Maxxam
A Bureau Veritas Group Company

Your Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Your C.O.C. #: 686534-01-01

Attention: Report - 160900764

Stantec Consulting Ltd
Clarington
ON
Canada

Report Date: 2018/10/18
Report #: R5446827
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8Q6619
Received: 2018/10/10, 09:00

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	10	N/A	2018/10/16	CAM SOP-00301	EPA 8270D m
ABN Compounds in Water by SIM GC/MS	9	2018/10/12	2018/10/15	CAM SOP-00301	EPA 8270 m
ABN Compounds in Water by SIM GC/MS	1	2018/10/12	2018/10/16	CAM SOP-00301	EPA 8270 m
Acidity (CaCO3) in water (1)	4	N/A	2018/10/17		SM 22 2310
Alkalinity	3	N/A	2018/10/13	CAM SOP-00448	SM 23 2320 B m
Alkalinity	1	N/A	2018/10/18	CAM SOP-00448	SM 23 2320 B m
Carbonate, Bicarbonate and Hydroxide	4	N/A	2018/10/15	CAM SOP-00102	APHA 4500-CO2 D
1,3-Dichloropropene Sum	4	N/A	2018/10/15		EPA 8260C m
Chloride by Automated Colourimetry	3	N/A	2018/10/12	CAM SOP-00463	EPA 325.2 m
Chloride by Automated Colourimetry	1	N/A	2018/10/18	CAM SOP-00463	EPA 325.2 m
Conductivity	1	N/A	2018/10/12	CAM SOP-00414	SM 23 2510 m
Conductivity	3	N/A	2018/10/15	CAM SOP-00414	SM 23 2510 m
Chromium (VI) in Water	4	N/A	2018/10/15	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	4	N/A	2018/10/15	CAM SOP-00457	OMOE E3015 m
Dissolved Organic Carbon (DOC) (2)	4	N/A	2018/10/13	CAM SOP-00446	SM 23 5310 B m
Petroleum Hydrocarbons F2-F4 in Water (3)	4	2018/10/13	2018/10/15	CAM SOP-00316	CCME PHC-CWS m
Fluoride	1	2018/10/11	2018/10/12	CAM SOP-00449	SM 23 4500-F C m
Fluoride	3	2018/10/11	2018/10/13	CAM SOP-00449	SM 23 4500-F C m
Hardness (calculated as CaCO3)	4	N/A	2018/10/16	CAM SOP 00102/00408/00447	SM 2340 B
Mercury	4	2018/10/15	2018/10/15	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	3	N/A	2018/10/15	CAM SOP-00447	EPA 6020B m
Dissolved Metals by ICPMS	1	N/A	2018/10/18	CAM SOP-00447	EPA 6020B m
Ion Balance (% Difference)	4	N/A	2018/10/16		
Anion and Cation Sum	4	N/A	2018/10/16		
Total Ammonia-N	4	N/A	2018/10/17	CAM SOP-00441	EPA GS I-2522-90 m
Nitrate (NO3) and Nitrite (NO2) in Water (4)	4	N/A	2018/10/13	CAM SOP-00440	SM 23 4500-NO3I/NO2B
Polychlorinated Biphenyl in Water	4	2018/10/12	2018/10/12	CAM SOP-00309	EPA 8082A m
pH	1	N/A	2018/10/12	CAM SOP-00413	SM 4500H+ B m
pH	3	N/A	2018/10/13	CAM SOP-00413	SM 4500H+ B m

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

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Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Orthophosphate	3	N/A	2018/10/12	CAM SOP-00461	EPA 365.1 m
Orthophosphate	1	N/A	2018/10/15	CAM SOP-00461	EPA 365.1 m
Sat. pH and Langelier Index (@ 20C)	4	N/A	2018/10/16		
Sat. pH and Langelier Index (@ 4C)	4	N/A	2018/10/16		
Sulphate by Automated Colourimetry	3	N/A	2018/10/12	CAM SOP-00464	EPA 375.4 m
Sulphate by Automated Colourimetry	1	N/A	2018/10/18	CAM SOP-00464	EPA 375.4 m
Total Dissolved Solids (TDS calc)	4	N/A	2018/10/16		
Total Dissolved Solids	4	2018/10/12	2018/10/15	CAM SOP-00428	SM 23 2540C m
Total Organic Carbon (TOC) (5)	4	N/A	2018/10/14	CAM SOP-00446	SM 23 5310B m
Total Suspended Solids	4	2018/10/12	2018/10/15	CAM SOP-00428	SM 23 2540D m
Turbidity	4	N/A	2018/10/11	CAM SOP-00417	SM 23 2130 B m
Volatile Organic Compounds and F1 PHCs	4	N/A	2018/10/13	CAM SOP-00230	EPA 8260C m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Bedford
(2) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(4) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(5) Total Organic Carbon (TOC) present in the sample should be considered as non-purgeable TOC.

Encryption Key

Colby Coutu
Project Manager Assistant
18 Oct 2018 16:48:55

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ronklin Gracian, Project Manager
Email: RGracian@maxxam.ca
Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		HZB429			HZB429		
Sampling Date		2018/10/09 12:00			2018/10/09 12:00		
COC Number		686534-01-01			686534-01-01		
	UNITS	**WG-160900764-201809-RD01**	**RDL**	**QC Batch**	**WG-160900764-201809-RD01 Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters							
Anion Sum	me/L	3.43	N/A	5774811			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	140	1.0	5774807			
Calculated TDS	mg/L	170	1.0	5774814			
Carb. Alkalinity (calc. as CaCO3)	mg/L	4.4	1.0	5774807			
Cation Sum	me/L	2.30	N/A	5774811			
Hardness (CaCO3)	mg/L	20	1.0	5776790			
Ion Balance (% Difference)	%	19.8	N/A	5774810			
Langelier Index (@ 20C)	N/A	-0.0340		5774812			
Langelier Index (@ 4C)	N/A	-0.285		5774813			
Saturation pH (@ 20C)	N/A	8.56		5774812			
Saturation pH (@ 4C)	N/A	8.81		5774813			
Inorganics							
Total Ammonia-N	mg/L	0.084	0.050	5778289			
Conductivity	umho/cm	230	1.0	5778577	230	1.0	5778577
Dissolved Organic Carbon	mg/L	0.88	0.50	5777895			
Orthophosphate (P)	mg/L	<0.010	0.010	5778568	<0.010	0.010	5778568
pH	pH	8.52		5778580	8.58		5778580
Dissolved Sulphate (SO4)	mg/L	22	1.0	5789061			
Alkalinity (Total as CaCO3)	mg/L	140	1.0	5788959			
Dissolved Chloride (Cl-)	mg/L	1.4	1.0	5789060			
Nitrite (N)	mg/L	<0.010	0.010	5778129			
Nitrate (N)	mg/L	<0.10	0.10	5778129			
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	5778129			
Metals							
Dissolved Aluminum (Al)	mg/L	0.027	0.0050	5789707			
Dissolved Antimony (Sb)	mg/L	<0.00050	0.00050	5789707			
Dissolved Arsenic (As)	mg/L	0.0017	0.0010	5789707			
Dissolved Barium (Ba)	mg/L	0.0049	0.0020	5789707			
Dissolved Beryllium (Be)	mg/L	<0.00050	0.00050	5789707			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Sampler Initials: RD

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		HZB429			HZB429		
Sampling Date		2018/10/09 12:00			2018/10/09 12:00		
COC Number		686534-01-01			686534-01-01		
	UNITS	**WG-160900764-201809-RD01**	**RDL**	**QC Batch**	**WG-160900764-201809-RD01 Lab-Dup**	**RDL**	**QC Batch**
Dissolved Boron (B)	mg/L	0.21	0.010	5789707			
Dissolved Cadmium (Cd)	mg/L	<0.00010	0.00010	5789707			
Dissolved Calcium (Ca)	mg/L	4.8	0.20	5789707			
Dissolved Chromium (Cr)	mg/L	<0.0050	0.0050	5789707			
Dissolved Cobalt (Co)	mg/L	<0.00050	0.00050	5789707			
Dissolved Copper (Cu)	mg/L	<0.0010	0.0010	5789707			
Dissolved Iron (Fe)	mg/L	<0.10	0.10	5789707			
Dissolved Lead (Pb)	mg/L	<0.00050	0.00050	5789707			
Dissolved Magnesium (Mg)	mg/L	2.0	0.050	5789707			
Dissolved Manganese (Mn)	mg/L	0.0021	0.0020	5789707			
Dissolved Molybdenum (Mo)	mg/L	0.0040	0.00050	5789707			
Dissolved Nickel (Ni)	mg/L	<0.0010	0.0010	5789707			
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	5789707			
Dissolved Potassium (K)	mg/L	0.42	0.20	5789707			
Dissolved Selenium (Se)	mg/L	<0.0020	0.0020	5789707			
Dissolved Silicon (Si)	mg/L	3.4	0.050	5789707			
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	5789707			
Dissolved Sodium (Na)	mg/L	43	0.10	5789707			
Dissolved Strontium (Sr)	mg/L	0.11	0.0010	5789707			
Dissolved Thallium (Tl)	mg/L	<0.000050	0.000050	5789707			
Dissolved Titanium (Ti)	mg/L	<0.0050	0.0050	5789707			
Dissolved Uranium (U)	mg/L	0.00034	0.00010	5789707			
Dissolved Vanadium (V)	mg/L	<0.00050	0.00050	5789707			
Dissolved Zinc (Zn)	mg/L	<0.0050	0.0050	5789707			
Dissolved Zirconium (Zr)	mg/L	<0.0010	0.0010	5789707			

RDL = Reportable Detection Limit
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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

RCAP - COMPREHENSIVE (WATER)

Maxxam ID		HZB431	HZB434	HZB436		
Sampling Date		2018/10/09 12:10	2018/10/09 15:02	2018/10/09 15:56		
COC Number		686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-KR01**	**WG-160900764-201809-KR02**	**WG-160900764-201809-RD02**	**RDL**	**QC Batch**
Calculated Parameters						
Anion Sum	me/L	9.05	8.55	2.33	N/A	5774811
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	250	270	90	1.0	5774807
Calculated TDS	mg/L	510	470	130	1.0	5774814
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.3	1.4	1.6	1.0	5774807
Cation Sum	me/L	8.35	7.74	2.06	N/A	5774811
Hardness (CaCO3)	mg/L	390	360	16	1.0	5776790
Ion Balance (% Difference)	%	4.00	4.92	NC	N/A	5774810
Langelier Index (@ 20C)	N/A	0.809	0.770	-0.559		5774812
Langelier Index (@ 4C)	N/A	0.561	0.523	-0.809		5774813
Saturation pH (@ 20C)	N/A	6.93	6.97	8.84		5774812
Saturation pH (@ 4C)	N/A	7.18	7.22	9.09		5774813
Inorganics						
Total Ammonia-N	mg/L	<0.050	<0.050	<0.050	0.050	5778289
Conductivity	umho/cm	730	690	190	1.0	5777739
Dissolved Organic Carbon	mg/L	1.1	1.0	0.77	0.50	5777895
Orthophosphate (P)	mg/L	<0.010	<0.010	0.017	0.010	5777718
pH	pH	7.74	7.74	8.28		5777727
Dissolved Sulphate (SO4)	mg/L	120	86	17	1.0	5777717
Alkalinity (Total as CaCO3)	mg/L	250	270	92	1.0	5777726
Dissolved Chloride (Cl-)	mg/L	35	31	2.0	1.0	5777713
Nitrite (N)	mg/L	<0.010	<0.010	<0.010	0.010	5778129
Nitrate (N)	mg/L	5.64	6.56	<0.10	0.10	5778129
Nitrate + Nitrite (N)	mg/L	5.64	6.56	<0.10	0.10	5778129
Metals						
Dissolved Aluminum (Al)	mg/L	0.0060	<0.0050	0.068	0.0050	5777239
Dissolved Antimony (Sb)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	5777239
Dissolved Arsenic (As)	mg/L	<0.0010	<0.0010	0.0023	0.0010	5777239
Dissolved Barium (Ba)	mg/L	0.049	0.064	0.0077	0.0020	5777239
Dissolved Beryllium (Be)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	5777239
Dissolved Boron (B)	mg/L	<0.010	0.074	0.22	0.010	5777239

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RCAP - COMPREHENSIVE (WATER)

Maxxam ID		HZB431	HZB434	HZB436		
Sampling Date		2018/10/09 12:10	2018/10/09 15:02	2018/10/09 15:56		
COC Number		686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-KR01**	**WG-160900764-201809-KR02**	**WG-160900764-201809-RD02**	**RDL**	**QC Batch**
Dissolved Cadmium (Cd)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	5777239
Dissolved Calcium (Ca)	mg/L	130	130	4.0	0.20	5777239
Dissolved Chromium (Cr)	mg/L	<0.0050	<0.0050	<0.0050	0.0050	5777239
Dissolved Cobalt (Co)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	5777239
Dissolved Copper (Cu)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	5777239
Dissolved Iron (Fe)	mg/L	<0.10	<0.10	<0.10	0.10	5777239
Dissolved Lead (Pb)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	5777239
Dissolved Magnesium (Mg)	mg/L	15	12	1.5	0.050	5777239
Dissolved Manganese (Mn)	mg/L	<0.0020	<0.0020	<0.0020	0.0020	5777239
Dissolved Molybdenum (Mo)	mg/L	<0.00050	<0.00050	0.0062	0.00050	5777239
Dissolved Nickel (Ni)	mg/L	0.0010	<0.0010	<0.0010	0.0010	5777239
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	0.10	5777239
Dissolved Potassium (K)	mg/L	1.0	1.3	0.56	0.20	5777239
Dissolved Selenium (Se)	mg/L	<0.0020	<0.0020	<0.0020	0.0020	5777239
Dissolved Silicon (Si)	mg/L	5.9	5.2	3.0	0.050	5777239
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	5777239
Dissolved Sodium (Na)	mg/L	11	11	40	0.10	5777239
Dissolved Strontium (Sr)	mg/L	0.27	0.27	0.098	0.0010	5777239
Dissolved Thallium (Tl)	mg/L	<0.000050	<0.000050	<0.000050	0.000050	5777239
Dissolved Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	0.0050	5777239
Dissolved Uranium (U)	mg/L	0.00057	0.00063	0.00051	0.00010	5777239
Dissolved Vanadium (V)	mg/L	<0.00050	<0.00050	0.00093	0.00050	5777239
Dissolved Zinc (Zn)	mg/L	<0.0050	<0.0050	<0.0050	0.0050	5777239
Dissolved Zirconium (Zr)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	5777239

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Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

RESULTS OF ANALYSES OF WATER

Maxxam ID		HZB429			HZB429		
Sampling Date		2018/10/09 12:00			2018/10/09 12:00		
COC Number		686534-01-01			686534-01-01		
	UNITS	**WG-160900764-201809-RD01**	**RDL**	**QC Batch**	**WG-160900764-201809-RD01 Lab-Dup**	**RDL**	**QC Batch**
Inorganics							
Acidity	mg/L	<5.0	5.0	5787226			
Total Dissolved Solids	mg/L	220	10	5781451			
Fluoride (F-)	mg/L	1.3	0.10	5778569	1.2	0.10	5778569
Total Organic Carbon (TOC)	mg/L	1.2	0.50	5778241			
Total Suspended Solids	mg/L	39	10	5777533			
Turbidity	NTU	160	0.1	5776651			
WAD Cyanide (Free)	ug/L	<1	1	5783626			

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Maxxam ID		HZB431			HZB431		
Sampling Date		2018/10/09 12:10			2018/10/09 12:10		
COC Number		686534-01-01			686534-01-01		
	UNITS	**WG-160900764-201809-KR01**	**RDL**	**QC Batch**	**WG-160900764-201809-KR01 Lab-Dup**	**RDL**	**QC Batch**
Inorganics							
Acidity	mg/L	24	5.0	5787226	23	5.0	5787226
Total Dissolved Solids	mg/L	465	10	5781451			
Fluoride (F-)	mg/L	<0.10	0.10	5777712			
Total Organic Carbon (TOC)	mg/L	1.1	0.50	5778241			
Total Suspended Solids	mg/L	<10	10	5777533			
Turbidity	NTU	0.3	0.1	5776651			
WAD Cyanide (Free)	ug/L	<1	1	5783626			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

RESULTS OF ANALYSES OF WATER

Maxxam ID		HZB434	HZB436		
Sampling Date		2018/10/09 15:02	2018/10/09 15:56		
COC Number		686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-KR02**	**WG-160900764-201809-RD02**	**RDL**	**QC Batch**
Inorganics					
Acidity	mg/L	28	<5.0	5.0	5787226
Total Dissolved Solids	mg/L	685	250	10	5781451
Fluoride (F-)	mg/L	<0.10	1.4	0.10	5777712
Total Organic Carbon (TOC)	mg/L	1.0	0.91	0.50	5778241
Total Suspended Solids	mg/L	19	<10	10	5777533
Turbidity	NTU	6.7	1.8	0.1	5776651
WAD Cyanide (Free)	ug/L	<1	<1	1	5783626

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		HZB429	HZB431	HZB434	HZB436		
Sampling Date		2018/10/09 12:00	2018/10/09 12:10	2018/10/09 15:02	2018/10/09 15:56		
COC Number		686534-01-01	686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-RD01**	**WG-160900764-201809-KR01**	**WG-160900764-201809-KR02**	**WG-160900764-201809-RD02**	**RDL**	**QC Batch**
Metals							
Chromium (VI)	ug/L	<0.50	0.94	1.5	<0.50	0.50	5775788
Mercury (Hg)	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5783403

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 PCBS (WATER)

Maxxam ID		HZB429	HZB431	HZB434	HZB436		
Sampling Date		2018/10/09 12:00	2018/10/09 12:10	2018/10/09 15:02	2018/10/09 15:56		
COC Number		686534-01-01	686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-RD01**	**WG-160900764-201809-KR01**	**WG-160900764-201809-KR02**	**WG-160900764-201809-RD02**	**RDL**	**QC Batch**
PCBs							
Aroclor 1242	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780423
Aroclor 1248	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780423
Aroclor 1254	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780423
Aroclor 1260	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780423
Total PCB	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780423
Surrogate Recovery (%)							
Decachlorobiphenyl	%	77	73	70	75		5780423

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
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Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		HZB429	HZB431	HZB434		
Sampling Date		2018/10/09 12:00	2018/10/09 12:10	2018/10/09 15:02		
COC Number		686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-RD01**	**WG-160900764-201809-KR01**	**WG-160900764-201809-KR02**	**RDL**	**QC Batch**
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	0.50	5776902
Volatile Organics						
Acetone (2-Propanone)	ug/L	<10	<10	<10	10	5777387
Benzene	ug/L	<0.20	<0.20	<0.20	0.20	5777387
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	0.50	5777387
Bromoform	ug/L	<1.0	<1.0	<1.0	1.0	5777387
Bromomethane	ug/L	<0.50	<0.50	<0.50	0.50	5777387
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	0.20	5777387
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	0.20	5777387
Chloroform	ug/L	<0.20	<0.20	<0.20	0.20	5777387
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	0.50	5777387
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	5777387
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	5777387
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	5777387
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	1.0	5777387
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	5777387
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	5777387
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	5777387
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	5777387
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	5777387
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	0.20	5777387
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	0.30	5777387
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	0.40	5777387
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	0.20	5777387
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	0.20	5777387
Hexane	ug/L	<1.0	<1.0	<1.0	1.0	5777387
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	2.0	5777387
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	10	5777387
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	5.0	5777387
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	0.50	5777387

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		HZB429	HZB431	HZB434		
Sampling Date		2018/10/09 12:00	2018/10/09 12:10	2018/10/09 15:02		
COC Number		686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-RD01**	**WG-160900764-201809-KR01**	**WG-160900764-201809-KR02**	**RDL**	**QC Batch**
Styrene	ug/L	<0.50	<0.50	<0.50	0.50	5777387
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	5777387
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	5777387
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	5777387
Toluene	ug/L	<0.20	<0.20	<0.20	0.20	5777387
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	5777387
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	5777387
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	5777387
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	0.50	5777387
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	0.20	5777387
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	5777387
o-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	5777387
Total Xylenes	ug/L	<0.20	<0.20	<0.20	0.20	5777387
F1 (C6-C10)	ug/L	<25	<25	<25	25	5777387
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	25	5777387
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	100	5782082
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	200	5782082
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	200	5782082
Reached Baseline at C50	ug/L	Yes	Yes	Yes		5782082
Surrogate Recovery (%)						
o-Terphenyl	%	97	95	96		5782082
4-Bromofluorobenzene	%	93	93	92		5777387
D4-1,2-Dichloroethane	%	101	102	104		5777387
D8-Toluene	%	99	98	99		5777387

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		HZB436		
Sampling Date		2018/10/09 15:56		
COC Number		686534-01-01		
	UNITS	**WG-160900764-201809-RD02**	**RDL**	**QC Batch**
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	5776902
Volatile Organics				
Acetone (2-Propanone)	ug/L	<10	10	5777387
Benzene	ug/L	<0.20	0.20	5777387
Bromodichloromethane	ug/L	<0.50	0.50	5777387
Bromoform	ug/L	<1.0	1.0	5777387
Bromomethane	ug/L	<0.50	0.50	5777387
Carbon Tetrachloride	ug/L	<0.20	0.20	5777387
Chlorobenzene	ug/L	<0.20	0.20	5777387
Chloroform	ug/L	<0.20	0.20	5777387
Dibromochloromethane	ug/L	<0.50	0.50	5777387
1,2-Dichlorobenzene	ug/L	<0.50	0.50	5777387
1,3-Dichlorobenzene	ug/L	<0.50	0.50	5777387
1,4-Dichlorobenzene	ug/L	<0.50	0.50	5777387
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	5777387
1,1-Dichloroethane	ug/L	<0.20	0.20	5777387
1,2-Dichloroethane	ug/L	<0.50	0.50	5777387
1,1-Dichloroethylene	ug/L	<0.20	0.20	5777387
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	5777387
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	5777387
1,2-Dichloropropane	ug/L	<0.20	0.20	5777387
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	5777387
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	5777387
Ethylbenzene	ug/L	<0.20	0.20	5777387
Ethylene Dibromide	ug/L	<0.20	0.20	5777387
Hexane	ug/L	<1.0	1.0	5777387
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	5777387
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	5777387
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	5777387
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	5777387

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		HZB436		
Sampling Date		2018/10/09 15:56		
COC Number		686534-01-01		
	UNITS	**WG-160900764-201809-RD02**	**RDL**	**QC Batch**
Styrene	ug/L	<0.50	0.50	5777387
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	5777387
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	5777387
Tetrachloroethylene	ug/L	<0.20	0.20	5777387
Toluene	ug/L	<0.20	0.20	5777387
1,1,1-Trichloroethane	ug/L	<0.20	0.20	5777387
1,1,2-Trichloroethane	ug/L	<0.50	0.50	5777387
Trichloroethylene	ug/L	<0.20	0.20	5777387
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	5777387
Vinyl Chloride	ug/L	<0.20	0.20	5777387
p+m-Xylene	ug/L	<0.20	0.20	5777387
o-Xylene	ug/L	<0.20	0.20	5777387
Total Xylenes	ug/L	<0.20	0.20	5777387
F1 (C6-C10)	ug/L	<25	25	5777387
F1 (C6-C10) - BTEX	ug/L	<25	25	5777387
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/L	<100	100	5782082
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	5782082
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	5782082
Reached Baseline at C50	ug/L	Yes		5782082
Surrogate Recovery (%)				
o-Terphenyl	%	95		5782082
4-Bromofluorobenzene	%	93		5777387
D4-1,2-Dichloroethane	%	101		5777387
D8-Toluene	%	99		5777387

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 SEMIVOLATILES PACKAGE (WATER)

Maxxam ID		HZB429	HZB430	HZB431	HZB432		
Sampling Date		2018/10/09 12:00	2018/10/09 12:00	2018/10/09 12:10	2018/10/09 12:10		
COC Number		686534-01-01	686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-RD01**	**WG-160900764-201809-RD01A**	**WG-160900764-201809-KR01**	**WG-160900764-201809-KR01A**	**RDL**	**QC Batch**
Semivolatile Organics							
1,2,4-Trichlorobenzene	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
1-Methylnaphthalene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
2,4,5-Trichlorophenol	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
2,4,6-Trichlorophenol	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
2,4-Dichlorophenol	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
2,4-Dimethylphenol	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
2,4-Dinitrophenol	ug/L	<2	<2	<2	<2	2	5780128
2,4-Dinitrotoluene	ug/L	<0.3	<0.3	<0.3	<0.3	0.3	5780128
2,6-Dinitrotoluene	ug/L	<0.3	<0.3	<0.3	<0.3	0.3	5780128
2-Chlorophenol	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
2-Methylnaphthalene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
3,3'-Dichlorobenzidine	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
Acenaphthene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
Acenaphthylene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
Anthracene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Benzo(a)anthracene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Benzo(a)pyrene	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	5780128
Benzo(b/j)fluoranthene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Benzo(g,h,i)perylene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Benzo(k)fluoranthene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Biphenyl	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Bis(2-chloroethyl)ether	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
Bis(2-chloroisopropyl)ether	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
Bis(2-ethylhexyl)phthalate	ug/L	<1	<1	<1	<1	1	5780128
Chrysene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Dibenz(a,h)anthracene	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Diethyl phthalate	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Dimethyl phthalate	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Fluoranthene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
Fluorene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 SEMIVOLATILES PACKAGE (WATER)

Maxxam ID		HZB429	HZB430	HZB431	HZB432		
Sampling Date		2018/10/09 12:00	2018/10/09 12:00	2018/10/09 12:10	2018/10/09 12:10		
COC Number		686534-01-01	686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-RD01**	**WG-160900764-201809-RD01A**	**WG-160900764-201809-KR01**	**WG-160900764-201809-KR01A**	**RDL**	**QC Batch**
Indeno(1,2,3-cd)pyrene	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Naphthalene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
p-Chloroaniline	ug/L	<1	<1	<1	<1	1	5780128
Pentachlorophenol	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Phenanthrene	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Phenol	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
Pyrene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Calculated Parameters							
Methylnaphthalene, 2-(1-)	ug/L	<0.28	<0.28	<0.28	<0.28	0.28	5775346
Surrogate Recovery (%)							
2,4,6-Tribromophenol	%	64	68	57	53		5780128
2-Fluorobiphenyl	%	70	53	37 (1)	52		5780128
D14-Terphenyl (FS)	%	92	17 (1)	92	9.8 (1)		5780128
D5-Nitrobenzene	%	66	67	48 (1)	66		5780128

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 SEMIVOLATILES PACKAGE (WATER)

Maxxam ID		HZB434	HZB435	HZB436	HZB437		
Sampling Date		2018/10/09 15:02	2018/10/09 15:02	2018/10/09 15:56	2018/10/09 15:56		
COC Number		686534-01-01	686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-KR02**	**WG-160900764-201809-KR02A**	**WG-160900764-201809-RD02**	**WG-160900764-201809-RD02A**	**RDL**	**QC Batch**
Semivolatile Organics							
1,2,4-Trichlorobenzene	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
1-Methylnaphthalene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
2,4,5-Trichlorophenol	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
2,4,6-Trichlorophenol	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
2,4-Dichlorophenol	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
2,4-Dimethylphenol	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
2,4-Dinitrophenol	ug/L	<2	<2	<2	<2	2	5780128
2,4-Dinitrotoluene	ug/L	<0.3	<0.3	<0.3	<0.3	0.3	5780128
2,6-Dinitrotoluene	ug/L	<0.3	<0.3	<0.3	<0.3	0.3	5780128
2-Chlorophenol	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
2-Methylnaphthalene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
3,3'-Dichlorobenzidine	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
Acenaphthene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
Acenaphthylene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
Anthracene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Benzo(a)anthracene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Benzo(a)pyrene	ug/L	<0.01	<0.01	<0.01	<0.01	0.01	5780128
Benzo(b/j)fluoranthene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Benzo(g,h,i)perylene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Benzo(k)fluoranthene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Biphenyl	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Bis(2-chloroethyl)ether	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
Bis(2-chloroisopropyl)ether	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
Bis(2-ethylhexyl)phthalate	ug/L	<1	<1	<1	<1	1	5780128
Chrysene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Dibenz(a,h)anthracene	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Diethyl phthalate	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Dimethyl phthalate	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Fluoranthene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
Fluorene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 SEMIVOLATILES PACKAGE (WATER)

Maxxam ID		HZB434	HZB435	HZB436	HZB437		
Sampling Date		2018/10/09 15:02	2018/10/09 15:02	2018/10/09 15:56	2018/10/09 15:56		
COC Number		686534-01-01	686534-01-01	686534-01-01	686534-01-01		
	UNITS	**WG-160900764-201809-KR02**	**WG-160900764-201809-KR02A**	**WG-160900764-201809-RD02**	**WG-160900764-201809-RD02A**	**RDL**	**QC Batch**
Indeno(1,2,3-cd)pyrene	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Naphthalene	ug/L	<0.2	<0.2	<0.2	<0.2	0.2	5780128
p-Chloroaniline	ug/L	<1	<1	<1	<1	1	5780128
Pentachlorophenol	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Phenanthrene	ug/L	<0.1	<0.1	<0.1	<0.1	0.1	5780128
Phenol	ug/L	<0.5	<0.5	<0.5	<0.5	0.5	5780128
Pyrene	ug/L	<0.05	<0.05	<0.05	<0.05	0.05	5780128
Calculated Parameters							
Methylnaphthalene, 2-(1-)	ug/L	<0.28	<0.28	<0.28	<0.28	0.28	5775346
Surrogate Recovery (%)							
2,4,6-Tribromophenol	%	72	76	76	67		5780128
2-Fluorobiphenyl	%	43 (1)	70	54	55		5780128
D14-Terphenyl (FS)	%	93	9.2 (1)	92	9.5 (1)		5780128
D5-Nitrobenzene	%	48 (1)	69	68	69		5780128

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 SEMIVOLATILES PACKAGE (WATER)

Maxxam ID		HZE252		HZE253		
Sampling Date		2018/10/09		2018/10/09		
COC Number		686534-01-01		686534-01-01		
	UNITS	**FILTERED BLANK**	**RDL**	**FILTERED SPIKE**	**RDL**	**QC Batch**
Semivolatile Organics						
1,2,4-Trichlorobenzene	ug/L	<0.1	0.1	41 (1)	1	5780128
1-Methylnaphthalene	ug/L	<0.2	0.2	71	1	5780128
2,4,5-Trichlorophenol	ug/L	<0.2	0.2	82	1	5780128
2,4,6-Trichlorophenol	ug/L	<0.2	0.2	75	1	5780128
2,4-Dichlorophenol	ug/L	<0.1	0.1	71	1	5780128
2,4-Dimethylphenol	ug/L	<0.5	0.5	44	1	5780128
2,4-Dinitrophenol	ug/L	<2	2	74	1	5780128
2,4-Dinitrotoluene	ug/L	<0.3	0.3	83	1	5780128
2,6-Dinitrotoluene	ug/L	<0.3	0.3	81	1	5780128
2-Chlorophenol	ug/L	<0.1	0.1	63	1	5780128
2-Methylnaphthalene	ug/L	<0.2	0.2	66	1	5780128
3,3'-Dichlorobenzidine	ug/L	<0.5	0.5	55	1	5780128
Acenaphthene	ug/L	<0.2	0.2	65	1	5780128
Acenaphthylene	ug/L	<0.2	0.2	71	1	5780128
Anthracene	ug/L	<0.05	0.05	31 (1)	1	5780128
Benzo(a)anthracene	ug/L	<0.05	0.05	24 (1)	1	5780128
Benzo(a)pyrene	ug/L	<0.01	0.01	23 (1)	1	5780128
Benzo(b/j)fluoranthene	ug/L	<0.05	0.05	24 (1)	1	5780128
Benzo(g,h,i)perylene	ug/L	<0.05	0.05	16 (1)	1	5780128
Benzo(k)fluoranthene	ug/L	<0.05	0.05	28 (1)	1	5780128
Biphenyl	ug/L	<0.1	0.1	65	1	5780128
Bis(2-chloroethyl)ether	ug/L	<0.5	0.5	69	1	5780128
Bis(2-chloroisopropyl)ether	ug/L	<0.5	0.5	71	1	5780128
Bis(2-ethylhexyl)phthalate	ug/L	<1	1	25 (1)	1	5780128
Chrysene	ug/L	<0.05	0.05	24 (1)	1	5780128
Dibenz(a,h)anthracene	ug/L	<0.1	0.1	17 (1)	1	5780128
Diethyl phthalate	ug/L	<0.1	0.1	86	1	5780128
Dimethyl phthalate	ug/L	<0.1	0.1	85	1	5780128
Fluoranthene	ug/L	<0.2	0.2	36 (1)	1	5780128

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

O.REG 153 SEMIVOLATILES PACKAGE (WATER)

Maxxam ID		HZE252		HZE253		
Sampling Date		2018/10/09		2018/10/09		
COC Number		686534-01-01		686534-01-01		
	UNITS	**FILTERED BLANK**	**RDL**	**FILTERED SPIKE**	**RDL**	**QC Batch**
Fluorene	ug/L	<0.2	0.2	51	1	5780128
Indeno(1,2,3-cd)pyrene	ug/L	<0.1	0.1	17 (1)	1	5780128
Naphthalene	ug/L	<0.2	0.2	68	1	5780128
p-Chloroaniline	ug/L	<1	1	45	1	5780128
Pentachlorophenol	ug/L	<0.1	0.1	82	1	5780128
Phenanthrene	ug/L	<0.1	0.1	44 (1)	1	5780128
Phenol	ug/L	<0.5	0.5	29 (1)	1	5780128
Pyrene	ug/L	<0.05	0.05	35 (1)	1	5780128
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/L	<0.28	0.28	140	1.4	5775346
Surrogate Recovery (%)						
2,4,6-Tribromophenol	%	65		79		5780128
2-Fluorobiphenyl	%	60		57		5780128
D14-Terphenyl (FS)	%	4.3 (2)		59		5780128
D5-Nitrobenzene	%	70		69		5780128

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

TEST SUMMARY

Maxxam ID: HZB429
Sample ID: WG-160900764-201809-RD01
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/15	Milijana Avramovic
Acidity (CaCO3) in water	MT	5787226	N/A	2018/10/17	Brent Boudreau
Alkalinity	AT	5788959	N/A	2018/10/18	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	5774807	N/A	2018/10/15	Automated Statchk
1,3-Dichloropropene Sum	CALC	5776902	N/A	2018/10/15	Automated Statchk
Chloride by Automated Colourimetry	KONE	5789060	N/A	2018/10/18	Alina Dobreanu
Conductivity	AT	5778577	N/A	2018/10/12	Surinder Rai
Chromium (VI) in Water	IC	5775788	N/A	2018/10/15	Sally Norouz
Free (WAD) Cyanide	SKAL/CN	5783626	N/A	2018/10/15	Xuanhong Qiu
Dissolved Organic Carbon (DOC)	TOCV/NDIR	5777895	N/A	2018/10/13	Nimarta Singh
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5782082	2018/10/13	2018/10/15	Anna Stuglik Rolland
Fluoride	ISE	5778569	2018/10/11	2018/10/12	Surinder Rai
Hardness (calculated as CaCO3)		5776790	N/A	2018/10/16	Automated Statchk
Mercury	CV/AA	5783403	2018/10/15	2018/10/15	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5789707	N/A	2018/10/18	Arefa Dabhad
Ion Balance (% Difference)	CALC	5774810	N/A	2018/10/16	Automated Statchk
Anion and Cation Sum	CALC	5774811	N/A	2018/10/16	Automated Statchk
Total Ammonia-N	LACH/NH4	5778289	N/A	2018/10/17	Chandra Nandlal
Nitrate (NO3) and Nitrite (NO2) in Water	LACH	5778129	N/A	2018/10/13	Chandra Nandlal
Polychlorinated Biphenyl in Water	GC/ECD	5780423	2018/10/12	2018/10/12	Svitlana Shaula
pH	AT	5778580	N/A	2018/10/12	Surinder Rai
Orthophosphate	KONE	5778568	N/A	2018/10/15	Alina Dobreanu
Sat. pH and Langelier Index (@ 20C)	CALC	5774812	N/A	2018/10/16	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	5774813	N/A	2018/10/16	Automated Statchk
Sulphate by Automated Colourimetry	KONE	5789061	N/A	2018/10/18	Alina Dobreanu
Total Dissolved Solids (TDS calc)	CALC	5774814	N/A	2018/10/16	Automated Statchk
Total Dissolved Solids	BAL	5781451	2018/10/12	2018/10/15	Jingwei (Alvin) Shi
Total Organic Carbon (TOC)	TOCV/NDIR	5778241	N/A	2018/10/14	Nimarta Singh
Total Suspended Solids	BAL	5777533	2018/10/12	2018/10/15	Mandeep Kaur
Turbidity	AT	5776651	N/A	2018/10/11	Barbara Kalbasi Esfahani
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5777387	N/A	2018/10/13	Yang (Philip) Yu

Maxxam ID: HZB429 Dup
Sample ID: WG-160900764-201809-RD01
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	5778577	N/A	2018/10/12	Surinder Rai
Fluoride	ISE	5778569	2018/10/11	2018/10/12	Surinder Rai
pH	AT	5778580	N/A	2018/10/12	Surinder Rai
Orthophosphate	KONE	5778568	N/A	2018/10/15	Alina Dobreanu

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

TEST SUMMARY

Maxxam ID: HZB430
Sample ID: WG-160900764-201809-RD01A
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/15	Milijana Avramovic

Maxxam ID: HZB431
Sample ID: WG-160900764-201809-KR01
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/15	Milijana Avramovic
Acidity (CaCO3) in water	MT	5787226	N/A	2018/10/17	Brent Boudreau
Alkalinity	AT	5777726	N/A	2018/10/13	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	5774807	N/A	2018/10/15	Automated Statchk
1,3-Dichloropropene Sum	CALC	5776902	N/A	2018/10/15	Automated Statchk
Chloride by Automated Colourimetry	KONE	5777713	N/A	2018/10/12	Deonarine Ramnarine
Conductivity	AT	5777739	N/A	2018/10/15	Surinder Rai
Chromium (VI) in Water	IC	5775788	N/A	2018/10/15	Sally Norouz
Free (WAD) Cyanide	SKAL/CN	5783626	N/A	2018/10/15	Xuanhong Qiu
Dissolved Organic Carbon (DOC)	TOCV/NDIR	5777895	N/A	2018/10/13	Nimarta Singh
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5782082	2018/10/13	2018/10/15	Anna Stuglik Rolland
Fluoride	ISE	5777712	2018/10/11	2018/10/13	Surinder Rai
Hardness (calculated as CaCO3)		5776790	N/A	2018/10/16	Automated Statchk
Mercury	CV/AA	5783403	2018/10/15	2018/10/15	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5777239	N/A	2018/10/15	Thao Nguyen
Ion Balance (% Difference)	CALC	5774810	N/A	2018/10/16	Automated Statchk
Anion and Cation Sum	CALC	5774811	N/A	2018/10/16	Automated Statchk
Total Ammonia-N	LACH/NH4	5778289	N/A	2018/10/17	Chandra Nandlal
Nitrate (NO3) and Nitrite (NO2) in Water	LACH	5778129	N/A	2018/10/13	Chandra Nandlal
Polychlorinated Biphenyl in Water	GC/ECD	5780423	2018/10/12	2018/10/12	Svitlana Shaula
pH	AT	5777727	N/A	2018/10/13	Surinder Rai
Orthophosphate	KONE	5777718	N/A	2018/10/12	Alina Dobreanu
Sat. pH and Langelier Index (@ 20C)	CALC	5774812	N/A	2018/10/16	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	5774813	N/A	2018/10/16	Automated Statchk
Sulphate by Automated Colourimetry	KONE	5777717	N/A	2018/10/12	Alina Dobreanu
Total Dissolved Solids (TDS calc)	CALC	5774814	N/A	2018/10/16	Automated Statchk
Total Dissolved Solids	BAL	5781451	2018/10/12	2018/10/15	Jingwei (Alvin) Shi
Total Organic Carbon (TOC)	TOCV/NDIR	5778241	N/A	2018/10/14	Nimarta Singh
Total Suspended Solids	BAL	5777533	2018/10/12	2018/10/15	Mandeep Kaur
Turbidity	AT	5776651	N/A	2018/10/11	Barbara Kalbasi Esfahani
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5777387	N/A	2018/10/13	Yang (Philip) Yu

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

TEST SUMMARY

Maxxam ID: HZB431 Dup
Sample ID: WG-160900764-201809-KR01
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity (CaCO3) in water	MT	5787226	N/A	2018/10/17	Brent Boudreau

Maxxam ID: HZB432
Sample ID: WG-160900764-201809-KR01A
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/15	Milijana Avramovic

Maxxam ID: HZB434
Sample ID: WG-160900764-201809-KR02
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/15	Milijana Avramovic
Acidity (CaCO3) in water	MT	5787226	N/A	2018/10/17	Brent Boudreau
Alkalinity	AT	5777726	N/A	2018/10/13	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	5774807	N/A	2018/10/15	Automated Statchk
1,3-Dichloropropene Sum	CALC	5776902	N/A	2018/10/15	Automated Statchk
Chloride by Automated Colourimetry	KONE	5777713	N/A	2018/10/12	Deonarine Ramnarine
Conductivity	AT	5777739	N/A	2018/10/15	Surinder Rai
Chromium (VI) in Water	IC	5775788	N/A	2018/10/15	Sally Norouz
Free (WAD) Cyanide	SKAL/CN	5783626	N/A	2018/10/15	Xuanhong Qiu
Dissolved Organic Carbon (DOC)	TOCV/NDIR	5777895	N/A	2018/10/13	Nimarta Singh
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5782082	2018/10/13	2018/10/15	Anna Stuglik Rolland
Fluoride	ISE	5777712	2018/10/11	2018/10/13	Surinder Rai
Hardness (calculated as CaCO3)		5776790	N/A	2018/10/16	Automated Statchk
Mercury	CV/AA	5783403	2018/10/15	2018/10/15	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5777239	N/A	2018/10/15	Thao Nguyen
Ion Balance (% Difference)	CALC	5774810	N/A	2018/10/16	Automated Statchk
Anion and Cation Sum	CALC	5774811	N/A	2018/10/16	Automated Statchk
Total Ammonia-N	LACH/NH4	5778289	N/A	2018/10/17	Chandra Nandlal
Nitrate (NO3) and Nitrite (NO2) in Water	LACH	5778129	N/A	2018/10/13	Chandra Nandlal
Polychlorinated Biphenyl in Water	GC/ECD	5780423	2018/10/12	2018/10/12	Svitlana Shaula
pH	AT	5777727	N/A	2018/10/13	Surinder Rai
Orthophosphate	KONE	5777718	N/A	2018/10/12	Alina Dobreanu
Sat. pH and Langelier Index (@ 20C)	CALC	5774812	N/A	2018/10/16	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	5774813	N/A	2018/10/16	Automated Statchk
Sulphate by Automated Colourimetry	KONE	5777717	N/A	2018/10/12	Alina Dobreanu
Total Dissolved Solids (TDS calc)	CALC	5774814	N/A	2018/10/16	Automated Statchk
Total Dissolved Solids	BAL	5781451	2018/10/12	2018/10/15	Jingwei (Alvin) Shi
Total Organic Carbon (TOC)	TOCV/NDIR	5778241	N/A	2018/10/14	Nimarta Singh

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

TEST SUMMARY

Maxxam ID: HZB434
Sample ID: WG-160900764-201809-KR02
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids	BAL	5777533	2018/10/12	2018/10/15	Mandeep Kaur
Turbidity	AT	5776651	N/A	2018/10/11	Barbara Kalbasi Esfahani
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5777387	N/A	2018/10/13	Yang (Philip) Yu

Maxxam ID: HZB435
Sample ID: WG-160900764-201809-KR02A
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/15	Milijana Avramovic

Maxxam ID: HZB436
Sample ID: WG-160900764-201809-RD02
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/15	Milijana Avramovic
Acidity (CaCO3) in water	MT	5787226	N/A	2018/10/17	Brent Boudreau
Alkalinity	AT	5777726	N/A	2018/10/13	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	5774807	N/A	2018/10/15	Automated Statchk
1,3-Dichloropropene Sum	CALC	5776902	N/A	2018/10/15	Automated Statchk
Chloride by Automated Colourimetry	KONE	5777713	N/A	2018/10/12	Deonarine Ramnarine
Conductivity	AT	5777739	N/A	2018/10/15	Surinder Rai
Chromium (VI) in Water	IC	5775788	N/A	2018/10/15	Sally Norouz
Free (WAD) Cyanide	SKAL/CN	5783626	N/A	2018/10/15	Xuanhong Qiu
Dissolved Organic Carbon (DOC)	TOCV/NDIR	5777895	N/A	2018/10/13	Nimarta Singh
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5782082	2018/10/13	2018/10/15	Anna Stuglik Rolland
Fluoride	ISE	5777712	2018/10/11	2018/10/13	Surinder Rai
Hardness (calculated as CaCO3)		5776790	N/A	2018/10/16	Automated Statchk
Mercury	CV/AA	5783403	2018/10/15	2018/10/15	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5777239	N/A	2018/10/15	Thao Nguyen
Ion Balance (% Difference)	CALC	5774810	N/A	2018/10/16	Automated Statchk
Anion and Cation Sum	CALC	5774811	N/A	2018/10/16	Automated Statchk
Total Ammonia-N	LACH/NH4	5778289	N/A	2018/10/17	Chandra Nandlal
Nitrate (NO3) and Nitrite (NO2) in Water	LACH	5778129	N/A	2018/10/13	Chandra Nandlal
Polychlorinated Biphenyl in Water	GC/ECD	5780423	2018/10/12	2018/10/12	Svitlana Shaula
pH	AT	5777727	N/A	2018/10/13	Surinder Rai
Orthophosphate	KONE	5777718	N/A	2018/10/12	Alina Dobreanu
Sat. pH and Langelier Index (@ 20C)	CALC	5774812	N/A	2018/10/16	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	5774813	N/A	2018/10/16	Automated Statchk
Sulphate by Automated Colourimetry	KONE	5777717	N/A	2018/10/12	Alina Dobreanu
Total Dissolved Solids (TDS calc)	CALC	5774814	N/A	2018/10/16	Automated Statchk

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

TEST SUMMARY

Maxxam ID: HZB436
Sample ID: WG-160900764-201809-RD02
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Dissolved Solids	BAL	5781451	2018/10/12	2018/10/15	Jingwei (Alvin) Shi
Total Organic Carbon (TOC)	TOCV/NDIR	5778241	N/A	2018/10/14	Nimarta Singh
Total Suspended Solids	BAL	5777533	2018/10/12	2018/10/15	Mandeep Kaur
Turbidity	AT	5776651	N/A	2018/10/11	Barbara Kalbasi Esfahani
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5777387	N/A	2018/10/13	Yang (Philip) Yu

Maxxam ID: HZB437
Sample ID: WG-160900764-201809-RD02A
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/15	Milijana Avramovic

Maxxam ID: HZE252
Sample ID: FILTERED BLANK
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/15	Milijana Avramovic

Maxxam ID: HZE253
Sample ID: FILTERED SPIKE
Matrix: Water

Collected: 2018/10/09
Shipped:
Received: 2018/10/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5775346	N/A	2018/10/16	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	5780128	2018/10/12	2018/10/16	Milijana Avramovic

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.3°C
Package 2	10.0°C
Package 3	7.7°C
Package 4	7.3°C
Package 5	6.7°C
Package 6	10.3°C
Package 7	9.0°C
Package 8	7.0°C
Package 9	7.0°C

Sample HZB429 [WG-160900764-201809-RD01] : Elevated ion balance result was confirmed by reanalysis.

Sample HZB430 [WG-160900764-201809-RD01A] : ABN Analysis :Sample was filtered prior to the extraction as per the client's recommendation.

Sample HZB431 [WG-160900764-201809-KR01] : TOC< DOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. Hexavalent Chromium > Total/Dissolved Chromium: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample HZB432 [WG-160900764-201809-KR01A] : ABN Analysis :Sample was filtered prior to the extraction as per the client's recommendation.

Sample HZB434 [WG-160900764-201809-KR02] : Hexavalent Chromium > Total/Dissolved Chromium: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample HZB435 [WG-160900764-201809-KR02A] : ABN Analysis :Sample was filtered prior to the extraction as per the client's recommendation.

Sample HZB436 [WG-160900764-201809-RD02] : ortho-Phosphate > Total Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample HZB437 [WG-160900764-201809-RD02A] : ABN Analysis :Sample was filtered prior to the extraction as per the client's recommendation.

Sample HZE253 [FILTERED SPIKE] : ABN Analysis: Data are reported as percentage recoveries.

Results relate only to the items tested.

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

QUALITY ASSURANCE REPORT

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5777387	4-Bromofluorobenzene	2018/10/12	97	70 - 130	96	70 - 130	94	%				
5777387	D4-1,2-Dichloroethane	2018/10/12	100	70 - 130	99	70 - 130	99	%				
5777387	D8-Toluene	2018/10/12	104	70 - 130	105	70 - 130	101	%				
5780128	2,4,6-Tribromophenol	2018/10/13	59	50 - 130	76	50 - 130	67	%				
5780128	2-Fluorobiphenyl	2018/10/13	27 (1)	50 - 130	63	50 - 130	66	%				
5780128	D14-Terphenyl (FS)	2018/10/13	91	50 - 130	92	50 - 130	91	%				
5780128	D5-Nitrobenzene	2018/10/13	29 (1)	50 - 130	67	50 - 130	68	%				
5780423	Decachlorobiphenyl	2018/10/12	70	60 - 130	67	60 - 130	69	%				
5782082	o-Terphenyl	2018/10/15	103	60 - 130	107	60 - 130	94	%				
5775788	Chromium (VI)	2018/10/15	103	80 - 120	101	80 - 120	<0.50	ug/L	7.4	20		
5776651	Turbidity	2018/10/11			101	85 - 115	<0.1	NTU	4.3	20		
5777239	Dissolved Aluminum (Al)	2018/10/15	93	80 - 120	95	80 - 120	<0.0050	mg/L				
5777239	Dissolved Antimony (Sb)	2018/10/15	104	80 - 120	100	80 - 120	<0.00050	mg/L				
5777239	Dissolved Arsenic (As)	2018/10/15	97	80 - 120	98	80 - 120	<0.0010	mg/L	0.67	20		
5777239	Dissolved Barium (Ba)	2018/10/15	NC	80 - 120	100	80 - 120	<0.0020	mg/L	3.0	20		
5777239	Dissolved Beryllium (Be)	2018/10/15	99	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20		
5777239	Dissolved Boron (B)	2018/10/15	96	80 - 120	97	80 - 120	<0.010	mg/L				
5777239	Dissolved Cadmium (Cd)	2018/10/15	98	80 - 120	98	80 - 120	<0.00010	mg/L				
5777239	Dissolved Calcium (Ca)	2018/10/15	NC	80 - 120	93	80 - 120	<0.20	mg/L				
5777239	Dissolved Chromium (Cr)	2018/10/15	95	80 - 120	97	80 - 120	<0.0050	mg/L				
5777239	Dissolved Cobalt (Co)	2018/10/15	94	80 - 120	97	80 - 120	<0.00050	mg/L	13	20		
5777239	Dissolved Copper (Cu)	2018/10/15	97	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20		
5777239	Dissolved Iron (Fe)	2018/10/15	93	80 - 120	97	80 - 120	<0.10	mg/L				
5777239	Dissolved Lead (Pb)	2018/10/15	95	80 - 120	98	80 - 120	<0.00050	mg/L				
5777239	Dissolved Magnesium (Mg)	2018/10/15	NC	80 - 120	98	80 - 120	<0.050	mg/L				
5777239	Dissolved Manganese (Mn)	2018/10/15	NC	80 - 120	99	80 - 120	<0.0020	mg/L				
5777239	Dissolved Molybdenum (Mo)	2018/10/15	102	80 - 120	100	80 - 120	<0.00050	mg/L				
5777239	Dissolved Nickel (Ni)	2018/10/15	92	80 - 120	96	80 - 120	<0.0010	mg/L				
5777239	Dissolved Phosphorus (P)	2018/10/15	105	80 - 120	111	80 - 120	<0.10	mg/L				
5777239	Dissolved Potassium (K)	2018/10/15	97	80 - 120	98	80 - 120	<0.20	mg/L				
5777239	Dissolved Selenium (Se)	2018/10/15	94	80 - 120	97	80 - 120	<0.0020	mg/L				

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

QUALITY ASSURANCE REPORT(CONT'D)

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5777239	Dissolved Silicon (Si)	2018/10/15	91	80 - 120	96	80 - 120	<0.050	mg/L				
5777239	Dissolved Silver (Ag)	2018/10/15	90	80 - 120	97	80 - 120	<0.00010	mg/L				
5777239	Dissolved Sodium (Na)	2018/10/15	NC	80 - 120	94	80 - 120	<0.10	mg/L	1.7	20		
5777239	Dissolved Strontium (Sr)	2018/10/15	NC	80 - 120	99	80 - 120	<0.0010	mg/L				
5777239	Dissolved Thallium (Tl)	2018/10/15	94	80 - 120	96	80 - 120	<0.000050	mg/L				
5777239	Dissolved Titanium (Ti)	2018/10/15	93	80 - 120	91	80 - 120	<0.0050	mg/L				
5777239	Dissolved Uranium (U)	2018/10/15	97	80 - 120	100	80 - 120	<0.00010	mg/L				
5777239	Dissolved Vanadium (V)	2018/10/15	98	80 - 120	97	80 - 120	<0.00050	mg/L				
5777239	Dissolved Zinc (Zn)	2018/10/15	96	80 - 120	96	80 - 120	<0.0050	mg/L				
5777239	Dissolved Zirconium (Zr)	2018/10/15	102	80 - 120	100	80 - 120	<0.0010	mg/L				
5777387	1,1,1,2-Tetrachloroethane	2018/10/12	98	70 - 130	100	70 - 130	<0.50	ug/L	NC	30		
5777387	1,1,1-Trichloroethane	2018/10/12	98	70 - 130	100	70 - 130	<0.20	ug/L	0.085	30		
5777387	1,1,2,2-Tetrachloroethane	2018/10/12	96	70 - 130	95	70 - 130	<0.50	ug/L	NC	30		
5777387	1,1,2-Trichloroethane	2018/10/12	99	70 - 130	100	70 - 130	<0.50	ug/L	NC	30		
5777387	1,1-Dichloroethane	2018/10/12	97	70 - 130	99	70 - 130	<0.20	ug/L	NC	30		
5777387	1,1-Dichloroethylene	2018/10/12	98	70 - 130	100	70 - 130	<0.20	ug/L	NC	30		
5777387	1,2-Dichlorobenzene	2018/10/12	95	70 - 130	98	70 - 130	<0.50	ug/L	NC	30		
5777387	1,2-Dichloroethane	2018/10/12	95	70 - 130	97	70 - 130	<0.50	ug/L	NC	30		
5777387	1,2-Dichloropropane	2018/10/12	95	70 - 130	97	70 - 130	<0.20	ug/L	NC	30		
5777387	1,3-Dichlorobenzene	2018/10/12	97	70 - 130	101	70 - 130	<0.50	ug/L	NC	30		
5777387	1,4-Dichlorobenzene	2018/10/12	96	70 - 130	100	70 - 130	<0.50	ug/L	NC	30		
5777387	Acetone (2-Propanone)	2018/10/12	93	60 - 140	93	60 - 140	<10	ug/L	NC	30		
5777387	Benzene	2018/10/12	96	70 - 130	98	70 - 130	<0.20	ug/L	NC	30		
5777387	Bromodichloromethane	2018/10/12	94	70 - 130	96	70 - 130	<0.50	ug/L	NC	30		
5777387	Bromoform	2018/10/12	90	70 - 130	90	70 - 130	<1.0	ug/L	NC	30		
5777387	Bromomethane	2018/10/12	96	60 - 140	99	60 - 140	<0.50	ug/L	NC	30		
5777387	Carbon Tetrachloride	2018/10/12	96	70 - 130	98	70 - 130	<0.20	ug/L	NC	30		
5777387	Chlorobenzene	2018/10/12	97	70 - 130	98	70 - 130	<0.20	ug/L	NC	30		
5777387	Chloroform	2018/10/12	97	70 - 130	99	70 - 130	<0.20	ug/L	NC	30		
5777387	cis-1,2-Dichloroethylene	2018/10/12	96	70 - 130	98	70 - 130	<0.50	ug/L	NC	30		
5777387	cis-1,3-Dichloropropene	2018/10/12	83	70 - 130	83	70 - 130	<0.30	ug/L	NC	30		

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

QUALITY ASSURANCE REPORT(CONT'D)

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5777387	Dibromochloromethane	2018/10/12	94	70 - 130	95	70 - 130	<0.50	ug/L	NC	30		
5777387	Dichlorodifluoromethane (FREON 12)	2018/10/12	103	60 - 140	106	60 - 140	<1.0	ug/L	NC	30		
5777387	Ethylbenzene	2018/10/12	96	70 - 130	97	70 - 130	<0.20	ug/L	NC	30		
5777387	Ethylene Dibromide	2018/10/12	96	70 - 130	96	70 - 130	<0.20	ug/L	NC	30		
5777387	F1 (C6-C10) - BTEX	2018/10/12					<25	ug/L	NC	30		
5777387	F1 (C6-C10)	2018/10/12	97	60 - 140	98	60 - 140	<25	ug/L	NC	30		
5777387	Hexane	2018/10/12	98	70 - 130	100	70 - 130	<1.0	ug/L	NC	30		
5777387	Methyl Ethyl Ketone (2-Butanone)	2018/10/12	89	60 - 140	89	60 - 140	<10	ug/L	NC	30		
5777387	Methyl Isobutyl Ketone	2018/10/12	83	70 - 130	82	70 - 130	<5.0	ug/L	NC	30		
5777387	Methyl t-butyl ether (MTBE)	2018/10/12	91	70 - 130	92	70 - 130	<0.50	ug/L	NC	30		
5777387	Methylene Chloride(Dichloromethane)	2018/10/12	99	70 - 130	101	70 - 130	<2.0	ug/L	NC	30		
5777387	o-Xylene	2018/10/12	93	70 - 130	95	70 - 130	<0.20	ug/L	NC	30		
5777387	p+m-Xylene	2018/10/12	92	70 - 130	94	70 - 130	<0.20	ug/L	NC	30		
5777387	Styrene	2018/10/12	92	70 - 130	94	70 - 130	<0.50	ug/L	NC	30		
5777387	Tetrachloroethylene	2018/10/12	99	70 - 130	102	70 - 130	<0.20	ug/L	NC	30		
5777387	Toluene	2018/10/12	98	70 - 130	99	70 - 130	<0.20	ug/L	NC	30		
5777387	Total Xylenes	2018/10/12					<0.20	ug/L	NC	30		
5777387	trans-1,2-Dichloroethylene	2018/10/12	95	70 - 130	99	70 - 130	<0.50	ug/L	NC	30		
5777387	trans-1,3-Dichloropropene	2018/10/12	87	70 - 130	87	70 - 130	<0.40	ug/L	NC	30		
5777387	Trichloroethylene	2018/10/12	96	70 - 130	98	70 - 130	<0.20	ug/L	NC	30		
5777387	Trichlorofluoromethane (FREON 11)	2018/10/12	101	70 - 130	104	70 - 130	<0.50	ug/L	NC	30		
5777387	Vinyl Chloride	2018/10/12	95	70 - 130	99	70 - 130	<0.20	ug/L	NC	30		
5777533	Total Suspended Solids	2018/10/15					<10	mg/L	NC	25	98	85 - 115
5777712	Fluoride (F-)	2018/10/13	98	80 - 120	95	80 - 120	<0.10	mg/L	0.93	20		
5777713	Dissolved Chloride (Cl-)	2018/10/12	108	80 - 120	102	80 - 120	<1.0	mg/L	3.9	20		
5777717	Dissolved Sulphate (SO4)	2018/10/12	99	75 - 125	101	80 - 120	<1.0	mg/L	1.4	20		
5777718	Orthophosphate (P)	2018/10/12	108	75 - 125	100	80 - 120	<0.010	mg/L	5.5	25		
5777726	Alkalinity (Total as CaCO3)	2018/10/13			98	85 - 115	<1.0	mg/L	3.6	20		
5777727	pH	2018/10/13			101	98 - 103			1.7	N/A		
5777739	Conductivity	2018/10/15			101	85 - 115	<1.0	umho/cm	0.43	25		

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

QUALITY ASSURANCE REPORT(CONT'D)

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5777895	Dissolved Organic Carbon	2018/10/13	93	80 - 120	94	80 - 120	<0.50	mg/L	4.5	20		
5778129	Nitrate (N)	2018/10/13	103	80 - 120	103	80 - 120	<0.10	mg/L	NC	20		
5778129	Nitrite (N)	2018/10/13	106	80 - 120	106	80 - 120	<0.010	mg/L	NC	20		
5778241	Total Organic Carbon (TOC)	2018/10/14	92	80 - 120	100	80 - 120	<0.50	mg/L	1.1	20		
5778289	Total Ammonia-N	2018/10/17	100	75 - 125	99	80 - 120	<0.050	mg/L	19	20		
5778568	Orthophosphate (P)	2018/10/15	101	75 - 125	99	80 - 120	<0.010	mg/L	NC	25		
5778569	Fluoride (F-)	2018/10/12	100	80 - 120	98	80 - 120	<0.10	mg/L	3.4	20		
5778577	Conductivity	2018/10/12			101	85 - 115	<1.0	umho/cm	0	25		
5778580	pH	2018/10/12			101	98 - 103			0.67	N/A		
5780128	1,2,4-Trichlorobenzene	2018/10/15	22 (2)	50 - 130	55	50 - 130	<0.1	ug/L	NC	30		
5780128	1-Methylnaphthalene	2018/10/15	34 (3)	50 - 130	77	50 - 130	<0.2	ug/L	NC	30		
5780128	2,4,5-Trichlorophenol	2018/10/15	39 (3)	50 - 130	77	50 - 130	<0.2	ug/L	NC	30		
5780128	2,4,6-Trichlorophenol	2018/10/15	33 (3)	50 - 130	72	50 - 130	<0.2	ug/L	NC	30		
5780128	2,4-Dichlorophenol	2018/10/15	28 (3)	50 - 130	66	50 - 130	<0.1	ug/L	NC	30		
5780128	2,4-Dimethylphenol	2018/10/15	14 (3)	30 - 130	60	30 - 130	<0.5	ug/L	NC	30		
5780128	2,4-Dinitrophenol	2018/10/15	76	30 - 130	98	30 - 130	<2	ug/L	NC	30		
5780128	2,4-Dinitrotoluene	2018/10/15	72	50 - 130	85	50 - 130	<0.3	ug/L	NC	30		
5780128	2,6-Dinitrotoluene	2018/10/15	48 (3)	50 - 130	80	50 - 130	<0.3	ug/L	NC	30		
5780128	2-Chlorophenol	2018/10/15	26 (3)	50 - 130	63	50 - 130	<0.1	ug/L	NC	30		
5780128	2-Methylnaphthalene	2018/10/15	32 (3)	50 - 130	73	50 - 130	<0.2	ug/L	NC	30		
5780128	3,3'-Dichlorobenzidine	2018/10/15	70	30 - 130	81	30 - 130	<0.5	ug/L	NC	30		
5780128	Acenaphthene	2018/10/15	38 (3)	50 - 130	80	50 - 130	<0.2	ug/L	NC	30		
5780128	Acenaphthylene	2018/10/15	38 (3)	50 - 130	80	50 - 130	<0.2	ug/L	NC	30		
5780128	Anthracene	2018/10/15	70	50 - 130	83	50 - 130	<0.05	ug/L	NC	30		
5780128	Benzo(a)anthracene	2018/10/15	101	50 - 130	100	50 - 130	<0.05	ug/L	NC	30		
5780128	Benzo(a)pyrene	2018/10/15	96	50 - 130	96	50 - 130	<0.01	ug/L	NC	30		
5780128	Benzo(b/j)fluoranthene	2018/10/15	97	50 - 130	98	50 - 130	<0.05	ug/L	NC	30		
5780128	Benzo(g,h,i)perylene	2018/10/15	92	50 - 130	90	50 - 130	<0.05	ug/L	NC	30		
5780128	Benzo(k)fluoranthene	2018/10/15	107	50 - 130	109	50 - 130	<0.05	ug/L	NC	30		
5780128	Biphenyl	2018/10/15	34 (3)	50 - 130	76	50 - 130	<0.1	ug/L	NC	30		

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

QUALITY ASSURANCE REPORT(CONT'D)

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5780128	Bis(2-chloroethyl)ether	2018/10/15	27 (3)	50 - 130	67	50 - 130	<0.5	ug/L	NC	30		
5780128	Bis(2-chloroisopropyl)ether	2018/10/15	27 (3)	50 - 130	70	50 - 130	<0.5	ug/L	NC	30		
5780128	Bis(2-ethylhexyl)phthalate	2018/10/15	89	50 - 130	89	50 - 130	<1	ug/L	NC	30		
5780128	Chrysene	2018/10/15	102	50 - 130	101	50 - 130	<0.05	ug/L	NC	30		
5780128	Dibenz(a,h)anthracene	2018/10/15	96	50 - 130	94	50 - 130	<0.1	ug/L	NC	30		
5780128	Diethyl phthalate	2018/10/15	73	50 - 130	86	50 - 130	<0.1	ug/L	NC	30		
5780128	Dimethyl phthalate	2018/10/15	59	50 - 130	87	50 - 130	<0.1	ug/L	NC	30		
5780128	Fluoranthene	2018/10/15	103	50 - 130	102	50 - 130	<0.2	ug/L	NC	30		
5780128	Fluorene	2018/10/15	41 (3)	50 - 130	78	50 - 130	<0.2	ug/L	NC	30		
5780128	Indeno(1,2,3-cd)pyrene	2018/10/15	100	50 - 130	97	50 - 130	<0.1	ug/L	NC	30		
5780128	Naphthalene	2018/10/15	38 (3)	50 - 130	73	50 - 130	<0.2	ug/L	NC	30		
5780128	p-Chloroaniline	2018/10/15	28 (3)	30 - 130	68	30 - 130	<1	ug/L	NC	30		
5780128	Pentachlorophenol	2018/10/15	68	50 - 130	78	50 - 130	<0.1	ug/L	NC	30		
5780128	Phenanthrene	2018/10/15	71	50 - 130	85	50 - 130	<0.1	ug/L	NC	30		
5780128	Phenol	2018/10/15	12 (3)	30 - 130	32	30 - 130	<0.5	ug/L	NC	30		
5780128	Pyrene	2018/10/15	104	50 - 130	103	50 - 130	<0.05	ug/L	NC	30		
5780423	Aroclor 1242	2018/10/12					<0.05	ug/L				
5780423	Aroclor 1248	2018/10/12					<0.05	ug/L				
5780423	Aroclor 1254	2018/10/12					<0.05	ug/L				
5780423	Aroclor 1260	2018/10/12	61	60 - 130	75	60 - 130	<0.05	ug/L				
5780423	Total PCB	2018/10/12	61	60 - 130	75	60 - 130	<0.05	ug/L	NC	40		
5781451	Total Dissolved Solids	2018/10/15					<10	mg/L	3.2	25	98	90 - 110
5782082	F2 (C10-C16 Hydrocarbons)	2018/10/15	106	50 - 130	108	60 - 130	<100	ug/L	NC	30		
5782082	F3 (C16-C34 Hydrocarbons)	2018/10/15	97	50 - 130	103	60 - 130	<200	ug/L	NC	30		
5782082	F4 (C34-C50 Hydrocarbons)	2018/10/15	96	50 - 130	98	60 - 130	<200	ug/L	NC	30		
5783403	Mercury (Hg)	2018/10/15	93	75 - 125	100	80 - 120	<0.1	ug/L	NC	20		
5783626	WAD Cyanide (Free)	2018/10/15	104	80 - 120	106	80 - 120	<1	ug/L	NC	20		
5787226	Acidity	2018/10/17	87	80 - 120	101	80 - 120	<5.0	mg/L	4.3	25		
5788959	Alkalinity (Total as CaCO3)	2018/10/18			94	85 - 115	<1.0	mg/L	1.9	20		
5789060	Dissolved Chloride (Cl-)	2018/10/18	NC	80 - 120	102	80 - 120	<1.0	mg/L	4.0	20		
5789061	Dissolved Sulphate (SO4)	2018/10/18	NC	75 - 125	101	80 - 120	<1.0	mg/L	0.86	20		

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

QUALITY ASSURANCE REPORT(CONT'D)

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5789707	Dissolved Aluminum (Al)	2018/10/18	99	80 - 120	100	80 - 120	<0.0050	mg/L				
5789707	Dissolved Antimony (Sb)	2018/10/18	105	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20		
5789707	Dissolved Arsenic (As)	2018/10/18	101	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20		
5789707	Dissolved Barium (Ba)	2018/10/18	97	80 - 120	98	80 - 120	<0.0020	mg/L	1.7	20		
5789707	Dissolved Beryllium (Be)	2018/10/18	99	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20		
5789707	Dissolved Boron (B)	2018/10/18	99	80 - 120	101	80 - 120	<0.010	mg/L	1.6	20		
5789707	Dissolved Cadmium (Cd)	2018/10/18	102	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20		
5789707	Dissolved Calcium (Ca)	2018/10/18	NC	80 - 120	98	80 - 120	<0.20	mg/L				
5789707	Dissolved Chromium (Cr)	2018/10/18	96	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20		
5789707	Dissolved Cobalt (Co)	2018/10/18	98	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20		
5789707	Dissolved Copper (Cu)	2018/10/18	96	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20		
5789707	Dissolved Iron (Fe)	2018/10/18	100	80 - 120	100	80 - 120	<0.10	mg/L				
5789707	Dissolved Lead (Pb)	2018/10/18	96	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20		
5789707	Dissolved Magnesium (Mg)	2018/10/18	NC	80 - 120	102	80 - 120	<0.050	mg/L				
5789707	Dissolved Manganese (Mn)	2018/10/18	NC	80 - 120	99	80 - 120	<0.0020	mg/L				
5789707	Dissolved Molybdenum (Mo)	2018/10/18	101	80 - 120	98	80 - 120	<0.00050	mg/L	0.41	20		
5789707	Dissolved Nickel (Ni)	2018/10/18	96	80 - 120	96	80 - 120	<0.0010	mg/L	4.7	20		
5789707	Dissolved Phosphorus (P)	2018/10/18	102	80 - 120	113	80 - 120	<0.10	mg/L				
5789707	Dissolved Potassium (K)	2018/10/18	101	80 - 120	98	80 - 120	<0.20	mg/L				
5789707	Dissolved Selenium (Se)	2018/10/18	99	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20		
5789707	Dissolved Silicon (Si)	2018/10/18	99	80 - 120	104	80 - 120	<0.050	mg/L				
5789707	Dissolved Silver (Ag)	2018/10/18	98	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20		
5789707	Dissolved Sodium (Na)	2018/10/18	97	80 - 120	100	80 - 120	<0.10	mg/L				
5789707	Dissolved Strontium (Sr)	2018/10/18	98	80 - 120	100	80 - 120	<0.0010	mg/L				
5789707	Dissolved Thallium (Tl)	2018/10/18	98	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20		
5789707	Dissolved Titanium (Ti)	2018/10/18	102	80 - 120	103	80 - 120	<0.0050	mg/L				
5789707	Dissolved Uranium (U)	2018/10/18	101	80 - 120	101	80 - 120	<0.00010	mg/L	2.6	20		
5789707	Dissolved Vanadium (V)	2018/10/18	99	80 - 120	98	80 - 120	<0.00050	mg/L	5.3	20		
5789707	Dissolved Zinc (Zn)	2018/10/18	98	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20		

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Report Date: 2018/10/18

QUALITY ASSURANCE REPORT(CONT'D)

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
5789707	Dissolved Zirconium (Zr)	2018/10/18	103	80 - 120	101	80 - 120	<0.0010	mg/L				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

(2) The recovery was below the lower control limit. This may represent a low bias in some results for flagged analytes.

(3) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Maxxam Job #: B8Q6619
Report Date: 2018/10/18

Stantec Consulting Ltd
Client Project #: 160900764
Site Location: CLARINGTON TS - MONITORING WELL
Sampler Initials: RD

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere, Scientific Service Specialist

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Gina Thompson, Inorganics General Chemistry Supervisor

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
Page 1 of 1	686534-01-01
Page 1 of 1	686538-01-01
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	

COOLER OBSERVATIONS:

MAXXAM JOB#: B8Q6619

	YES	NO				
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT		✓	TEMP	3	2	2
INTACT		✓				
ICE PRESENT	✓			1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT	✓		TEMP	9	6	9
INTACT	✓					
ICE PRESENT	✓			1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT	✓		TEMP	10	7	6
INTACT	✓					
ICE PRESENT	✓			1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT	✓		TEMP	6	3	4
INTACT	✓					
ICE PRESENT	✓			1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT	✓		TEMP	7	7	6
INTACT	✓					
ICE PRESENT	✓			1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3

	YES	NO				
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT				1	2	3

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
Dipika Singh	DIPIKA SINGH	2018/10/10	13:21

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Page ___ of ___

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REC'D IN PORT HOPE

ADDITIONAL COOLER TEMPERAT

CHAIN-OF-CUSTODY RECOR

10-Oct-18 09:00
Ronklin Gracian
B8Q6619

MAXXAM JOB#: KVG ENV-409

CHAIN OF CUSTODY #	
Page 1 of 1	626534-01-01
Page 1 of 1	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	

COOLER OBSERVATIONS: nessu,

	YES	NO	COOLER ID	1	2	3
CUSTODY SEAL						
PRESENT	X		TEMP	8	10	10
INTACT	X					
ICE PRESENT	X					
CUSTODY SEAL						
PRESENT	X		TEMP	10	10	10
INTACT	X					
ICE PRESENT	X					
CUSTODY SEAL						
PRESENT	X		TEMP	7	8	8
INTACT	X					
ICE PRESENT	X					
CUSTODY SEAL						
PRESENT	X		TEMP	7	8	7
INTACT	X					
ICE PRESENT	X					
CUSTODY SEAL						
PRESENT	X		TEMP	8	6	6
INTACT	X					
ICE PRESENT	X					
CUSTODY SEAL						
PRESENT	X		TEMP	10	10	11
INTACT	X					
ICE PRESENT	X					
CUSTODY SEAL						
PRESENT	X		TEMP	10	9	8
INTACT	X					
ICE PRESENT	X					
CUSTODY SEAL						
PRESENT	X		TEMP	7	7	7
INTACT	X					
ICE PRESENT	X					
CUSTODY SEAL						
PRESENT	X		TEMP	8	7	6
INTACT	X					
ICE PRESENT	X					
CUSTODY SEAL						
PRESENT			TEMP			
INTACT						
ICE PRESENT						

	YES	NO	COOLER ID	1	2	3
CUSTODY SEAL						
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL						
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL						
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL						
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL						
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL						
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL						
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL						
PRESENT			TEMP			
INTACT						
ICE PRESENT						

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
JWoodward	JenWoodward	2018/10/10	09:00

B8Q6619

Presence of Visible Particulate/Sediment

Maxxam Analytics
CAM FCD-01013/5
Page 1 of 1

When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below

			Bottle Types																									
			Inorganics					Organics										Hydrocarbons							Volatiles				Other
	Sample ID	All	CrVI	CN	General	Hg	Metals (Diss.)	Organic 1 of 2	Organic 2 of 2	PCB 1 of 2	PCB 2 of 2	Pest/ Herb 1 of 2	Pest/ Herb 2 of 2	SVOC/ ABN 1 of 2	SVOC/ ABN 2 of 2	PAH 1 of 2	PAH 2 of 2	Dioxin /Furan	F1 Vial 1	F1 Vial 2	F1 Vial 3	F1 Vial 4	F2-F4 1 of 2	F2-F4 2 of 2	F4G	VOC Vial 1	VOC Vial 2	VOC Vial 3	VOC Vial 4	
1	WG-1609-00764-2018 1009-RD01	TS																											
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													

Comments:
Metals, Hg, CrVI have been field filtered.

Legend:	
P	Suspended Particulate
TS	Trace Settled Sediment (just covers bottom of container or less)
S	Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print) K.Va — KAITLYN VAN GENNSEN.

Maxxam
A Bureau Veritas Group Company

Maxxam Analytics International Corporation o/a Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel (905) 817-5700 Toll-free 800-563-6266 Fax (905) 817-5777 www.maxxam.ca

STANTEC CHAIN OF CUSTODY RECORD

IMMEDIATE

INVOICE INFORMATION:
Company Name: #8197 Stantec Consulting Ltd
Contact Name: Accounts Payable
Address: 300 Hagey Blvd Suite 100, Waterloo ON N2L 0A4
Phone: (519) 579-4410 Fax: (519) 579-6733
Email: accounts.payable.invoices@stantec.com

REPORT INFORMATION(if differs from invoice):
Company Name: #18379 Stantec Consulting Ltd
Contact Name: Report - 160900764
Address: ON
Phone: Fax:
Email: aaron.warkentin@stantec.com, jamie.koch@stantec.co

PROJECT INFORMATION:
Quotation #: B48218
Task #: 200.500
Project #: 160900764
Profit Centre: 1609
Site #: Clarington TS - Monitoring Wel
Sampled By: Ryan Dang

Laboratory Use Only:
Maxxam Job #:
Bottle Order #: 686534
COC #: C#686534-01-01
Project Manager: Ronklin Gracian

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): [X] Table 1 [ ] Table 2 [ ] Table 3 [ ] Table ___ [ ] Res/Park [ ] Ind/Comm [ ] Agri/Other [ ] Medium/Fine [ ] Coarse [ ] For RSC

Other Regulations: [ ] CCME [ ] Reg 558 [ ] MISA [ ] PWQO [ ] Other ___ [ ] Sanitary Sewer Bylaw [ ] Storm Sewer Bylaw Municipality ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Acidity	Cr (VI) & Free CN	Fluoride & Turbidity	Mercury & TOC	TDS & TSS	RCAp - Comprehensive (Field Filter)	Reg 153 PCBs	Reg153 VOCs and F1-F4	SVOCs	Lab Filtered SVOCs	# of Bottles	Comments
1		WG-160900764-20181009-RD01	Oct 9/18	1200	GW	Y	X	X	X	X	X	X	X	X	X		18	Analyze as per quote
2		WG-160900764-20181009-RD01A	Oct 9/18	1200	GW	—										X	2	
3		09-KR01	Oct 9/18	12:10	GW	Y	X	X	X	X	X	X	X	X	X		18	
4		09-KR01A	Oct 9/18	12:10	GW	—										X	2	
5		09-KR02	Oct 9/18	15:02		Y	X	X	X	X	X	X	X	X	X		18	
6		09-KR02A	Oct 9/18	15:02		—										X	2	
7		09-RD02	Oct 9/18	15:56		Y	X	X	X	X	X	X	X	X	X		18	
8		09-RD02A	Oct 9/18	15:56		—										X	2	
9																		
10																		

REC'D IN ...
10-Oct-18 09:00
Ronklin Gracian
B8Q6619
KVG ENV-409

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
JAMIE KOCH	18/10/09	1430	Navdeep Kaur	18/10/10	09:00	
			DIPIKA SINGH	2018/10/10	13:21	

Laboratory Use Only: Time Sensitive; Temperature (°C) on Receipt: See ACTR; Custody Seal: Present [ ] Intact [ ]; Yes [X]; No [ ]

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxa Yellow: Client

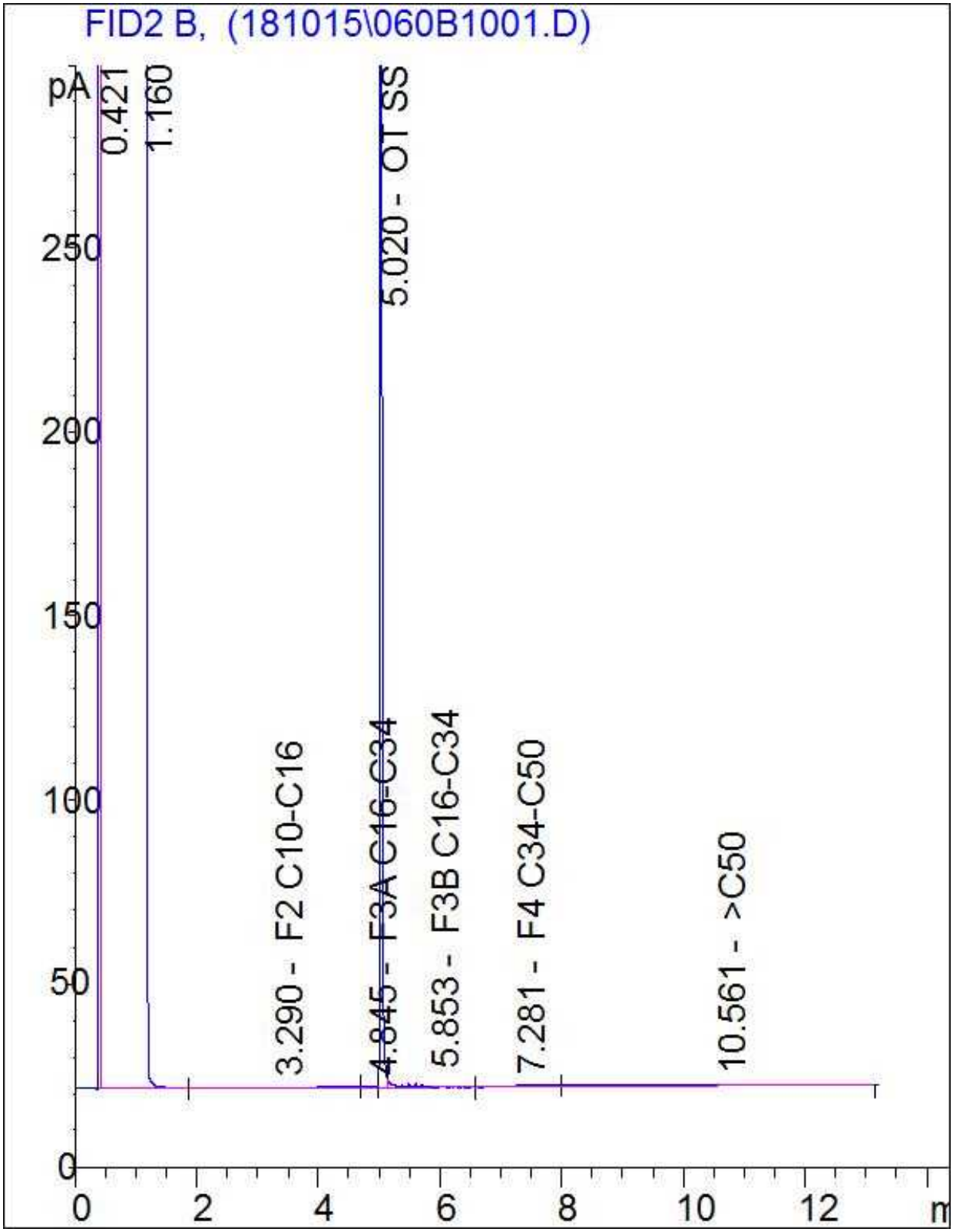
Refer to ACTR

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam Job #: B8Q6619
Report Date: 2018/10/18
Maxxam Sample: HZB429

Stantec Consulting Ltd
Client Project #: 160900764
Project name: CLARINGTON TS - MONITORING WELL
Client ID: WG-160900764-201809-RD01

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

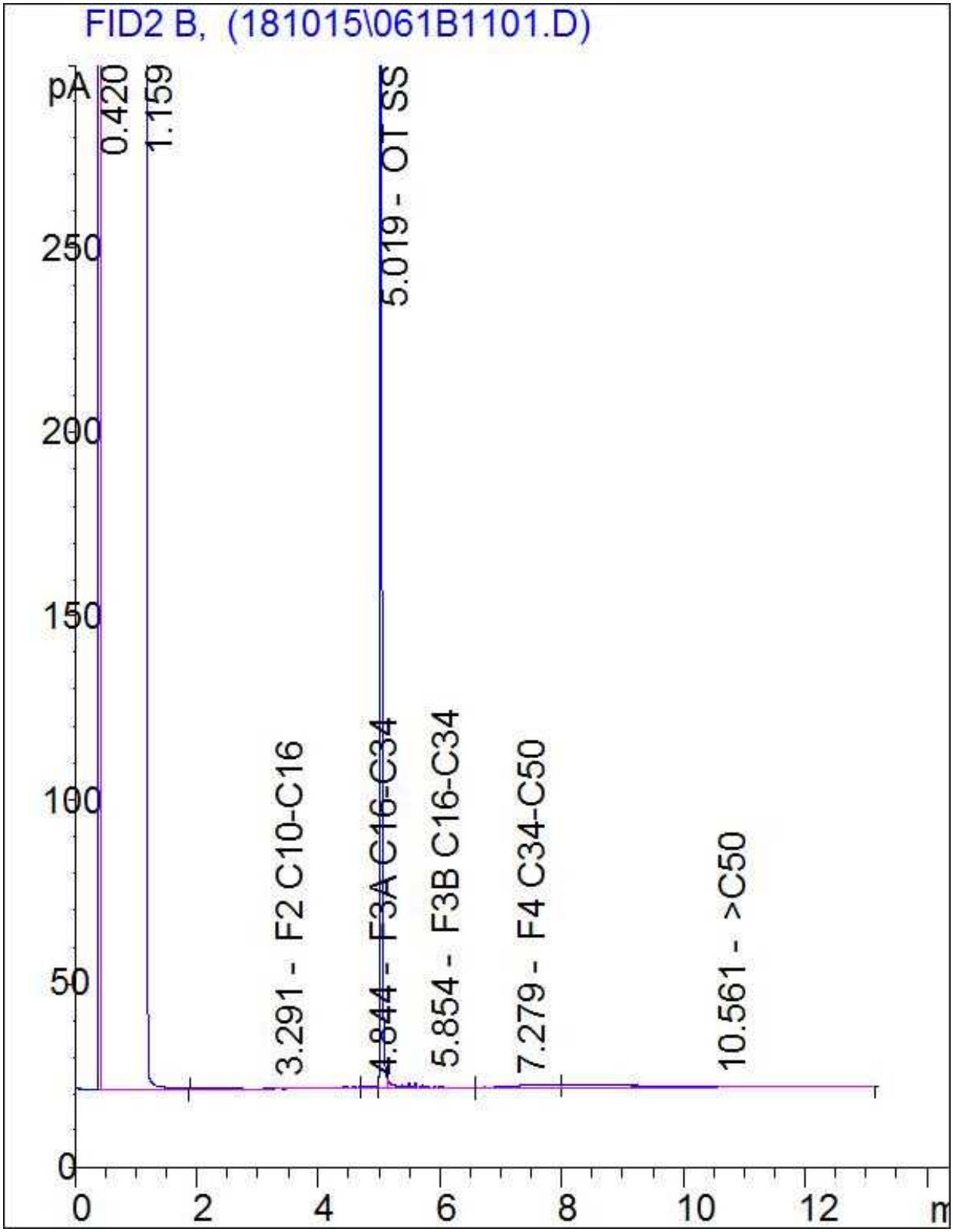


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B8Q6619
Report Date: 2018/10/18
Maxxam Sample: HZB431

Stantec Consulting Ltd
Client Project #: 160900764
Project name: CLARINGTON TS - MONITORING WELL
Client ID: WG-160900764-201809-KR01

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

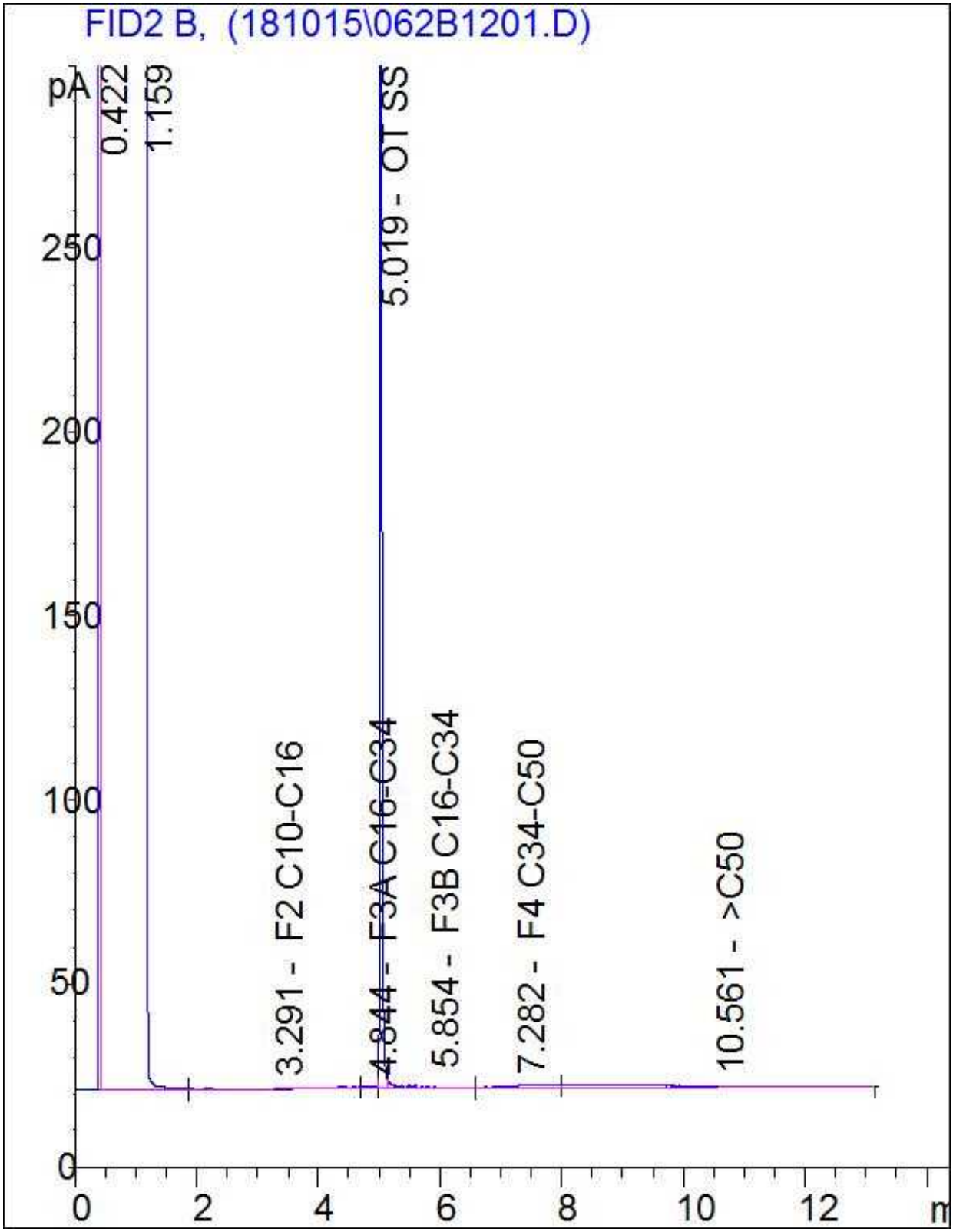


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B8Q6619
Report Date: 2018/10/18
Maxxam Sample: HZB434

Stantec Consulting Ltd
Client Project #: 160900764
Project name: CLARINGTON TS - MONITORING WELL
Client ID: WG-160900764-201809-KR02

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

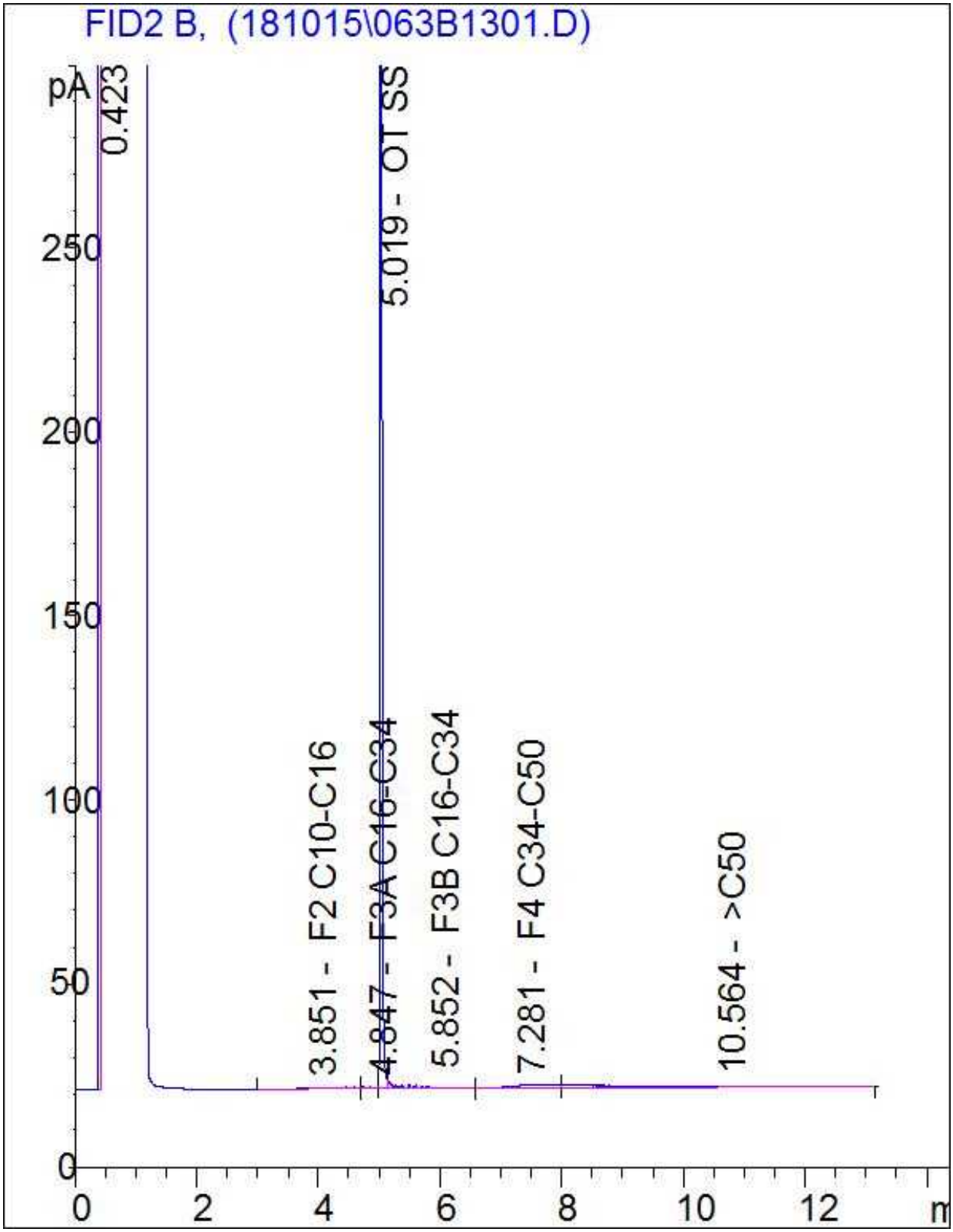


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B8Q6619
Report Date: 2018/10/18
Maxxam Sample: HZB436

Stantec Consulting Ltd
Client Project #: 160900764
Project name: CLARINGTON TS - MONITORING WELL
Client ID: WG-160900764-201809-RD02

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.