

REGIONAL MUNICIPALITY OF DURHAM

WHITBY, ONTARIO

DURHAM YORK ENERGY CENTRE: 2017 SOIL TESTING REPORT

RWDI #1604066

November 20, 2017

SUBMITTED TO

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RE: 2017 Soil Testing Report
Durham York Energy Centre
RFP-528-2016
RWDI Reference No. 1604066, 8001

Dear Ms. Waller,

RWDI AIR Inc. (RWDI) is pleased to provide this 2017 Soil Testing Report in consideration of the Soils Testing Plan established for the Durham York Energy Centre (DYEC).

Field work associated with the 2017 Soil Testing Program was completed on August 23, 2017. The soil analytical results were received from the laboratory on October 5, 2017. A re-sampling event for analysis of benzo(a)pyrene at the downwind soil sampling site was completed on October 18, 2017 and the results of the re-sample were received from the laboratory on October 26, 2017. This report provides details of the soil testing program completed in 2017 for DYEC and an interpretation of the 2017 monitoring data, including our conclusions and recommendations. Relevant technical data are appended.

We trust that this 2017 Soil Testing Report for DYEC provides sufficient information for your requirements. Should there be any questions or comments, please contact us.

Yours very truly,

RWDI AIR Inc.

A handwritten signature in black ink, appearing to read 'Philippe E. Janisse'.

Philippe E. Janisse, B.Sc., P.Geo.
Project Manager | Senior Geoscience Specialist

Attach.



EXECUTIVE SUMMARY

DYEC is an energy-from-waste facility located in the Municipality of Clarington, Regional Municipality of Durham, Ontario. DYEC is situated on the southwest corner of Osborne Road and Energy Drive. DYEC is bounded by commercial and industrial property uses to the north and east, the Canadian National Railway to the south and undeveloped lands to the west. A Location Map is presented in **Figure 1**.

DYEC is operated under a multi-media Environmental Compliance Approval 7306-8FDKNX, dated June 28, 2011 (ECA). A baseline soil quality study was undertaken as part of the Environmental Assessment (EA) to characterize background soil conditions in the vicinity of DYEC prior to its operation. The soil quality results of the baseline study satisfied the Table 1 criteria, where applicable, of the *Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (MOECC, April 15, 2011)*. Per Condition 7(10) and 13 (4) of the ECA, the Soils Testing Plan (*Durham York Energy Centre Soils Testing Plan, The Regional Municipality of Durham, dated March 7, 2014*) was prepared. The Soils Testing Plan was based, in part, on the findings of the baseline soil study.

This report was prepared to satisfy the requirements of the Soils Testing Plan as well as ECA No. 7306-8FDKNX.

The following conclusions are based on the findings presented in this report.

- The soil sampling grids established at the upwind and DYEC sampling locations were constructed by RWDI personnel based on previously established metal T-fence post benchmarks installed at specific corners of the grid outline at each of the soil sampling sites. The soil sampling grid established at the downwind location was left in place from the previous sample collection efforts.
- Overall, parameter concentrations observed at the upwind, downwind, and DYEC soil sampling sites were generally comparable to historical concentrations.
- The observed soil concentration of benzo(a)pyrene (0.61 µg/g) noted at the downwind soil sampling site for the August 2017 sampling event exceeded the Table 1 criteria of the MOECC Standards (0.3 µg/g).
- Per Section 7 of the Soils Testing Plan, the soil sampling site shall be re-sampled and analyzed for parameter(s) noted to have exceeded during the original sampling event. As such, the downwind soil sampling site was re-sampled on October 18, 2017 for analysis of benzo(a)pyrene. The concentration of benzo(a)pyrene (0.28 µg/g) observed for the soil sample collected at the downwind soil sampling site on October 18, 2017 satisfied the Table 1 criteria of the MOECC Standards.
- It is noted that the August 2017 concentration was not verified in October 2017 and therefore, the benzo(a)pyrene concentration noted in August 2017 is not persistent within the soil of the downwind sampling site. Consequently, the August 2017 benzo(a)pyrene concentration noted in the soil that was sampled from the downwind sampling site is interpreted to be anomalous as the soil re-sampling event for the downwind soil sampling site that took place in October 2017, did not verify the August 2017 concentration.
- The inconsistency of parameter concentrations in soil is indicative of native soil's inherent natural heterogeneity, which is common in soils and is similarly observed for other tested constituents in soils. The DYEC source tests confirm that the DYEC is not a significant contributor of benzo(a)pyrene. Given



- this evidence, the benzo(a)pyrene concentrations noted in the soil for the August sampling event should not be attributed to DYEC operations.
- The benzo(a)pyrene concentration noted within the soil sample collected from the downwind sampling site in August 2017 does not pose an immediate risk to health or the environment and it was not verified to be persistent within the soil as evidenced by the acceptable soil quality noted for the re-sampling event conducted in October 2017. Ongoing soil monitoring in the future will continue to assess the long-term concentration trend for benzo(a)pyrene in the soil at the downwind soil sampling site.
 - In accordance with Condition 7.(10) (b) of the ECA, soil testing shall be undertaken once every three (3) years. The soil sampling program should take place within the same season each year (i.e. August). The next soil testing event is scheduled to be completed in August of 2020.



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1 INTRODUCTION

1.1 Background

Durham York Energy Centre (DYEC) is an energy-from-waste facility located in the Municipality of Clarington, Regional Municipality of Durham, Ontario. DYEC is situated on the southwest corner of Osborne Road and Energy Drive. DYEC is bounded by commercial and industrial property uses to the north and east, the Canadian National Railway and the Courtice Water Pollution Control Plant (CWPCP) to the south and undeveloped lands to the west. A Location Map is presented in **Figure 1**.

DYEC is operated under a multi-media Environmental Compliance Approval 7306-8FDKNX, dated June 28, 2011 (ECA). A baseline soil quality study was undertaken as part of the Environmental Assessment (EA) to characterize background soil conditions in the vicinity of DYEC prior to its operation. The soil quality results of the baseline study satisfied the Table 1 criteria, where applicable, of the *Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (MOECC, April 15, 2011)*. Per Condition 7(10) and 13 (4) of the ECA, the Soils Testing Plan (*Durham York Energy Centre Soils Testing Plan, The Regional Municipality of Durham*, dated March 7, 2014) was prepared. The Soils Testing Plan was based, in part, on the findings of the baseline soil study.

Subsequent soil testing events were undertaken in 2013 (prior to DYEC operations), 2015 (representing year 1 of DYEC operations), and in 2016 (representing year 2 of DYEC operations). Soil samples were collected from the designated upwind and downwind sampling locations, as well as on-site during the 2015 and 2016 sampling events.

This report was prepared to satisfy the requirements of the Soils Testing Plan as well as ECA No. 7306-8FDKNX, dated June 28, 2011 (plus amendments).

1.2 Objectives and Scope

The objectives of the 2017 Soil Testing Program for DYEC are outlined below.

- To evaluate soil quality upwind, downwind, and on-site for potential effects as a result of DYEC operations.
- To compare the current year's soil quality data to the baseline data, historical data, the Table 1 criteria of the Ministry of Environment and Climate Change (MOECC) "*Soil, Groundwater, and Sediment Standards For Use Under Part XV.1 of the Environmental Protection Act*", (MOECC Standards), as well as soil quality data between soil sampling sites.
- To determine whether or not there is the need to implement a contingency plan as outlined in the Soils Testing Plan, in consideration of soil testing findings.
- To provide a report presenting the findings of the Soil Testing Program to Durham Region and the MOECC.



The primary aspects of the Soil Testing Program are data collection, analysis, and interpretation. This 2017 Soil Testing Report documents the data collected as part of the 2017 Soil Testing Program and the data were interpreted in consideration of the requirements set forth in the Soils Testing Plan, as well as historical data.

To evaluate the soil quality at and nearby the Site, analytical results were assessed against the Table 1 criteria of the MOECC Standards. The 2017 Soil Testing Program involved a data collection component and a comprehensive analysis and interpretation component. Historical data were provided to RWDI by Durham Region. The 2017 data was collected, assembled, and analyzed by RWDI.

1.3 Assumptions and Limitations

Relevant historical data were provided to RWDI by Durham Region. The historical data provided by Durham Region for the purposes of preparing this 2017 Soil Testing Report has been relied upon by RWDI for our assessment. RWDI has assumed that the information provided was factual and accurate as presented.

2 METHODOLOGY

Soil samples were collected from each designated sampling site (upwind, downwind, and on-site). Each soil sampling site was established adjacent to an existing ambient air monitoring station. The upwind soil sampling site was established at the western portion of the Courtice Water Pollution Control Plant (CWPCP), about 600 metres southwest of the Site. The location of the upwind soil sampling site is presented in **Figure 2**. The downwind soil sampling site was established on a parcel of private property leased by Durham Region, which is located near the southeast corner of the Baseline Road and Rundle Road intersection, about 2 kilometres northeast of DYEC. The location of the downwind soil sampling site is presented in **Figure 3**. The on-site soil sampling site was established at the eastern extent DYEC-owned lands, adjacent to Osborne Road and south of Energy Drive. The location of the DYEC soil sampling site is presented in **Figure 4**.

2.1 Soil Sampling Site Preparation

The soil sampling sites established upwind and at DYEC were constructed by RWDI personnel based on previously established metal fence post benchmarks at each site. The metal posts were installed at the southeast and northwest corners of the respective soil sampling sites for the upwind and DYEC locations. A fiberglass measuring tape was used to lay out the remaining three (3) corners of the sampling site to establish sub-plots within a sampling grid. Metal posts were installed at each corner, creating a ten (10) metre by ten (10) metre square. Nine (9) equally distributed sub-plots were then established within each ten (10) metre square using the measuring tape and wooden stakes. Each sub-plot consisted of a 3.3 metre by 3.3 metre square. The sampling grids were then completed by delineating each sub-plot with rope secured to the metal posts and wooden stakes.

The downwind soil sampling site remained unchanged from the previous sampling event and was considered relatively undisturbed. As such, the soil sample was collected within the established grid at the downwind soil sampling site. It should be noted the tall vegetation prevented the delineation of the sub-plots using rope. RWDI personnel used caution such that sample was accurately collected within the established grid. Photographs of each sample grid are presented in **Appendix A**.



The position of each corner of the sampling sites was recorded using a handheld GPS unit. The coordinates were recorded in UTM NAD 83 format for reference, if required. Following sample collection, the temporarily constructed grids located at the upwind and DYEC soil sampling sites were removed, with the exception of the aforementioned metal fence post benchmarks, which were maintained for future reference at these locations. The downwind soil sampling site was left in place following sample collection, in consideration of past practice.

2.2 Soil Sampling

One (1) composite soil sample was collected from each soil sampling site on August 23, 2017. Compositing samples consisted of combining soil aliquots collected from nine (9) sub-plots for each soil sampling grid, which are established per Section 2.1. An equal volume of soil (approximately 250 mL) was collected from each sub-plot, for a total of approximately 2,250 mL of soil that was collected from each soil sampling site. The soil was collected from surface to two (2) centimetres below ground surface (cm BGS) using a stainless-steel trowel. Vegetation and rootlets were excluded from the sample, where practical. The soil aliquots from each sub-plot were placed into a stainless-steel bowl and homogenized prior to filling the laboratory provided sample jars.

Per Section 3.4 of the Soils Testing Plan, one (1) replicate soil sample was collected from each of the three (3) soil sampling sites. The replicate samples were retained by Durham Region personnel, in consideration of past practices.

2.2.1 Soil Sample Holding Times

Per Section 3.5 of the Soils Testing Plan (Sample Handling), container requirements for parameter analysis, storage, and preservation requirements for soil samples were carried out in accordance with the document *Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act* by MOECC Laboratory Services Branch dated July 1, 2011. As noted in previous Soil Testing Reports, the soil sample holding times specified in the aforementioned document vary compared to the sample holding times recommended by AGAT Laboratories Ltd. (AGAT) for select parameters, as outlined below.

Parameter Grouping	AGAT Laboratories Holding Time	MOECC Analytical Protocol*
Metals	180 days	180 days
Chromium VI	28 days	30 days
Mercury, Methyl Mercury	28 days	28 days
PAH's	14 days	60 days
Dioxins and Furans	180 days	Indefinite

Note: *Denotes protocol as per *Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act* by MOECC Laboratory Services Branch dated July 1, 2011.

Analytical results of the above parameters may be affected, should analysis be completed beyond the prescribed sample holding times. Soil samples submitted for analytical testing did not surpass their respective holding times for this soil sampling event.



2.2.2 Decontamination Procedure

The stainless-steel trowels and bowls used for soil sample collection were decontaminated between each soil sampling site. The decontamination procedure was undertaken in accordance with Section 3.5 of the Soils Testing Plan, such that the equipment was washed with an environmental grade cleanser and rinsed with de-ionized water, followed by acetone and hexane rinses. The sampling equipment was allowed to air-dry prior to being placed in sealed containers for storage in between soil sampling sites.

2.3 Laboratory Analytical Parameters

The soil samples collected during the 2017 Soil Testing Program were submitted to AGAT Laboratories (AGAT) under chain of custody procedures for analysis of the parameters listed below. AGAT is a Canadian Association for Laboratory Accreditation (CALA) certified laboratory for analysis of the parameters listed below with the exception of methyl mercury. Analysis of methyl mercury was subcontracted by AGAT to Flett Research Ltd. of Winnipeg, Manitoba, a CALA certified laboratory for methyl mercury analysis.

Parameter Grouping	Parameter
Metals	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Chromium VI, Cobalt, Copper, Lead, Mercury, Methyl Mercury, Molybdenum, Nickel, Phosphorus, Selenium, Silver, Thallium, Tin, Vanadium, Zinc
Polycyclic Aromatic Hydrocarbons (PAH's)	Anthracene, Benzo(a)fluorene, Benzo(a)pyrene TEQ, Benzo(b)fluorene, Fluorene
Dioxins and Furans (PCDD/PCDF)	Total PCDD/PCDF (TEQ)

3 RESULTS AND EVALUATION

3.1 Quality Assurance and Quality Control

Quality assurance and quality control (QA/QC) measures for DYEC's Soil Testing Program in 2017 included field-prepared duplicate samples, laboratory duplicates, laboratory spiked samples, as well as percent recovery of analysis and data review.

The laboratory analyzed several control samples to verify that the analytical equipment was functioning properly and that it would report results accurately at the time of analysis for the samples collected. The control samples had an expected target value, which was compared against pre-determined data quality objectives. For the laboratory control samples, the results were within acceptable laboratory data quality criteria.



For the field-prepared duplicate sample, the analytical results for the required parameters of analysis were evaluated by RWDI for the relative percent difference (RPD) of parameter concentrations using the USEPA National Functional Guidelines (US EPA 540-R-10-011) as a general QA/QC RPD screening mechanism. The RPD screening mechanism is such that for concentrations greater than five (5) times the reported detection limit (RDL), a concentration difference of less than or equal to 20% is deemed acceptable. For concentrations less than or equal to five (5) times the RDL, a concentration difference of equal to or less than the RDL is deemed acceptable. Where a calculated RPD is outside of the tolerance of the general QA/QC RPD screening mechanism, the results for the required parameters of analysis are evaluated against the applicable performance standards for sample duplicates noted in Tables 5.1 to 5.15 of the MOECC's *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*, dated March 8, 2004, and amended July 1, 2011.

For the results found to be outside of the tolerance of each QA/QC evaluation, a laboratory data quality review (DQR) of the results is requested such that the concentrations are accurate as presented and are within acceptable laboratory data quality criteria. Soil duplicate samples were analyzed for the complete analytical parameter list.

One (1) field prepared soil duplicate sample was collected during the 2017 Soil Testing Program. The field-prepared soil duplicate sample was collected from the upwind soil sampling site (designated 'Soil Dup'). The RPD results for the field prepared soil duplicate sample are included in **Table 1**. Per **Table 1**, the analyzed metals and PAH parameters satisfied QA/QC tolerances. Select dioxin and furan parameters showed RPD values that were above the control limits. Soil dioxin and furan concentrations were detected very close, within five times, of the respective RDL. As the measured result approaches the RDL, the uncertainty associated with the value increases. It is noted the laboratory internal QA analysis satisfied the relevant acceptance limits. Given the heterogeneity associated with soil as a sample media, the RPD analysis for dioxins and furans should be interpreted with caution.

Although QA/QC exceptions were identified, the relevant sample results were deemed to be representative of actual conditions at the time of sampling.



3.2 Field Documentation

Per Section 3.6 of the Soils Testing Plan, detailed field notes were collected at the time of sampling by RWDI personnel. The following table summarizes the data collected in the field.

Data Type	Information Collected
Site Name & Photograph	Durham York Energy Center. Site photographs are included in Appendix A .
GPS Coordinates for Sample Plot Locations (UTM NAD 83)	Upwind NE Corner: 680044, 4860028 Downwind NE Corner: 681968,4861867 DYEC NE Corner: 680655, 4860513
Field Personnel's Name	Dusan Milovic, Martin Town
Date, Time and Location of Sample Collection	Upwind: August 23, 2017, 9:30 Downwind: August 23, 2017, 12:45 DYEC: August 23, 2017, 11:00
Sample Number/ID	Upwind Grid: 'Upwind' Downwind Grid: 'Downwind' DYEC Grid: 'DYEC'
Whether QA/QC Samples Were Collected	One (1) field prepared blind duplicate sample. One (1) replicate sample collected for retention by Durham Region at each sample grid location.
Type of Containers Used for Collection	Two (2) 250 mL and one (1) 120 mL glass amber jars for each sampling grid were provided by AGAT.
Whether samples were Preserved	Samples were not preserved, as specified by AGAT.
Sampling Method and Composite Collection Pattern/Map of Test Plot Area	As specified in Section 2 and Figures 2 through 4 of this Report.
Unusual Site Conditions	The Downwind sample grid was covered with waist high vegetation. The DYEC sample grid was located with approximately 0.3 m of Osborne Road.
Weather Conditions	Clear to partly cloudy, approximately 22°C.

Field notes collected at the time of sample collection are maintained on file by RWDI for future reference, if required.

3.3 Soil Quality

The soil analytical results were received in full from the laboratory on October 26, 2017. The laboratory certificates of analysis are provided in **Appendix B**.



3.3.1 Metals

The laboratory analytical results for the metals parameters analyzed at the upwind, downwind, and DYEC soil sampling sites in August 2017, historical data dating back to 2013, as well as a comparison to Table 1 criteria of the MOECC Standards is provided in **Table 2**. Per **Table 2**, the metals parameter concentrations observed in August 2017 satisfied the Table 1 criteria of the MOECC Standards. The current concentrations were generally consistent with the historical metals concentrations. Concentrations for select metal constituents were observed to be slightly increasing as noted for each of the upwind, downwind, and DYEC datasets, similar to historical observations.

3.3.2 Polycyclic Aromatic Hydrocarbons

The laboratory analytical results for the PAH parameters analyzed at the upwind, downwind, and DYEC soil sampling sites in August 2017, historical data dating back to 2013, as well as a comparison to Table 1 criteria of the MOECC Standards is provided in **Table 3**. Per **Table 3**, the PAH parameter concentrations observed in August 2017 satisfied the Table 1 criteria of the MOECC Standards with the exception of benzo(a)pyrene at the downwind soil sampling site.

The observed concentration of benzo(a)pyrene (0.61 micrograms per gram ($\mu\text{g/g}$)) exceeded the Table 1 criteria of the MOECC Standards of 0.3 $\mu\text{g/g}$. Benzo(a)pyrene has been detected historically (2013 and 2015) at this sampling location at concentrations that satisfied the Table 1 criteria of the MOECC Standards. Of note, the August 2013 soil sampling event was completed prior to operation of the Site.

3.3.2.1 Downwind Sampling Site PAH Re-Sampling

Per Section 7 of the Soils Testing Plan, if a parameter concentration exceeds the Table 1 criteria of the MOECC Standards, a re-sampling event is to take place with analytical testing focusing on the parameters that exceeded the relevant criteria during the original sampling event. As such, the downwind soil sampling site was re-sampled on October 18, 2017 and was submitted to AGAT for analysis of benzo(a)pyrene. The soil sampling methodology for the October 2017 re-sampling event followed that of the original soil sampling event conducted in August as outlined in **Section 2.2**. The benzo(a)pyrene concentration of 0.28 $\mu\text{g/g}$ observed for the sample collected on October 18, 2017 satisfied the Table 1 criteria of the MOECC Standards of 0.3 $\mu\text{g/g}$.

3.3.3 Dioxins and Furans

The laboratory analytical results for the dioxins & furans parameters analyzed at the upwind, downwind, and DYEC soil sampling sites in August 2017, historical data dating back to 2013, as well as a comparison to Table 1 criteria of the MOECC Standards is provided in **Table 4**. Per **Table 4**, the dioxins & furans parameter concentrations observed in August 2017 satisfied the Table 1 criteria of the MOECC Standards. The current concentrations noted in the soil for this sampling event were generally consistent with the historical soil dioxins and furans concentrations.



3.3.4 Summary and Discussion

Overall, parameter concentrations observed at the upwind, downwind, and DYEC soil sampling sites were generally comparable to historical concentrations. Benzo(a)pyrene within the soil at the downwind soil sampling site has been detected historically and typically has satisfied the Table 1 criteria of the MOECC Standards.

The PAH parameter concentrations observed in August 2017 satisfied the Table 1 criteria of the MOECC Standards with the exception of benzo(a)pyrene at the downwind soil sampling site. At the downwind sampling site, the observed concentration of benzo(a)pyrene (0.61 micrograms per gram ($\mu\text{g/g}$)) exceeded the Table 1 criteria of the MOECC Standards of 0.3 $\mu\text{g/g}$.

The downwind soil sampling site was re-sampled on October 18, 2017 and was submitted to AGAT for analysis of benzo(a)pyrene. The soil sampling methodology for the October 2017 re-sampling event followed that of the original soil sampling event conducted in August as outlined in **Section 2.2**. The soil benzo(a)pyrene concentration of 0.28 $\mu\text{g/g}$ observed for the re-sampling event soil collected on October 18, 2017 satisfied the Table 1 criteria of the MOECC Standards of 0.3 $\mu\text{g/g}$.

It is noted that the August 2017 concentration was not verified in October 2017 and therefore, the benzo(a)pyrene concentration noted in August 2017 is not persistent within the soil of the downwind sampling site. Consequently, the August 2017 benzo(a)pyrene concentration noted in the soil that was sampled from the downwind sampling site is interpreted to be anomalous as the soil re-sampling event for the downwind soil sampling site that took place in October 2017, did not verify the August 2017 concentration.

The inconsistency of parameter concentrations in soil is indicative of native soil's inherent natural heterogeneity, which is common in soils and is similarly observed for other tested constituents in soils. The DYEC source tests confirm that the DYEC is not a significant contributor of benzo(a)pyrene. Given this evidence, the benzo(a)pyrene concentrations noted in the soil for the August sampling event should not be attributed to DYEC operations.

The August 2017, soil benzo(a)pyrene concentration, does not pose an immediate risk to human health or the environment, as the concentration was deemed to be anomalous. As a further degree of conservatism to protect human health and the environment, the downwind soil sampling site is not accessed and/or utilized for any purpose and is left in a naturalized (overgrown) vegetative condition.

4 FUTURE MONITORING

Per Section 3.2 of the Soils Testing Plan, the 2017 Soil Testing Program was the third event in a three (3) consecutive year period since DYEC operations began. As such, and in accordance with Condition 7.(10) (b) of the ECA, soil testing shall be undertaken once every three (3) years. It is suggested that the soil sampling program take place within the same season each year (i.e. August). As such, the next soil testing event is scheduled to be completed in August of 2020.

5 CONCLUSIONS

The following conclusions are based on the findings presented in this report.

- The soil sampling grids established at the upwind and DYEC sampling locations were constructed by RWDI personnel based on previously established metal T-fence post benchmarks installed at specific corners of the grid outline at each of the soil sampling sites. The soil sampling grid established at the downwind location was left in place from the previous sample collection efforts.
- Overall, parameter concentrations observed at the upwind, downwind, and DYEC soil sampling sites were generally comparable to historical concentrations.
- The observed soil concentration of benzo(a)pyrene (0.61 µg/g) noted at the downwind soil sampling site for the August 2017 sampling event exceeded the Table 1 criteria of the MOECC Standards (0.3 µg/g).
- Per Section 7 of the Soils Testing Plan, the soil sampling site shall be re-sampled and analyzed for parameter(s) noted to have exceeded during the original sampling event. As such, the downwind soil sampling site was re-sampled on October 18, 2017 for analysis of benzo(a)pyrene. The concentration of benzo(a)pyrene (0.28 µg/g) observed for the soil sample collected at the downwind soil sampling site on October 18, 2017 satisfied the Table 1 criteria of the MOECC Standards.
- It is noted that the August 2017 concentration was not verified in October 2017 and therefore, the benzo(a)pyrene concentration noted in August 2017 is not persistent within the soil of the downwind sampling site. Consequently, the August 2017 benzo(a)pyrene concentration noted in the soil that was sampled from the downwind sampling site is interpreted to be anomalous as the soil re-sampling event for the downwind soil sampling site that took place in October 2017, did not verify the August 2017 concentration.
- The inconsistency of parameter concentrations in soil is indicative of native soil's inherent natural heterogeneity, which is common in soils and is similarly observed for other tested constituents in soils. The DYEC source tests confirm that the DYEC is not a significant contributor of benzo(a)pyrene. Given this evidence, the benzo(a)pyrene concentrations noted in the soil for the August sampling event should not be attributed to DYEC operations.
- The benzo(a)pyrene concentration noted within the soil sample collected from the downwind sampling site in August 2017 does not pose an immediate risk to health or the environment and it was not verified to be persistent within the soil as evidenced by the acceptable soil quality noted for the re-sampling event conducted in October 2017. Ongoing soil monitoring in the future will continue to assess the long-term concentration trend for benzo(a)pyrene in the soil at the downwind soil sampling site

6 STUDY LIMITATIONS

This report was prepared using scientific principles and professional judgment in assessing available facts and presenting subjective interpretations. The professional judgments presented within this document are based on available facts within the limits of the existing information, budgeted scope of work, and schedule. It is RWDI's intent that the professional judgment and interpretive conclusions be utilized as guidance and not be necessarily construed as a firm course of action, unless explicitly stated otherwise. We make no warranties, expressed or implied, including without limitation, or warranties as to merchantability or fitness of the property for a particular purpose. The information presented in this report is not to be construed as legal advice.

RWDI relied on information obtained from Site representatives, independent sources, and other historical documentation as referenced in this report. The accuracy and completeness of third party sources was not verified. It is noted that regulatory guidelines, standards, and related documents as they may be referenced in this report are subject to interpretation and may change over time.

This report was prepared for the exclusive use of the Regional Municipality of Durham and the Ministry of the Environment and Climate Change. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibility of such third parties. RWDI accepts no responsibility for damages, if any, suffered by any third party as result of decisions made or actions based on this report.

7 CLOSURE

We trust that this 2017 Soil Testing Report for the Durham York Energy Centre is satisfactory. Please do not hesitate to contact us with any questions you may have.

Yours very truly,

RWDI



Philippe E. Janisse, B.Sc., P.Geo.
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Timothy Boc, B.E.S.
Senior Scientist

Attach.



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TABLES

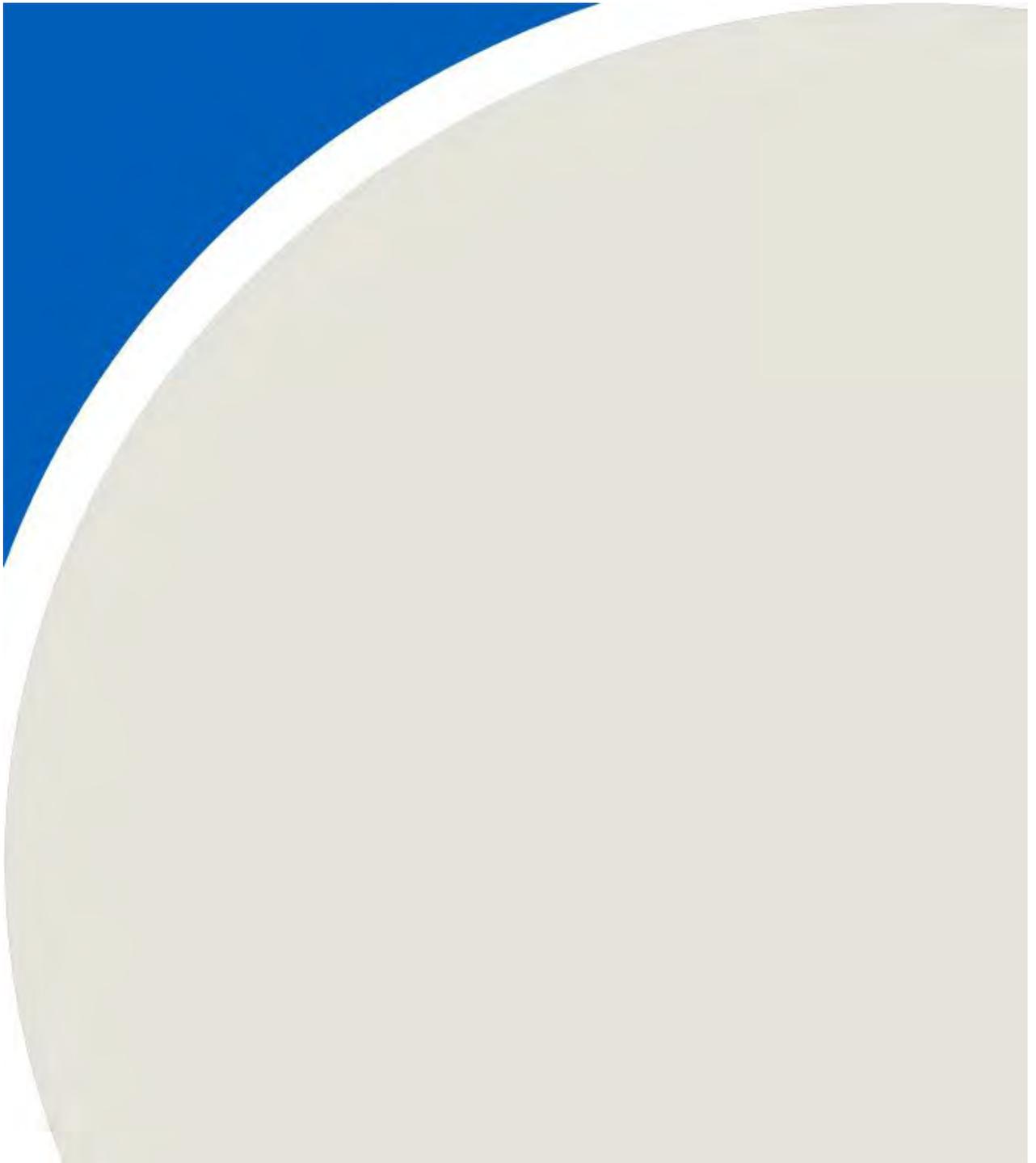


Table 1: Relative Percent Difference Analysis - Soil
Durham York Energy Center
The Regional Municipality of Durham
Project No. 1604066.8001

SAMPLING EVENT	SAMPLE IDENTIFIER	PARAMETER	UNITS	REPORTED DETECTION LIMIT	SAMPLE CONCENTRATION	REPLICATE CONCENTRATION	CONCENTRATION <5X RDL			CONCENTRATION >5X RDL		
							DIFFERENCE IN CONCENTRATION	CONTROL LIMIT (± RDL)	COMMENT	RPD %	CONTROL LIMIT	COMMENT
Aug-17	UPWIND (SOIL DUP)	Metals										
		Antimony	µg/g	0.8	1	1	0.00	0.8	OK			
		Arsenic	µg/g	1	3	3	0.00	1	OK			
		Barium	µg/g	2	94	92				2	30	OK
		Beryllium	µg/g	0.5	1	1	0.00	0.5	OK			
		Boron	µg/g	5	6	7	1.00	5	OK			
		Cadmium	µg/g	0.5	1	1	0.00	0.5	OK			
		Chromium, Total	µg/g	2	21	21				0	30	OK
		Chromium, Hexavalent	µg/g	0.2	0.2	0.2	0.00	0.2	OK			
		Cobalt	µg/g	0.5	7.9	7.6				4	30	OK
		Copper	µg/g	1	16	16				0	30	OK
		Lead	µg/g	1	11	12				9	30	OK
		Mercury	µg/g	0.10	0.1	0.1	0.00	0.10	OK			
		Molybdenum	µg/g	0.5	0.5	0.5	0.00	0.5	OK			
		Nickel	µg/g	1	17	16				6	30	OK
		Phosphorus	µg/g	5	691	726				5	30	OK
		Selenium	µg/g	0.8	0.8	0.8	0.00	0.8	OK			
		Silver	µg/g	0.4	0.4	0.4	0.00	0.4	OK			
		Thallium	µg/g	0.4	0.4	0.4	0.00	0.4	OK			
		Tin	µg/g	1	1	1	0.00	1	OK			
		Vanadium	µg/g	1	32	31				3	30	OK
		Zinc	µg/g	5	69	70				1	30	OK
		Polycyclic Aromatic Hydrocarbons (PAHs)										
		Fluorene	µg/g	0.05	0.05	0.05	0.00	0.05	OK			
		Anthracene	µg/g	0.05	0.05	0.05	0.00	0.05	OK			
		Benzo(a)pyrene	µg/g	0.05	0.05	0.05	0.00	0.05	OK			
		Benzo(a)fluorene	µg/g	0.05	0.05	0.05	0.00	0.05	OK			
		Benzo(b)fluorene	µg/g	0.05	0.05	0.05	0.00	0.05	OK			
		Dioxins & Furans										
		2,3,7,8-Tetra CDD	ng/kg	0.1	0.1	0.2	0.10	0.1	OK			
		1,2,3,7,8-Penta CDD	ng/kg	0.2	0.2	0.6	0.40	0.2	EXCEED			
		1,2,3,4,7,8-Hexa CDD	ng/kg	0.2	0.3	1.0	0.70	0.2	EXCEED			
		1,2,3,6,7,8-Hexa CDD	ng/kg	0.2	0.3	0.8	0.50	0.2	EXCEED			
		1,2,3,7,8-Hexa CDD	ng/kg	0.2	0.2	1.2	1.00	0.2	EXCEED			
		1,2,3,4,6,7,8-Hepta CDD	ng/kg	0.3	6.2	8.8				35	40	OK
		Octa CDD	ng/kg	0.6	43.2	64.4				39	40	OK
		2,3,7,8-Tetra CDF	ng/kg	0.1	0.1	0.3	0.20	0.1	EXCEED			
		1,2,3,7,8-Penta CDF	ng/kg	0.2	0.2	1.0	0.80	0.2	EXCEED			
		2,3,4,7,8-Penta CDF	ng/kg	0.2	0.2	0.6	0.40	0.2	EXCEED			
		1,2,3,4,7,8-Hexa CDF	ng/kg	0.2	0.4	1.0	0.60	0.2	EXCEED			
		1,2,3,6,7,8-Hexa CDF	ng/kg	0.2	0.2	0.9	0.70	0.2	EXCEED			
		2,3,4,6,7,8-Hexa CDF	ng/kg	0.2	0.2	1.0	0.80	0.2	EXCEED			
		1,2,3,7,8,9-Hexa CDF	ng/kg	0.2	0.2	1.0	0.80	0.2	EXCEED			
		1,2,3,4,6,7,8-Hepta CDF	ng/kg	0.3	1.7	2.6				42	40	EXCEED
		1,2,3,4,7,8,9-Hepta CDF	ng/kg	0.4	0.4	0.7	0.30	0.4	OK			
		Octa CDF	ng/kg	0.5	4.6	4.5				2	40	OK
		Total Tetrachlorodibenzodioxins	ng/kg	0.1	0.5	0.7	0.20	0.1	EXCEED			
		Total Pentachlorodibenzodioxins	ng/kg	0.2	1.0	1.3	0.30	0.2	EXCEED			
		Total Hexachlorodibenzodioxins	ng/kg	0.2	2.3	4.4				63	40	EXCEED
		Total Heptachlorodibenzodioxins	ng/kg	0.3	14.5	18.6				25	40	OK
		Total PCDDs	ng/kg	0.6	61.5	89.3				37	40	OK
		Total Tetrachlorodibenzofurans	ng/kg	0.1	2.6	2.9				11	40	OK
Total Pentachlorodibenzofurans	ng/kg	0.2	1.1	3.2				98	40	EXCEED		
Total Hexachlorodibenzofurans	ng/kg	0.2	2.5	6.0				82	40	EXCEED		
Total Heptachlorodibenzofurans	ng/kg	0.4	4.1	5.8				34	40	OK		
Total PCDFs	ng/kg	0.5	14.9	22.4				40	40	OK		

Notes: (1) "RPD" indicates Relative Percent Difference.
(2) Concentrations reported below the RDL are presented as the RDL.

Table 2: Soil Analytical Results - Metals

Durham York Energy Center
 The Regional Municipality of Durham
 Project No. 1604066.8001

Parameters	Soil Standards	UPWIND				DYEC			DOWNWIND			
		22-Aug-13	25-Aug-15	17-Aug-16	23-Aug-17	25-Aug-15	17-Aug-16	23-Aug-17	22-Aug-13	25-Aug-15	17-Aug-16	23-Aug-17
<i>Metals</i>												
Antimony	1.3	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	2	2	3	3	2	3	3	3	3	3	3
Barium	220	87	76	100	94	54	81	97	68	59	74	67
Beryllium	2.5	0.5	0.6	0.6	0.6	0.5	0.6	0.6	<0.5	0.5	0.6	<0.5
Boron	36	6	7	9	6	5	7	5	5	7	8	5
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium, Total	70	18	20	23	21	16	20	22	14	15	18	16
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cobalt	21	6.8	7.1	7.7	7.9	4.5	5.6	6.6	4.8	4.9	5.6	4.9
Copper	92	15	12	15	16	9	14	17	11	9	11	10
Lead	120	10	9	10	11	10	13	15	13	12	14	15
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Methyl Mercury (ng/g)	-	<1.3	<0.4	<0.4	<0.4	0.75	<0.4	<0.4	<1.3	<0.4	<0.4	<0.4
Molybdenum	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	82	16	13	15	17	9	12	14	11	9	10	9
Phosphorus	-	729	815	891	691	911	973	813	609	668	705	592
Selenium	1.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Thallium	1	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Tin	-	<1	<1	<1	<1	1	2	1	<1	<1	<1	<1
Vanadium	86	27	29	33	32	23	27	31	24	26	28	25
Zinc	290	63	58	67	69	54	70	78	51	49	60	53

- Notes:** 1. Soil Standard as per Table 1 of the Soil, Groundwater and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act (MOECC, April 15, 2011.)
 2. '-' denotes Soil Standard criteria not established.
 3. **BOLD** and shaded indicate an exceedance of the Soil Standards
 4. Units are in µg/g unless otherwise noted.

Table 3: Soil Analytical Results - Polycyclic Aromatic Hydrocarbons

Durham York Energy Center
 The Regional Municipality of Durham
 Project No. 1604066.8001

Parameters	Soil Standards	UPWIND				DYEC			DOWNWIND					
		22-Aug-13	25-Aug-15	17-Aug-16	23-Aug-17	25-Aug-15	17-Aug-16	23-Aug-17	22-Aug-13	25-Aug-15	17-Aug-16	23-Aug-17	10/18/2017 (Re-sample)	
<i>Polycyclic Aromatic Hydrocarbons (PAHs)</i>														
Fluorene	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Anthracene	0.16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	-
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.11	0.05	<0.05	0.61	0.28	
Benzo(a)fluorene	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Benzo(b)fluorene	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-

- Notes:**
1. Soil Standard as per Table 1 of the Soil, Groundwater and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act (MOECC, April 15, 2011.)
 2. '-' denotes Soil Standard criteria not established.
 3. **BOLD** and shaded indicate an exceedance of the Soil Standards
 4. Units are in µg/g unless otherwise noted.

Table 4: Soil Analytical Results - Dioxins & Furans

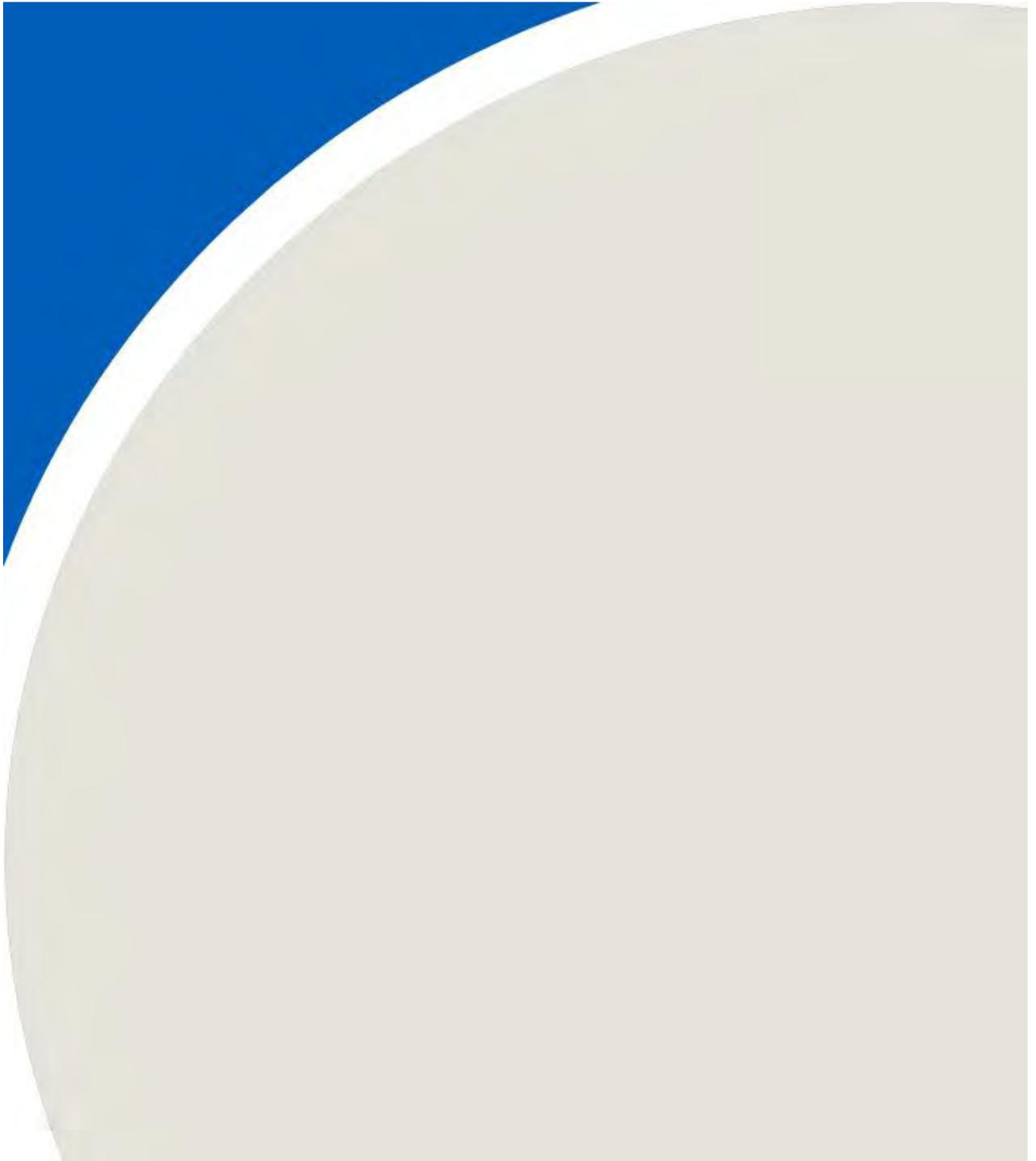
Durham York Energy Center
 The Regional Municipality of Durham
 Project No. 1604066.8001

Parameters	Units	Soil Standards	UPWIND				DYEC			DOWNWIND			
			22-Aug-13	25-Aug-15	17-Aug-16	23-Aug-17	25-Aug-15	17-Aug-16	23-Aug-17	22-Aug-13	25-Aug-15	17-Aug-16	23-Aug-17
<i>Dioxins & Furans</i>													
2,3,7,8-Tetra CDD	ng/kg	-	<0.5	0.2	<0.1	<0.1	<0.2	<0.1	<0.8	<0.4	<0.1	<0.1	<0.3
1,2,3,7,8-Penta CDD	ng/kg	-	<0.6	0.5	<0.1	<0.2	0.3	<0.1	<0.6	<0.6	<0.2	<0.1	0.4
1,2,3,4,7,8-Hexa CDD	ng/kg	-	<0.6	0.6	<0.1	0.3	0.4	1.8	<1	<0.5	0.2	<0.1	<0.4
1,2,3,6,7,8-Hexa CDD	ng/kg	-	<0.6	0.5	<0.1	0.3	<0.3	2	<1	<0.5	0.6	<0.1	0.6
1,2,3,7,8,9-Hexa CDD	ng/kg	-	<0.5	0.6	<0.1	0.2	0.9	2.2	<1	0.5	0.5	<0.1	1
1,2,3,4,6,7,8-Hepta CDD	ng/kg	-	8.2	7.9	4.8	6.2	12	36.3	12	17	11	8.1	12.6
Octa CDD	ng/kg	-	57	60	31.5	43.2	95	303	82	118	86	74.7	103
2,3,7,8-Tetra CDF	ng/kg	-	<0.4	0.3	<0.1	<0.1	<0.2	<0.1	<0.3	<0.3	0.2	<0.1	<0.3
1,2,3,7,8-Penta CDF	ng/kg	-	<0.4	0.4	<0.1	<0.2	<0.2	<0.1	<1	<0.8	0.2	<0.1	<0.4
2,3,4,7,8-Penta CDF	ng/kg	-	<0.4	0.5	<0.1	0.2	0.2	<0.1	<1	<0.6	0.3	<0.1	<0.4
1,2,3,4,7,8-Hexa CDF	ng/kg	-	<0.6	0.6	1.7	0.4	0.5	<0.1	<0.9	<0.4	0.6	1.6	0.8
1,2,3,6,7,8-Hexa CDF	ng/kg	-	<0.6	0.3	<0.1	0.2	0.3	<0.1	<0.8	<0.4	0.4	<0.1	0.4
2,3,4,6,7,8-Hexa CDF	ng/kg	-	<0.6	0.4	2.3	<0.2	0.4	<0.1	<0.9	0.7	0.3	1.4	0.5
1,2,3,7,8,9-Hexa CDF	ng/kg	-	<0.8	0.4	<0.1	<0.2	<0.3	<0.1	<1	<0.5	<0.2	<0.1	<0.4
1,2,3,4,6,7,8-Hepta CDF	ng/kg	-	2.1	2.2	1.2	1.7	2.7	7.8	1.3	4.9	2.6	7.9	3.2
1,2,3,4,7,8,9-Hepta CDF	ng/kg	-	<1	<0.3	<0.1	<0.4	0.3	<0.1	<0.9	<0.6	<0.2	<0.1	0.4
Octa CDF	ng/kg	-	3	6	6.7	4.6	9	32	7.5	9	8	9	6.1
Total Tetrachlorodibenzodioxins	ng/kg	-	1.3	0.7	<0.1	0.5	0.3	<0.1	<0.8	1.4	0.4	<0.1	1.5
Total Pentachlorodibenzodioxins	ng/kg	-	<0.6	2.5	<0.1	1	2.3	8.1	<0.6	2.3	1.8	<0.1	2.6
Total Hexachlorodibenzodioxins	ng/kg	-	3.6	3.7	<0.2	2.3	3.3	22.5	<1	4.3	3.2	<0.2	4.7
Total Heptachlorodibenzodioxins	ng/kg	-	17.7	10.2	13.4	14.5	15	57.9	20	31.1	12.7	28.6	25.7
Total PCDDs	ng/kg	-	80	76.8	44.9	61.5	116	392	103	158	104	103	138
Total Tetrachlorodibenzofurans	ng/kg	-	3.1	2	<0.1	2.6	3.8	10.1	7.4	4.7	2.1	1.2	3.7
Total Pentachlorodibenzofurans	ng/kg	-	1.3	2.3	4.3	1.1	3.3	6.2	<1	3.3	2.5	<0.1	2.7
Total Hexachlorodibenzofurans	ng/kg	-	2.4	1.8	103	2.5	1.2	173	3.3	6.5	1.3	2.9	5.3
Total Heptachlorodibenzofurans	ng/kg	-	5	3.3	56.9	4.1	4.9	36.4	4.1	12.3	4.8	15.1	8.1
Total PCDFs	ng/kg	-	14	15.5	171	14.9	21.7	258	14.8	36	19.1	28.3	25.9
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ	-	0.25	0.195	0.05	0.05	0.1	0.05	0.4	0.2	0.05	0.05	0.15
1,2,3,7,8-Penta CDD (TEF 1.0)	TEQ	-	0.3	0.47	0.05	0.1	0.262	0.05	0.3	0.3	0.1	0.05	0.422
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ	-	0.03	0.0628	0.005	0.0261	0.0372	0.184	0.065	0.025	0.0203	0.005	0.02
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ	-	0.03	0.0525	0.005	0.0285	0.015	0.201	0.065	0.025	0.0605	0.005	0.0635
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	TEQ	-	0.025	0.0646	0.005	0.0217	0.0871	0.22	0.07	0.0544	0.0535	0.005	0.105
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	TEQ	-	0.0819	0.0788	0.0475	0.0616	0.12	0.363	0.121	0.17	0.109	0.0807	0.126
Octa CDD (TEF 0.0003)	TEQ	-	0.0172	0.0179	0.00944	0.0129	0.0285	0.091	0.0246	0.0355	0.0259	0.0224	0.031
2,3,7,8-Tetra CDF (TEF 0.1)	TEQ	-	0.02	0.0265	0.005	0.005	0.01	0.005	0.015	0.015	0.0224	0.005	0.015
1,2,3,7,8-Penta CDF (TEF 0.03)	TEQ	-	0.006	0.012	0.0015	0.003	0.003	0.0015	0.0165	0.012	0.006	0.0015	0.006
2,3,4,7,8-Penta CDF (TEF 0.3)	TEQ	-	0.06	0.15	0.015	0.0638	0.06	0.015	0.15	0.09	0.09	0.015	0.06
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	TEQ	-	0.03	0.0623	0.171	0.0367	0.0499	0.005	0.045	0.02	0.0576	0.159	0.075
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	TEQ	-	0.03	0.0302	0.005	0.0203	0.03	0.005	0.04	0.02	0.0369	0.005	0.0422
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	TEQ	-	0.03	0.0372	0.233	0.01	0.0427	0.005	0.045	0.072	0.0286	0.136	0.0495
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	TEQ	-	0.04	0.0377	0.005	0.01	0.015	0.005	0.065	0.025	0.01	0.005	0.02
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	TEQ	-	0.021	0.0219	0.012	0.0173	0.027	0.0782	0.0125	0.049	0.0261	0.0785	0.0321
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	TEQ	-	0.005	0.0015	0.0005	0.002	0.00266	0.0005	0.0045	0.003	0.001	0.0005	0.00417
Octa CDF (TEF 0.0003)	TEQ	-	0.00081	0.0018	0.00202	0.00138	0.00256	0.00961	0.00225	0.00284	0.00252	0.00271	0.00184
Total PCDDs and PCDFs (TEQ)	TEQ ng/kg	7	0.977	1.32	0.622	0.47	0.9	1.29	1.44	1.12	0.7	0.626	1.22

Notes: 1. Soil Standard as per Table 1 of the Soil, Groundwater and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act (MOECC, April 15, 2011.)

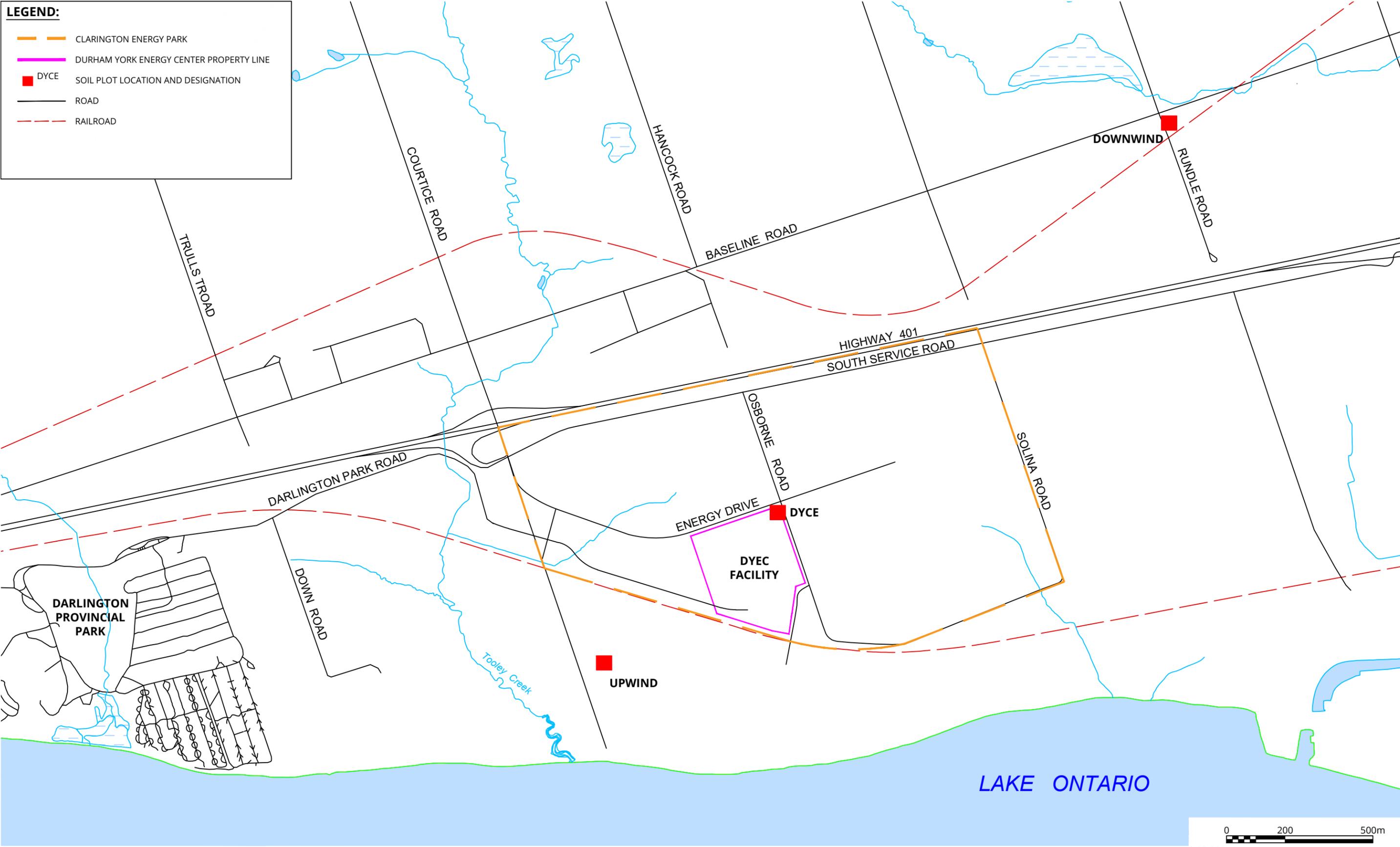
2. '-' denotes Soil Standard criteria not established.

FIGURES



LEGEND:

-  CLARINGTON ENERGY PARK
-  DURHAM YORK ENERGY CENTER PROPERTY LINE
-  DYCE SOIL PLOT LOCATION AND DESIGNATION
-  ROAD
-  RAILROAD



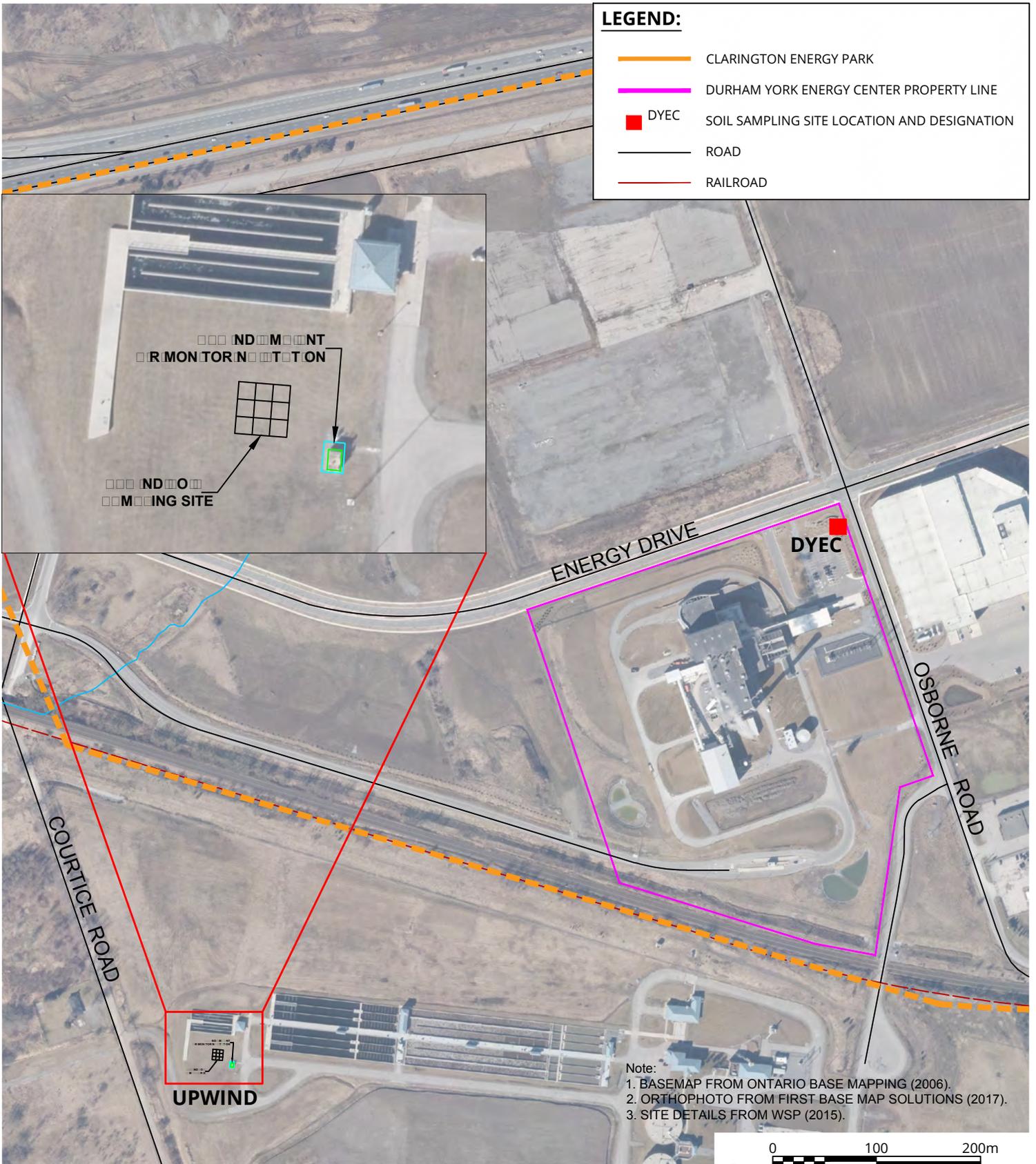
LOCATION MAP
 DURHAM YORK ENERGY CENTER
 2017 SOIL TESTING PROGRAM
 THE REGIONAL MUNICIPALITY OF DURHAM

Note:
 1. SITE DETAILS FROM WSP (2015).

True North

 Drawn by: SSL Figure: 1
 Approx. Scale: 1:12,000
 Date Revised: Nov. 18, 2017
 Project #1604066





UPWIND SAMPLE LOCATION MAP
 DURHAM YORK ENERGY CENTRE
 2017 SOIL TESTING PROGRAM

THE REGIONAL MUNICIPALITY OF DURHAM



Project # 1604066

Drawn by: SSL	Figure: 2
Approx. Scale: 1:5,000	
Date Revised: Aug. 24, 2017	

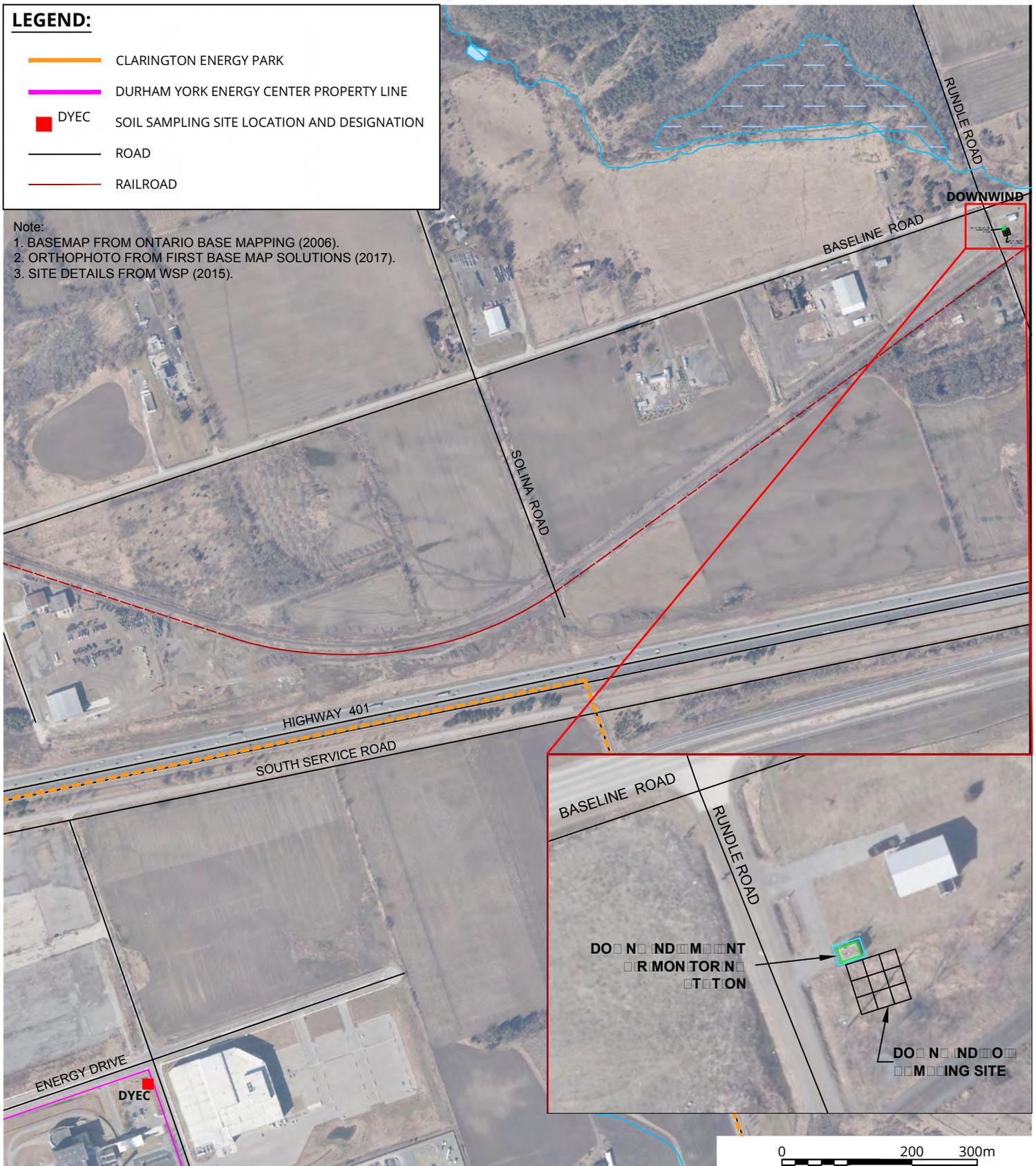


DATE PLOTTED: August 24, 2017

LEGEND:

- CLARINGTON ENERGY PARK
- DURHAM YORK ENERGY CENTER PROPERTY LINE
- DYEC SOIL SAMPLING SITE LOCATION AND DESIGNATION
- ROAD
- RAILROAD

Note:
 1. BASEMAP FROM ONTARIO BASE MAPPING (2006).
 2. ORTHOPHOTO FROM FIRST BASE MAP SOLUTIONS (2017).
 3. SITE DETAILS FROM WSP (2015).



1:8000

DOWNWIND SAMPLE LOCATION MAP
 DURHAM YORK ENERGY CENTRE
 2017 SOIL TESTING PROGRAM

THE REGIONAL MUNICIPALITY OF DURHAM



Project # 1604066

Drawn by: SSL	Figure: 3
Approx. Scale: 1:8,000	
Date Revised: Aug. 24, 2017	

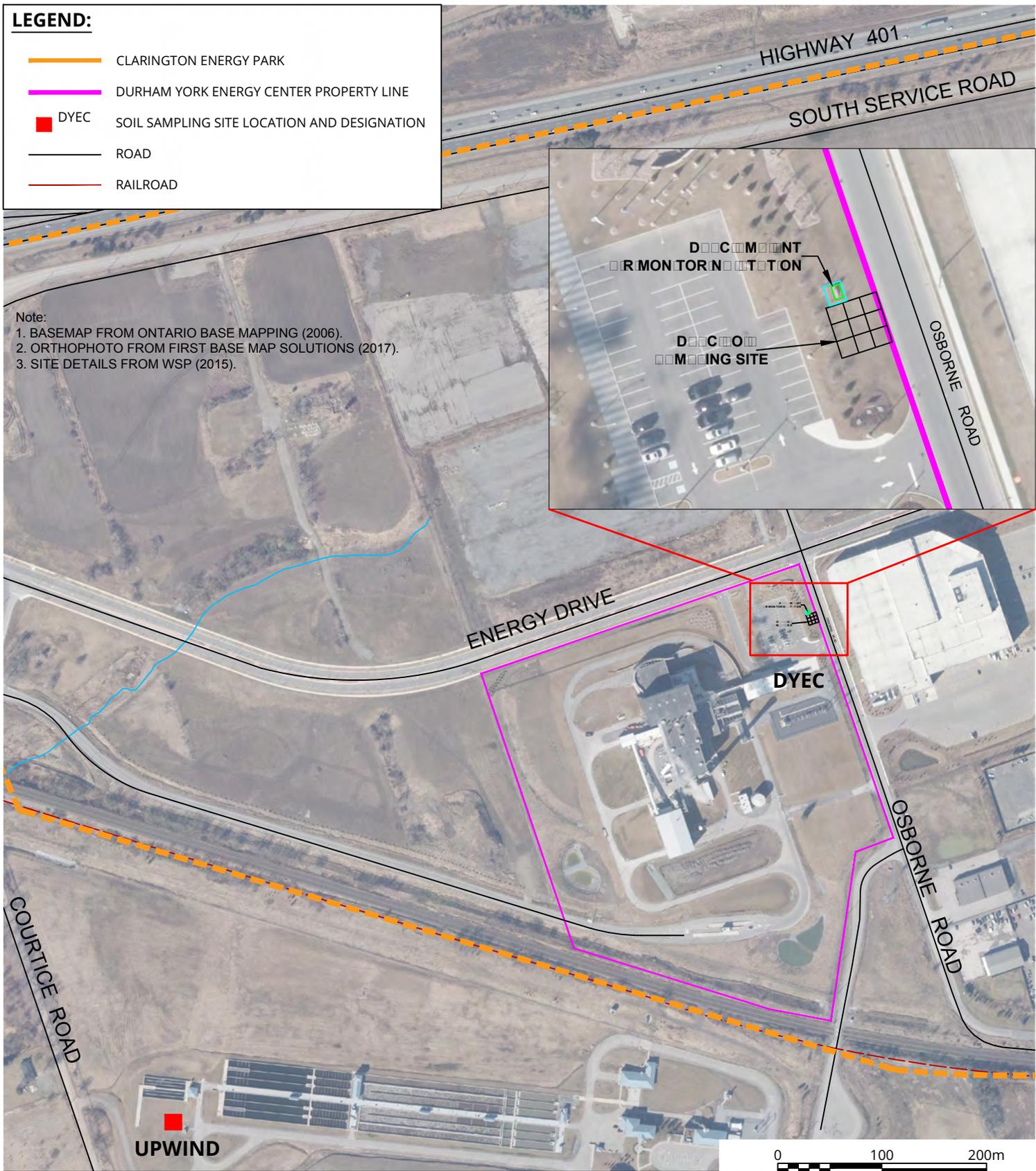


DATE PLOTTED: August 24, 2017

LEGEND:

-  CLARINGTON ENERGY PARK
-  DURHAM YORK ENERGY CENTER PROPERTY LINE
-  DYEC SOIL SAMPLING SITE LOCATION AND DESIGNATION
-  ROAD
-  RAILROAD

Note:
 1. BASEMAP FROM ONTARIO BASE MAPPING (2006).
 2. ORTHOPHOTO FROM FIRST BASE MAP SOLUTIONS (2017).
 3. SITE DETAILS FROM WSP (2015).



DYEC LOCATION MAP
 DURHAM YORK ENERGY CENTRE
 2017 SOIL TESTING PROGRAM

THE REGIONAL MUNICIPALITY OF DURHAM



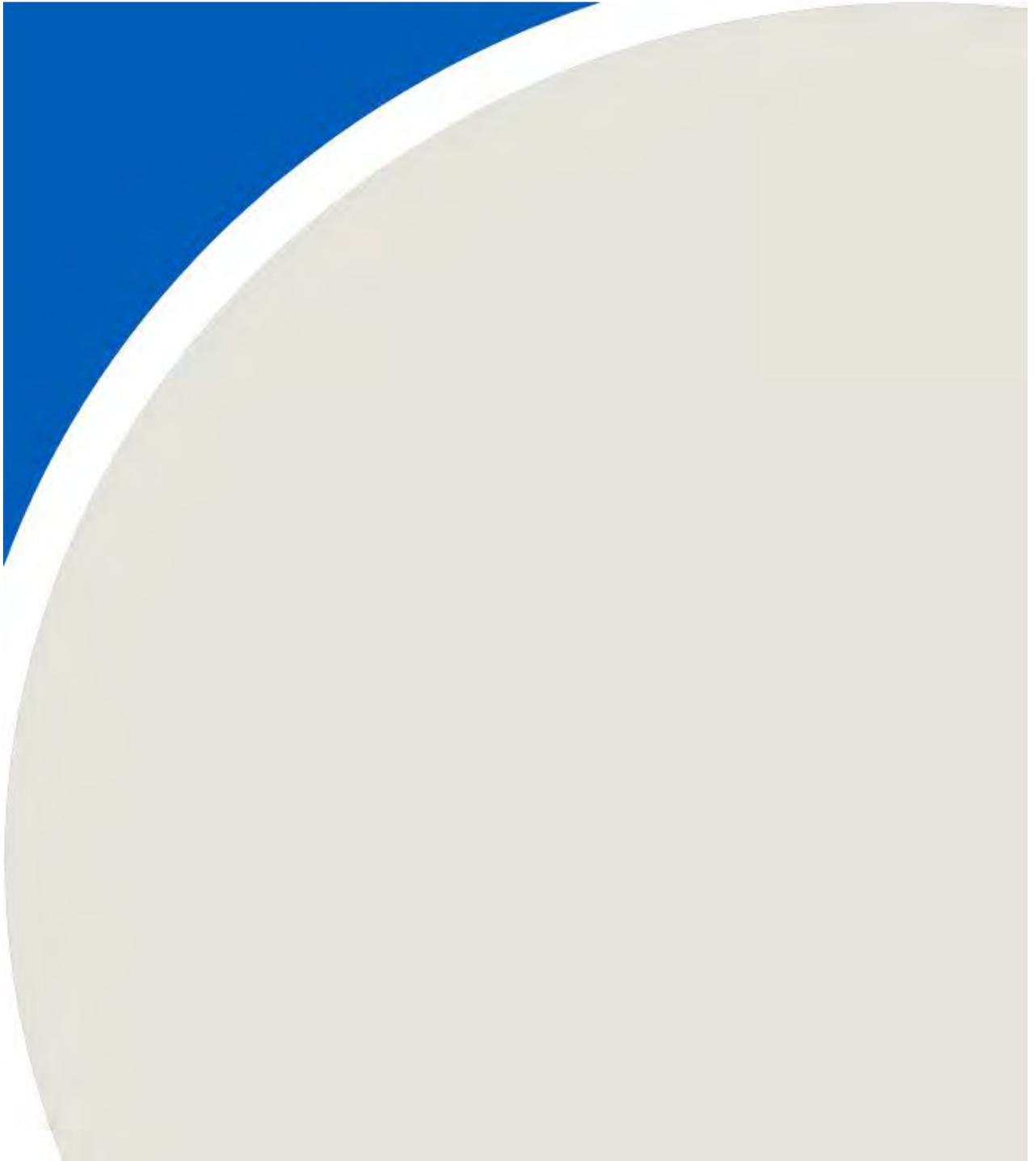
Project # 1604066

Drawn by: SSL	Figure: 4
Approx. Scale: 1:5,000	
Date Revised: Aug. 24, 2017	



DATE PLOTTED: August 24, 2017

APPENDIX A





PHOTOGRAPH 1: VIEW OF THE UPWIND SOIL SAMPLING SITE, FACING NORTHWEST.



PHOTOGRAPH 2: VIEW OF THE DYEC SOIL SAMPLING SITE, FACING NORTHWEST.

Notes:	PHOTOGRAPHIC LOG	FIGURE NUMBER	PROJECT NUMBER	
	2017 SOIL TESTING REPORT	A-1	1604066	
	<i>REGIONAL MUNICIPALITY OF DURHAM</i> <i>DURHAM YORK ENERGY CENTRE</i>	APPROX. SCALE	DATE REVISED	
		NTS	08/25/2017	



PHOTOGRAPH 3: VIEW OF THE DOWNWIND SOIL SAMPLING SITE, FACING SOUTHWEST.

Notes:

PHOTOGRAPHIC LOG

2017 SOIL TESTING REPORT

*REGIONAL MUNICIPALITY OF DURHAM
DURHAM YORK ENERGY CENTRE*

FIGURE NUMBER

A-2

APPROX. SCALE

NTS

PROJECT NUMBER

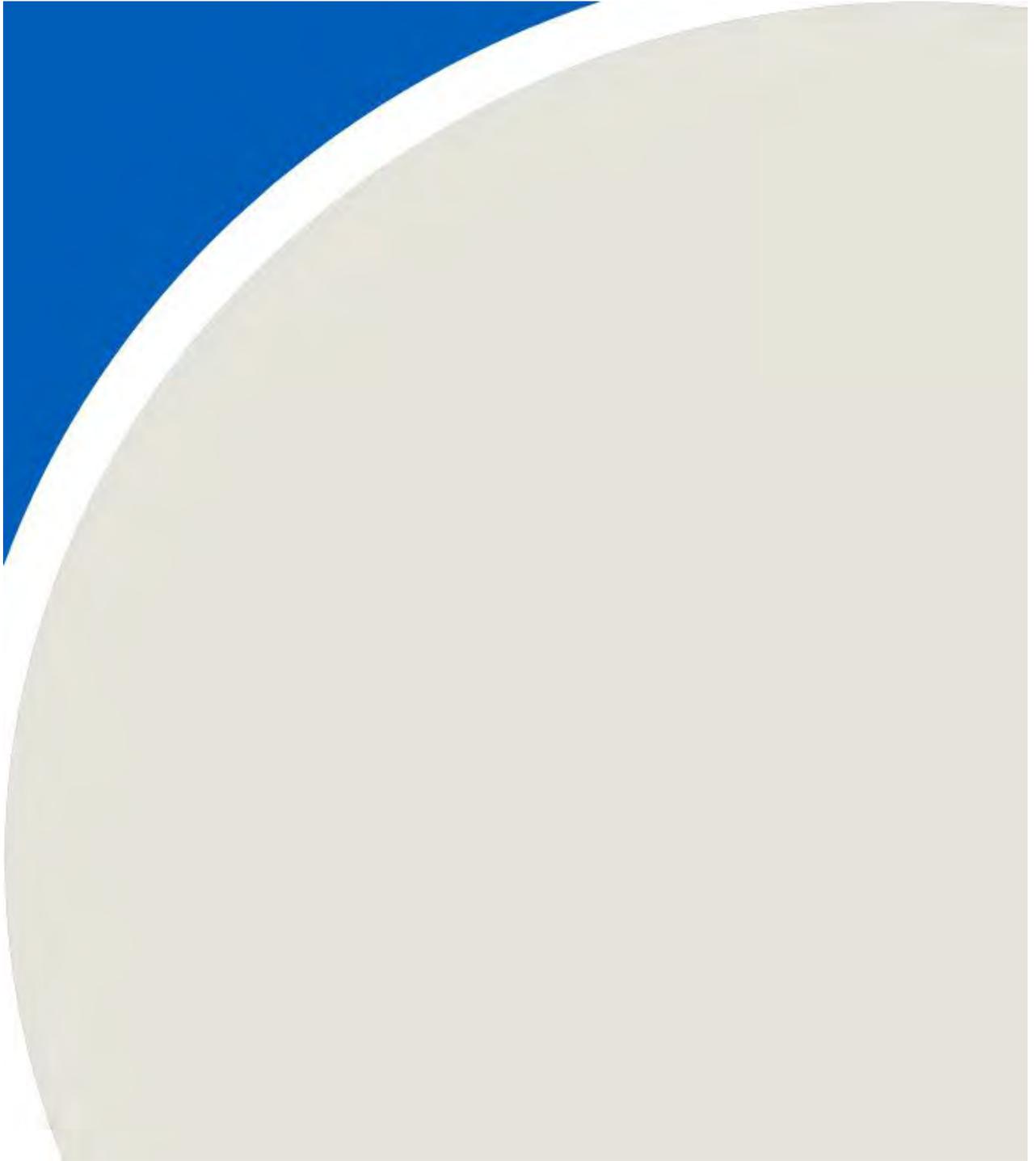
1604066

DATE REVISED

08/25/2017



APPENDIX B



CLIENT NAME: RWDI
605 ROSSLAND ROAD EAST, PO BOX 710
WHITBY, ON L1N0A9
(905) 668-7711

ATTENTION TO: Timothy Boc

PROJECT: 1604066-8001

AGAT WORK ORDER: 17T256372

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Coordinator

TRACE ORGANICS REVIEWED BY: Inga Kuzmina, Trace Organics Lab Manager

ULTRA TRACE REVIEWED BY: Philippe Morneau, chimiste

DATE REPORTED: Oct 05, 2017

PAGES (INCLUDING COVER): 15

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

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



Certificate of Analysis

AGAT WORK ORDER: 17T256372

PROJECT: 1604066-8001

5835 COOPERS AVENUE
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1Y2
 TEL (905)712-5100
 FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: RWDI

ATTENTION TO: Timothy Boc

SAMPLING SITE:

SAMPLED BY:

Metals Scan incl. CrVI (Soil)

DATE RECEIVED: 2017-08-24

DATE REPORTED: 2017-10-05

Parameter	Unit	SAMPLE DESCRIPTION:		UPWIND	DYEC	DOWNWIND	SOIL DUP
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-08-23	2017-08-23	2017-08-23	2017-08-23
		G / S	RDL	8689663	8689664	8689667	8689670
Antimony	µg/g		0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g		1	3	3	3	3
Barium	µg/g		2	94	97	67	92
Beryllium	µg/g		0.5	0.6	0.6	<0.5	0.6
Boron	µg/g		5	6	5	5	7
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g		2	21	22	16	21
Chromium, Hexavalent	µg/g		0.2	<0.2	<0.2	<0.2	<0.2
Cobalt	µg/g		0.5	7.9	6.6	4.9	7.6
Copper	µg/g		1	16	17	10	16
Lead	µg/g		1	11	15	15	12
Mercury	µg/g		0.10	<0.10	<0.10	<0.10	<0.10
Molybdenum	µg/g		0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g		1	17	14	9	16
Phosphorus	µg/g		5	691	813	592	726
Selenium	µg/g		0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g		0.4	<0.4	<0.4	<0.4	<0.4
Thallium	µg/g		0.4	<0.4	<0.4	<0.4	<0.4
Tin	µg/g		1	<1	1	<1	<1
Vanadium	µg/g		1	32	31	25	31
Zinc	µg/g		5	69	78	53	70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
 8689663-8689670

Certified By:

Amanjot Bhela



Certificate of Analysis

AGAT WORK ORDER: 17T256372

PROJECT: 1604066-8001

5835 COOPERS AVENUE
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 CANADA L4Z 1Y2
 TEL (905)712-5100
 FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: RWDI

ATTENTION TO: Timothy Boc

SAMPLING SITE:

SAMPLED BY:

PAHs (Soil)							
DATE RECEIVED: 2017-08-24				DATE REPORTED: 2017-10-05			
Parameter	Unit	SAMPLE DESCRIPTION:		UPWIND	DYEC	DOWNWIND	SOIL DUP
		G / S	RDL	Soil	Soil	Soil	Soil
DATE SAMPLED:		2017-08-23	2017-08-23	2017-08-23	2017-08-23	2017-08-23	2017-08-23
Fluorene	µg/g	0.12	0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.16	0.05	<0.05	<0.05	0.12	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	0.61	<0.05
Benzo(a)fluorene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluorene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	35.0	20.8	20.5	21.9
Surrogate	Unit	Acceptable Limits					
Chrysene-d12	%	50-140		98	63	67	82

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
 8689663-8689670 Results are based on the dry weight of the soil.

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 17T256372

PROJECT: 1604066-8001

5835 COOPERS AVENUE
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1Y2
 TEL (905)712-5100
 FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: RWDI

ATTENTION TO: Timothy Boc

SAMPLING SITE:

SAMPLED BY:

Dioxins & Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-08-24

DATE REPORTED: 2017-10-05

Parameter	Unit	SAMPLE DESCRIPTION:		UPWIND		DYEC		DOWNWIND		SOIL DUP
		SAMPLE TYPE:		Soil		Soil		Soil		Soil
		DATE SAMPLED:		2017-08-23		2017-08-23		2017-08-23		2017-08-23
		G / S	RDL	8689663	RDL	8689664	RDL	8689667	RDL	8689670
2,3,7,8-Tetra CDD	ng/kg		0.1	<0.1	0.8	<0.8	0.3	<0.3	0.2	<0.2
1,2,3,7,8-Penta CDD	ng/kg		0.2	<0.2	0.6	<0.6	0.2	0.4	0.4	0.6
1,2,3,4,7,8-Hexa CDD	ng/kg		0.2	0.3	1	<1	0.4	<0.4	1	<1
1,2,3,6,7,8-Hexa CDD	ng/kg		0.2	0.3	1	<1	0.3	0.6	0.4	0.8
1,2,3,7,8,9-Hexa CDD	ng/kg		0.2	0.2	1	<1	0.3	1.0	0.4	1.2
1,2,3,4,6,7,8-Hepta CDD	ng/kg		0.3	6.2	2	12	0.5	12.6	0.3	8.8
Octa CDD	ng/kg		0.6	43.2	4	82	0.1	103	0.5	64.4
2,3,7,8-Tetra CDF	ng/kg		0.1	<0.1	0.3	<0.3	0.3	<0.3	0.3	<0.3
1,2,3,7,8-Penta CDF	ng/kg		0.2	<0.2	1	<1	0.4	<0.4	1	<1
2,3,4,7,8-Penta CDF	ng/kg		0.2	0.2	1	<1	0.4	<0.4	0.6	<0.6
1,2,3,4,7,8-Hexa CDF	ng/kg		0.2	0.4	0.9	<0.9	0.2	0.8	0.3	1.0
1,2,3,6,7,8-Hexa CDF	ng/kg		0.2	0.2	0.8	<0.8	0.2	0.4	0.3	0.9
2,3,4,6,7,8-Hexa CDF	ng/kg		0.2	<0.2	0.9	<0.9	0.2	0.5	0.4	1.0
1,2,3,7,8,9-Hexa CDF	ng/kg		0.2	<0.2	1	<1	0.4	<0.4	1	<1
1,2,3,4,6,7,8-Hepta CDF	ng/kg		0.3	1.7	0.7	1.3	0.3	3.2	0.3	2.6
1,2,3,4,7,8,9-Hepta CDF	ng/kg		0.4	<0.4	0.9	<0.9	0.3	0.4	0.3	0.7
Octa CDF	ng/kg		0.5	4.6	1	7.5	0.5	6.1	0.5	4.5
Total Tetrachlorodibenzodioxins	ng/kg		0.1	0.5	0.8	<0.8	0.3	1.5	0.2	0.7
Total Pentachlorodibenzodioxins	ng/kg		0.2	1.0	0.6	<0.6	0.2	2.6	0.4	1.3
Total Hexachlorodibenzodioxins	ng/kg		0.2	2.3	1	<1	0.4	4.7	1	4.4
Total Heptachlorodibenzodioxins	ng/kg		0.3	14.5	1	20	0.3	25.7	0.3	18.6
Total PCDDs	ng/kg		0.6	61.5	4	103	0.5	138	0.5	89.3
Total Tetrachlorodibenzofurans	ng/kg		0.1	2.6	0.3	7.4	0.3	3.7	0.3	2.9
Total Pentachlorodibenzofurans	ng/kg		0.2	1.1	1	<1	0.4	2.7	1	3.2
Total Hexachlorodibenzofurans	ng/kg		0.2	2.5	1	3.3	0.4	5.3	1	6.0
Total Heptachlorodibenzofurans	ng/kg		0.4	4.1	0.9	4.1	0.3	8.1	0.3	5.8
Total PCDFs	ng/kg		0.5	14.9	1	14.8	0.5	25.9	0.6	22.4
2,3,7,8-Tetra CDD (TEF 1.0)	TEQ			0.05		0.4		0.15		0.1
1,2,3,7,8-Penta CDD (TEF 1.0)	TEQ			0.1		0.3		0.422		0.640
1,2,3,4,7,8-Hexa CDD (TEF 0.1)	TEQ			0.0261		0.065		0.02		0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17T256372

PROJECT: 1604066-8001

5835 COOPERS AVENUE
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1Y2
 TEL (905)712-5100
 FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: RWDI

ATTENTION TO: Timothy Boc

SAMPLING SITE:

SAMPLED BY:

Dioxins & Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-08-24

DATE REPORTED: 2017-10-05

Parameter	Unit	SAMPLE DESCRIPTION:		UPWIND		DYEC		DOWNWIND		SOIL DUP
		SAMPLE TYPE:		Soil		Soil		Soil		Soil
		DATE SAMPLED:		2017-08-23		2017-08-23		2017-08-23		2017-08-23
		G / S	RDL	8689663	RDL	8689664	RDL	8689667	RDL	8689670
1,2,3,6,7,8-Hexa CDD (TEF 0.1)	TEQ			0.0285		0.065		0.0635		0.0823
1,2,3,7,8,9-Hexa CDD (TEF 0.1)	TEQ			0.0217		0.07		0.105		0.116
1,2,3,4,6,7,8-Hepta CDD (TEF 0.01)	TEQ			0.0616		0.121		0.126		0.0881
Octa CDD (TEF 0.0003)	TEQ			0.0129		0.0246		0.0310		0.0193
2,3,7,8-Tetra CDF (TEF 0.1)	TEQ			0.005		0.015		0.015		0.015
1,2,3,7,8-Penta CDF (TEF 0.03)	TEQ			0.003		0.0165		0.006		0.015
2,3,4,7,8-Penta CDF (TEF 0.3)	TEQ			0.0638		0.15		0.06		0.09
1,2,3,4,7,8-Hexa CDF (TEF 0.1)	TEQ			0.0367		0.045		0.0750		0.104
1,2,3,6,7,8-Hexa CDF (TEF 0.1)	TEQ			0.0203		0.04		0.0422		0.0884
2,3,4,6,7,8-Hexa CDF (TEF 0.1)	TEQ			0.01		0.045		0.0495		0.102
1,2,3,7,8,9-Hexa CDF (TEF 0.1)	TEQ			0.01		0.065		0.02		0.05
1,2,3,4,6,7,8-Hepta CDF (TEF 0.01)	TEQ			0.0173		0.0125		0.0321		0.0265
1,2,3,4,7,8,9-Hepta CDF (TEF 0.01)	TEQ			0.002		0.0045		0.00417		0.00707
Octa CDF (TEF 0.0003)	TEQ			0.00138		0.00225		0.00184		0.00134
Total PCDDs and PCDFs (TEQ)	TEQ	7.0		0.470		1.44		1.22		1.59

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 17T256372

PROJECT: 1604066-8001

5835 COOPERS AVENUE
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1Y2
 TEL (905)712-5100
 FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: RWDI

ATTENTION TO: Timothy Boc

SAMPLING SITE:

SAMPLED BY:

Dioxins & Furans (Soil, WHO 2005)

DATE RECEIVED: 2017-08-24

DATE REPORTED: 2017-10-05

Surrogate	Unit	SAMPLE DESCRIPTION:		UPWIND	DYEC	DOWNWIND	SOIL DUP
		SAMPLE TYPE:	DATE SAMPLED:	Soil	Soil	Soil	Soil
Acceptable Limits	8689663	2017-08-23	2017-08-23	2017-08-23	2017-08-23	2017-08-23	2017-08-23
8689663	8689664	8689667	8689670				
13C-2378-TCDF	%	40-130	68	63	69	58	
13C-12378-PeCDF	%	40-130	64	69	68	61	
13C-23478-PeCDF	%	40-130	68	69	69	44	
13C-123478-HxCDF	%	40-130	58	58	53	53	
13C-123678-HxCDF	%	40-130	55	58	51	52	
13C-234678-HxCDF	%	40-130	62	61	58	58	
13C-123789-HxCDF	%	40-130	57	61	56	54	
13C-1234678-HpCDF	%	40-130	49	64	48	52	
13C-1234789-HpCDF	%	40-130	50	74	55	56	
13C-2378-TCDD	%	40-130	99	77	100	86	
13C-12378-PeCDD	%	40-130	90	79	93	63	
13C-123478-HxCDD	%	40-130	79	66	77	74	
13C-123678-HxCDD	%	40-130	77	66	68	71	
13C-1234678-HpCDD	%	40-130	65	78	67	74	
13C-OCDD	%	40-130	52	94	57	59	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1 (D&F)
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
 8689663-8689670 The results were corrected based on the surrogate percent recoveries.

Certified By:





Guideline Violation

AGAT WORK ORDER: 17T256372

PROJECT: 1604066-8001

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: RWDI

ATTENTION TO: Timothy Boc

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
8689667	DOWNWIND	ON T1 S RPI/ICC	PAHs (Soil)	Benzo(a)pyrene	µg/g	0.3	0.61

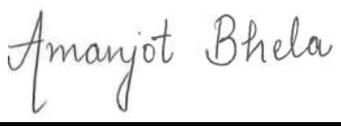
Quality Assurance

CLIENT NAME: RWDI
 PROJECT: 1604066-8001
 SAMPLING SITE:

AGAT WORK ORDER: 17T256372
 ATTENTION TO: Timothy Boc
 SAMPLED BY:

Soil Analysis															
RPT Date: Oct 05, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Metals Scan incl. CrVI (Soil)															
Antimony	8693077		<0.8	<0.8	NA	< 0.8	99%	70%	130%	86%	80%	120%	84%	70%	130%
Arsenic	8693077		4	4	NA	< 1	99%	70%	130%	92%	80%	120%	99%	70%	130%
Barium	8693077		76	77	1.3%	< 2	113%	70%	130%	99%	80%	120%	101%	70%	130%
Beryllium	8693077		<0.5	<0.5	NA	< 0.5	102%	70%	130%	94%	80%	120%	107%	70%	130%
Boron	8693077		7	7	NA	< 5	100%	70%	130%	97%	80%	120%	106%	70%	130%
Cadmium	8693077		<0.5	<0.5	NA	< 0.5	107%	70%	130%	105%	80%	120%	110%	70%	130%
Chromium	8693077		16	17	6.1%	< 2	92%	70%	130%	96%	80%	120%	98%	70%	130%
Chromium, Hexavalent	8693097		<0.2	<0.2	NA	< 0.2	101%	90%	110%	98%	90%	110%	101%	70%	130%
Cobalt	8693077		7.2	7.4	2.7%	< 0.5	94%	70%	130%	94%	80%	120%	90%	70%	130%
Copper	8693077		18	18	0.0%	< 1	105%	70%	130%	116%	80%	120%	144%	70%	130%
Lead	8693077		9	9	0.0%	< 1	102%	70%	130%	97%	80%	120%	98%	70%	130%
Mercury	8693077		<0.10	<0.10	NA	< 0.10	111%	70%	130%	93%	80%	120%	98%	70%	130%
Molybdenum	8693077		<0.5	<0.5	NA	< 0.5	100%	70%	130%	102%	80%	120%	99%	70%	130%
Nickel	8693077		15	16	6.5%	< 1	99%	70%	130%	94%	80%	120%	91%	70%	130%
Phosphorus	8693077		658	688	4.5%	< 5	99%	80%	120%	99%	80%	120%	114%	70%	130%
Selenium	8693077		2.0	1.9	NA	< 0.8	101%	70%	130%	94%	80%	120%	103%	70%	130%
Silver	8693077		<0.4	<0.4	NA	< 0.4	97%	70%	130%	101%	80%	120%	98%	70%	130%
Thallium	8693077		<0.4	<0.4	NA	< 0.4	98%	70%	130%	101%	80%	120%	93%	70%	130%
Tin	8693077		<1	<1	NA	< 1	110%	70%	130%	92%	80%	120%	95%	70%	130%
Vanadium	8693077		26	27	3.8%	< 1	95%	70%	130%	91%	80%	120%	94%	70%	130%
Zinc	8693077		37	37	0.0%	< 5	104%	70%	130%	117%	80%	120%	118%	70%	130%

Comments: NA signifies Not Applicable.
 Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.
 QA Qualifier for metals - Copper: For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.


 Certified By: _____

Quality Assurance

CLIENT NAME: RWDI
 PROJECT: 1604066-8001
 SAMPLING SITE:

AGAT WORK ORDER: 17T256372
 ATTENTION TO: Timothy Boc
 SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 05, 2017			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
PAHs (Soil)															
Fluorene	8676968		< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	91%	50%	140%	86%	50%	140%
Anthracene	8676968		< 0.05	< 0.05	NA	< 0.05	113%	50%	140%	93%	50%	140%	89%	50%	140%
Benzo(a)pyrene	8676968		< 0.05	< 0.05	NA	< 0.05	120%	50%	140%	92%	50%	140%	91%	50%	140%
Benzo(a)fluorene	8676968		< 15	< 15	NA	< 15	NA	70%	130%	98%	50%	150%	92%	50%	150%
Benzo(b)fluorene	8676968		< 15	< 15	NA	< 15	NA	70%	130%	96%	50%	150%	91%	50%	150%

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

Certified By: _____



Quality Assurance

CLIENT NAME: RWDI
 PROJECT: 1604066-8001
 SAMPLING SITE:

AGAT WORK ORDER: 17T256372
 ATTENTION TO: Timothy Boc
 SAMPLED BY:

Ultra Trace Analysis

RPT Date: Oct 05, 2017			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dioxins & Furans (Soil, WHO 2005)															
2,3,7,8-Tetra CDD	1	8693189	< 0.1	< 0.1	NA	< 0.1	91%	40%	130%	NA	40%	130%	94%	40%	130%
1,2,3,7,8-Penta CDD	1	8693189	< 0.1	< 0.1	NA	< 0.1	115%	40%	130%	NA	40%	130%	120%	40%	130%
1,2,3,4,7,8-Hexa CDD	1	8693189	< 0.2	< 0.2	NA	< 0.2	114%	40%	130%	NA	40%	130%	115%	40%	130%
1,2,3,6,7,8-Hexa CDD	1	8693189	< 0.2	< 0.2	NA	< 0.2	123%	40%	130%	NA	40%	130%	130%	40%	130%
1,2,3,7,8,9-Hexa CDD	1	8693189	< 0.2	< 0.2	NA	< 0.2	103%	40%	130%	NA	40%	130%	125%	40%	130%
1,2,3,4,6,7,8-Hepta CDD	1	8693189	< 0.3	< 0.3	NA	< 0.3	120%	40%	130%	NA	40%	130%	97%	40%	130%
Octa CDD	1	8693189	0.9	0.8	11.8%	< 0.3	114%	40%	130%	NA	40%	130%	98%	40%	130%
2,3,7,8-Tetra CDF	1	8693189	< 0.1	< 0.1	NA	< 0.1	117%	40%	130%	NA	40%	130%	123%	40%	130%
1,2,3,7,8-Penta CDF	1	8693189	< 0.1	< 0.1	NA	< 0.1	113%	40%	130%	NA	40%	130%	115%	40%	130%
2,3,4,7,8-Penta CDF	1	8693189	< 0.1	< 0.1	NA	< 0.1	118%	40%	130%	NA	40%	130%	121%	40%	130%
1,2,3,4,7,8-Hexa CDF	1	8693189	< 0.1	< 0.1	NA	< 0.1	117%	40%	130%	NA	40%	130%	119%	40%	130%
1,2,3,6,7,8-Hexa CDF	1	8693189	< 0.1	< 0.1	NA	< 0.1	116%	40%	130%	NA	40%	130%	119%	40%	130%
2,3,4,6,7,8-Hexa CDF	1	8693189	< 0.1	< 0.1	NA	< 0.1	114%	40%	130%	NA	40%	130%	123%	40%	130%
1,2,3,7,8,9-Hexa CDF	1	8693189	0.1	0.1	0.0%	< 0.1	119%	40%	130%	NA	40%	130%	122%	40%	130%
1,2,3,4,6,7,8-Hepta CDF	1	8693189	< 0.1	< 0.1	NA	< 0.1	120%	40%	130%	NA	40%	130%	104%	40%	130%
1,2,3,4,7,8,9-Hepta CDF	1	8693189	< 0.1	< 0.1	NA	< 0.1	123%	40%	130%	NA	40%	130%	121%	40%	130%
Octa CDF	1	8693189	< 0.5	< 0.5	NA	< 0.5	100%	40%	130%	NA	40%	130%	102%	40%	130%

Certified By: _____



QA Violation

 CLIENT NAME: RWDI
 PROJECT: 1604066-8001

 AGAT WORK ORDER: 17T256372
 ATTENTION TO: Timothy Boc

RPT Date: Oct 05, 2017			REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Sample Description	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
				Lower	Upper		Lower	Upper		Lower	Upper
Metals Scan incl. CrVI (Soil)											
Copper		UPWIND	105%	70%	130%	116%	80%	120%	144%	70%	130%

Comments: NA signifies Not Applicable.

Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

QA Qualifier for metals - Copper: For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

Method Summary

 CLIENT NAME: RWDI
 PROJECT: 1604066-8001
 SAMPLING SITE:

 AGAT WORK ORDER: 17T256372
 ATTENTION TO: Timothy Boc
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Barium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium, Hexavalent	INOR-93-6029	SM 3500 B; MSA Part 3, Ch. 25	SPECTROPHOTOMETER
Cobalt	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Copper	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Lead	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Mercury	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Nickel	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Phosphorus	MET-93-6103	EPA SW 846-3050B & 6020A	ICP-MS
Selenium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Silver	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Thallium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Tin	MET-93-6103	EPA SW 846 3050B & 6020A	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Zinc	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Trace Organics Analysis			
Fluorene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(a)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(a)fluorene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(b)fluorene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Moisture Content	ORG-91-5106	EPA SW-846 3541 & 8270	BALANCE
Chrysene-d12	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS

Method Summary

 CLIENT NAME: RWDI
 PROJECT: 1604066-8001
 SAMPLING SITE:

 AGAT WORK ORDER: 17T256372
 ATTENTION TO: Timothy Boc
 SAMPLED BY:

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

Method Summary

CLIENT NAME: RWDI
 PROJECT: 1604066-8001
 SAMPLING SITE:

AGAT WORK ORDER: 17T256372
 ATTENTION TO: Timothy Boc
 SAMPLED BY:

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

Methyl Mercury Results

Flett Research Ltd.

440 DeSalaberry Ave. Winnipeg, MB R2L 0Y7

Fax/Phone (204) 667-2505

E-mail: flett@flettresearch.ca Webpage: http://www.flettresearch.ca

CLIENT: AGAT Labs - Mississauga: 17T256372

5835 Coopers Avenue

Mississauga, ON L4Z 1Y2

Date Received: September 7, 2017

Sampling Date: August 23, 2017

Matrix: Sediment (wet)

Transaction ID: 593

PO/Contract No.:

Date Analysed: September 11, 2017

Analyst(s): Xiang W.

Analytical Method: M10240: Methyl Mercury in Sediment by Distillation, Aqueous Ethylation, Purge and Trap, and CVAFS with Automated Instruments (Version 2)
P:Methyl Mercury/Method and SOPs/M10240 MeHg in Sediment by Distillation - Automated method.doc

Detection Limit: 0.4 ng/g (ML)

MDL=0.1 ng/g

The MDL was determined based on greater than 7 replicates of analytical blanks (98% confidence level) and a 200 mg wet sample size.

For reporting purposes results will be flagged below the ML which is considered a practical quantitation limit.

Estimated Uncertainty: The estimated uncertainty of this method has been determined to be ± 20% at a concentration level of 0.1 and 170 ng/g (95% confidence)

Results authorized by Dr. Robert J. Flett, Chief Scientist

QUALITY DATA

Blanks		pg of MeHg in whole ethylation EPA vial	Gross Peak Area	Mean Ethylation Blank (ng/L)			
	Ethylation blank (H ₂ O+Reagent)	0.39	1625	0.01			
Mean Eth. Blank (last 30 runs)	0.29		0.01				
Standards		Net pg MeHg in whole Ethylation EPA vial	Gross Peak Area	Net Corrected MeHg Std Calibration Factor (units / pg)			
	Method Blank 1	0.01	1664				
	Method Blank 2	0.04	1804				
	Method Blank 3	-0.01	1592				
	Mean Method Blank	0.01					
Standards		MeHg Standard Added to Ethylation EPA Vial (pg CH ₃ Hg)	Gross Peak Area	Net Corrected MeHg Std Calibration Factor (units / pg)			
Mean Value				7067			
Spike Recovery	Sample Identification	Sample Type	Gross Peak Area	% CH ₃ Hg Recovery Used for Calculations	Wet Sample Mass (g)	Net CH ₃ Hg as Hg (ng/g-Wet Wt)	CH ₃ Hg Recovery (%)
	UPWIND (8689663)	MS2	1476017	100%	0.473	10	94.5
	UPWIND (8689663)	MS2D	1493553	100%	0.538	9	95.1
	Mean of Recoveries						94.8
QC Samples	FRES02 ID1201 (27.4± 3.6 ng/g)	Repeat Aliquot	842447	100%	0.116		86.9
	FRES02 ID1201 (27.4± 3.6 ng/g)		823695	100%	0.116		84.9
	Mean of FRES02						85.9
	Alternate Source Standard (A.S.S.)	A.S.S. - Alfa ID1302 (1000 ng/L)	224439	100%		<- Net CH ₃ Hg as Hg (ng/L)	107.2

LAB ID	Sampling Details	Sample ID	Date Sampled	Sample Type	Gross Peak Area	% CH ₃ Hg Recovery Used for Calculations	Weighed Wet Sample Mass (g)	Net CH ₃ Hg as Hg (ng/g) Wet Wt. [recovery corrected]
83690	UPWIND	8689663	August 23, 2017		30461	94.8	0.5300	~ 0.19
83691	DYEC	8689664	August 23, 2017		41304	94.8	0.5460	~ 0.25
83692	DOWNWIND	8689667	August 23, 2017		37471	94.8	0.4830	~ 0.26
83693	SOIL DUP	8689670	August 23, 2017	DupA1	22975	94.8	0.3490	~ 0.21
83693	SOIL DUP	8689670	August 23, 2017	DupA2	24707	94.8	0.3680	~ 0.21

* : See 'Comments' section above for discussion.

Q:\Clients A-LAGAT Labs - Mississauga\2017(593)\Methyl Mercury\MTSEDW091517XW2.xls

- : Result below the official detection limit for this analyte in this matrix.

Dup : Duplicate - two subsamples of the same sample carried through the analytical procedure in an identical manner.

This test report shall not be reproduced, except in full, without written approval of the laboratory.
Note: Results relate only to the items tested.



ISO/IEC 17025:2005 Accredited with the Canadian Association for Laboratory Accreditation

CLIENT NAME: RWDI
650 WOODLAWN ROAD WEST
GUELPH, ON N1K1B8
(519) 823-1311

ATTENTION TO: Timothy Boc

PROJECT: 1604066.8001

AGAT WORK ORDER: 17T273944

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

DATE REPORTED: Oct 26, 2017

PAGES (INCLUDING COVER): 5

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

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



Certificate of Analysis

AGAT WORK ORDER: 17T273944

PROJECT: 1604066.8001

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: RWDI

ATTENTION TO: Timothy Boc

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2017-10-18

DATE REPORTED: 2017-10-26

SAMPLE DESCRIPTION: DOWNWIND

SAMPLE TYPE: Soil

DATE SAMPLED: 2017-10-18

Parameter	Unit	G / S	RDL	8835098
Benzo(a)pyrene	µg/g	0.3	0.05	0.28
Moisture Content	%		0.1	27.3
Surrogate	Unit	Acceptable Limits		
Chrysene-d12	%	50-140		119

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8835098

Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

Certified By:

Quality Assurance

CLIENT NAME: RWDI
 PROJECT: 1604066.8001
 SAMPLING SITE:

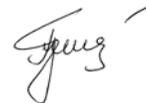
AGAT WORK ORDER: 17T273944
 ATTENTION TO: Timothy Boc
 SAMPLED BY:

Trace Organics Analysis															
RPT Date: Oct 26, 2017			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - PAHs (Soil)															
Benzo(a)pyrene	8831399		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	95%	50%	140%	95%	50%	140%

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

Certified By: _____



Method Summary

CLIENT NAME: RWDI
 PROJECT: 1604066.8001
 SAMPLING SITE:

AGAT WORK ORDER: 17T273944
 ATTENTION TO: Timothy Boc
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzo(a)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Moisture Content	ORG-91-5106	EPA SW-846 3541 & 8270	BALANCE
Chrysene-d12	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS



AGAT

Laboratories

1 M 14

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only

Work Order #: 17T273944

Cooler Quantity: _____
Arrival Temperatures: 3.2 | 3.0 | 3.0
3.0 | 3.0 | 3.0
Custody Seal Intact: Yes No N/A
Notes: _____

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: RWD1
Contact: TIMOTHY BOG
Address: 600 SOUTHGATE DR.
GUELPH ON N1G 4P6
Phone: 519 823-1311 x 2312 Fax: 519 823-1316
Reports to be sent to:
1. Email: TFB@RWD1.COM
2. Email: PEJ@RWD1.COM

Regulatory Requirements:

No Regulatory Requirement
(Please check all applicable boxes)
 Regulation 153/04
Table 1 Sewer Use Regulation 558
 Ind/Com Sanitary CCME
 Res/Park Storm Prov. Water Quality Objectives (PWQO)
 Agriculture Other
Soil Texture (Check One) Region: _____ Indicate One
 Coarse MISA Fine Indicate One

Turnaround Time (TAT) Required:

Regular TAT 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
 3 Business Days 2 Business Days Next Business Day
OR Date Required (Rush Surcharges May Apply): _____

Project Information:

Project: K604066-8001
Site Location: DYEC
Sampled By: TFB
AGAT Quote #: 528-203 PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis

Is this submission for a Record of Site Condition?

Yes No

Report Guideline on Certificate of Analysis

Yes No

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays
For 'Same Day' analysis, please contact your AGAT CPM

Invoice Information:

Bill To Same: Yes No
Company: REGION OF DURHAM
Contact: _____
Address: _____
Email: _____

Sample Matrix Legend

B Biota
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Field Filtered - Metals, hg. CrVI

Metals and Inorganics	0. Reg 153	Regulation/Custom Metals	Volatiles:	CCME Fractions 1 to 4	ABNS	PAHs	PCBs:	Organochlorine Pesticides	TCLP:	Sewer Use
<input type="checkbox"/> All Metals <input type="checkbox"/> 153 Metals (excl. Hydrides) <input type="checkbox"/> Hydride Metals <input type="checkbox"/> 153 Metals (incl. Hydrides)		<input type="checkbox"/> TP <input type="checkbox"/> NH ₄ <input type="checkbox"/> TKN <input type="checkbox"/> NO ₃ <input type="checkbox"/> NO ₂ <input type="checkbox"/> NO ₃ +NO ₂	<input type="checkbox"/> VOC <input type="checkbox"/> BTEX <input type="checkbox"/> THM				<input type="checkbox"/> Total <input type="checkbox"/> Aroclors		<input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNS <input type="checkbox"/> B(a)P <input type="checkbox"/> PCBs	<u>BENZO(a)PYRENE</u>
ORPs: <input type="checkbox"/> B-HWS <input type="checkbox"/> Cl ⁻ <input type="checkbox"/> CN ⁻ <input type="checkbox"/> C ⁴⁺ <input type="checkbox"/> EC <input type="checkbox"/> FOC <input type="checkbox"/> Hg <input type="checkbox"/> pH <input type="checkbox"/> SAR										<input checked="" type="checkbox"/>

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N
<u>DOWNWIND</u>	<u>18 OCT-17</u>	<u>9:00</u>	<u>1</u>	<u>S</u>		

Samples Relinquished By (Print Name and Sign):
Timothy Bog *ts*
Date: 19-OCT-17
Time: _____

Samples Received By (Print Name and Sign):
Way *WAA*
Date: 10/18/17
Time: 9:30

Samples Relinquished By (Print Name and Sign):
Way *WAA*
Date: 10/18/17
Time: 11:35

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No: **T 057501**