6040	5050		ug/g	18	30	07-AUG-18
Chromium (Cr)		18.5	15.6		ug/g	17	30	07-AUG-18
Cobalt (Co)		8.90	8.21		ug/g	8.1	30	07-AUG-18
Copper (Cu)		15.1	14.0		ug/g	7.3	30	07-AUG-18
Iron (Fe)		19900	18700		ug/g	6.1	30	07-AUG-18
Lead (Pb)		8.75	7.98		ug/g	9.2	40	07-AUG-18

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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-200.2-CCMS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160786</b>							
<b>WG2841251-6</b>	<b>DUP</b>	<b>WG2841251-5</b>						
Lithium (Li)		15.8	11.9		ug/g	28	30	07-AUG-18
Magnesium (Mg)		3710	3320		ug/g	11	30	07-AUG-18
Manganese (Mn)		220	208		ug/g	5.7	30	07-AUG-18
Molybdenum (Mo)		0.63	0.50		ug/g	22	40	07-AUG-18
Nickel (Ni)		19.4	17.8		ug/g	8.3	30	07-AUG-18
Phosphorus (P)		391	360		ug/g	8.2	30	07-AUG-18
Potassium (K)		1910	1470		ug/g	26	40	07-AUG-18
Selenium (Se)		0.26	0.27		ug/g	1.0	30	07-AUG-18
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	07-AUG-18
Sodium (Na)		1690	1510		ug/g	11	40	07-AUG-18
Strontium (Sr)		47.8	39.4		ug/g	19	40	07-AUG-18
Sulfur (S)		<1000	<1000	RPD-NA	ug/g	N/A	30	07-AUG-18
Thallium (Tl)		0.076	0.067		ug/g	12	30	07-AUG-18
Tin (Sn)		<2.0	<2.0	RPD-NA	ug/g	N/A	40	07-AUG-18
Titanium (Ti)		115	77.1		ug/g	40	40	07-AUG-18
Tungsten (W)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	07-AUG-18
Uranium (U)		0.647	0.571		ug/g	12	30	07-AUG-18
Vanadium (V)		35.5	31.0		ug/g	13	30	07-AUG-18
Zinc (Zn)		47.5	43.7		ug/g	8.3	30	07-AUG-18
Zirconium (Zr)		9.9	7.2	RRQC	ug/g	31	30	07-AUG-18
COMMENTS: RRQC: Zr added after original analysis.								
<b>WG2841251-4</b>	<b>LCS</b>							
Aluminum (Al)			100.6		%		80-120	07-AUG-18
Antimony (Sb)			104.0		%		80-120	07-AUG-18
Arsenic (As)			100.9		%		80-120	07-AUG-18
Barium (Ba)			99.6		%		80-120	07-AUG-18
Beryllium (Be)			96.7		%		80-120	07-AUG-18
Bismuth (Bi)			93.2		%		80-120	07-AUG-18
Boron (B)			87.5		%		80-120	07-AUG-18
Cadmium (Cd)			108.3		%		80-120	07-AUG-18
Calcium (Ca)			94.0		%		80-120	07-AUG-18
Chromium (Cr)			102.1		%		80-120	07-AUG-18
Cobalt (Co)			101.1		%		80-120	07-AUG-18

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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-200.2-CCMS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160786</b>							
<b>WG2841251-4</b>	<b>LCS</b>							
Copper (Cu)			98.5		%		80-120	07-AUG-18
Iron (Fe)			103.5		%		80-120	07-AUG-18
Lead (Pb)			96.1		%		80-120	07-AUG-18
Lithium (Li)			97.5		%		80-120	07-AUG-18
Magnesium (Mg)			102.8		%		80-120	07-AUG-18
Manganese (Mn)			102.5		%		80-120	07-AUG-18
Molybdenum (Mo)			96.2		%		80-120	07-AUG-18
Nickel (Ni)			101.4		%		80-120	07-AUG-18
Phosphorus (P)			100.9		%		80-120	07-AUG-18
Potassium (K)			92.3		%		80-120	07-AUG-18
Selenium (Se)			102.1		%		80-120	07-AUG-18
Silver (Ag)			96.8		%		80-120	07-AUG-18
Sodium (Na)			98.9		%		80-120	07-AUG-18
Strontium (Sr)			98.9		%		80-120	07-AUG-18
Sulfur (S)			100.6		%		80-120	07-AUG-18
Thallium (Tl)			92.2		%		80-120	07-AUG-18
Tin (Sn)			101.1		%		80-120	07-AUG-18
Titanium (Ti)			98.7		%		80-120	07-AUG-18
Tungsten (W)			96.5		%		80-120	07-AUG-18
Uranium (U)			97.4		%		80-120	07-AUG-18
Vanadium (V)			101.5		%		80-120	07-AUG-18
Zinc (Zn)			97.4		%		80-120	07-AUG-18
Zirconium (Zr)			94.2		%		80-120	07-AUG-18
<b>WG2841251-1</b>	<b>MB</b>							
Aluminum (Al)			<50		mg/kg		50	07-AUG-18
Antimony (Sb)			<0.10		mg/kg		0.1	07-AUG-18
Arsenic (As)			<0.10		mg/kg		0.1	07-AUG-18
Barium (Ba)			<0.50		mg/kg		0.5	07-AUG-18
Beryllium (Be)			<0.10		mg/kg		0.1	07-AUG-18
Bismuth (Bi)			<0.20		mg/kg		0.2	07-AUG-18
Boron (B)			<5.0		mg/kg		5	07-AUG-18
Cadmium (Cd)			<0.020		mg/kg		0.02	07-AUG-18
Calcium (Ca)			<50		mg/kg		50	07-AUG-18
Chromium (Cr)			<0.50		mg/kg		0.5	07-AUG-18



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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-200.2-CCMS-WT</b>		<b>Soil</b>						
<b>Batch R4160786</b>								
<b>WG2841251-1 MB</b>								
Cobalt (Co)			<0.10		mg/kg		0.1	07-AUG-18
Copper (Cu)			<0.50		mg/kg		0.5	07-AUG-18
Iron (Fe)			<50		mg/kg		50	07-AUG-18
Lead (Pb)			<0.50		mg/kg		0.5	07-AUG-18
Lithium (Li)			<2.0		mg/kg		2	07-AUG-18
Magnesium (Mg)			<20		mg/kg		20	07-AUG-18
Manganese (Mn)			<1.0		mg/kg		1	07-AUG-18
Molybdenum (Mo)			<0.10		mg/kg		0.1	07-AUG-18
Nickel (Ni)			<0.50		mg/kg		0.5	07-AUG-18
Phosphorus (P)			<50		mg/kg		50	07-AUG-18
Potassium (K)			<100		mg/kg		100	07-AUG-18
Selenium (Se)			<0.20		mg/kg		0.2	07-AUG-18
Silver (Ag)			<0.10		mg/kg		0.1	07-AUG-18
Sodium (Na)			<50		mg/kg		50	07-AUG-18
Strontium (Sr)			<0.50		mg/kg		0.5	07-AUG-18
Sulfur (S)			<1000		mg/kg		1000	07-AUG-18
Thallium (Tl)			<0.050		mg/kg		0.05	07-AUG-18
Tin (Sn)			<2.0		mg/kg		2	07-AUG-18
Titanium (Ti)			<1.0		mg/kg		1	07-AUG-18
Tungsten (W)			<0.50		mg/kg		0.5	07-AUG-18
Uranium (U)			<0.050		mg/kg		0.05	07-AUG-18
Vanadium (V)			<0.20		mg/kg		0.2	07-AUG-18
Zinc (Zn)			<2.0		mg/kg		2	07-AUG-18
Zirconium (Zr)			<1.0		mg/kg		1	07-AUG-18
<b>MOISTURE-WT</b>		<b>Soil</b>						
<b>Batch R4161695</b>								
<b>WG2844333-3 DUP</b>								
% Moisture		<b>L2140121-13</b> 23.0	22.8		%	1.0	20	09-AUG-18
<b>WG2844333-2 LCS</b>								
% Moisture			100.3		%		90-110	09-AUG-18
<b>WG2844333-1 MB</b>								
% Moisture			<0.10		%		0.1	09-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MOISTURE-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4161712</b>							
<b>WG2844088-3</b>	<b>DUP</b>	<b>L2142896-1</b>						
% Moisture		6.15	6.90		%	12	20	09-AUG-18
<b>WG2844088-2</b>	<b>LCS</b>							
% Moisture			99.8		%		90-110	09-AUG-18
<b>WG2844088-1</b>	<b>MB</b>							
% Moisture			<0.10		%		0.1	09-AUG-18
<b>Batch</b>	<b>R4161752</b>							
<b>WG2843829-3</b>	<b>DUP</b>	<b>L2138175-17</b>						
% Moisture		12.5	12.8		%	2.7	20	09-AUG-18
<b>WG2843829-2</b>	<b>LCS</b>							
% Moisture			99.8		%		90-110	09-AUG-18
<b>WG2843829-1</b>	<b>MB</b>							
% Moisture			<0.10		%		0.1	09-AUG-18
<b>N-TOTKJ-COL-SK</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4168308</b>							
<b>WG2843923-1</b>	<b>DUP</b>	<b>L2140121-11</b>						
Total Kjeldahl Nitrogen		0.108	0.108		%	0.5	20	13-AUG-18
<b>WG2843923-2</b>	<b>IRM</b>	<b>08-109_SOIL</b>						
Total Kjeldahl Nitrogen			83.8		%		80-120	13-AUG-18
<b>WG2843923-3</b>	<b>MB</b>							
Total Kjeldahl Nitrogen			<0.020		%		0.02	13-AUG-18
<b>Batch</b>	<b>R4169310</b>							
<b>WG2842477-1</b>	<b>DUP</b>	<b>L2139938-5</b>						
Total Kjeldahl Nitrogen		2.03	1.86		%	8.8	20	13-AUG-18
<b>WG2842477-2</b>	<b>IRM</b>	<b>08-109_SOIL</b>						
Total Kjeldahl Nitrogen			80.9		%		80-120	13-AUG-18
<b>WG2842477-3</b>	<b>MB</b>							
Total Kjeldahl Nitrogen			<0.020		%		0.02	13-AUG-18
<b>NH3-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160295</b>							
<b>WG2842375-3</b>	<b>DUP</b>	<b>L2140121-5</b>						
Ammonia as N		81	90		mg/kg	12	20	07-AUG-18
<b>WG2842375-2</b>	<b>LCS</b>							
Ammonia as N			104.7		%		70-130	07-AUG-18
<b>WG2842375-1</b>	<b>MB</b>							
Ammonia as N			<10		mg/kg		10	07-AUG-18
<b>WG2842375-4</b>	<b>MS</b>	<b>L2140121-5</b>						



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<b>NH3-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160295</b>							
<b>WG2842375-4</b>	<b>MS</b>	<b>L2140121-5</b>						
Ammonia as N			N/A	MS-B	%		-	07-AUG-18
<b>Batch</b>	<b>R4162174</b>							
<b>WG2844599-3</b>	<b>DUP</b>	<b>L2140121-19</b>						
Ammonia as N		41	47		mg/kg	14	20	09-AUG-18
<b>WG2844599-2</b>	<b>LCS</b>		99.9		%		70-130	09-AUG-18
Ammonia as N								
<b>WG2844599-1</b>	<b>MB</b>		<10		mg/kg		10	09-AUG-18
Ammonia as N								
<b>WG2844599-4</b>	<b>MS</b>	<b>L2140121-19</b>						
Ammonia as N			111.1		%		75-125	09-AUG-18
<b>Batch</b>	<b>R4163102</b>							
<b>WG2845404-3</b>	<b>DUP</b>	<b>L2140121-20</b>						
Ammonia as N		46	65	J	mg/kg	19	20	10-AUG-18
<b>WG2845404-2</b>	<b>LCS</b>		106.0		%		70-130	10-AUG-18
Ammonia as N								
<b>WG2845404-1</b>	<b>MB</b>		<10		mg/kg		10	10-AUG-18
Ammonia as N								
<b>WG2845404-4</b>	<b>MS</b>	<b>L2140121-20</b>						
Ammonia as N			110.0		%		75-125	10-AUG-18
<b>Batch</b>	<b>R4167629</b>							
<b>WG2843406-3</b>	<b>DUP</b>	<b>L2140121-10</b>						
Ammonia as N		41	32	J	mg/kg	9	20	08-AUG-18
<b>WG2843406-2</b>	<b>LCS</b>		96.1		%		70-130	08-AUG-18
Ammonia as N								
<b>WG2843406-1</b>	<b>MB</b>		<10		mg/kg		10	08-AUG-18
Ammonia as N								
<b>WG2843406-4</b>	<b>MS</b>	<b>L2140121-10</b>						
Ammonia as N			99.6		%		75-125	08-AUG-18
<b>NO2-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4165738</b>							
<b>WG2846199-5</b>	<b>DUP</b>	<b>WG2846199-4</b>						
Nitrite-N		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	10-AUG-18
<b>WG2846199-2</b>	<b>LCS</b>		101.4		%		80-120	10-AUG-18
Nitrite-N								
<b>WG2846199-1</b>	<b>MB</b>		<1.0		mg/kg		1	10-AUG-18
Nitrite-N								

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>NO2-WT</b>		<b>Soil</b>						
Batch	R4167222							
<b>WG2846278-3</b>	<b>DUP</b>	<b>WG2846278-5</b>						
Nitrite-N		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	11-AUG-18
<b>WG2846278-2</b>	<b>LCS</b>							
Nitrite-N			95.2		%		80-120	11-AUG-18
<b>WG2846278-1</b>	<b>MB</b>							
Nitrite-N			<1.0		mg/kg		1	11-AUG-18
<b>NO3-WT</b>		<b>Soil</b>						
Batch	R4165738							
<b>WG2846199-3</b>	<b>CRM</b>	<b>AN-CRM-WT</b>						
Nitrate-N			103.4		%		60-140	10-AUG-18
<b>WG2846199-5</b>	<b>DUP</b>	<b>WG2846199-4</b>						
Nitrate-N		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	10-AUG-18
<b>WG2846199-2</b>	<b>LCS</b>							
Nitrate-N			101.2		%		80-120	10-AUG-18
<b>WG2846199-1</b>	<b>MB</b>							
Nitrate-N			<1.0		mg/kg		1	10-AUG-18
Batch	R4167222							
<b>WG2846278-4</b>	<b>CRM</b>	<b>AN-CRM-WT</b>						
Nitrate-N			99.7		%		60-140	11-AUG-18
<b>WG2846278-3</b>	<b>DUP</b>	<b>WG2846278-5</b>						
Nitrate-N		14.5	14.5		mg/kg	0.5	30	11-AUG-18
<b>WG2846278-2</b>	<b>LCS</b>							
Nitrate-N			99.9		%		80-120	11-AUG-18
<b>WG2846278-1</b>	<b>MB</b>							
Nitrate-N			<1.0		mg/kg		1	11-AUG-18
<b>PCB-511-WT</b>		<b>Soil</b>						
Batch	R4162738							
<b>WG2843754-3</b>	<b>DUP</b>	<b>WG2843754-5</b>						
Aroclor 1242		<0.010	<0.010	RPD-NA	ug/g	N/A	40	10-AUG-18
Aroclor 1248		<0.010	<0.010	RPD-NA	ug/g	N/A	40	10-AUG-18
Aroclor 1254		<0.010	<0.010	RPD-NA	ug/g	N/A	40	10-AUG-18
Aroclor 1260		<0.010	<0.010	RPD-NA	ug/g	N/A	40	10-AUG-18
<b>WG2843754-2</b>	<b>LCS</b>							
Aroclor 1242			82.1		%		60-140	10-AUG-18
Aroclor 1248			80.1		%		60-140	10-AUG-18
Aroclor 1254			86.1		%		60-140	10-AUG-18
Aroclor 1260			103.2		%		60-140	10-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PCB-511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4162738</b>							
<b>WG2843754-1</b>	<b>MB</b>							
Aroclor 1242			<0.010		ug/g		0.01	10-AUG-18
Aroclor 1248			<0.010		ug/g		0.01	10-AUG-18
Aroclor 1254			<0.010		ug/g		0.01	10-AUG-18
Aroclor 1260			<0.010		ug/g		0.01	10-AUG-18
Surrogate: d14-Terphenyl			80.9		%		60-140	10-AUG-18
<b>WG2843754-4</b>	<b>MS</b>	<b>WG2843754-5</b>						
Aroclor 1242			83.5		%		60-140	10-AUG-18
Aroclor 1254			91.1		%		60-140	10-AUG-18
Aroclor 1260			107.3		%		60-140	10-AUG-18
<b>Batch</b>	<b>R4167269</b>							
<b>WG2842492-5</b>	<b>DUP</b>	<b>WG2842492-1</b>						
Aroclor 1242		<0.010	<0.010	RPD-NA	ug/g	N/A	40	13-AUG-18
Aroclor 1248		<0.010	<0.010	RPD-NA	ug/g	N/A	40	13-AUG-18
Aroclor 1254		<0.010	<0.010	RPD-NA	ug/g	N/A	40	13-AUG-18
Aroclor 1260		<0.010	<0.010	RPD-NA	ug/g	N/A	40	13-AUG-18
<b>WG2842492-3</b>	<b>LCS</b>							
Aroclor 1242			86.8		%		60-140	13-AUG-18
Aroclor 1248			81.9		%		60-140	13-AUG-18
Aroclor 1254			91.0		%		60-140	13-AUG-18
Aroclor 1260			83.4		%		60-140	13-AUG-18
<b>WG2842492-2</b>	<b>MB</b>							
Aroclor 1242			<0.010		ug/g		0.01	13-AUG-18
Aroclor 1248			<0.010		ug/g		0.01	13-AUG-18
Aroclor 1254			<0.010		ug/g		0.01	13-AUG-18
Aroclor 1260			<0.010		ug/g		0.01	13-AUG-18
Surrogate: d14-Terphenyl			88.1		%		60-140	13-AUG-18
<b>WG2842492-4</b>	<b>MS</b>	<b>WG2842492-1</b>						
Aroclor 1242			92.9		%		60-140	13-AUG-18
Aroclor 1254			107.7		%		60-140	13-AUG-18
Aroclor 1260			113.6		%		60-140	13-AUG-18
<b>PFAS-LL-EX-LCMS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4170114</b>							
<b>WG2844155-4</b>	<b>DUP</b>	<b>WG2844155-3</b>						
Perfluorobutane sulfonic acid (PFBS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluoropentane sulfonic acid (PFPeS)		<0.10	<0.10					

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<b>PFAS-LL-EX-LCMS-WT Soil</b>								
<b>Batch R4170114</b>								
<b>WG2844155-4 DUP</b>		<b>WG2844155-3</b>						
Perfluoropentane sulfonic acid (PFPeS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorohexane sulfonic acid (PFHxS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluoroheptane sulfonic acid (PFHpS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorooctane sulfonic acid (PFOS)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorodecane sulfonic acid (PFDS)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorobutanoic acid (PFBA)		<300	<300	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluoropentanoic acid (PFPeA)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorohexanoic acid (PFHxA)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluoroheptanoic acid (PFHpA)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorooctanoic acid (PFOA)		0.12	0.14	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorononanoic acid (PFNA)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorodecanoic acid (PFDA)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluoroundecanoic acid (PFUnDA)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorododecanoic acid (PFDoDA)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorotridecanoic acid (PFTrDA)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorotetradecanoic acid (PFTeDA)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
Perfluorooctane sulfonamide (FOSA)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
N-Me PFO sulfonamide (MeFOSA)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
N-Et PFO sulfonamide (EtFOSA)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
N-Me PFO sulfonamidoethanol (MeFOSE)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	14-AUG-18
N-Et PFO sulfonamidoethanol (EtFOSE)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
N-Me PFO sulfonamidoacetic acid(MeFOS		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
N-Et PFO sulfonamidoacetic acid(EtFOSA		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
4:2 Fluorotelomer sulfonic acid(4:2 FTS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
6:2 Fluorotelomer sulfonic acid(6:2 FTS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
8:2 Fluorotelomer sulfonic acid(8:2 FTS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
10:2 Fluorotelomer sulfonic acid(10:2 F		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	14-AUG-18
<b>WG2844155-2 LCS</b>								
Perfluorobutane sulfonic acid (PFBS)			90.4		%		50-150	14-AUG-18
Perfluoropentane sulfonic acid (PFPeS)			54.6		%		50-150	14-AUG-18
Perfluorohexane sulfonic acid (PFHxS)			87.0		%		50-150	14-AUG-18
Perfluoroheptane sulfonic acid (PFHpS)			131.2		%		50-150	14-AUG-18
Perfluorooctane sulfonic acid (PFOS)			86.6		%		50-150	14-AUG-18

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<b>PFAS-LL-EX-LCMS-WT Soil</b>								
<b>Batch R4170114</b>								
<b>WG2844155-2 LCS</b>								
Perfluorodecane sulfonic acid (PFDS)			72.0		%		50-150	14-AUG-18
Perfluoropentanoic acid (PFPeA)			65.8		%		50-150	14-AUG-18
Perfluorohexanoic acid (PFHxA)			100.4		%		50-150	14-AUG-18
Perfluoroheptanoic acid (PFHpA)			99.2		%		50-150	14-AUG-18
Perfluorooctanoic acid (PFOA)			102.6		%		50-150	14-AUG-18
Perfluorononanoic acid (PFNA)			93.2		%		50-150	14-AUG-18
Perfluorodecanoic acid (PFDA)			88.4		%		50-150	14-AUG-18
Perfluoroundecanoic acid (PFUnDA)			95.4		%		50-150	14-AUG-18
Perfluorododecanoic acid (PFDoDA)			92.8		%		50-150	14-AUG-18
Perfluorotridecanoic acid (PFTrDA)			71.8		%		50-150	14-AUG-18
Perfluorotetradecanoic acid (PFTeDA)			68.9		%		50-150	14-AUG-18
Perfluorooctane sulfonamide (FOSA)			96.8		%		50-150	14-AUG-18
N-Me PFO sulfonamide (MeFOSA)			128.4		%		50-150	14-AUG-18
N-Et PFO sulfonamide (EtFOSA)			81.4		%		50-150	14-AUG-18
N-Me PFO sulfonamidoethanol (MeFOSE)			71.1		%		50-150	14-AUG-18
N-Et PFO sulfonamidoethanol (EtFOSE)			97.2		%		50-150	14-AUG-18
N-Me PFO sulfonamidoacetic acid(MeFOSA)			117.6		%		50-150	14-AUG-18
N-Et PFO sulfonamidoacetic acid(EtFOSA)			91.2		%		50-150	14-AUG-18
4:2 Fluorotelomer sulfonic acid(4:2 FTS)			92.2		%		50-150	14-AUG-18
6:2 Fluorotelomer sulfonic acid(6:2 FTS)			102.4		%		50-150	14-AUG-18
8:2 Fluorotelomer sulfonic acid(8:2 FTS)			128.8		%		50-150	14-AUG-18
10:2 Fluorotelomer sulfonic acid(10:2 F)			125.6		%		50-150	14-AUG-18
<b>WG2844155-1 MB</b>								
Perfluorobutane sulfonic acid (PFBS)			<0.10		ug/kg		0.1	14-AUG-18
Perfluoropentane sulfonic acid (PFPeS)			<0.10		ug/kg		0.1	14-AUG-18
Perfluorohexane sulfonic acid (PFHxS)			<0.10		ug/kg		0.1	14-AUG-18
Perfluoroheptane sulfonic acid (PFHpS)			<0.10		ug/kg		0.1	14-AUG-18
Perfluorooctane sulfonic acid (PFOS)			<0.50		ug/kg		0.5	14-AUG-18
Perfluorodecane sulfonic acid (PFDS)			<0.50		ug/kg		0.5	14-AUG-18
Perfluorobutanoic acid (PFBA)			<300		ug/kg		300	14-AUG-18
Perfluoropentanoic acid (PFPeA)			<0.10		ug/kg		0.1	14-AUG-18
Perfluorohexanoic acid (PFHxA)			<0.10		ug/kg		0.1	14-AUG-18
Perfluoroheptanoic acid (PFHpA)			<0.10		ug/kg		0.1	14-AUG-18
Perfluorooctanoic acid (PFOA)			<0.10		ug/kg		0.1	14-AUG-18

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3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PFAS-LL-EX-LCMS-WT Soil</b>								
<b>Batch R4170114</b>								
<b>WG2844155-1 MB</b>								
Perfluorononanoic acid (PFNA)			<0.10		ug/kg		0.1	14-AUG-18
Perfluorodecanoic acid (PFDA)			<0.50		ug/kg		0.5	14-AUG-18
Perfluoroundecanoic acid (PFUnDA)			<0.10		ug/kg		0.1	14-AUG-18
Perfluorododecanoic acid (PFDoDA)			<0.50		ug/kg		0.5	14-AUG-18
Perfluorotridecanoic acid (PFTTrDA)			<0.50		ug/kg		0.5	14-AUG-18
Perfluorotetradecanoic acid (PFTTeDA)			<0.50		ug/kg		0.5	14-AUG-18
Perfluorooctane sulfonamide (FOSA)			<0.50		ug/kg		0.5	14-AUG-18
N-Me PFO sulfonamide (MeFOSA)			<0.50		ug/kg		0.5	14-AUG-18
N-Et PFO sulfonamide (EtFOSA)			<0.50		ug/kg		0.5	14-AUG-18
N-Me PFO sulfonamidoethanol (MeFOSE)			<0.50		ug/kg		0.5	14-AUG-18
N-Et PFO sulfonamidoethanol (EtFOSE)			<0.10		ug/kg		0.1	14-AUG-18
N-Me PFO sulfonamidoacetic acid(MeFOSA)			<0.10		ug/kg		0.1	14-AUG-18
N-Et PFO sulfonamidoacetic acid(EtFOSA)			<0.10		ug/kg		0.1	14-AUG-18
4:2 Fluorotelomer sulfonic acid(4:2 FTS)			<0.10		ug/kg		0.1	14-AUG-18
6:2 Fluorotelomer sulfonic acid(6:2 FTS)			<0.10		ug/kg		0.1	14-AUG-18
8:2 Fluorotelomer sulfonic acid(8:2 FTS)			<0.10		ug/kg		0.1	14-AUG-18
10:2 Fluorotelomer sulfonic acid(10:2 F)			<0.10		ug/kg		0.1	14-AUG-18
<b>WG2844155-5 MS WG2844155-3</b>								
Perfluorobutane sulfonic acid (PFBS)			93.0		%		50-150	14-AUG-18
Perfluoropentane sulfonic acid (PFPeS)			53.6		%		50-150	14-AUG-18
Perfluorohexane sulfonic acid (PFHxS)			90.8		%		50-150	14-AUG-18
Perfluoroheptane sulfonic acid (PFHpS)			146.0		%		50-150	14-AUG-18
Perfluorooctane sulfonic acid (PFOS)			112.4		%		50-150	14-AUG-18
Perfluorodecane sulfonic acid (PFDS)			83.8		%		50-150	14-AUG-18
Perfluorobutanoic acid (PFBA)			N/A	MS-B	%		-	14-AUG-18
Perfluoropentanoic acid (PFPeA)			73.0		%		50-150	14-AUG-18
Perfluorohexanoic acid (PFHxA)			90.2		%		50-150	14-AUG-18
Perfluoroheptanoic acid (PFHpA)			89.4		%		50-150	14-AUG-18
Perfluorooctanoic acid (PFOA)			110.8		%		50-150	14-AUG-18
Perfluorononanoic acid (PFNA)			104.6		%		50-150	14-AUG-18
Perfluorodecanoic acid (PFDA)			87.9		%		50-150	14-AUG-18
Perfluoroundecanoic acid (PFUnDA)			102.4		%		50-150	14-AUG-18
Perfluorododecanoic acid (PFDoDA)			96.4		%		50-150	14-AUG-18
Perfluorotridecanoic acid (PFTTrDA)			86.5		%		50-150	14-AUG-18



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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PFAS-LL-EX-LCMS-WT Soil</b>								
<b>Batch R4170114</b>								
<b>WG2844155-5 MS</b>		<b>WG2844155-3</b>						
Perfluorotetradecanoic acid (PFTeDA)			69.7		%		50-150	14-AUG-18
Perfluorooctane sulfonamide (FOSA)			93.0		%		50-150	14-AUG-18
N-Me PFO sulfonamide (MeFOSA)			112.8		%		50-150	14-AUG-18
N-Et PFO sulfonamide (EtFOSA)			110.4		%		50-150	14-AUG-18
N-Me PFO sulfonamidoethanol (MeFOSE)			75.3		%		50-150	14-AUG-18
N-Et PFO sulfonamidoethanol (EtFOSE)			89.0		%		50-150	14-AUG-18
N-Me PFO sulfonamidoacetic acid(MeFOS			90.8		%		50-150	14-AUG-18
N-Et PFO sulfonamidoacetic acid(EtFOSA			115.2		%		50-150	14-AUG-18
4:2 Fluorotelomer sulfonic acid(4:2 FTS)			86.0		%		50-150	14-AUG-18
6:2 Fluorotelomer sulfonic acid(6:2 FTS)			N/A	K	%		50-150	14-AUG-18
8:2 Fluorotelomer sulfonic acid(8:2 FTS)			84.4		%		50-150	14-AUG-18
10:2 Fluorotelomer sulfonic acid(10:2 F			139.4		%		50-150	14-AUG-18
<b>Batch R4170115</b>								
<b>WG2844236-4 DUP</b>		<b>WG2844236-3</b>						
Perfluorobutane sulfonic acid (PFBS)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluoropentane sulfonic acid (PFPeS)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorohexane sulfonic acid (PFHxS)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluoroheptane sulfonic acid (PFHpS)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorooctane sulfonic acid (PFOS)	<0.50	<0.50		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorodecane sulfonic acid (PFDS)	<0.50	<0.50		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorobutanoic acid (PFBA)	<300	<300		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluoropentanoic acid (PFPeA)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorohexanoic acid (PFHxA)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluoroheptanoic acid (PFHpA)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorooctanoic acid (PFOA)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorononanoic acid (PFNA)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorodecanoic acid (PFDA)	<0.50	<0.50		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluoroundecanoic acid (PFUnDA)	<0.10	<0.10		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorododecanoic acid (PFDoDA)	<0.50	<0.50		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorotridecanoic acid (PFTTrDA)	<0.50	<0.50		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorotetradecanoic acid (PFTeDA)	<0.50	<0.50		RPD-NA	ug/kg	N/A	50	15-AUG-18
Perfluorooctane sulfonamide (FOSA)	<0.50	<0.50		RPD-NA	ug/kg	N/A	50	15-AUG-18
N-Me PFO sulfonamide (MeFOSA)	<0.50	<0.50		RPD-NA	ug/kg	N/A	50	15-AUG-18

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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PFAS-LL-EX-LCMS-WT Soil</b>								
<b>Batch R4170115</b>								
<b>WG2844236-4 DUP WG2844236-3</b>								
N-Et PFO sulfonamide (EtFOSA)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	15-AUG-18
N-Me PFO sulfonamidoethanol (MeFOSE)		<0.50	<0.50	RPD-NA	ug/kg	N/A	50	15-AUG-18
N-Et PFO sulfonamidoethanol (EtFOSE)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	15-AUG-18
N-Me PFO sulfonamidoacetic acid(MeFOSA)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	15-AUG-18
N-Et PFO sulfonamidoacetic acid(EtFOSA)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	15-AUG-18
4:2 Fluorotelomer sulfonic acid(4:2 FTS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	15-AUG-18
6:2 Fluorotelomer sulfonic acid(6:2 FTS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	15-AUG-18
8:2 Fluorotelomer sulfonic acid(8:2 FTS)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	15-AUG-18
10:2 Fluorotelomer sulfonic acid(10:2 F)		<0.10	<0.10	RPD-NA	ug/kg	N/A	50	15-AUG-18
<b>WG2844236-2 LCS</b>								
Perfluorobutane sulfonic acid (PFBS)			108.2		%		50-150	15-AUG-18
Perfluoropentane sulfonic acid (PFPeS)			45.0	LCS-L	%		50-150	15-AUG-18
Perfluorohexane sulfonic acid (PFHxS)			87.2		%		50-150	15-AUG-18
Perfluoroheptane sulfonic acid (PFHpS)			148.2		%		50-150	15-AUG-18
Perfluorooctane sulfonic acid (PFOS)			101.8		%		50-150	15-AUG-18
Perfluorodecane sulfonic acid (PFDS)			66.8		%		50-150	15-AUG-18
Perfluoropentanoic acid (PFPeA)			67.6		%		50-150	15-AUG-18
Perfluorohexanoic acid (PFHxA)			93.4		%		50-150	15-AUG-18
Perfluoroheptanoic acid (PFHpA)			89.0		%		50-150	15-AUG-18
Perfluorooctanoic acid (PFOA)			97.4		%		50-150	15-AUG-18
Perfluorononanoic acid (PFNA)			84.2		%		50-150	15-AUG-18
Perfluorodecanoic acid (PFDA)			107.4		%		50-150	15-AUG-18
Perfluoroundecanoic acid (PFUnDA)			89.8		%		50-150	15-AUG-18
Perfluorododecanoic acid (PFDoDA)			85.4		%		50-150	15-AUG-18
Perfluorotridecanoic acid (PFTTrDA)			72.3		%		50-150	15-AUG-18
Perfluorotetradecanoic acid (PFTeDA)			54.1		%		50-150	15-AUG-18
Perfluorooctane sulfonamide (FOSA)			86.8		%		50-150	15-AUG-18
N-Me PFO sulfonamide (MeFOSA)			118.2		%		50-150	15-AUG-18
N-Et PFO sulfonamide (EtFOSA)			105.2		%		50-150	15-AUG-18
N-Me PFO sulfonamidoethanol (MeFOSE)			79.6		%		50-150	15-AUG-18
N-Et PFO sulfonamidoethanol (EtFOSE)			81.0		%		50-150	15-AUG-18
N-Me PFO sulfonamidoacetic acid(MeFOSA)			98.8		%		50-150	15-AUG-18
N-Et PFO sulfonamidoacetic acid(EtFOSA)			101.2		%		50-150	15-AUG-18

**WG2844236-3**

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Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PFAS-LL-EX-LCMS-WT Soil</b>								
<b>Batch R4170115</b>								
<b>WG2844236-5 MS</b>		<b>WG2844236-3</b>						
Perfluorobutane sulfonic acid (PFBS)			93.0		%		50-150	15-AUG-18
Perfluoropentane sulfonic acid (PFPeS)			57.6		%		50-150	15-AUG-18
Perfluorohexane sulfonic acid (PFHxS)			90.4		%		50-150	15-AUG-18
Perfluoroheptane sulfonic acid (PFHpS)			118.6		%		50-150	15-AUG-18
Perfluorooctane sulfonic acid (PFOS)			98.8		%		50-150	15-AUG-18
Perfluorodecane sulfonic acid (PFDS)			66.6		%		50-150	15-AUG-18
Perfluorobutanoic acid (PFBA)			N/A	MS-B	%		-	15-AUG-18
Perfluoropentanoic acid (PFPeA)			106.0		%		50-150	15-AUG-18
Perfluorohexanoic acid (PFHxA)			105.2		%		50-150	15-AUG-18
Perfluoroheptanoic acid (PFHpA)			85.2		%		50-150	15-AUG-18
Perfluorooctanoic acid (PFOA)			104.8		%		50-150	15-AUG-18
Perfluorononanoic acid (PFNA)			91.0		%		50-150	15-AUG-18
Perfluorodecanoic acid (PFDA)			107.0		%		50-150	15-AUG-18
Perfluoroundecanoic acid (PFUnDA)			99.6		%		50-150	15-AUG-18
Perfluorododecanoic acid (PFDoDA)			104.6		%		50-150	15-AUG-18
Perfluorotridecanoic acid (PFTrDA)			65.5		%		50-150	15-AUG-18
Perfluorotetradecanoic acid (PFTeDA)			61.1		%		50-150	15-AUG-18
Perfluorooctane sulfonamide (FOSA)			91.4		%		50-150	15-AUG-18
N-Me PFO sulfonamide (MeFOSA)			113.1		%		50-150	15-AUG-18
N-Et PFO sulfonamide (EtFOSA)			119.5		%		50-150	15-AUG-18
N-Me PFO sulfonamidoethanol (MeFOSE)			115.1		%		50-150	15-AUG-18
N-Et PFO sulfonamidoethanol (EtFOSE)			89.0		%		50-150	15-AUG-18
N-Me PFO sulfonamidoacetic acid(MeFOSE)			132.0		%		50-150	15-AUG-18
N-Et PFO sulfonamidoacetic acid(EtFOSA)			86.0		%		50-150	15-AUG-18
4:2 Fluorotelomer sulfonic acid(4:2 FTS)			89.6		%		50-150	15-AUG-18
6:2 Fluorotelomer sulfonic acid(6:2 FTS)			88.5		%		50-150	15-AUG-18
8:2 Fluorotelomer sulfonic acid(8:2 FTS)			95.0		%		50-150	15-AUG-18
10:2 Fluorotelomer sulfonic acid(10:2 F)			137.0		%		50-150	15-AUG-18
<b>PH-WT Soil</b>								
<b>Batch R4161847</b>								
<b>WG2843793-1 DUP</b>		<b>L2142435-1</b>						
pH		7.87	7.85	J	pH units	0.02	0.3	09-AUG-18
<b>WG2844590-1 LCS</b>								
pH			7.02		pH units		6.9-7.1	09-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PH-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4161940</b>							
<b>WG2844049-1</b>	<b>DUP</b>	<b>L2140827-1</b>						
pH		7.87	7.85	J	pH units	0.02	0.3	09-AUG-18
<b>WG2844706-1</b>	<b>LCS</b>		6.96		pH units		6.9-7.1	09-AUG-18
pH								
<b>Batch</b>	<b>R4162216</b>							
<b>WG2842325-1</b>	<b>DUP</b>	<b>L2140970-15</b>						
pH		7.80	7.77	J	pH units	0.03	0.3	09-AUG-18
<b>WG2843415-1</b>	<b>LCS</b>		6.94		pH units		6.9-7.1	09-AUG-18
pH								
<b>PHENOLS-4AAP-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4161186</b>							
<b>WG2842172-3</b>	<b>DUP</b>	<b>L2140121-7</b>						
Phenols (4AAP)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	08-AUG-18
<b>WG2842172-2</b>	<b>LCS</b>		95.0		%		80-120	07-AUG-18
Phenols (4AAP)								
<b>WG2842172-1</b>	<b>MB</b>		<0.10		mg/kg		0.1	07-AUG-18
Phenols (4AAP)								
<b>WG2842172-4</b>	<b>MS</b>	<b>L2140121-7</b>						
Phenols (4AAP)			89.3		%		70-130	08-AUG-18
<b>Batch</b>	<b>R4161646</b>							
<b>WG2843577-3</b>	<b>DUP</b>	<b>L2140121-15</b>						
Phenols (4AAP)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	08-AUG-18
<b>WG2843577-2</b>	<b>LCS</b>		94.7		%		80-120	08-AUG-18
Phenols (4AAP)								
<b>WG2843577-1</b>	<b>MB</b>		<0.10		mg/kg		0.1	08-AUG-18
Phenols (4AAP)								
<b>WG2843577-4</b>	<b>MS</b>	<b>L2140121-15</b>						
Phenols (4AAP)			84.6		%		70-130	08-AUG-18
<b>Batch</b>	<b>R4162992</b>							
<b>WG2844801-3</b>	<b>DUP</b>	<b>L2140121-23</b>						
Phenols (4AAP)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	10-AUG-18
<b>WG2844801-2</b>	<b>LCS</b>		97.3		%		80-120	10-AUG-18
Phenols (4AAP)								
<b>WG2844801-1</b>	<b>MB</b>		<0.10		mg/kg		0.1	10-AUG-18
Phenols (4AAP)								
<b>WG2844801-4</b>	<b>MS</b>	<b>L2140121-23</b>						
Phenols (4AAP)			80.5		%		70-130	10-AUG-18

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PSA-75UM-SIEVE-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4163071</b>							
<b>WG2846277-2</b>	<b>DUP</b>	<b>L2140121-15</b>						
% >75um		21.2	22.6	J	%	1.3	5	10-AUG-18
<b>WG2846277-1</b>	<b>IRM</b>	<b>PSA_IRM</b>						
% >75um			100.2		%		70-130	10-AUG-18
<b>SO4-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4165738</b>							
<b>WG2844896-4</b>	<b>CRM</b>	<b>AN-CRM-WT</b>						
Sulphate			117.4		%		60-140	10-AUG-18
<b>WG2845200-4</b>	<b>CRM</b>	<b>AN-CRM-WT</b>						
Sulphate			111.4		%		60-140	10-AUG-18
<b>WG2844896-3</b>	<b>DUP</b>	<b>WG2844896-5</b>						
Sulphate		708	737		mg/kg	4.0	30	10-AUG-18
<b>WG2845200-3</b>	<b>DUP</b>	<b>L2143163-1</b>						
Sulphate		516	517		mg/kg	0.1	30	10-AUG-18
<b>WG2844896-2</b>	<b>LCS</b>							
Sulphate			102.2		%		80-120	10-AUG-18
<b>WG2845200-2</b>	<b>LCS</b>							
Sulphate			102.8		%		80-120	10-AUG-18
<b>WG2844896-1</b>	<b>MB</b>							
Sulphate			<20		mg/kg		20	10-AUG-18
<b>WG2845200-1</b>	<b>MB</b>							
Sulphate			<20		mg/kg		20	10-AUG-18
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160917</b>							
<b>WG2840783-4</b>	<b>DUP</b>	<b>WG2840783-3</b>						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18

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3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160917</b>							
<b>WG2840783-4</b>	<b>DUP</b>	<b>WG2840783-3</b>						
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	08-AUG-18
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	08-AUG-18
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	08-AUG-18
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	08-AUG-18
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	08-AUG-18
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	08-AUG-18
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	08-AUG-18
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	08-AUG-18
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	08-AUG-18
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	08-AUG-18
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	08-AUG-18
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-AUG-18
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	08-AUG-18
<b>WG2840783-2</b>	<b>LCS</b>							
1,1,1,2-Tetrachloroethane			102.7		%		60-130	08-AUG-18
1,1,2,2-Tetrachloroethane			99.1		%		60-130	08-AUG-18
1,1,1-Trichloroethane			98.3		%		60-130	08-AUG-18

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3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160917</b>							
<b>WG2840783-2</b>	<b>LCS</b>							
1,1,2-Trichloroethane			104.8		%		60-130	08-AUG-18
1,1-Dichloroethane			102.1		%		60-130	08-AUG-18
1,1-Dichloroethylene			88.5		%		60-130	08-AUG-18
1,2-Dibromoethane			104.3		%		70-130	08-AUG-18
1,2-Dichlorobenzene			105.8		%		70-130	08-AUG-18
1,2-Dichloroethane			97.4		%		60-130	08-AUG-18
1,2-Dichloropropane			104.3		%		70-130	08-AUG-18
1,3-Dichlorobenzene			104.0		%		70-130	08-AUG-18
1,4-Dichlorobenzene			104.5		%		70-130	08-AUG-18
Acetone			97.1		%		60-140	08-AUG-18
Benzene			105.3		%		70-130	08-AUG-18
Bromodichloromethane			104.0		%		50-140	08-AUG-18
Bromoform			101.9		%		70-130	08-AUG-18
Bromomethane			82.6		%		50-140	08-AUG-18
Carbon tetrachloride			99.0		%		70-130	08-AUG-18
Chlorobenzene			104.4		%		70-130	08-AUG-18
Chloroform			103.4		%		70-130	08-AUG-18
cis-1,2-Dichloroethylene			103.9		%		70-130	08-AUG-18
cis-1,3-Dichloropropene			109.4		%		70-130	08-AUG-18
Dibromochloromethane			102.3		%		60-130	08-AUG-18
Dichlorodifluoromethane			80.5		%		50-140	08-AUG-18
Ethylbenzene			96.6		%		70-130	08-AUG-18
n-Hexane			103.5		%		70-130	08-AUG-18
Methylene Chloride			104.5		%		70-130	08-AUG-18
MTBE			104.5		%		70-130	08-AUG-18
m+p-Xylenes			98.2		%		70-130	08-AUG-18
Methyl Ethyl Ketone			106.2		%		60-140	08-AUG-18
Methyl Isobutyl Ketone			98.7		%		60-140	08-AUG-18
o-Xylene			95.4		%		70-130	08-AUG-18
Styrene			96.7		%		70-130	08-AUG-18
Tetrachloroethylene			104.1		%		60-130	08-AUG-18
Toluene			99.8		%		70-130	08-AUG-18
trans-1,2-Dichloroethylene			98.3		%		60-130	08-AUG-18



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Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160917</b>							
<b>WG2840783-2</b>	<b>LCS</b>							
trans-1,3-Dichloropropene			101.7		%		70-130	08-AUG-18
Trichloroethylene			108.7		%		60-130	08-AUG-18
Trichlorofluoromethane			101.7		%		50-140	08-AUG-18
Vinyl chloride			91.8		%		60-140	08-AUG-18
<b>WG2840783-1</b>	<b>MB</b>							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	08-AUG-18
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	08-AUG-18
1,1,1-Trichloroethane			<0.050		ug/g		0.05	08-AUG-18
1,1,2-Trichloroethane			<0.050		ug/g		0.05	08-AUG-18
1,1-Dichloroethane			<0.050		ug/g		0.05	08-AUG-18
1,1-Dichloroethylene			<0.050		ug/g		0.05	08-AUG-18
1,2-Dibromoethane			<0.050		ug/g		0.05	08-AUG-18
1,2-Dichlorobenzene			<0.050		ug/g		0.05	08-AUG-18
1,2-Dichloroethane			<0.050		ug/g		0.05	08-AUG-18
1,2-Dichloropropane			<0.050		ug/g		0.05	08-AUG-18
1,3-Dichlorobenzene			<0.050		ug/g		0.05	08-AUG-18
1,4-Dichlorobenzene			<0.050		ug/g		0.05	08-AUG-18
Acetone			<0.50		ug/g		0.5	08-AUG-18
Benzene			<0.0068		ug/g		0.0068	08-AUG-18
Bromodichloromethane			<0.050		ug/g		0.05	08-AUG-18
Bromoform			<0.050		ug/g		0.05	08-AUG-18
Bromomethane			<0.050		ug/g		0.05	08-AUG-18
Carbon tetrachloride			<0.050		ug/g		0.05	08-AUG-18
Chlorobenzene			<0.050		ug/g		0.05	08-AUG-18
Chloroform			<0.050		ug/g		0.05	08-AUG-18
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	08-AUG-18
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	08-AUG-18
Dibromochloromethane			<0.050		ug/g		0.05	08-AUG-18
Dichlorodifluoromethane			<0.050		ug/g		0.05	08-AUG-18
Ethylbenzene			<0.018		ug/g		0.018	08-AUG-18
n-Hexane			<0.050		ug/g		0.05	08-AUG-18
Methylene Chloride			<0.050		ug/g		0.05	08-AUG-18
MTBE			<0.050		ug/g		0.05	08-AUG-18
m+p-Xylenes			<0.030		ug/g		0.03	08-AUG-18

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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160917</b>							
<b>WG2840783-1 MB</b>								
Methyl Ethyl Ketone			<0.50		ug/g		0.5	08-AUG-18
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	08-AUG-18
o-Xylene			<0.020		ug/g		0.02	08-AUG-18
Styrene			<0.050		ug/g		0.05	08-AUG-18
Tetrachloroethylene			<0.050		ug/g		0.05	08-AUG-18
Toluene			<0.080		ug/g		0.08	08-AUG-18
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	08-AUG-18
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	08-AUG-18
Trichloroethylene			<0.010		ug/g		0.01	08-AUG-18
Trichlorofluoromethane			<0.050		ug/g		0.05	08-AUG-18
Vinyl chloride			<0.020		ug/g		0.02	08-AUG-18
Surrogate: 1,4-Difluorobenzene			113.6		%		50-140	08-AUG-18
Surrogate: 4-Bromofluorobenzene			111.7		%		50-140	08-AUG-18
<b>WG2840783-5 MS</b>		<b>L2140121-1</b>						
1,1,1,2-Tetrachloroethane			106.3		%		50-140	08-AUG-18
1,1,2,2-Tetrachloroethane			102.2		%		50-140	08-AUG-18
1,1,1-Trichloroethane			101.9		%		50-140	08-AUG-18
1,1,2-Trichloroethane			108.0		%		50-140	08-AUG-18
1,1-Dichloroethane			105.0		%		50-140	08-AUG-18
1,1-Dichloroethylene			91.6		%		50-140	08-AUG-18
1,2-Dibromoethane			107.3		%		50-140	08-AUG-18
1,2-Dichlorobenzene			108.3		%		50-140	08-AUG-18
1,2-Dichloroethane			98.7		%		50-140	08-AUG-18
1,2-Dichloropropane			106.4		%		50-140	08-AUG-18
1,3-Dichlorobenzene			107.3		%		50-140	08-AUG-18
1,4-Dichlorobenzene			107.8		%		50-140	08-AUG-18
Acetone			102.8		%		50-140	08-AUG-18
Benzene			107.8		%		50-140	08-AUG-18
Bromodichloromethane			106.7		%		50-140	08-AUG-18
Bromoform			104.7		%		50-140	08-AUG-18
Bromomethane			86.0		%		50-140	08-AUG-18
Carbon tetrachloride			102.8		%		50-140	08-AUG-18
Chlorobenzene			107.1		%		50-140	08-AUG-18
Chloroform			106.4		%		50-140	08-AUG-18

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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4160917</b>							
<b>WG2840783-5 MS</b>		<b>L2140121-1</b>						
cis-1,2-Dichloroethylene			107.0		%		50-140	08-AUG-18
cis-1,3-Dichloropropene			111.8		%		50-140	08-AUG-18
Dibromochloromethane			105.6		%		50-140	08-AUG-18
Dichlorodifluoromethane			87.1		%		50-140	08-AUG-18
Ethylbenzene			99.6		%		50-140	08-AUG-18
n-Hexane			108.6		%		50-140	08-AUG-18
Methylene Chloride			107.5		%		50-140	08-AUG-18
MTBE			107.5		%		50-140	08-AUG-18
m+p-Xylenes			100.9		%		50-140	08-AUG-18
Methyl Ethyl Ketone			108.3		%		50-140	08-AUG-18
Methyl Isobutyl Ketone			99.3		%		50-140	08-AUG-18
o-Xylene			97.7		%		50-140	08-AUG-18
Styrene			98.7		%		50-140	08-AUG-18
Tetrachloroethylene			108.3		%		50-140	08-AUG-18
Toluene			103.0		%		50-140	08-AUG-18
trans-1,2-Dichloroethylene			101.4		%		50-140	08-AUG-18
trans-1,3-Dichloropropene			105.4		%		50-140	08-AUG-18
Trichloroethylene			112.4		%		50-140	08-AUG-18
Trichlorofluoromethane			106.7		%		50-140	08-AUG-18
Vinyl chloride			95.3		%		50-140	08-AUG-18
<b>Batch</b>	<b>R4161900</b>							
<b>WG2842810-4 DUP</b>		<b>WG2842810-3</b>						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18

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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4161900</b>							
<b>WG2842810-4</b>	<b>DUP</b>	<b>WG2842810-3</b>						
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	09-AUG-18
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	09-AUG-18
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	09-AUG-18
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	09-AUG-18
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	09-AUG-18
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	09-AUG-18
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	09-AUG-18
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	09-AUG-18
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	09-AUG-18
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	09-AUG-18
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	09-AUG-18
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	09-AUG-18
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	09-AUG-18
<b>WG2842810-2</b>	<b>LCS</b>							
1,1,1,2-Tetrachloroethane			103.3		%		60-130	09-AUG-18
1,1,2,2-Tetrachloroethane			105.5		%		60-130	09-AUG-18
1,1,1-Trichloroethane			96.1		%		60-130	09-AUG-18

## Quality Control Report

Workorder: L2140121

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4161900</b>							
<b>WG2842810-2</b>	<b>LCS</b>							
1,1,2-Trichloroethane			108.2		%		60-130	09-AUG-18
1,1-Dichloroethane			100.6		%		60-130	09-AUG-18
1,1-Dichloroethylene			85.2		%		60-130	09-AUG-18
1,2-Dibromoethane			108.2		%		70-130	09-AUG-18
1,2-Dichlorobenzene			108.6		%		70-130	09-AUG-18
1,2-Dichloroethane			96.4		%		60-130	09-AUG-18
1,2-Dichloropropane			108.9		%		70-130	09-AUG-18
1,3-Dichlorobenzene			105.1		%		70-130	09-AUG-18
1,4-Dichlorobenzene			106.2		%		70-130	09-AUG-18
Acetone			99.7		%		60-140	09-AUG-18
Benzene			109.5		%		70-130	09-AUG-18
Bromodichloromethane			105.9		%		50-140	09-AUG-18
Bromoform			106.5		%		70-130	09-AUG-18
Bromomethane			90.6		%		50-140	09-AUG-18
Carbon tetrachloride			96.6		%		70-130	09-AUG-18
Chlorobenzene			104.7		%		70-130	09-AUG-18
Chloroform			103.7		%		70-130	09-AUG-18
cis-1,2-Dichloroethylene			107.2		%		70-130	09-AUG-18
cis-1,3-Dichloropropene			116.0		%		70-130	09-AUG-18
Dibromochloromethane			103.5		%		60-130	09-AUG-18
Dichlorodifluoromethane			107.0		%		50-140	09-AUG-18
Ethylbenzene			92.7		%		70-130	09-AUG-18
n-Hexane			104.5		%		70-130	09-AUG-18
Methylene Chloride			109.4		%		70-130	09-AUG-18
MTBE			107.9		%		70-130	09-AUG-18
m+p-Xylenes			96.3		%		70-130	09-AUG-18
Methyl Ethyl Ketone			119.9		%		60-140	09-AUG-18
Methyl Isobutyl Ketone			102.6		%		60-140	09-AUG-18
o-Xylene			92.3		%		70-130	09-AUG-18
Styrene			96.0		%		70-130	09-AUG-18
Tetrachloroethylene			100.9		%		60-130	09-AUG-18
Toluene			97.4		%		70-130	09-AUG-18
trans-1,2-Dichloroethylene			96.4		%		60-130	09-AUG-18

## Quality Control Report

Workorder: L2140121

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4161900</b>							
<b>WG2842810-2</b>	<b>LCS</b>							
trans-1,3-Dichloropropene			102.3		%		70-130	09-AUG-18
Trichloroethylene			110.7		%		60-130	09-AUG-18
Trichlorofluoromethane			99.6		%		50-140	09-AUG-18
Vinyl chloride			99.6		%		60-140	09-AUG-18
<b>WG2842810-1</b>	<b>MB</b>							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	09-AUG-18
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	09-AUG-18
1,1,1-Trichloroethane			<0.050		ug/g		0.05	09-AUG-18
1,1,2-Trichloroethane			<0.050		ug/g		0.05	09-AUG-18
1,1-Dichloroethane			<0.050		ug/g		0.05	09-AUG-18
1,1-Dichloroethylene			<0.050		ug/g		0.05	09-AUG-18
1,2-Dibromoethane			<0.050		ug/g		0.05	09-AUG-18
1,2-Dichlorobenzene			<0.050		ug/g		0.05	09-AUG-18
1,2-Dichloroethane			<0.050		ug/g		0.05	09-AUG-18
1,2-Dichloropropane			<0.050		ug/g		0.05	09-AUG-18
1,3-Dichlorobenzene			<0.050		ug/g		0.05	09-AUG-18
1,4-Dichlorobenzene			<0.050		ug/g		0.05	09-AUG-18
Acetone			<0.50		ug/g		0.5	09-AUG-18
Benzene			<0.0068		ug/g		0.0068	09-AUG-18
Bromodichloromethane			<0.050		ug/g		0.05	09-AUG-18
Bromoform			<0.050		ug/g		0.05	09-AUG-18
Bromomethane			<0.050		ug/g		0.05	09-AUG-18
Carbon tetrachloride			<0.050		ug/g		0.05	09-AUG-18
Chlorobenzene			<0.050		ug/g		0.05	09-AUG-18
Chloroform			<0.050		ug/g		0.05	09-AUG-18
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	09-AUG-18
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	09-AUG-18
Dibromochloromethane			<0.050		ug/g		0.05	09-AUG-18
Dichlorodifluoromethane			<0.050		ug/g		0.05	09-AUG-18
Ethylbenzene			<0.018		ug/g		0.018	09-AUG-18
n-Hexane			<0.050		ug/g		0.05	09-AUG-18
Methylene Chloride			<0.050		ug/g		0.05	09-AUG-18
MTBE			<0.050		ug/g		0.05	09-AUG-18
m+p-Xylenes			<0.030		ug/g		0.03	09-AUG-18

## Quality Control Report

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R4161900</b>							
<b>WG2842810-1 MB</b>								
Methyl Ethyl Ketone			<0.50		ug/g		0.5	09-AUG-18
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	09-AUG-18
o-Xylene			<0.020		ug/g		0.02	09-AUG-18
Styrene			<0.050		ug/g		0.05	09-AUG-18
Tetrachloroethylene			<0.050		ug/g		0.05	09-AUG-18
Toluene			<0.080		ug/g		0.08	09-AUG-18
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	09-AUG-18
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	09-AUG-18
Trichloroethylene			<0.010		ug/g		0.01	09-AUG-18
Trichlorofluoromethane			<0.050		ug/g		0.05	09-AUG-18
Vinyl chloride			<0.020		ug/g		0.02	09-AUG-18
Surrogate: 1,4-Difluorobenzene			104.3		%		50-140	09-AUG-18
Surrogate: 4-Bromofluorobenzene			101.3		%		50-140	09-AUG-18
<b>WG2842810-5 MS</b>		<b>L2140121-22</b>						
1,1,1,2-Tetrachloroethane			102.0		%		50-140	09-AUG-18
1,1,2,2-Tetrachloroethane			91.8		%		50-140	09-AUG-18
1,1,1-Trichloroethane			98.3		%		50-140	09-AUG-18
1,1,2-Trichloroethane			98.7		%		50-140	09-AUG-18
1,1-Dichloroethane			99.0		%		50-140	09-AUG-18
1,1-Dichloroethylene			88.5		%		50-140	09-AUG-18
1,2-Dibromoethane			96.0		%		50-140	09-AUG-18
1,2-Dichlorobenzene			106.4		%		50-140	09-AUG-18
1,2-Dichloroethane			84.6		%		50-140	09-AUG-18
1,2-Dichloropropane			102.2		%		50-140	09-AUG-18
1,3-Dichlorobenzene			106.7		%		50-140	09-AUG-18
1,4-Dichlorobenzene			107.1		%		50-140	09-AUG-18
Acetone			85.2		%		50-140	09-AUG-18
Benzene			107.3		%		50-140	09-AUG-18
Bromodichloromethane			98.3		%		50-140	09-AUG-18
Bromoform			94.9		%		50-140	09-AUG-18
Bromomethane			86.9		%		50-140	09-AUG-18
Carbon tetrachloride			100.4		%		50-140	09-AUG-18
Chlorobenzene			103.6		%		50-140	09-AUG-18
Chloroform			100.3		%		50-140	09-AUG-18

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Workorder: L2140121

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Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
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Contact: Ed Riseborough

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R4161900</b>							
<b>WG2842810-5 MS</b>		<b>L2140121-22</b>						
cis-1,2-Dichloroethylene			103.1		%		50-140	09-AUG-18
cis-1,3-Dichloropropene			102.5		%		50-140	09-AUG-18
Dibromochloromethane			96.1		%		50-140	09-AUG-18
Dichlorodifluoromethane			110.9		%		50-140	09-AUG-18
Ethylbenzene			97.0		%		50-140	09-AUG-18
n-Hexane			112.1		%		50-140	09-AUG-18
Methylene Chloride			101.9		%		50-140	09-AUG-18
MTBE			107.0		%		50-140	09-AUG-18
m+p-Xylenes			99.4		%		50-140	09-AUG-18
Methyl Ethyl Ketone			93.3		%		50-140	09-AUG-18
Methyl Isobutyl Ketone			80.5		%		50-140	09-AUG-18
o-Xylene			93.8		%		50-140	09-AUG-18
Styrene			93.7		%		50-140	09-AUG-18
Tetrachloroethylene			106.9		%		50-140	09-AUG-18
Toluene			101.0		%		50-140	09-AUG-18
trans-1,2-Dichloroethylene			96.7		%		50-140	09-AUG-18
trans-1,3-Dichloropropene			90.9		%		50-140	09-AUG-18
Trichloroethylene			111.5		%		50-140	09-AUG-18
Trichlorofluoromethane			105.9		%		50-140	09-AUG-18
Vinyl chloride			103.5		%		50-140	09-AUG-18



# Quality Control Report

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Client: Defence Research and Development Canada (Ottawa)  
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## Legend:

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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:

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Qualifier	Description
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
J	Duplicate results and limits are expressed in terms of absolute difference.
K	Matrix Spike recovery outside ALS DQO due to sample matrix effects.
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.
RRQC	Refer to report remarks for information regarding this QC result.

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# Quality Control Report

Workorder: L2140121

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Client: Defence Research and Development Canada (Ottawa)  
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## Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
<b>Physical Tests</b>							
% Moisture	1	13-JUL-18 10:37	09-AUG-18 15:37	14	27	days	EHTR
	2	13-JUL-18 11:34	09-AUG-18 17:07	14	27	days	EHTR
	3	13-JUL-18 11:13	09-AUG-18 17:08	14	27	days	EHTR
	4	13-JUL-18 11:27	09-AUG-18 17:09	14	27	days	EHTR
	5	13-JUL-18 11:19	09-AUG-18 17:10	14	27	days	EHTR
	7	13-JUL-18 09:47	09-AUG-18 17:11	14	27	days	EHTR
	8	13-JUL-18 10:37	09-AUG-18 17:12	14	27	days	EHTR
	9	13-JUL-18 10:48	09-AUG-18 17:13	14	27	days	EHTR
	10	13-JUL-18 10:55	09-AUG-18 17:14	14	27	days	EHTR
	11	13-JUL-18 11:07	09-AUG-18 17:15	14	27	days	EHTR
	12	13-JUL-18 11:54	09-AUG-18 17:16	14	27	days	EHTR
	13	13-JUL-18 10:10	09-AUG-18 20:17	14	27	days	EHTR
	14	13-JUL-18 11:40	09-AUG-18 20:19	14	27	days	EHTR
	15	13-JUL-18 10:03	09-AUG-18 20:20	14	27	days	EHTR
	16	13-JUL-18 09:37	09-AUG-18 20:21	14	27	days	EHTR
	17	13-JUL-18 10:19	09-AUG-18 20:22	14	27	days	EHTR
	18	13-JUL-18 09:28	09-AUG-18 20:23	14	27	days	EHTR
	19	13-JUL-18 09:55	09-AUG-18 20:24	14	27	days	EHTR
	20	13-JUL-18 10:26	09-AUG-18 20:25	14	27	days	EHTR
	21	13-JUL-18 11:54	09-AUG-18 20:26	14	27	days	EHTR
	22	13-JUL-18 11:40	09-AUG-18 20:27	14	27	days	EHTR
	23	13-JUL-18 12:07	09-AUG-18 20:28	14	27	days	EHTR
pH	6	13-JUL-18 12:21	02-AUG-18 00:00	4	19	days	EHTR
<b>Leachable Anions &amp; Nutrients</b>							
Ammonia as N	1	13-JUL-18 10:37	07-AUG-18 11:00	3	25	days	EHTR
	2	13-JUL-18 11:34	07-AUG-18 11:00	3	25	days	EHTR
	3	13-JUL-18 11:13	07-AUG-18 11:00	3	25	days	EHTR
	4	13-JUL-18 11:27	07-AUG-18 11:00	3	25	days	EHTR
	5	13-JUL-18 11:19	07-AUG-18 11:00	3	25	days	EHTR
	7	13-JUL-18 09:47	08-AUG-18 10:00	3	26	days	EHTR
	8	13-JUL-18 10:37	08-AUG-18 10:00	3	26	days	EHTR
	9	13-JUL-18 10:48	08-AUG-18 10:00	3	26	days	EHTR
	10	13-JUL-18 10:55	08-AUG-18 10:00	3	26	days	EHTR
	11	13-JUL-18 11:07	09-AUG-18 09:00	3	27	days	EHTR
	12	13-JUL-18 11:54	09-AUG-18 09:00	3	27	days	EHTR
	13	13-JUL-18 10:10	09-AUG-18 09:00	3	27	days	EHTR
	14	13-JUL-18 11:40	09-AUG-18 09:00	3	27	days	EHTR
	15	13-JUL-18 10:03	09-AUG-18 09:00	3	27	days	EHTR
	16	13-JUL-18 09:37	09-AUG-18 09:00	3	27	days	EHTR
	17	13-JUL-18 10:19	09-AUG-18 09:00	3	27	days	EHTR
	18	13-JUL-18 09:28	09-AUG-18 09:00	3	27	days	EHTR
	19	13-JUL-18 09:55	09-AUG-18 09:00	3	27	days	EHTR
	20	13-JUL-18 10:26	09-AUG-18 18:00	3	27	days	EHTR
	21	13-JUL-18 11:54	09-AUG-18 18:00	3	27	days	EHTR
	22	13-JUL-18 11:40	09-AUG-18 18:00	3	27	days	EHTR
	23	13-JUL-18 12:07	09-AUG-18 18:00	3	27	days	EHTR
Nitrate in Soil (NO3-N)	1	13-JUL-18 10:37	10-AUG-18 15:00	3	28	days	EHTR
	2	13-JUL-18 11:34	10-AUG-18 15:00	3	28	days	EHTR

# Quality Control Report

Workorder: L2140121

Report Date: 22-AUG-18

Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
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Contact: Ed Riseborough

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## Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
<b>Leachable Anions &amp; Nutrients</b>							
Nitrate in Soil (NO3-N)							
	3	13-JUL-18 11:13	10-AUG-18 15:00	3	28	days	EHTR
	4	13-JUL-18 11:27	10-AUG-18 15:00	3	28	days	EHTR
	5	13-JUL-18 11:19	10-AUG-18 15:00	3	28	days	EHTR
	7	13-JUL-18 09:47	10-AUG-18 15:00	3	28	days	EHTR
	8	13-JUL-18 10:37	10-AUG-18 15:00	3	28	days	EHTR
	9	13-JUL-18 10:48	10-AUG-18 15:00	3	28	days	EHTR
	10	13-JUL-18 10:55	10-AUG-18 15:00	3	28	days	EHTR
	11	13-JUL-18 11:07	10-AUG-18 15:00	3	28	days	EHTR
	12	13-JUL-18 11:54	10-AUG-18 15:00	3	28	days	EHTR
	13	13-JUL-18 10:10	10-AUG-18 15:00	3	28	days	EHTR
	14	13-JUL-18 11:40	10-AUG-18 15:00	3	28	days	EHTR
	15	13-JUL-18 10:03	10-AUG-18 15:00	3	28	days	EHTR
	16	13-JUL-18 09:37	10-AUG-18 15:00	3	28	days	EHTR
	17	13-JUL-18 10:19	10-AUG-18 15:00	3	28	days	EHTR
	18	13-JUL-18 09:28	10-AUG-18 15:00	3	28	days	EHTR
	19	13-JUL-18 09:55	10-AUG-18 15:00	3	28	days	EHTR
	20	13-JUL-18 10:26	10-AUG-18 15:00	3	28	days	EHTR
	21	13-JUL-18 11:54	10-AUG-18 15:00	3	28	days	EHTR
	22	13-JUL-18 11:40	10-AUG-18 16:00	3	28	days	EHTR
	23	13-JUL-18 12:07	10-AUG-18 16:00	3	28	days	EHTR
Nitrate in Water by IC							
	6	13-JUL-18 12:21	07-AUG-18 00:00	7	24	days	EHTR
Nitrite in Soil							
	1	13-JUL-18 10:37	10-AUG-18 15:00	3	28	days	EHTR
	2	13-JUL-18 11:34	10-AUG-18 15:00	3	28	days	EHTR
	3	13-JUL-18 11:13	10-AUG-18 15:00	3	28	days	EHTR
	4	13-JUL-18 11:27	10-AUG-18 15:00	3	28	days	EHTR
	5	13-JUL-18 11:19	10-AUG-18 15:00	3	28	days	EHTR
	7	13-JUL-18 09:47	10-AUG-18 15:00	3	28	days	EHTR
	8	13-JUL-18 10:37	10-AUG-18 15:00	3	28	days	EHTR
	9	13-JUL-18 10:48	10-AUG-18 15:00	3	28	days	EHTR
	10	13-JUL-18 10:55	10-AUG-18 15:00	3	28	days	EHTR
	11	13-JUL-18 11:07	10-AUG-18 15:00	3	28	days	EHTR
	12	13-JUL-18 11:54	10-AUG-18 15:00	3	28	days	EHTR
	13	13-JUL-18 10:10	10-AUG-18 15:00	3	28	days	EHTR
	14	13-JUL-18 11:40	10-AUG-18 15:00	3	28	days	EHTR
	15	13-JUL-18 10:03	10-AUG-18 15:00	3	28	days	EHTR
	16	13-JUL-18 09:37	10-AUG-18 15:00	3	28	days	EHTR
	17	13-JUL-18 10:19	10-AUG-18 15:00	3	28	days	EHTR
	18	13-JUL-18 09:28	10-AUG-18 15:00	3	28	days	EHTR
	19	13-JUL-18 09:55	10-AUG-18 15:00	3	28	days	EHTR
	20	13-JUL-18 10:26	10-AUG-18 15:00	3	28	days	EHTR
	21	13-JUL-18 11:54	10-AUG-18 15:00	3	28	days	EHTR
	22	13-JUL-18 11:40	10-AUG-18 16:00	3	28	days	EHTR
	23	13-JUL-18 12:07	10-AUG-18 16:00	3	28	days	EHTR
Nitrite in Water by IC							
	6	13-JUL-18 12:21	07-AUG-18 00:00	7	24	days	EHTR
<b>Aggregate Organics</b>							
Phenol (4AAP)							
	1	13-JUL-18 10:37	07-AUG-18 07:00	14	25	days	EHTR
	2	13-JUL-18 11:34	07-AUG-18 07:00	14	25	days	EHTR

# Quality Control Report

Workorder: L2140121

Report Date: 22-AUG-18

Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3

Contact: Ed Riseborough

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## Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
<b>Aggregate Organics</b>							
Phenol (4AAP)							
	3	13-JUL-18 11:13	07-AUG-18 07:00	14	25	days	EHTR
	4	13-JUL-18 11:27	07-AUG-18 07:00	14	25	days	EHTR
	5	13-JUL-18 11:19	07-AUG-18 07:00	14	25	days	EHTR
	7	13-JUL-18 09:47	07-AUG-18 07:00	14	25	days	EHTR
	8	13-JUL-18 10:37	07-AUG-18 07:00	14	25	days	EHTR
	9	13-JUL-18 10:48	08-AUG-18 12:00	14	26	days	EHTR
	10	13-JUL-18 10:55	08-AUG-18 12:00	14	26	days	EHTR
	11	13-JUL-18 11:07	08-AUG-18 12:00	14	26	days	EHTR
	12	13-JUL-18 11:54	08-AUG-18 12:00	14	26	days	EHTR
	13	13-JUL-18 10:10	08-AUG-18 12:00	14	26	days	EHTR
	14	13-JUL-18 11:40	08-AUG-18 12:00	14	26	days	EHTR
	15	13-JUL-18 10:03	08-AUG-18 12:00	14	26	days	EHTR
	16	13-JUL-18 09:37	09-AUG-18 12:00	14	27	days	EHTR
	17	13-JUL-18 10:19	09-AUG-18 12:00	14	27	days	EHTR
	18	13-JUL-18 09:28	09-AUG-18 12:00	14	27	days	EHTR
	19	13-JUL-18 09:55	09-AUG-18 12:00	14	27	days	EHTR
	20	13-JUL-18 10:26	09-AUG-18 12:00	14	27	days	EHTR
	21	13-JUL-18 11:54	09-AUG-18 12:00	14	27	days	EHTR
	22	13-JUL-18 11:40	09-AUG-18 12:00	14	27	days	EHTR
	23	13-JUL-18 12:07	09-AUG-18 12:00	14	27	days	EHTR
<b>Volatile Organic Compounds</b>							
VOC by GCMS HS O.Reg 153/04 (July 2011)							
	6	13-JUL-18 12:21	03-AUG-18 12:47	14	21	days	EHTR
VOC-O.Reg 153/04 (July 2011)							
	1	13-JUL-18 10:37	03-AUG-18 12:17	14	21	days	EHTR
	2	13-JUL-18 11:34	03-AUG-18 12:21	14	21	days	EHTR
	3	13-JUL-18 11:13	03-AUG-18 12:23	14	21	days	EHTR
	4	13-JUL-18 11:27	03-AUG-18 12:24	14	21	days	EHTR
	5	13-JUL-18 11:19	03-AUG-18 12:25	14	21	days	EHTR
	7	13-JUL-18 09:47	03-AUG-18 12:26	14	21	days	EHTR
	8	13-JUL-18 10:37	03-AUG-18 12:27	14	21	days	EHTR
	9	13-JUL-18 10:48	03-AUG-18 12:28	14	21	days	EHTR
	10	13-JUL-18 10:55	03-AUG-18 12:29	14	21	days	EHTR
	11	13-JUL-18 11:07	03-AUG-18 12:30	14	21	days	EHTR
	12	13-JUL-18 11:54	03-AUG-18 12:31	14	21	days	EHTR
	13	13-JUL-18 10:10	03-AUG-18 12:32	14	21	days	EHTR
	14	13-JUL-18 11:40	03-AUG-18 12:33	14	21	days	EHTR
	15	13-JUL-18 10:03	03-AUG-18 12:34	14	21	days	EHTR
	16	13-JUL-18 09:37	03-AUG-18 12:35	14	21	days	EHTR
	17	13-JUL-18 10:19	03-AUG-18 12:36	14	21	days	EHTR
	18	13-JUL-18 09:28	03-AUG-18 12:37	14	21	days	EHTR
	19	13-JUL-18 09:55	03-AUG-18 12:38	14	21	days	EHTR
	20	13-JUL-18 10:26	03-AUG-18 12:39	14	21	days	EHTR
	21	13-JUL-18 11:54	03-AUG-18 12:40	14	21	days	EHTR
	22	13-JUL-18 11:40	07-AUG-18 16:18	14	25	days	EHTR
	23	13-JUL-18 12:07	07-AUG-18 16:22	14	25	days	EHTR
<b>Hydrocarbons</b>							
F1-O.Reg 153/04 (July 2011)							
	6	13-JUL-18 12:21	03-AUG-18 12:47	14	21	days	EHTR
F1-O.Reg 153/04 (July 2011)							
	1	13-JUL-18 10:37	03-AUG-18 12:17	14	21	days	EHTR

# Quality Control Report

Workorder: L2140121

Report Date: 22-AUG-18

Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3  
Contact: Ed Riseborough

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## Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
<b>Hydrocarbons</b>							
F1-O.Reg 153/04 (July 2011)							
	2	13-JUL-18 11:34	03-AUG-18 12:21	14	21	days	EHTR
	3	13-JUL-18 11:13	03-AUG-18 12:23	14	21	days	EHTR
	4	13-JUL-18 11:27	03-AUG-18 12:24	14	21	days	EHTR
	5	13-JUL-18 11:19	03-AUG-18 12:25	14	21	days	EHTR
	7	13-JUL-18 09:47	03-AUG-18 12:26	14	21	days	EHTR
	8	13-JUL-18 10:37	03-AUG-18 12:27	14	21	days	EHTR
	9	13-JUL-18 10:48	03-AUG-18 12:28	14	21	days	EHTR
	10	13-JUL-18 10:55	03-AUG-18 12:29	14	21	days	EHTR
	11	13-JUL-18 11:07	03-AUG-18 12:30	14	21	days	EHTR
	12	13-JUL-18 11:54	03-AUG-18 12:31	14	21	days	EHTR
	13	13-JUL-18 10:10	03-AUG-18 12:32	14	21	days	EHTR
	14	13-JUL-18 11:40	03-AUG-18 12:33	14	21	days	EHTR
	15	13-JUL-18 10:03	03-AUG-18 12:34	14	21	days	EHTR
	16	13-JUL-18 09:37	03-AUG-18 12:35	14	21	days	EHTR
	17	13-JUL-18 10:19	03-AUG-18 12:36	14	21	days	EHTR
	18	13-JUL-18 09:28	03-AUG-18 12:37	14	21	days	EHTR
	19	13-JUL-18 09:55	03-AUG-18 12:38	14	21	days	EHTR
	20	13-JUL-18 10:26	03-AUG-18 12:39	14	21	days	EHTR
	21	13-JUL-18 11:54	03-AUG-18 12:40	14	21	days	EHTR
	22	13-JUL-18 11:40	07-AUG-18 16:18	14	25	days	EHTR
	23	13-JUL-18 12:07	07-AUG-18 16:22	14	25	days	EHTR
F2-F4-O.Reg 153/04 (July 2011)							
	6	13-JUL-18 12:21	03-AUG-18 18:46	14	21	days	EHTR
F2-F4-O.Reg 153/04 (July 2011)							
	1	13-JUL-18 10:37	07-AUG-18 11:00	14	25	days	EHTR
	2	13-JUL-18 11:34	07-AUG-18 11:00	14	25	days	EHTR
	3	13-JUL-18 11:13	07-AUG-18 11:00	14	25	days	EHTR
	4	13-JUL-18 11:27	07-AUG-18 11:00	14	25	days	EHTR
	5	13-JUL-18 11:19	07-AUG-18 11:00	14	25	days	EHTR
	7	13-JUL-18 09:47	07-AUG-18 11:00	14	25	days	EHTR
	8	13-JUL-18 10:37	07-AUG-18 11:00	14	25	days	EHTR
	9	13-JUL-18 10:48	07-AUG-18 11:00	14	25	days	EHTR
	10	13-JUL-18 10:55	07-AUG-18 11:00	14	25	days	EHTR
	11	13-JUL-18 11:07	07-AUG-18 11:00	14	25	days	EHTR
	12	13-JUL-18 11:54	07-AUG-18 11:00	14	25	days	EHTR
	13	13-JUL-18 10:10	08-AUG-18 15:00	14	26	days	EHTR
	14	13-JUL-18 11:40	08-AUG-18 15:00	14	26	days	EHTR
	15	13-JUL-18 10:03	08-AUG-18 15:00	14	26	days	EHTR
	16	13-JUL-18 09:37	08-AUG-18 15:00	14	26	days	EHTR
	17	13-JUL-18 10:19	08-AUG-18 15:00	14	26	days	EHTR
	18	13-JUL-18 09:28	08-AUG-18 15:00	14	26	days	EHTR
	19	13-JUL-18 09:55	08-AUG-18 15:00	14	26	days	EHTR
	20	13-JUL-18 10:26	08-AUG-18 15:00	14	26	days	EHTR
	21	13-JUL-18 11:54	08-AUG-18 15:00	14	26	days	EHTR
	22	13-JUL-18 11:40	08-AUG-18 15:00	14	26	days	EHTR
	23	13-JUL-18 12:07	08-AUG-18 15:00	14	26	days	EHTR
<b>Polychlorinated Biphenyls</b>							
PCB-O. Reg 153/04 (July 2011)							
	6	13-JUL-18 12:21	03-AUG-18 18:47	14	21	days	EHTR

## Legend & Qualifier Definitions:

# Quality Control Report

Workorder: L2140121

Report Date: 22-AUG-18

Client: Defence Research and Development Canada (Ottawa)  
3701 Carling Avenue  
Ottawa ON K2G 0R3  
Contact: Ed Riseborough

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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 L2140121 were received on 01-AUG-18 14:30.

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.

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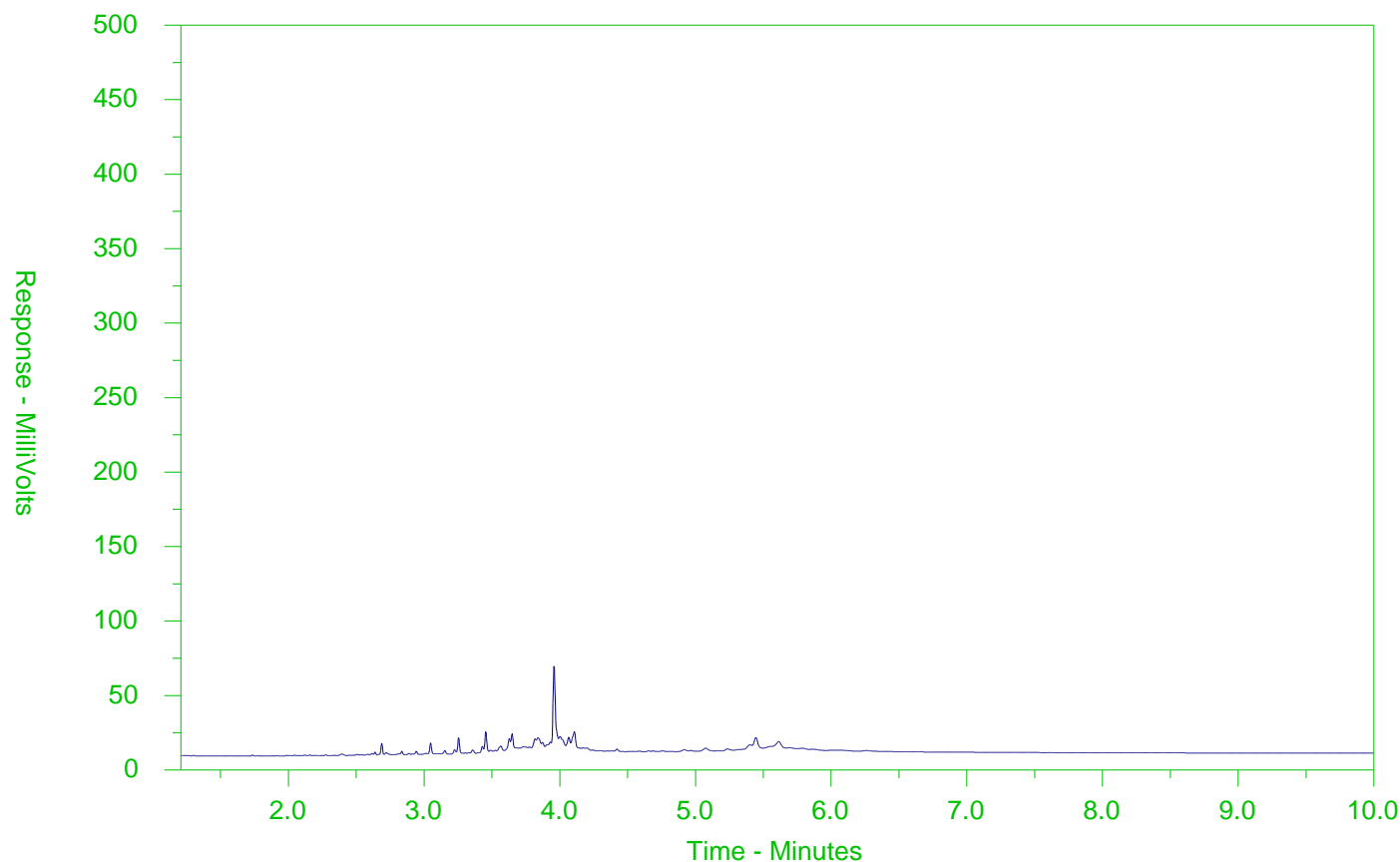
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-1  
Client Sample ID: 17-67587-DEEP



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

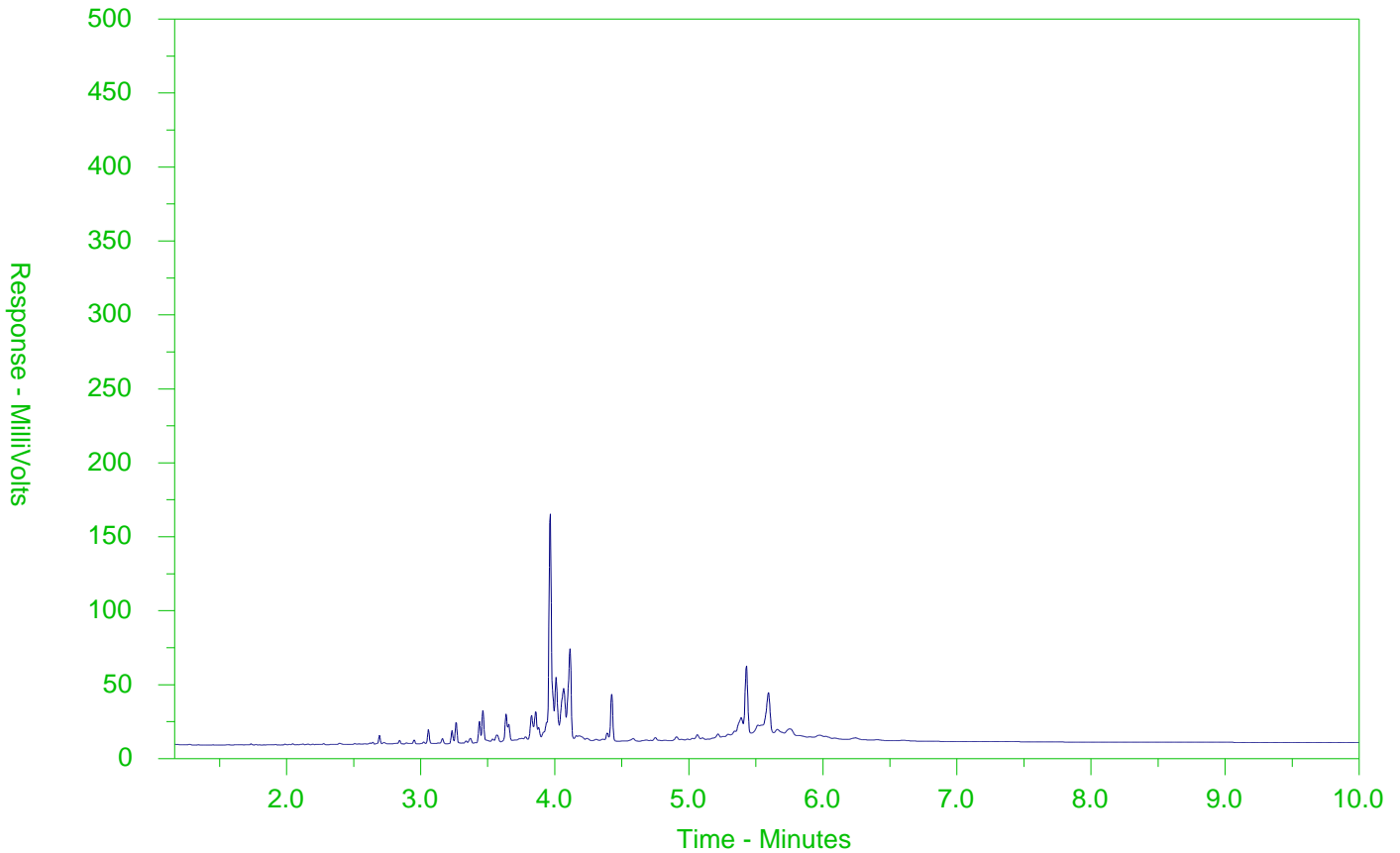
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-2  
Client Sample ID: 17-67575



F2		F3		F4	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease			
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

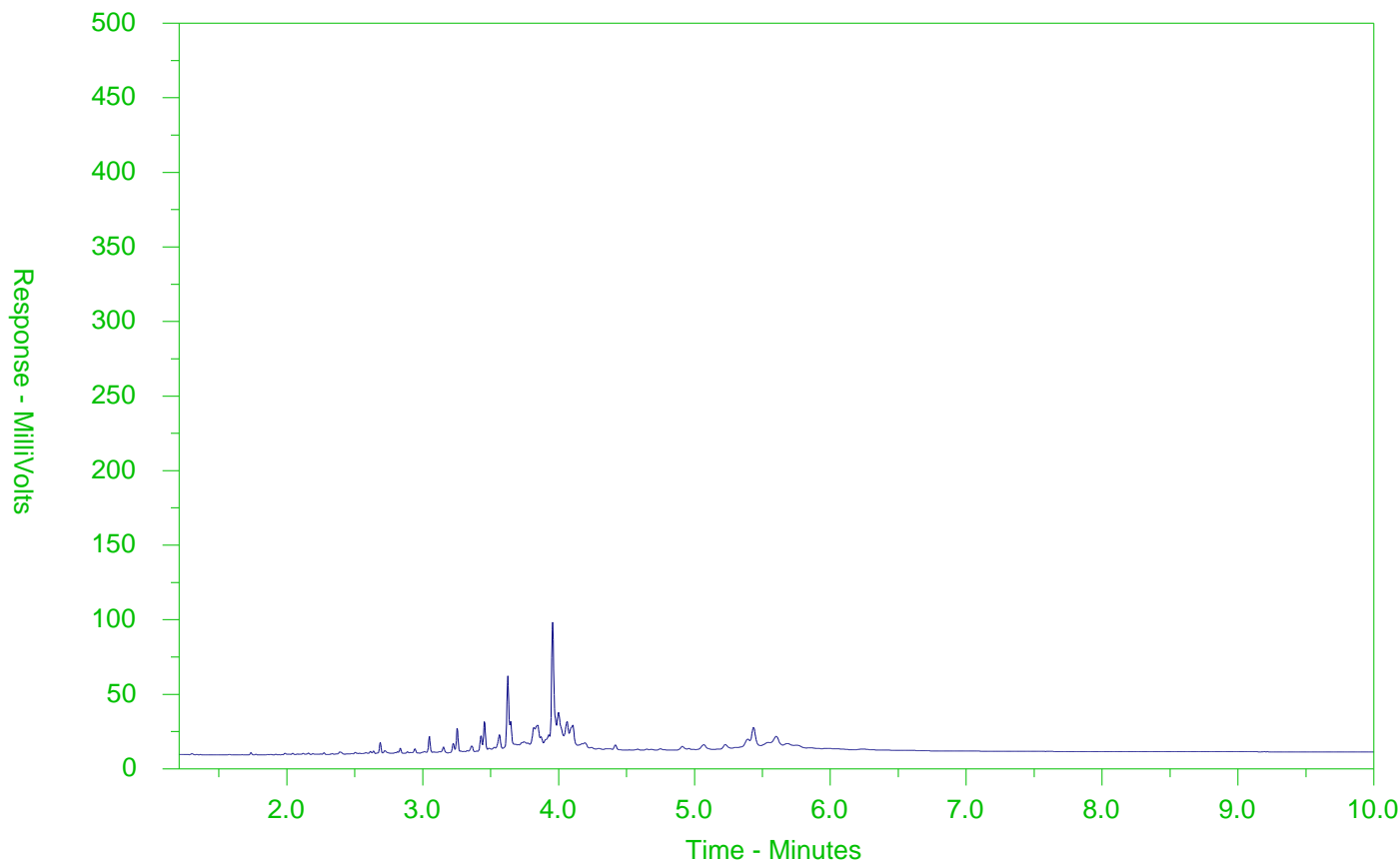
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-3  
Client Sample ID: 17-67579



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

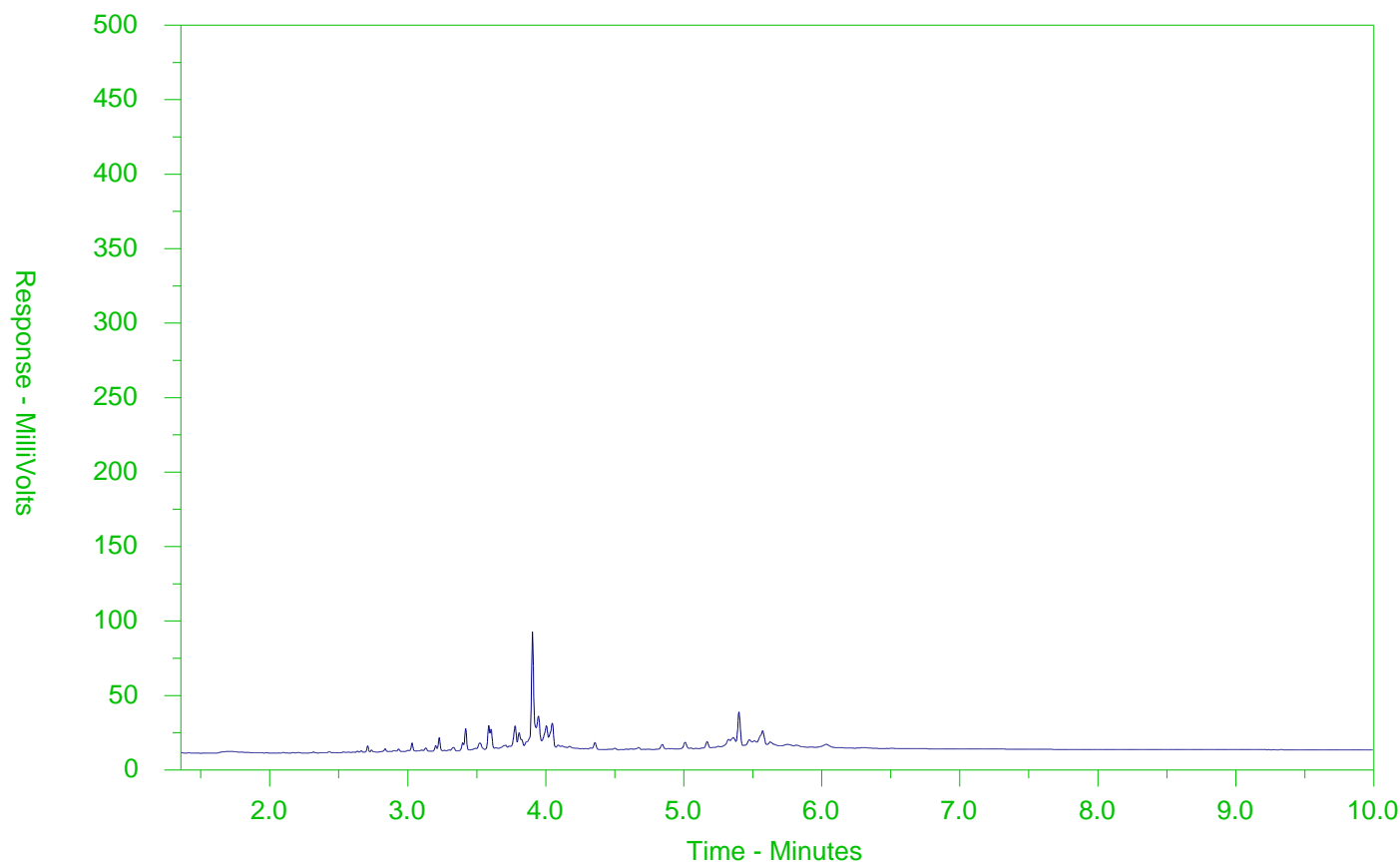
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-4  
Client Sample ID: 17-67570



F2		F3		F4	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

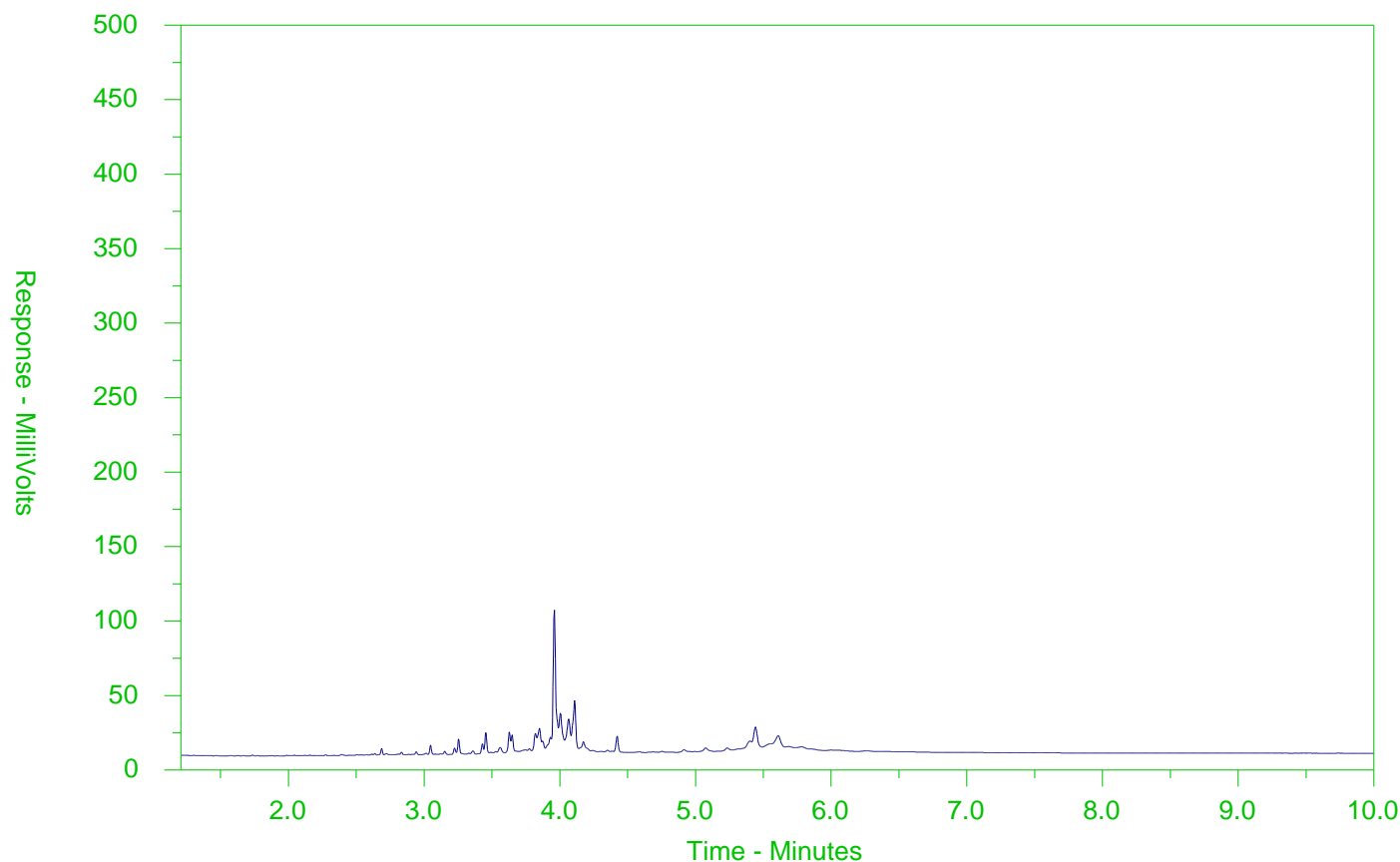
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-5  
Client Sample ID: 17-67586



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

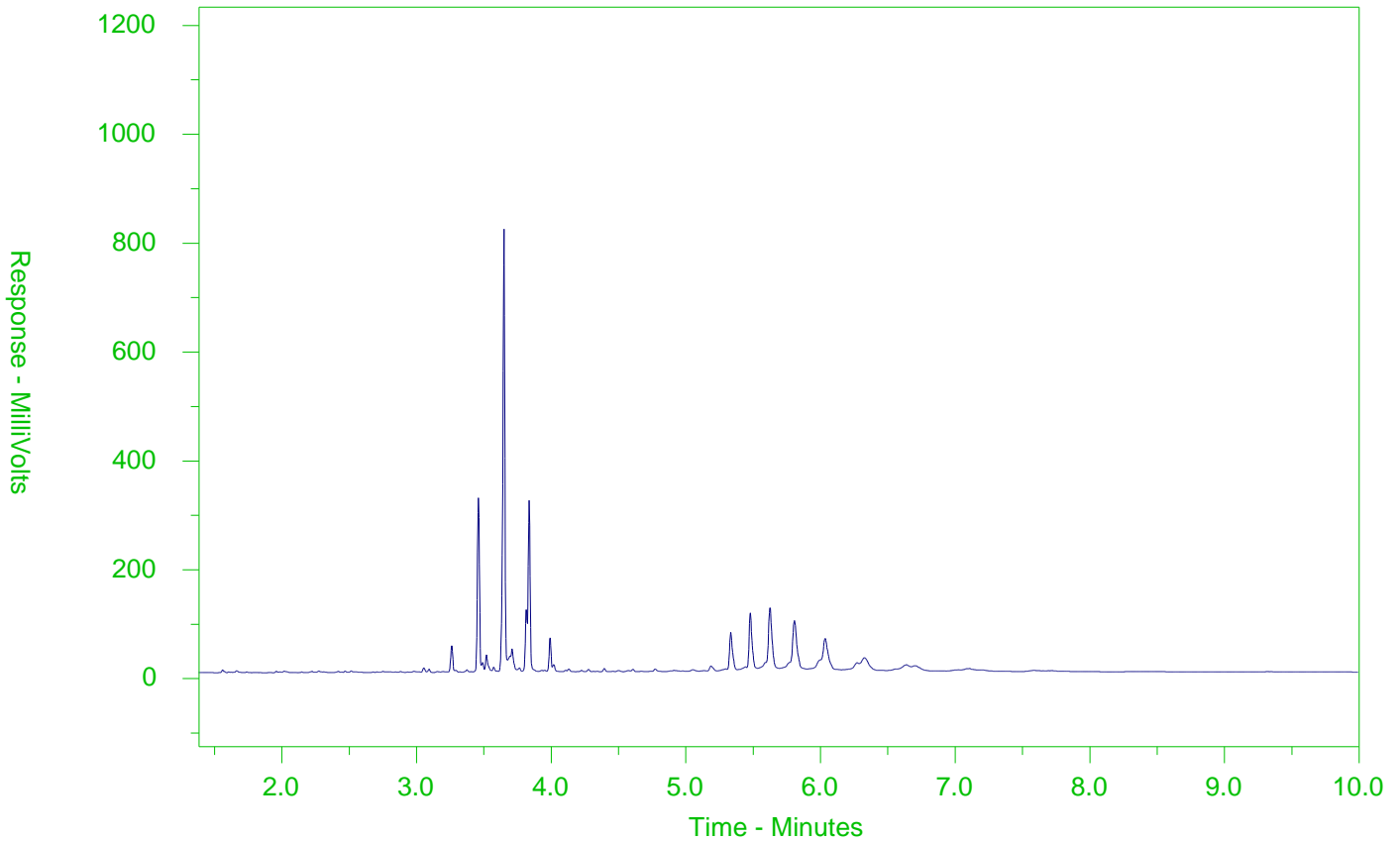
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-6  
Client Sample ID: 17-67708



F2		F3		F4	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →			
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

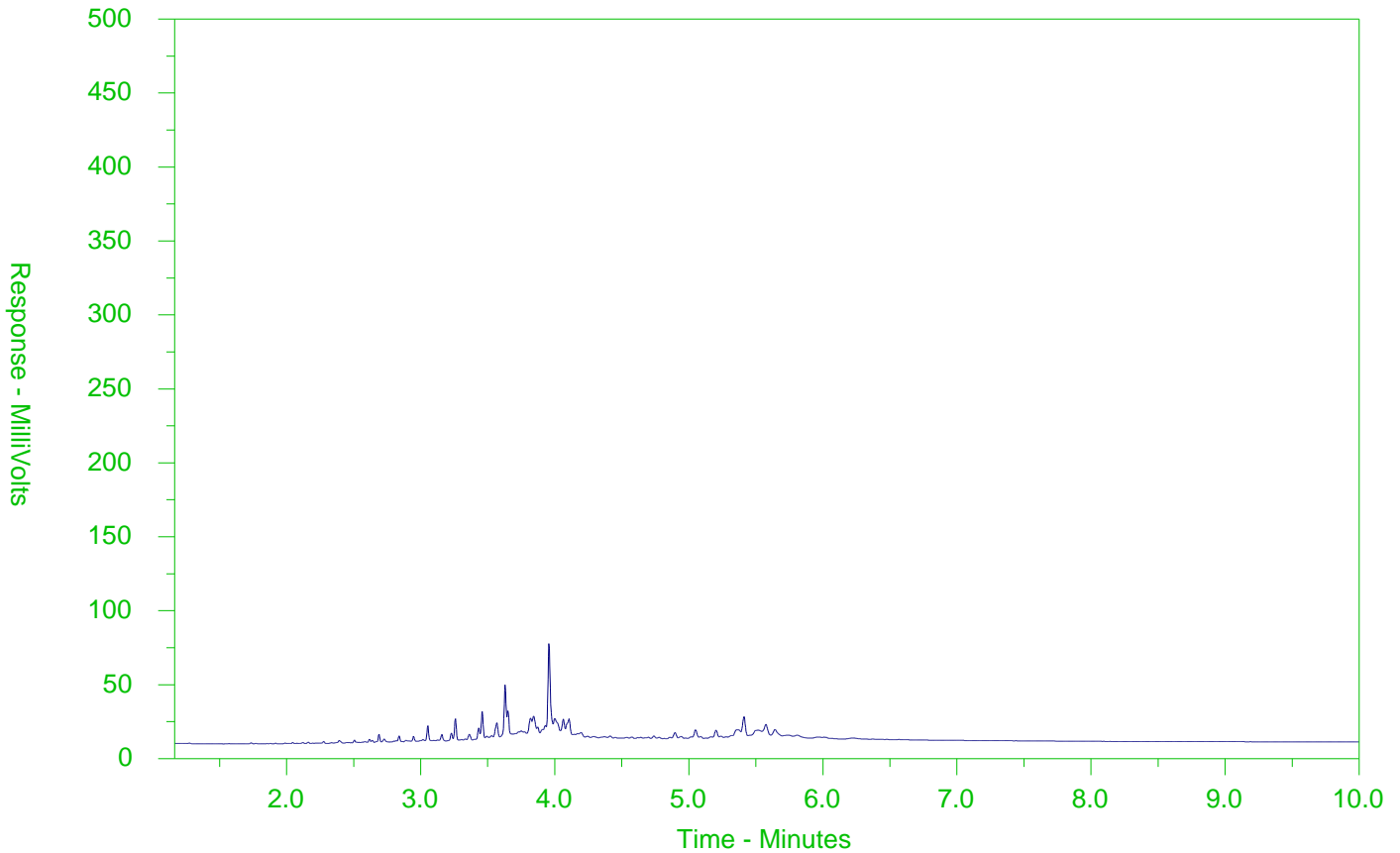
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-7  
Client Sample ID: 17-67823



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

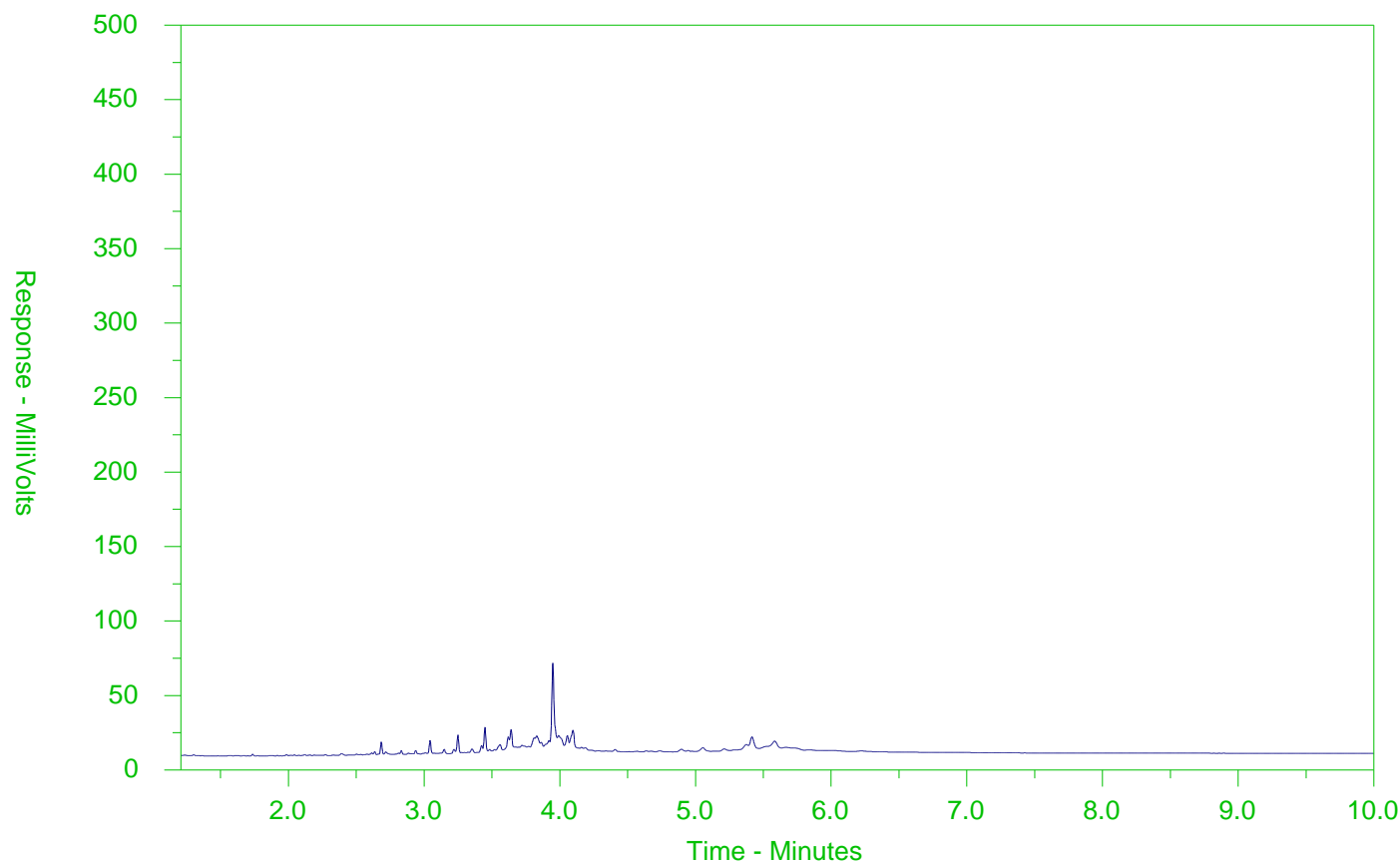
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-8  
Client Sample ID: 17-67587



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

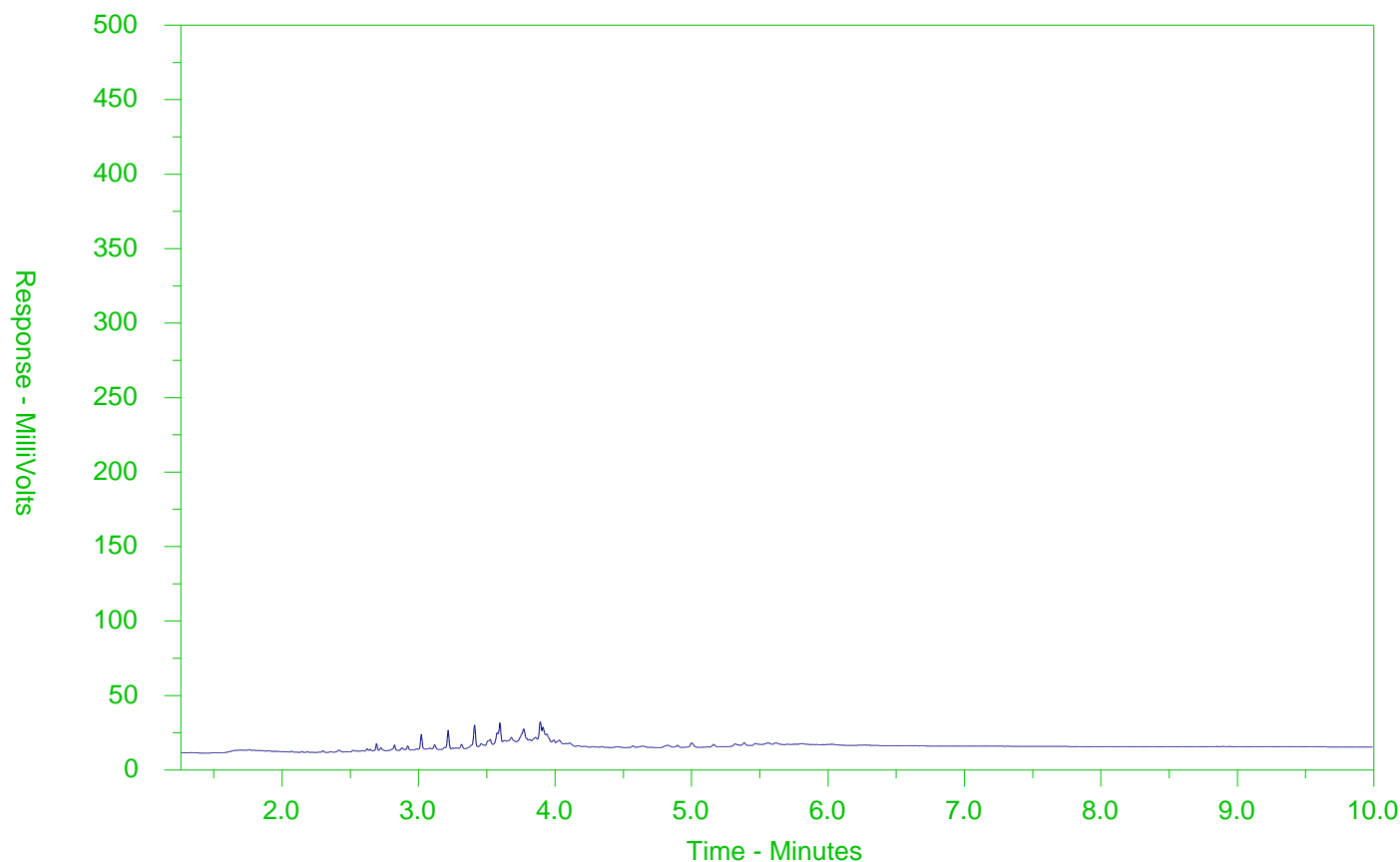
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-9  
Client Sample ID: 17-67581



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

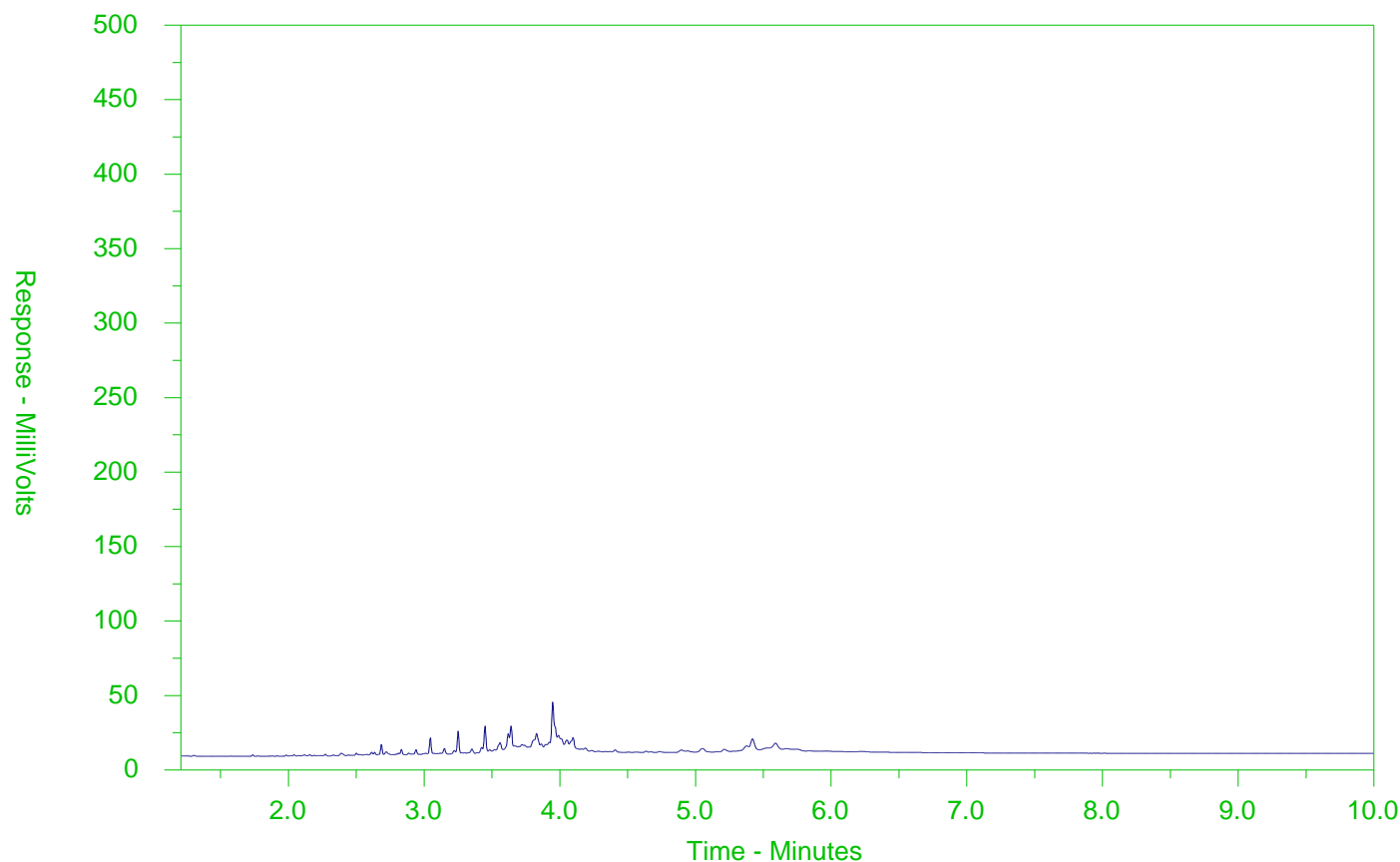
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-10  
Client Sample ID: 17-67574



F2		F3		F4	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

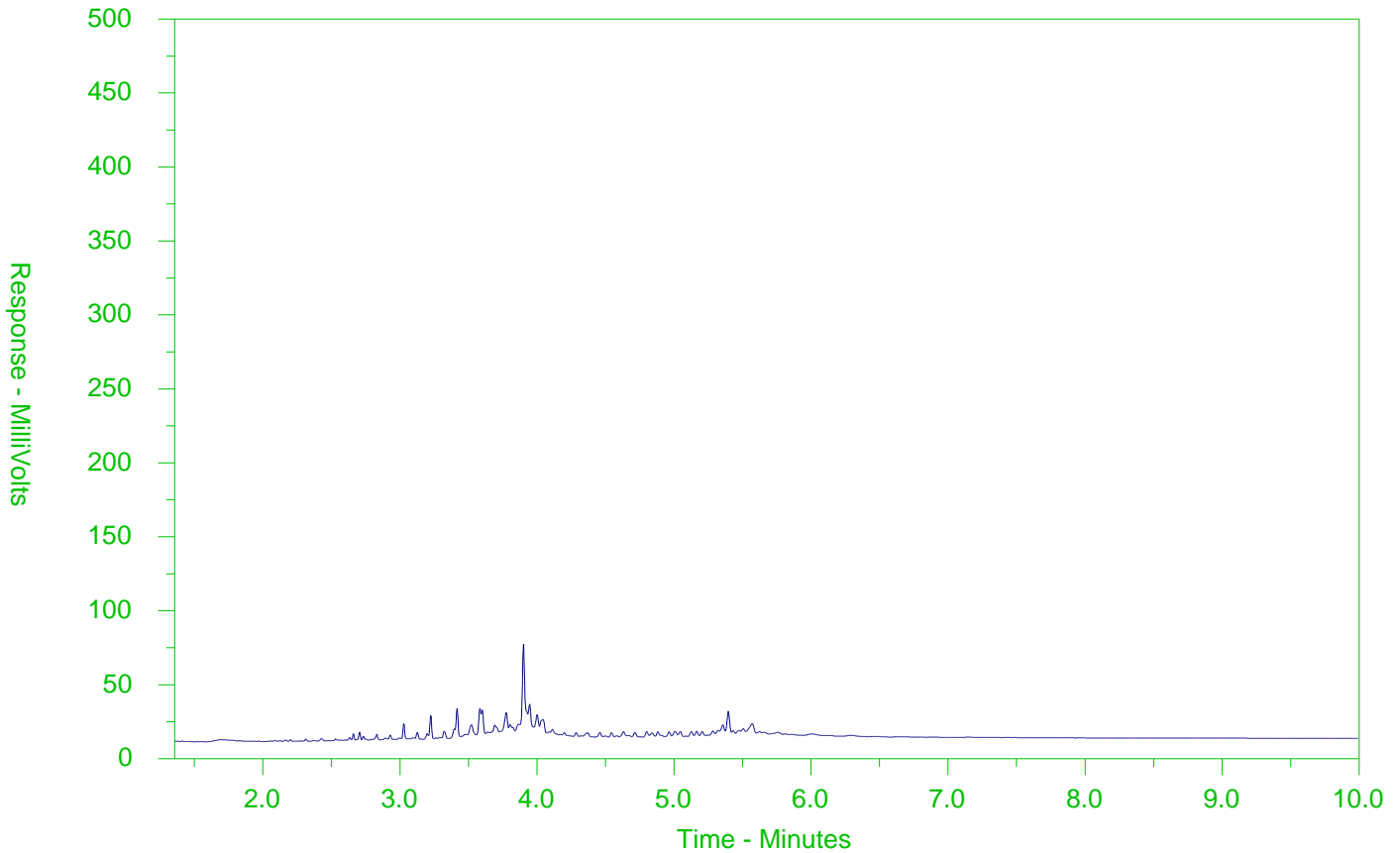
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-11  
Client Sample ID: 17-67574 DEEP



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

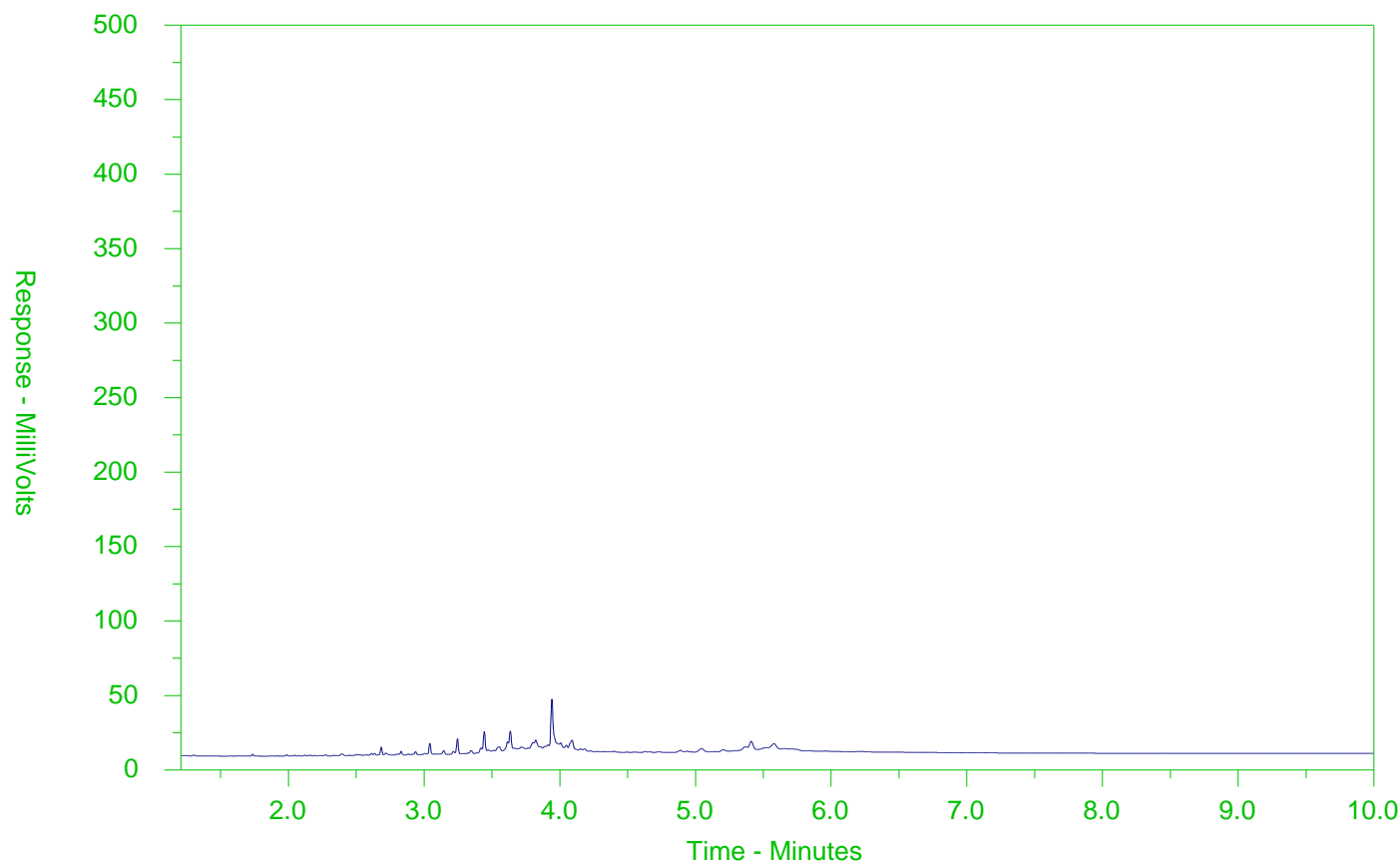
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-12  
Client Sample ID: 17-67646



F2		F3		F4	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

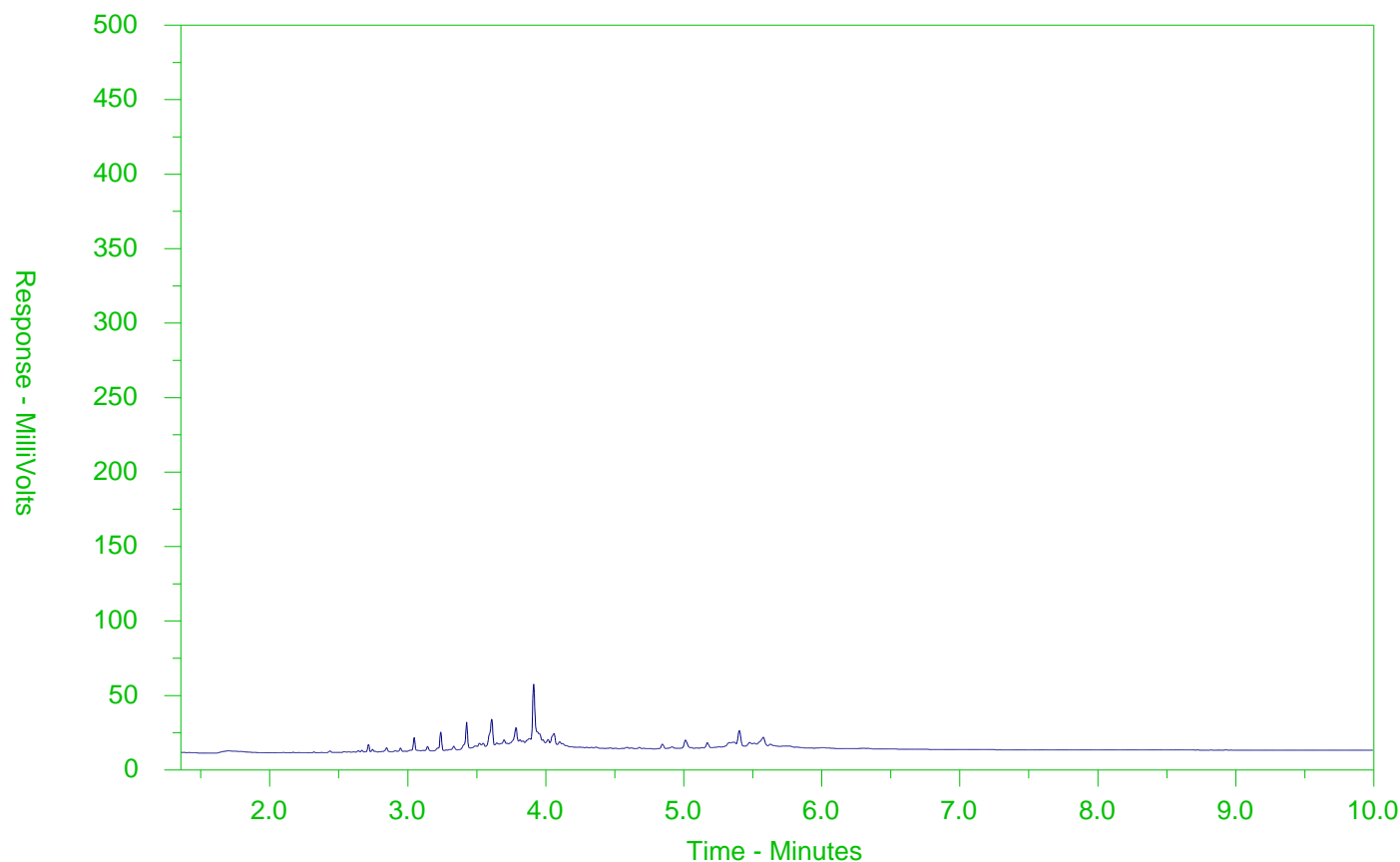
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-13  
Client Sample ID: 17-67647



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

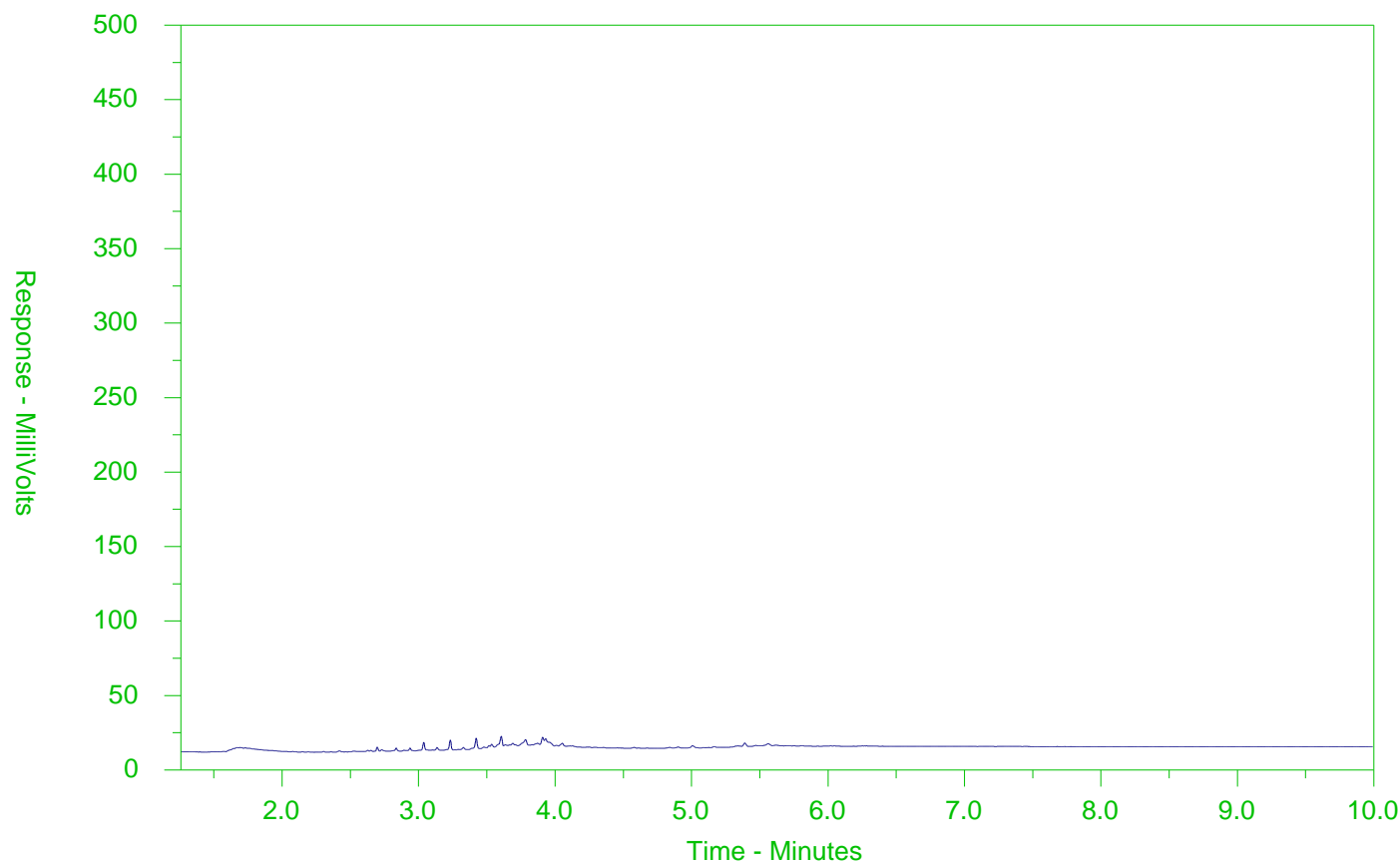
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-14  
Client Sample ID: 17-67648



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

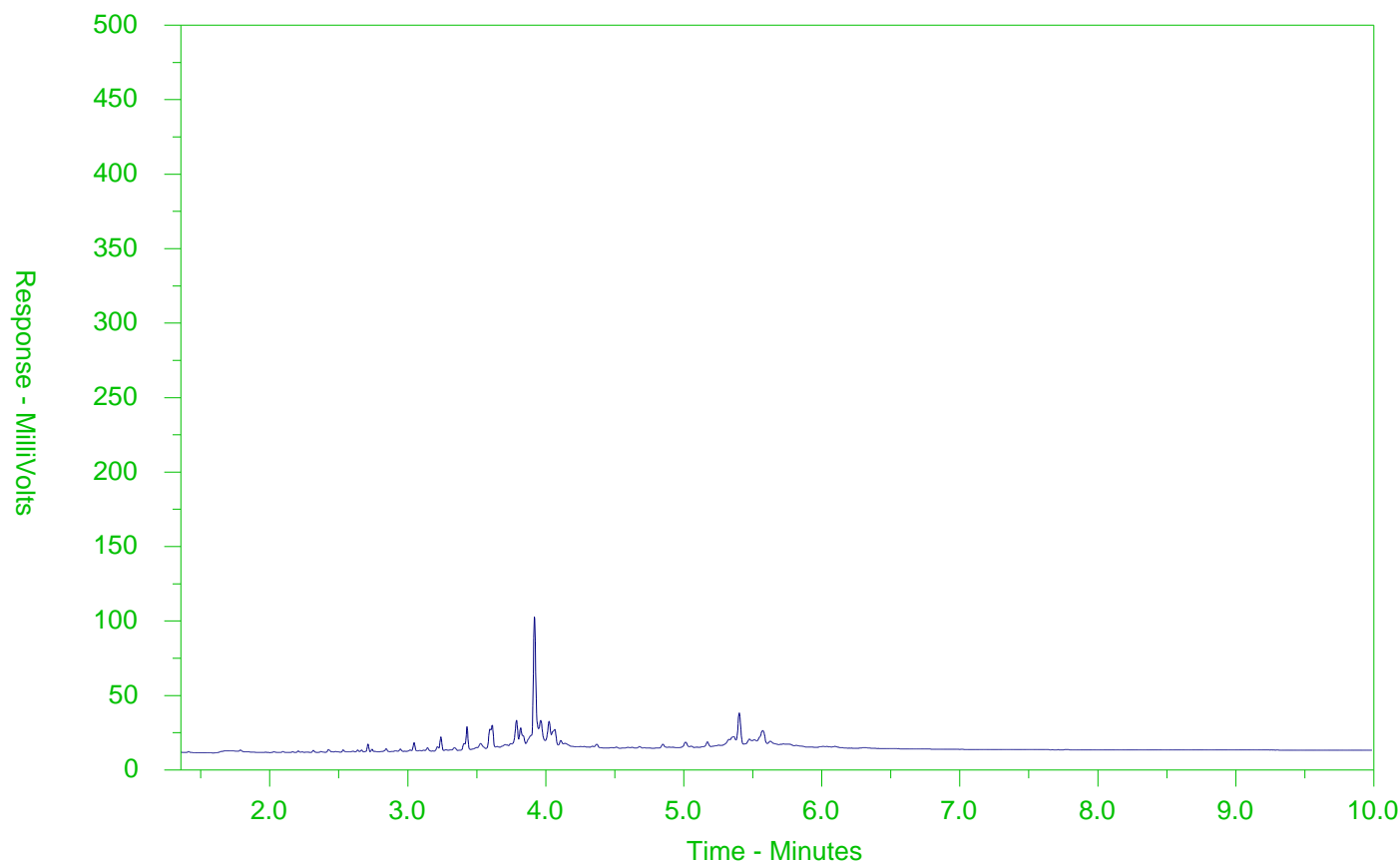
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-15  
Client Sample ID: 17-67649



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →			
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

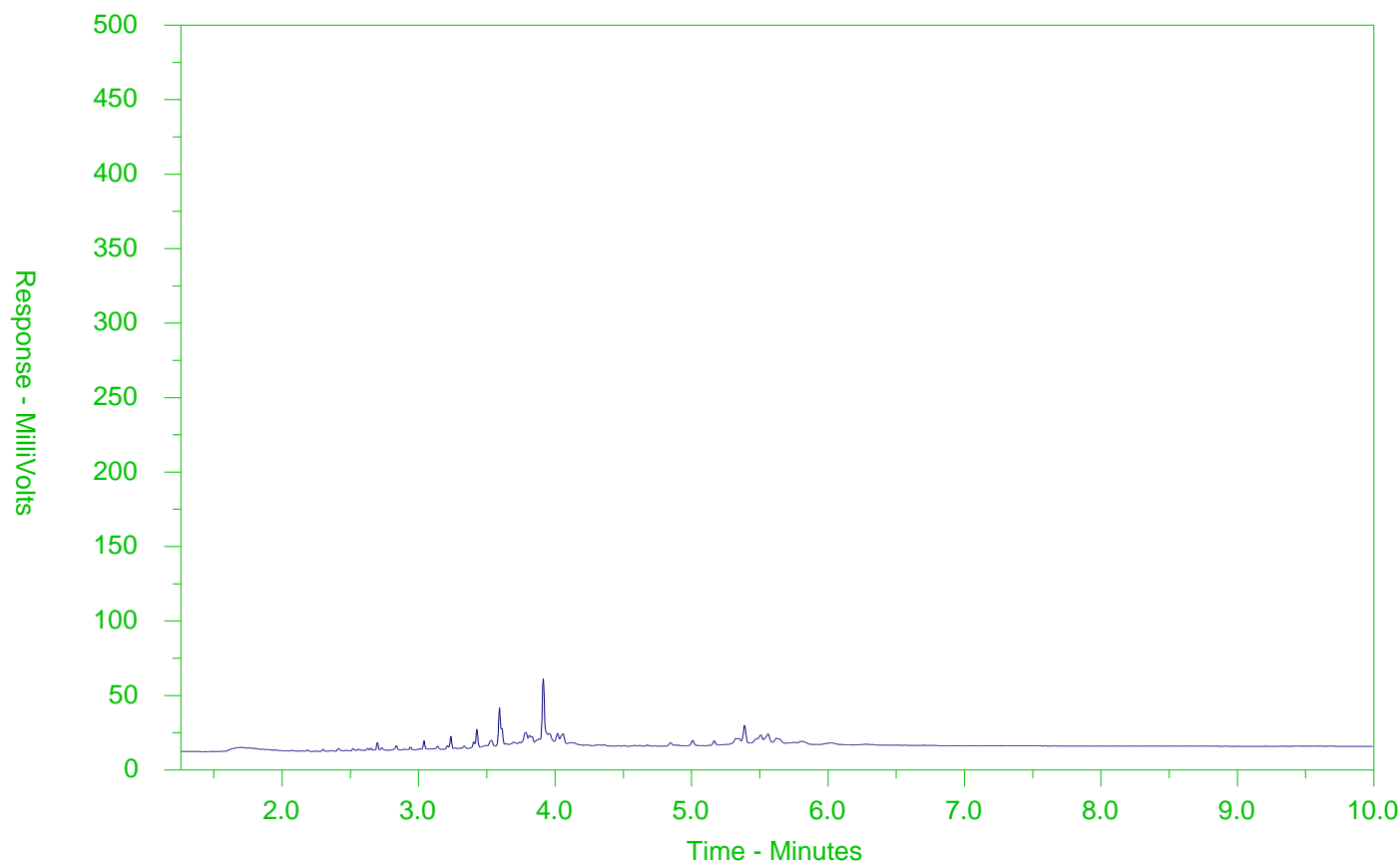
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-16  
Client Sample ID: 17-67650



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

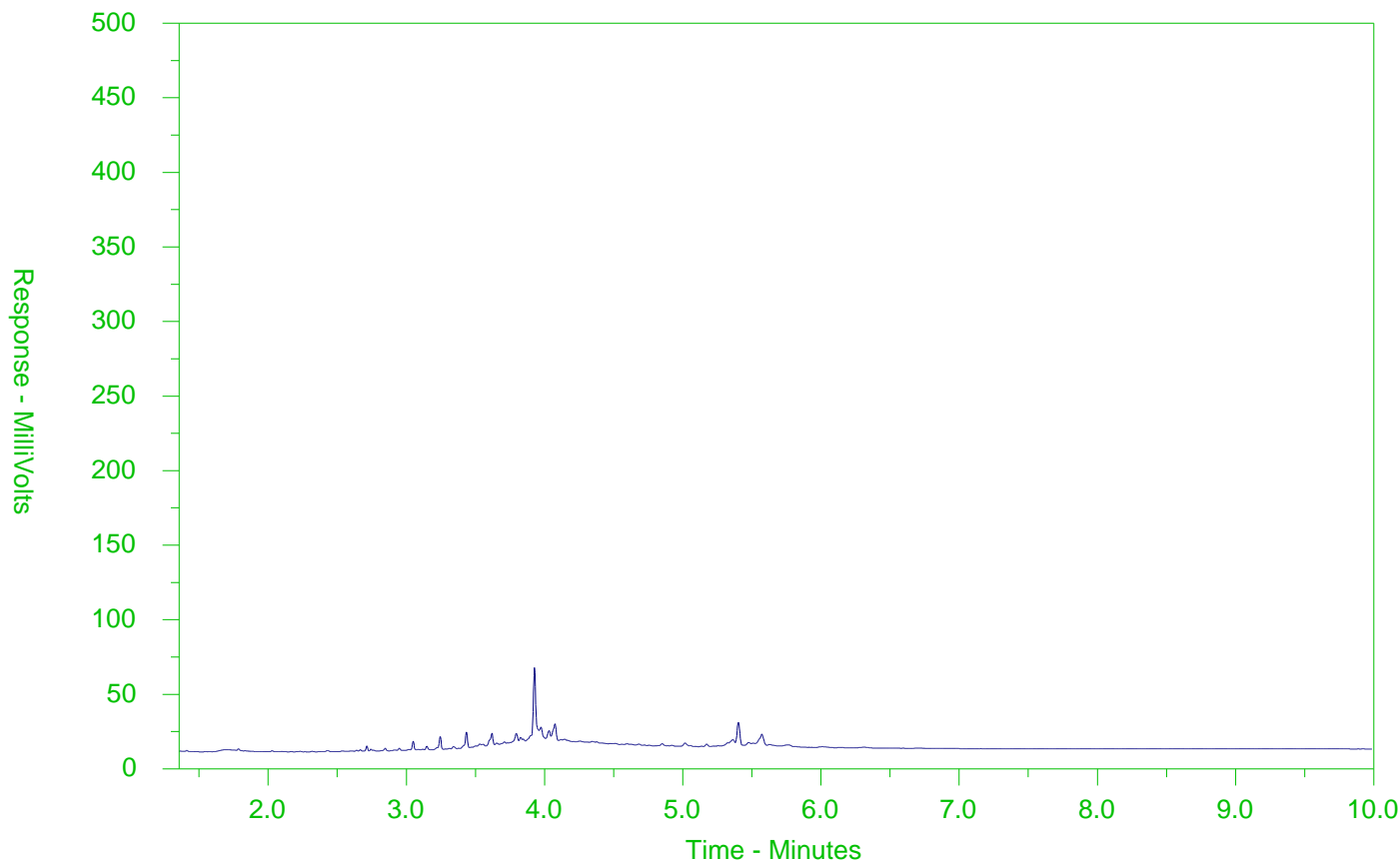
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-17  
Client Sample ID: 17-67651



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

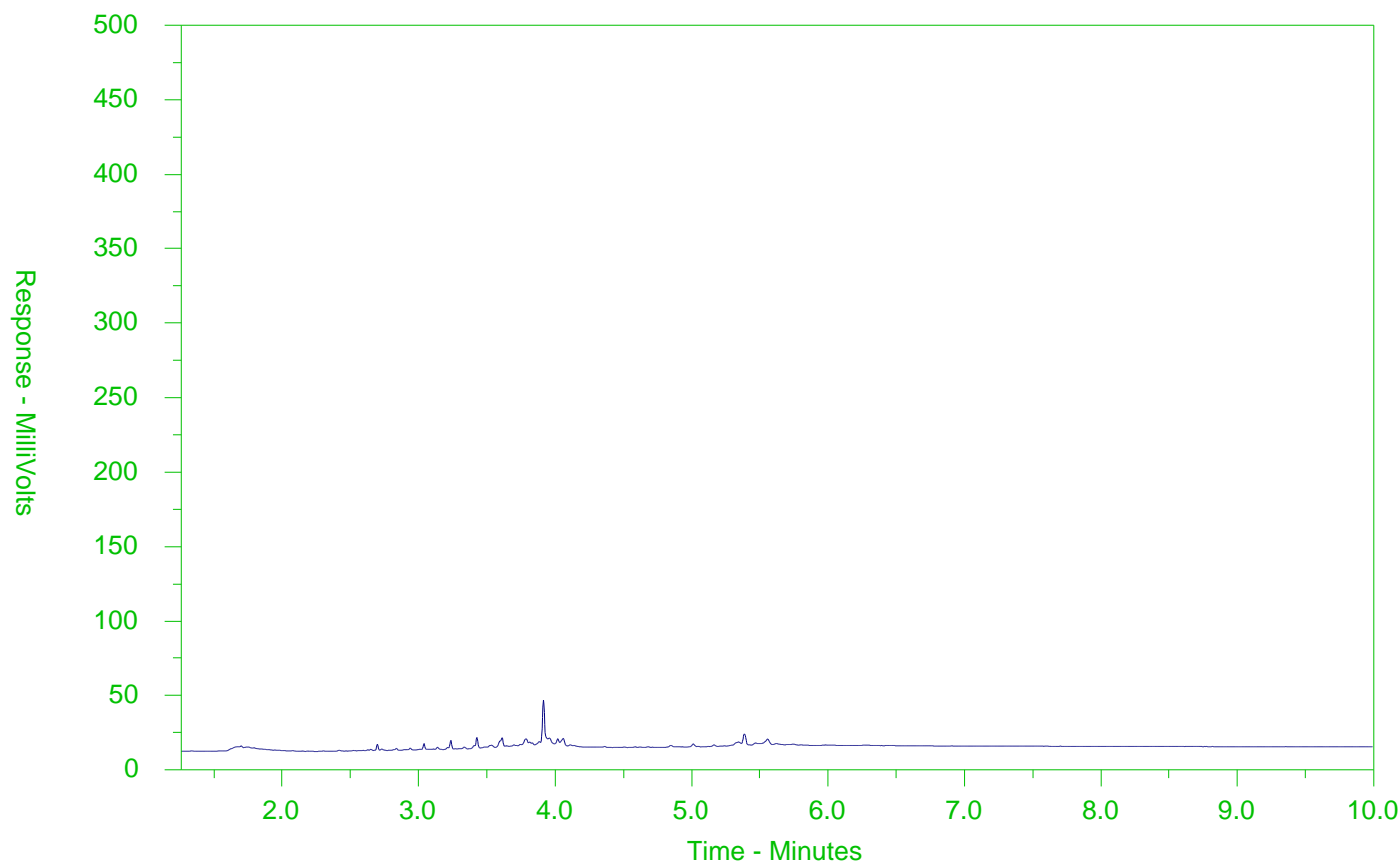
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-18  
Client Sample ID: 17-67652



F2		F3		F4	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

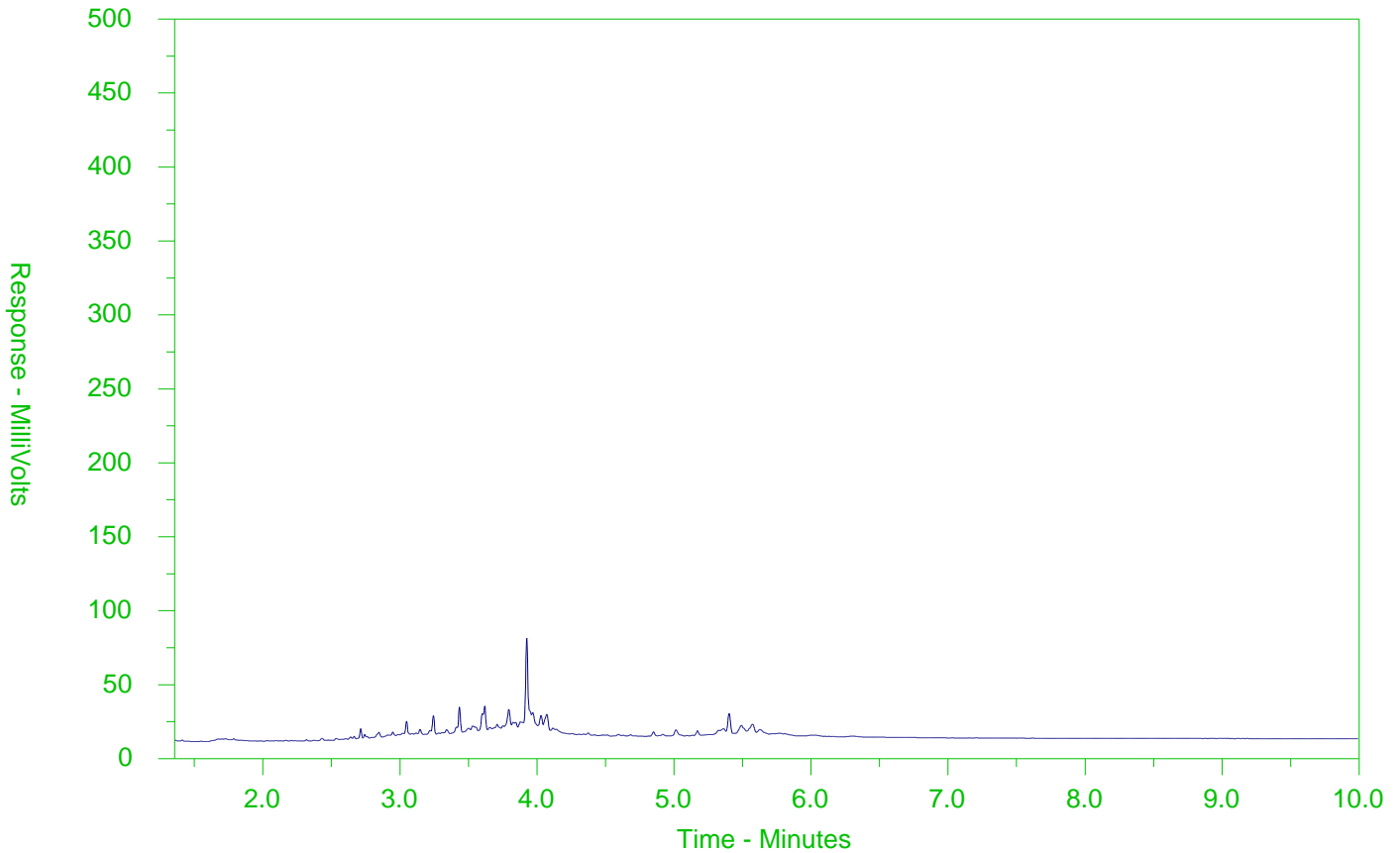


# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-19

Client Sample ID: 17-67653



F2		F3		F4	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

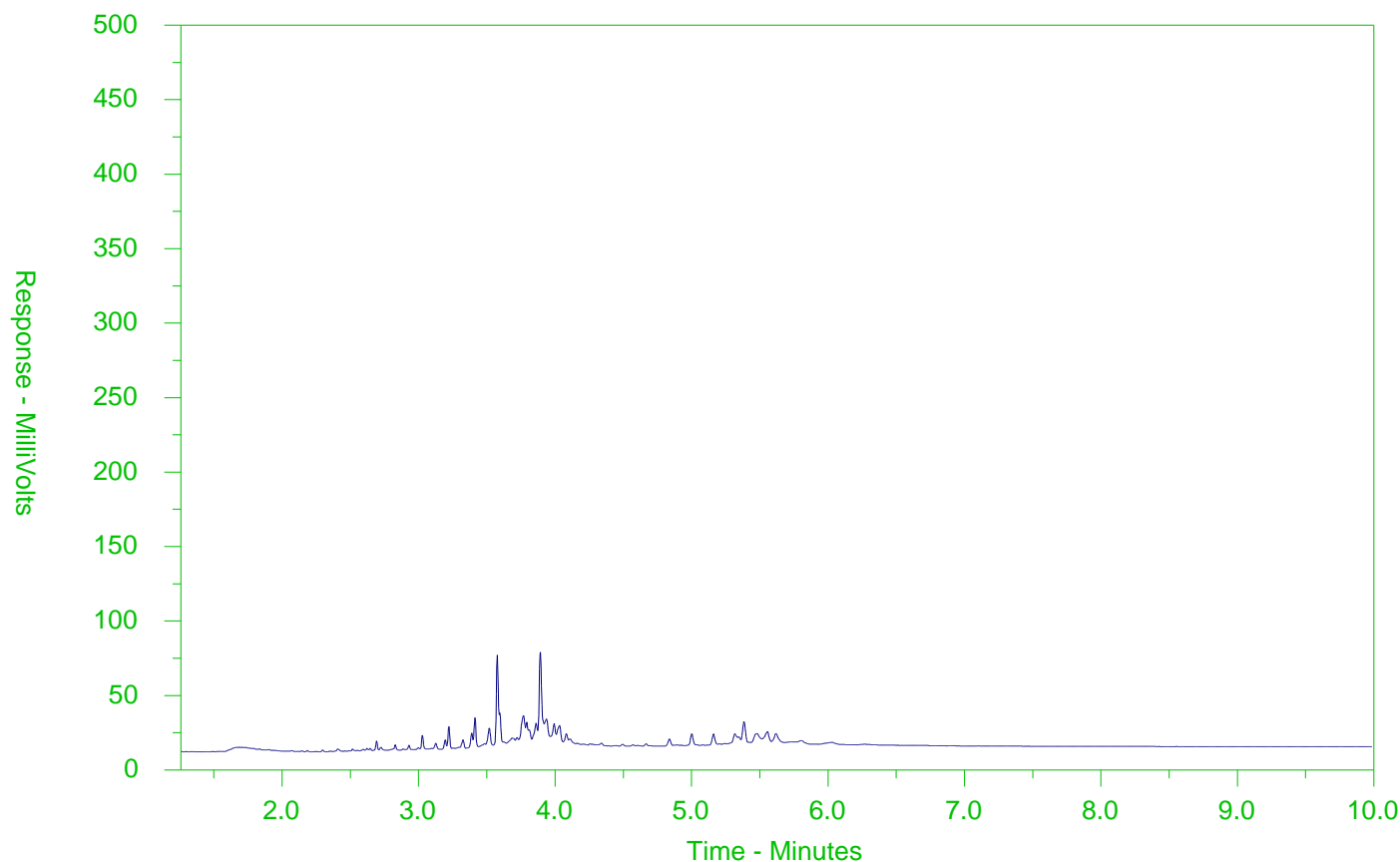
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-20  
Client Sample ID: 17-67654



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

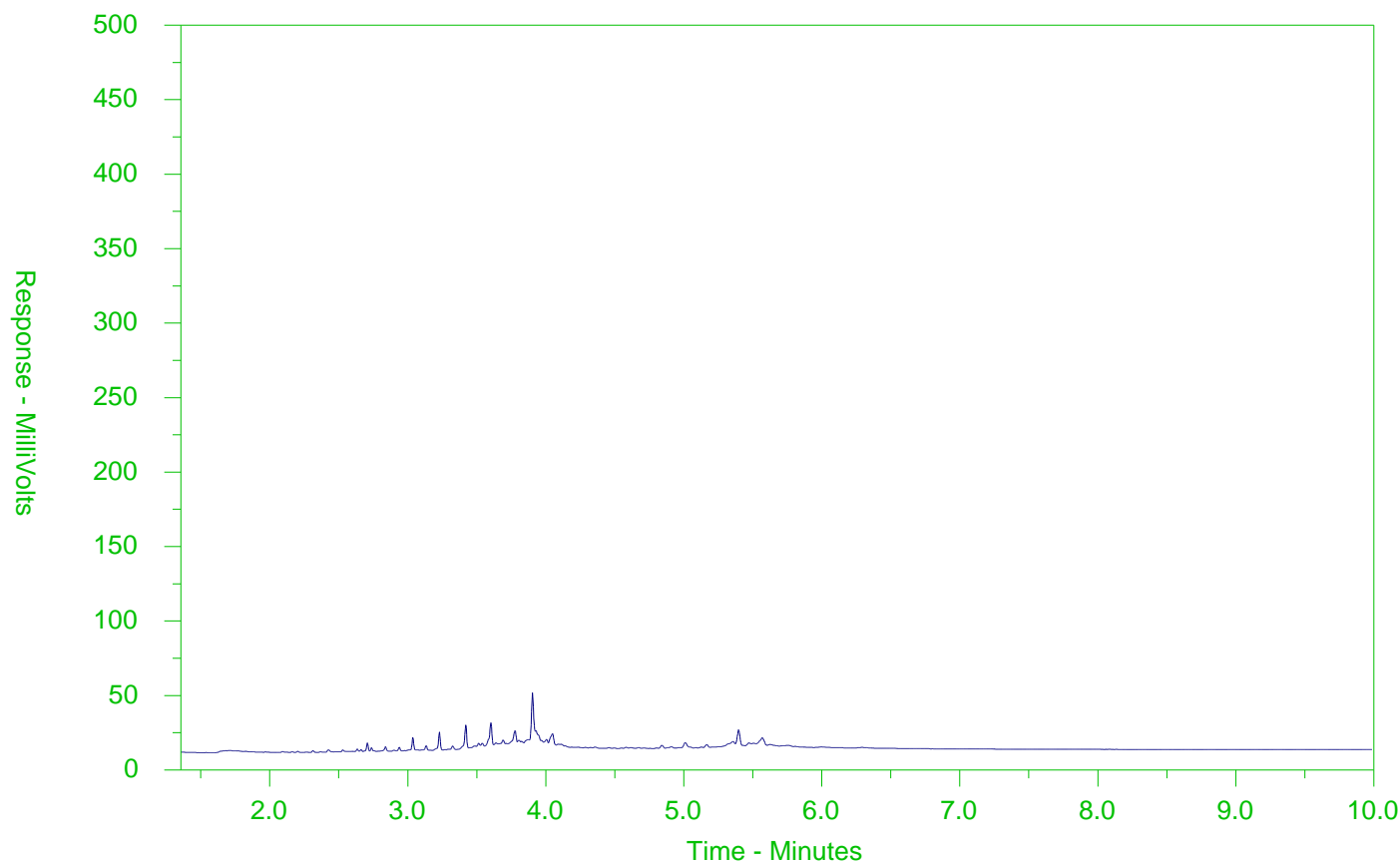
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-21  
Client Sample ID: 17-67646-DEEP



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

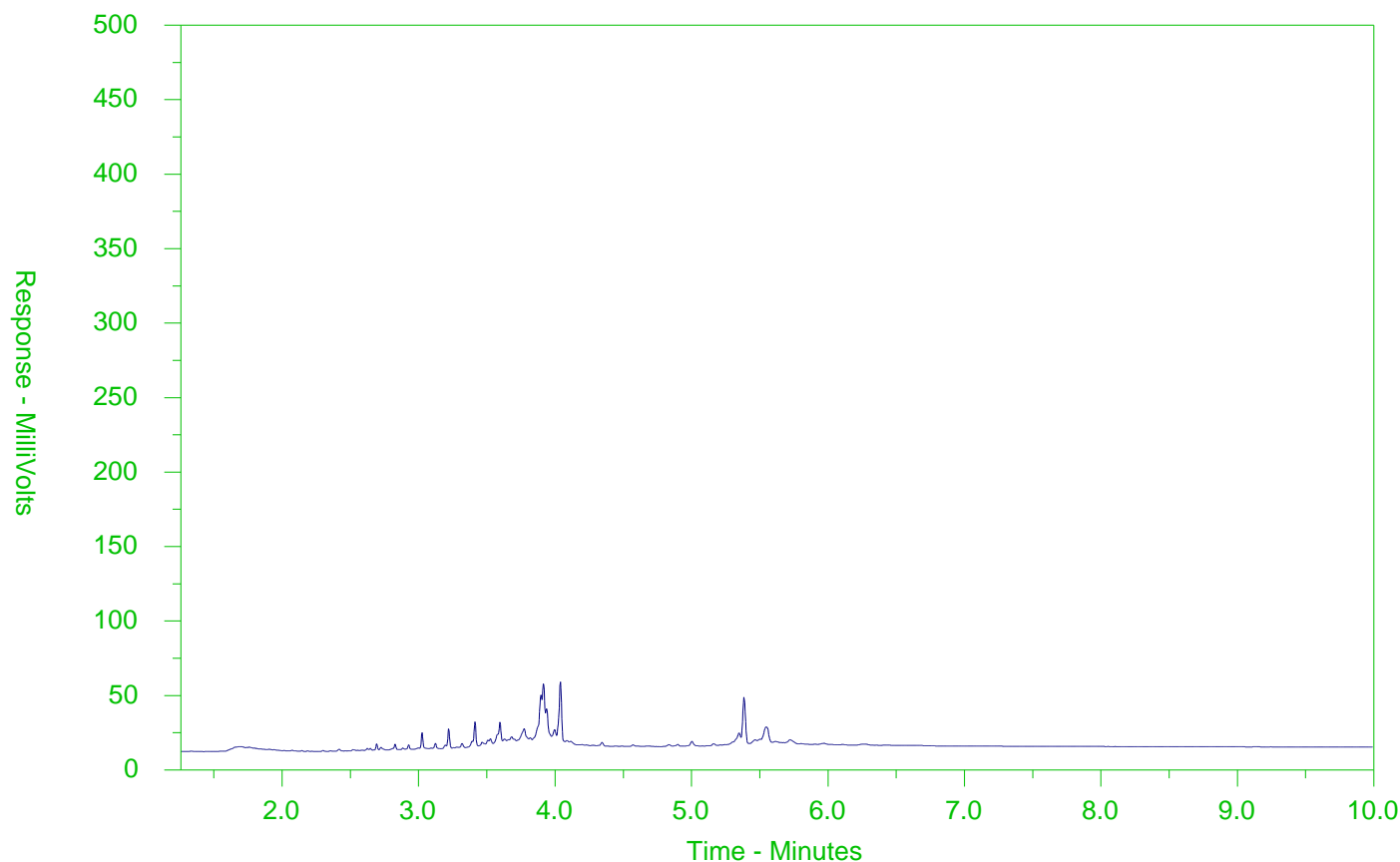
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-22  
Client Sample ID: 17-67648-DEEP



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

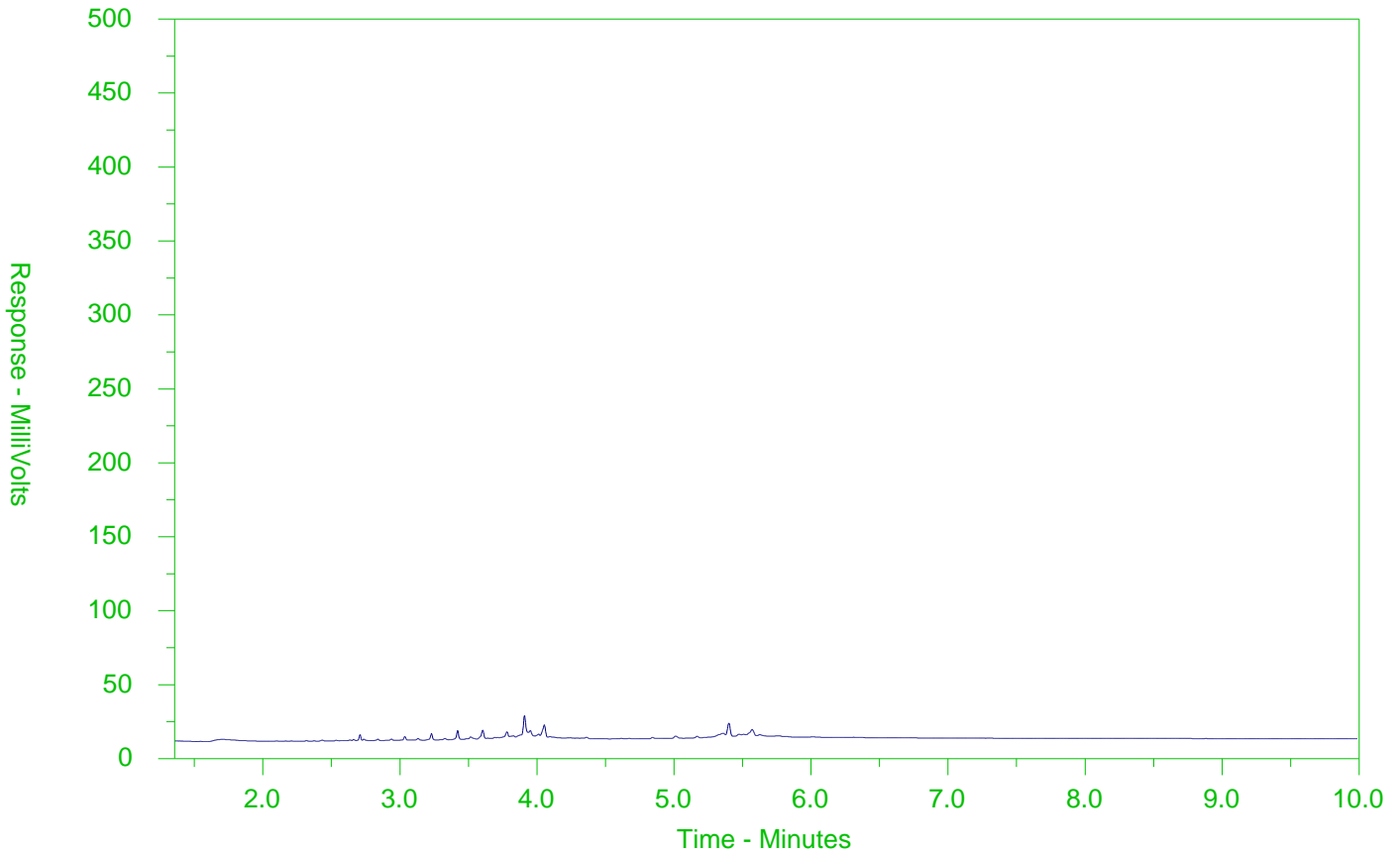
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2140121-23  
Client Sample ID: 17-67578



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

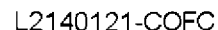
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



**Canada Toll Free: 1 800 668 9878**



COC Number: 17 -

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[www.aisglobal.com](http://www.aisglobal.com)

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY      YELLOW - CLIENT COPY

68PT 2017 FROM

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an Authorized DW COC form



L2140121-COFC

COC Number: 17 -

Page 2 of 2

<b>Report To</b> Contact and company name below will appear on the final report		<b>Report Format / Distribution</b>			<b>Select Service Level Below - Contact your AM to confirm all E&amp;P TATs (surcharges may apply)</b>																																																																
Company: DRDC Ottawa Research Centre		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																																																																
Contact: Ryan Riddolls		Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO			PRIORITY (Business Days) 4 day [P4-20%] <input type="checkbox"/> 3 day [P3-25%] <input type="checkbox"/> 2 day [P2-50%] <input type="checkbox"/>				EMERGENCY 1 Business day [E1 - 100%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 - 200% (Laboratory opening fees may apply)] <input type="checkbox"/>																																																												
Phone: 613-991-2056		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked																																																																			
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Date and Time Required for all E&P TATs:																																																																
Street: 3701 Carling Avenue		Email 1 or Fax ryan.riddolls@forces.gc.ca			For tests that can not be performed according to the service level selected, you will be contacted.																																																																
City/Province: Ottawa Ontario		Email 2 ed.riseborough@drdc-rddc.gc.ca			<b>Analysis Request</b> Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																
Postal Code: K2G 0R3		Email 3																																																																			
Invoice To Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<b>Invoice Distribution</b>			<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>ANIONS4-P-WT</td><td>CR-CR6-IC-WT</td><td>HG-200.2-CVAA-WT</td><td>MET-200.2-CCMS-WT</td><td>NH3-TKN-Phosphorus-Phenols</td><td>PCB-511-WT</td><td>VOC-R511-F1-F4-P-WT</td><td>PFAS-Long-List</td><td>PSA-75UM-SIEVE-WT</td><td>P-H-WT</td> <td rowspan="5" style="writing-mode: vertical-rl; transform: rotate(180deg);">SAMPLES ON HOLD</td> <td rowspan="5" style="writing-mode: vertical-rl; transform: rotate(180deg);">Sample is hazardous (please provide further details)</td> <td rowspan="5" style="writing-mode: vertical-rl; transform: rotate(180deg);">NUMBER OF CONTAINERS</td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>												ANIONS4-P-WT	CR-CR6-IC-WT	HG-200.2-CVAA-WT	MET-200.2-CCMS-WT	NH3-TKN-Phosphorus-Phenols	PCB-511-WT	VOC-R511-F1-F4-P-WT	PFAS-Long-List	PSA-75UM-SIEVE-WT	P-H-WT	SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS																																								
ANIONS4-P-WT	CR-CR6-IC-WT	HG-200.2-CVAA-WT	MET-200.2-CCMS-WT	NH3-TKN-Phosphorus-Phenols													PCB-511-WT	VOC-R511-F1-F4-P-WT	PFAS-Long-List	PSA-75UM-SIEVE-WT	P-H-WT	SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS																																													
Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																																																																			
Company: DRDC Ottawa Research Centre		Email 1 or Fax ryan.riddolls@forces.gc.ca																																																																			
Contact: Ryan Riddolls		Email 2 ed.riseborough@drdc-rddc.gc.ca																																																																			
<b>Project Information</b>		<b>Oil and Gas Required Fields (client use)</b>																																																																			
ALS Account # / Quote #: Q69320		AFE/Cost Center: PO#																																																																			
Job #:		Major/Minor Code: Routing Code:																																																																			
PO / AFE:		Requisitioner:																																																																			
LSD:		Location:																																																																			
ALS Lab Work Order # (lab use only): L2140121		ALS Contact:			Sampler:																																																																
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type																																																																	
1	17-67587-Deep	13-Jul-18	10:37	Soil																																																																	
2	17-67575	13-Jul-18	11:34	Soil																																																																	
3	17-67579	13-Jul-18	11:13	Soil																																																																	
4	17-67570	13-Jul-18	11:27	Soil																																																																	
5	17-67586	13-Jul-18	11:19	Soil																																																																	
6	17-67708	13-Jul-18	12:21	Water																																																																	
7	17-67823	13-Jul-18	9:47	Soil																																																																	
8	17-67587	13-Jul-18	10:37	Soil																																																																	
9	17-67581	13-Jul-18	10:48	Soil																																																																	
10	17-67574	13-Jul-18	10:55	Soil																																																																	
11	17-67574-Deep	13-Jul-18	11:07	Soil																																																																	

<b>Drinking Water (DW) Samples<sup>1</sup> (client use)</b>		<b>Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)</b>		<b>SAMPLE CONDITION AS RECEIVED (lab use only)</b>			
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>			
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO				Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>			
				Cooling Initiated <input type="checkbox"/>			
				INITIAL COOLER TEMPERATURES °C: 3.4			
				FINAL COOLER TEMPERATURES °C: 0-30C			

<b>SHIPMENT RELEASE (client use)</b>			<b>INITIAL SHIPMENT RECEPTION (lab use only)</b>			<b>FINAL SHIPMENT RECEPTION (lab use only)</b>		
Released by: <i>[Signature]</i>	Date: 18 Aug 2018	Time:	Received by: <i>[Signature]</i>	Date: 18 Aug 2018	Time: 7:30	Received by: <i>[Signature]</i>	Date: 18 Aug 2018	Time: 21:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.