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## Environmental Site Remediation Program

2980, 3054, 3060 & 3080 Navan Road  
6101 Renaud Road  
Ottawa, Ontario

Prepared For

Caivan Communities

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## EXECUTIVE SUMMARY

### Assessment

Paterson Group monitored the removal of impacted soil from the properties addressed 2980, 3054, 3080 Navan Road and 6101 Renaud Road in the City of Ottawa, Ontario between November 2020 and March 2021.

Paterson monitored the excavation of contaminated soil and determined the limits of the excavations using visual screening methods and/or vapour screening, in addition to analytical testing. Metals, PHC and PAH impacted soil was removed from the northwest portion of the subject site (EX1). Impacted soil consisting of fill material with fragments of building debris, including brick, mortar, concrete, asphalt and organics/wood was identified throughout the excavation to depths ranging from approximately 0.5m to 15m below original grade. Impacted soil was hauled directly off-site to an approved waste disposal facility.

Soil impacted with PHCs was removed from the southeast portion of the subject site from beneath the footprint of the former on-site garage/office building (EX2) to a depth of approximately 3.0 m below original grade.

Soil impacted with metals was removed from the vicinity of TP9 (EX3) in the west-central portion of the subject site, extending to a depth of approximately 2.0m below original grade. The exceedance in this area was considered to be naturally occurring and not as a result of anthropogenic soil impacts.

Soil impacted with metals and PAHs was removed from the vicinity of TP31 (EX4) (to the northwest of EX3) in the west portion of the subject site, extending to a depth of approximately 4.5m below original grade. The metal impacts in the area of TP31 are considered to be naturally occurring and not as a result of anthropogenic soil impacts.

Soil impacted with PAHs was removed from the vicinity of BH2 (EX5) (east of EX4) in the west portion of the subject site, extending to a depth of approximately 2.5m below original grade.

Full horizontal and vertical delineation of soil impacts was obtained during the remediation program. Based on analytical testing of both soil and groundwater recovered from within the excavations that groundwater beneath the property complies with MECP Table 2 standards. Therefore PHC, PAH and metal impacts are not expected to have migrated into the groundwater.

Approximately 28,000mt of contaminated soil was removed from the subject property and disposed of at the Waste Connections Canada Navan Road Landfill in Ottawa, Ontario.

Groundwater levels at the subject property were measured within the native material at depths ranging from approximately 0 to 0.66 m below grade, during the March 2021 groundwater monitoring event. As noted above, based on the findings of the Phase II ESA, the groundwater beneath the subject site complies with the MECP Table 2 standards.

Several naturally occurring metals (predominantly Cobalt and Vanadium) were identified in the clay and the clay fill on the site. The identification of these metals above the MECP Table 2 Standards did occur and attempts were made to remediate or resample and average the results. In some cases, this did not occur. The presence of elevated concentrations of Cobalt and Vanadium in the insitu silty clay on site is not considered to exceed the MECP Table 2 Standards and is considered to be consistent with the known soil chemistry and the National Capitol Region.

## **Conclusion**

Based on our field observations combined with the analytical test results, in our opinion, all previously identified impacted soil has been removed from the Phase II Property. No further remedial work is recommended at this time. A Record of Site Condition filing for the property is being prepared at this time for the change in land use from Commercial to Residential.



## 1.0 INTRODUCTION

Between November 2020 and March 2021 Paterson monitored an environmental site remediation program for the properties addressed 2980, 3054, 3080 Navan Road and 6101 Renaud Road in the City of Ottawa, Ontario. The findings of the remediation program are detailed in this report.

The Phase II property is located on the south side of Navan Road west of the Page Road intersection, in the City of Ottawa, Ontario. The remediation area consists of an excavation beneath the former garage/office building and an excavation in the northwestern corner of the Phase II Property.

The location of the Phase II Property is shown on Figure 1 – Key Plan, appended to the Phase II ESA report.

### 1.1 Background

Paterson Group conducted Phase I and Phase II Environmental Site Assessments for the subject property in the summer of 2020. Based on the results of the Phase I-Environmental Site Assessment (ESA), several areas of potential environmental concern (APECs) were identified on the Phase I Property, resulting from the following potentially contaminating activities (PCAs): former gasoline and diesel ASTs near the former garage/office building, a former garage/office building on the eastern portion of the Phase II ESA property, a former gasoline/diesel UST nest located near the former garage/office building, fill material of unknown quality (located throughout the Phase II ESA property), and the former 3 ASTs located within the garage/office building. A Phase II ESA was recommended to investigate these environmental concerns.

Based on the findings of the Phase II ESA, the fill material in the vicinity of TP9, TP12, TP13, and BH2 was impacted with PHCs, metals and/or PAHs above the Ontario Ministry of the Environment, Conservation and Parks (MECP) Table 2 standards. Based on the previously completed subsurface investigation, the northwestern portion of the Phase II Property was impacted with PHCs, Metals and PAHs.

Groundwater in the area of the former garage/office building was previously identified as potentially impacted with PHCs above the MECP Table 2 standards. These historical groundwater results were unable to be confirmed by Paterson during any sampling events, both prior to and following the soil remediation. The historic groundwater results are not considered to be valid and the groundwater

in the area of the former garage/office building is considered to be in compliance with the MECP Table 2 Standards.

## **2.0 SOIL REMEDIATION PROGRAM**

A representative sample of impacted soil obtained by Paterson on September 29, 2020, was submitted to Paracel Laboratories of Ottawa for a leachate analysis in accordance with Ontario Regulation 347/558. Based on the results of the testing, the impacted material was classified as solid non-hazardous waste.

Paterson personnel were on-site to monitor the removal of the metal, petroleum hydrocarbon and polycyclic aromatic hydrocarbon impacted soil from the Phase II ESA property and assist with the segregation of inert material. Taggart Construction Ltd. was retained as the excavation contractor for the remediation program. All impacted soil was excavated using hydraulic excavators and hauled off-site to the Waste Connections Canada Landfill on Navan Road. The remedial program consisted of 5 separate remedial excavations; Excavation 1 (EX1) located along the northwest portion of the subject site, Excavation 2 (EX2) located in the footprint of the former garage/office building, and excavations located at TP9, BH2, and TP31. The excavation limits within are illustrated on the attached drawings.

Upon completion of the excavation program the impacted soil had been delineated both horizontally and vertically. Groundwater monitoring wells were installed in EX1 and EX2 to confirm the groundwater quality. Approximately 28,000 mt of contaminated soil was sent to the Waste Connections Canada landfill on Navan Road, in Ottawa, Ontario.

### **Excavation 1**

Excavation 1 (EX1) commenced at the northwesternmost point of the Phase II ESA property. Impacted soil (historically imported fill material) extended from near ground surface to the native soil between 3 to 15m below original ground surface. The excavation was terminated at the northern and the eastern property boundaries, due to existing stratigraphy at the site a continuous western wall was not able to be sampled (part of the excavation continued until the face of the slope was excavated). Confirmatory soil samples were collected on the base, south, and western wall of the remediation excavation.

Metal, PHC, and PAH impacted fill material was identified within EX1. The fill material primarily consisted of brown silty sand material or brown silty clay with fragments of building debris, including brick and mortar, concrete, asphalt and

organics/wood, and extended throughout the excavation to depths ranging from approximately 0.5m to 15m below original grade. Impacted soil was hauled directly off-site to an approved waste disposal facility.

Sidewall and base samples were collected from within EX1 for visual screening and analytical testing. Based the results of the preliminary screening, samples were submitted for analytical testing for confirmatory purposes.

The final floor area of EX1 was approximately 6100m<sup>2</sup>. A total of 11 sidewall samples and 20 base samples were analysed for confirmatory purposes. Based on the analytical test results, the impacted soil was considered to be horizontally and vertically delineated. No further soil remediation work is considered to be required in the northwest corner of the Phase II ESA property.

## **Excavation 2**

Excavation 2 (EX2) was completed at the location of the former on-site garage/office building (southeast portion of the subject site). Following the demolition of the building impacted soil was identified. The excavation continued in all directions until no visual or olfactory evidence of impacted soil was identified. The impacted soil was loaded into trucks and hauled to the licensed waste disposal facility. Fill material and soil were excavated from near surface to native silty clay material, approximately 3.0 m below the original grade, and hauled directly off-site to an approved waste disposal facility.

The fill material consisted largely of brown silty sand with gravel, traces of organics and brick fragments in conjunction with strong PHC odors identified throughout. Based on visual and olfactory observations in combination with vapour measurements, worst case base and sidewall samples were selected for confirmatory analysis.

The final floor area of EX2 was approximately 200m<sup>2</sup>. A total of 7 sidewall samples and 4 base samples were analysed for confirmatory purposes. Based on the analytical test results, the impacted soil was considered to be horizontally and vertically delineated. No further soil remediation work is considered to be required in the area of the former garage/office building.

## **Excavation 3 – TP9**

Excavation 3-TP9 (EX3) was completed at TP9 in the west – central portion of the subject site and was approximately 5m wide to the north, south, east and west until no visual indications of contamination were observed within the surrounding soil. Cobalt and vanadium impacts were previously identified

exceeding the MECP Table 2 Standards in this test pit location at a depth of 0.8-1.1m. Fill material and soil were excavated from near surface to native silty clay material, approximately 2.0m below the original grade. The excavated material was hauled directly off-site to an approved waste disposal facility.

The fill material consisted largely of brown silty sand with gravel, shale, traces of organics and brick fragments. Based on visual and olfactory observations in combination with vapour measurements, worst case base and sidewall samples were selected for confirmatory analysis.

The final floor area of EX3 was approximately 100m<sup>2</sup>. A total of 4 sidewall samples and 2 base samples were analysed for confirmatory purposes. Based on the analytical test results, the impacted soil was considered to be horizontally and vertically delineated. No further soil remediation work is considered to be required in the area of TP9.

#### **Excavation 4 – TP31**

Excavation 4-TP31 (EX4) completed at TP31 (to the northwest of EX3) and was approximately 6m wide to the north and south and 8 m to east and west until no visual indications of contamination were observed within the surrounding soil. Vanadium, Benzo[a]pyrene and fluorene impacts were previously identified to be in excess of the MECP Table 2 Standards in this test pit location at a depth of 4.2-4.5m. Fill material and soil were excavated from near surface to native silty clay material, approximately 4.5m below the original grade, and hauled directly off-site to an approved waste disposal facility.

The fill material consisted largely of brown silty sand with gravel, shale, traces of organics and brick fragments. Based on visual and olfactory observations in combination with vapour measurements, worst case base and sidewall samples were selected for confirmatory analysis.

The final floor area of EX4 was approximately 48m<sup>2</sup>. A total of 4 sidewall samples and 2 base samples were analysed for confirmatory purposes. Based on the analytical test results, the impacted soil was considered to be horizontally and vertically delineated. No further soil remediation work is considered to be required in the area of TP31.

#### **Excavation 5 – BH2**

Excavation 5-BH2 (EX5) completed at BH2 east of EX4 (in the west portion of the subject site) and was approximately wide 5m to the north and south and 6 m to east and west until no visual indications of contamination were observed within

the surrounding soil. PAH impacts were previously identified to be in excess of the MECP Table 2 Standards in this bore hole location at a depth of 1.52-2.13. Fill material and soil were excavated from near surface to native silty clay material, approximately 2.5m below the original grade, and hauled directly off-site to an approved waste disposal facility.

The fill material consisted largely of brown silty sand with gravel, shale, traces of organics and brick fragments. Based on visual and olfactory observations in combination with vapour measurements, worst case base and sidewall samples were selected for confirmatory analysis.

The final floor area of EX5 was approximately 25m<sup>2</sup>. A total of 4 sidewall samples and 2 base samples were analysed for confirmatory purposes. Based on the analytical test results, the impacted soil was considered to be horizontally and vertically delineated. No further soil remediation work is considered to be required in the area of BH2.

### **3.0 FREE PRODUCT**

Groundwater was encountered within the remedial excavations at varying depths throughout the subject site. No free product was identified during the groundwater testing or during the soil remediation program. Free product was not encountered on site during any environmental investigations.

## **4.0 CONFIRMATORY SAMPLING AND ANALYSIS**

### **4.1 Confirmatory Soil Sampling Program**

The soil sampling protocols followed during this remedial program were in general accordance with the MECP document entitled "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", dated May 1996.

All soil samples were submitted to a preliminary screening procedure which included visual and olfactory screening for colour and odour, and in certain cases a screening with an RKI Eagle combustible gas detector. The detection limit of the RKI Eagle is 5ppm, with a precision of +/- 5ppm.

The soil vapours were measured by inserting the analyzer probe into the nominal headspace above the soil sample. Samples were then agitated, and the peak readings recorded. Typically, the soil samples with the highest combustible vapour readings are selected for analytical testing. Sample selection was also

based on visual and olfactory observations in combination with sample location, in accordance with the prescribed sample density outlined in Ontario Regulation (O.Reg.) 153/04. Contaminants analyzed were selected based on the contaminants of concern identified during the Phase II – ESA.

<b>Excavation ID</b>	<b>Approximate Floor Area (m<sup>2</sup>)</b>	<b>Base Samples</b>	<b>Wall Samples</b>
EX1	6100	20	11
EX2	275	4	7
EX3	25	2	4
EX4	48	2	4
EX5	25	2	4

Screening samples selected for analysis and analytical test results are presented on Drawing PE4937-6 - Remedial Excavation Testing Plan.

## 4.2 Analytical Testing

The remediation standards for the subject property were obtained from Table 2 of the document entitled “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act”, prepared by the Ontario Ministry of Environment, Conservation and Parks, April 15, 2011. The MECP Table 2 Standards are based on the following considerations:

- Fine-grained soil conditions;
- Full depth generic site condition;
- Potable groundwater conditions; and
- Residential land use.

Paracel Laboratories (Paracel) of Ottawa, performed the laboratory analysis of the samples submitted for testing. Paracel is a member of the Standards Council of Canada/Canadian Association for Environmental Analytical Laboratories (SCC/CAEAL). Paracel is accredited and certified by SCC/CAEAL for specific tests registered with the association.

Several grain sized analysis samples were submitted to confirm the fine-grained nature of the soils, this analysis, combined with the observations made on site make the application of the fine-grained standards appropriate.

## **Soil**

A leachate analysis was completed for a representative sample of impacted soil, in accordance with O.Reg. 347/558, for off-site disposal purposes. A copy of the laboratory Certificate of Analysis is appended to this report.

### **Excavation EX1**

Based on our field observations in combination with the results of the combustible vapour screening, confirmatory wall and base samples were submitted for laboratory analysis of Metals, PAHs, BTEX, and PHC parameters. The results of the analysed soil samples are presented in Table EX1 appended to this report. Copies of the laboratory Certificates of Analysis are appended to this report.

Samples SW2, SW4, SW6, SW6(2), SW8, SW10, SW10(2), WW6, WW8, WW8(2), WW9, WW10, GS5, GS6, GS8, GS8(2), GS9, GS10, GS11, GS12, GS12(2), GS13, GS14, GS14(2), GS14(3), GS15, GS16, GS17, GS18, GS19, GS20, GS21, GS22, GS24, GS26, GS29, GS29(2) represent final confirmatory samples of the sidewalls and base of EX1. The northern and eastern sidewalls of the excavation were continued to the property lines; therefore, no confirmatory soil samples were able to be collected along these walls. Additionally, due to the natural stratigraphy in this portion of the subject site, a small portion of the excavation had no western wall. Based on the analytical test results all of the Metals, PAHs, BTEX and PHCs identified in the final confirmatory wall and base samples are in compliance with the MECP Table 2 standards.

No further environmental remediation work is considered to be required in the area of the former garage/office building.

### **Excavation EX2**

Based on our field observations in combination with the results of the combustible vapour screening, confirmatory wall and base samples were submitted for laboratory analysis of BTEX and PHC parameters. The results of the analysed soil samples are presented in Table EX2 appended to this report. Copies of the laboratory Certificates of Analysis are appended to this report.

Samples EX2-B1, EX2-B6, EX2-B8, EX2-B10, EX2-WW3, EX2-SW2, EX2-SW4, EX2-EW1, EX2-EW5, EX2-NW1 and EX2-NW3 represent final confirmatory samples of the sidewalls and base of EX2. Based on the analytical test results all BTEX and PHC parameters are in compliance with the MECP Table 2 Standards.



No further environmental remediation work is considered to be required in the area of the former garage/office building.

### **Excavation 3 – TP9**

Based on our field observations in combination with the results of the combustible vapour screening, confirmatory wall and base samples were submitted for laboratory analysis of Metals, PAHs, BTEX, and PHC parameters. The results of the analysed soil samples are presented in Table EX3, appended to this report. Copies of the laboratory Certificates of Analysis are appended to this report.

Samples TP9-B1, TP9-B2, TP9-NW1, TP9-EW1, TP9-SW1 and TP9-WW1 represent final confirmatory samples of the sidewalls and base of EX2. Based on the analytical test results all Metals, PAHs, BTEX, and PHC parameters are in compliance with the MECP Table 2 Standards.

No further environmental remediation work is considered to be required in the area of the TP9.

### **Excavation 4 – TP31**

Based on our field observations in combination with the results of the combustible vapour screening, confirmatory wall and base samples were submitted for laboratory analysis of Metals, PAHs, BTEX, and/or PHC parameters. The results of the analysed soil samples are presented in Table EX4. Copies of the laboratory Certificates of Analysis are appended to this report.

Various concentrations of metals and PAHs were identified at concentrations exceeding the MECP Table 2 standards in various samples throughout EX4. These samples and their surrounding area were subsequently removed during additional excavation in the necessary direction and appropriate depth. Samples TP31-NW2, TP31-EW2, TP31-SW4, TP31-WW4, TP31-B2 and TP31-B2 are the soil samples which remain on site. All other soil samples previously identified to exceed the applicable standards have been removed.

No further environmental remediation work is considered to be required in the area of TP31.



## **Excavation 5 – BH2**

Based on our field observations in combination with the results of the combustible vapour screening, confirmatory wall and base samples were submitted for laboratory analysis of metals, PAHs, BTEX, and PHC parameters. The results of the analysed soil samples are presented in Table EX5. Copies of the laboratory Certificates of Analysis are appended to this report.

Various concentrations of metals, PAHs and PHCs were identified at concentrations exceeding the MECP Table 2 standards in various samples throughout EX5. These samples and their surrounding area were subsequently removed during additional excavation in the necessary direction and appropriate depth. Samples BH2-NW1, BH2-EW2, BH2-SW2, BH2-WW2, BH2-B1, and BH2-B2 represent final confirmatory samples which remain on site. All other soil samples previously identified to exceed the applicable standards have been removed.

No further environmental remediation work is considered to be required in the area of TP31..

### **4.3 Quality Assurance/Quality Control**

Duplicates of soil samples were collected and submitted for analytical testing. The duplicate samples were collected with the intent of calculating the relative percent difference (RPD) between duplicate sample values, as a way of assessing the quality of the analytical test results. No issues regarding the QA/QC results were identified during the data review.

Furthermore, all samples submitted during the remediation activities were handled in accordance with the Analytical Protocol with respect to holding time, preservation method, storage requirement and container type, and as per Subsection 47(3) of O.Reg. 153/04, as amended by O.Reg. 269/11, a Certificate of Analysis has been received for each sample submitted for analysis and all Certificates of Analysis are appended to this report.

## 5.0 CONCLUSIONS

### 5.1 Assessment

Paterson Group monitored the removal of impacted soil from the properties addressed 2980, 3054, 3080 Navan Road and 6101 Renaud Road in the City of Ottawa, Ontario between November 2020 and March 2021.

Paterson monitored the excavation of contaminated soil and determined the limits of the excavations using visual screening methods and/or vapour screening, in addition to analytical testing. Metals, PHC and PAH impacted soil was removed from the northwest portion of the subject site (EX1). Impacted soil consisting of fill material with fragments of building debris, including brick, mortar, concrete, asphalt and organics/wood was identified throughout the excavation to depths ranging from approximately 0.5m to 15m below original grade. Impacted soil was hauled directly off-site to an approved waste disposal facility.

Soil impacted with PHCs was removed from the southeast portion of the subject site from beneath the footprint of the former on-site garage/office building (EX2) to a depth of approximately 3.0 m below original grade.

Soil impacted with metals was removed from the vicinity of TP9 (EX3) in the west-central portion of the subject site, extending to a depth of approximately 2.0m below original grade. The exceedance in this area was considered to be naturally occurring and not as a result of anthropogenic soil impacts.

Soil impacted with metals and PAHs was removed from the vicinity of TP31 (EX4) (to the northwest of EX3) in the west portion of the subject site, extending to a depth of approximately 4.5m below original grade. The metal impacts in the area of TP31 are considered to be naturally occurring and not as a result of anthropogenic soil impacts.

Soil impacted with PAHs was removed from the vicinity of BH2 (EX5) (east of EX4) in the west portion of the subject site, extending to a depth of approximately 2.5m below original grade.

Full horizontal and vertical delineation of soil impacts was obtained during the remediation program. Based on analytical testing of both soil and groundwater recovered from within the excavations that groundwater beneath the property complies with MECP Table 2 standards. Therefore PHC, PAH and metal impacts are not expected to have migrated into the groundwater.

Approximately 28,000mt of contaminated soil was removed from the subject property and disposed of at the Waste Connections Canada Navan Road Landfill in Ottawa, Ontario.

Groundwater levels at the subject property were measured within the native material at depths ranging from approximately 0 to 0.66 m below grade, during the March 2021 groundwater monitoring event. As noted above, based on the findings of the Phase II ESA, the groundwater beneath the subject site complies with the MECP Table 2 standards.

Several naturally occurring metals (predominantly Cobalt and Vanadium) were identified in the clay and the clay fill on the site. The identification of these metals above the MECP Table 2 Standards did occur and attempts were made to remediate or resample and average the results. In some cases, this did not occur. The presence of elevated concentrations of Cobalt and Vanadium in the insitu silty clay on site is not considered to exceed the MECP Table 2 Standards and is considered to be consistent with the known soil chemistry and the National Capitol Region.

## **5.2 Conclusion**

Based on our field observations combined with the analytical test results, in our opinion, all previously identified impacted soil has been removed from the Phase II Property. No further remedial work is recommended at this time. A Record of Site Condition filing for the property is being prepared at this time for the change in land use from Commercial to Residential.

## 6.0 STATEMENT OF LIMITATIONS

The results of the sampling program are based on our field observations, preliminary screening results, and analytical test results obtained at specific test locations which can only be extrapolated to an undefined limited area around each location. The test results may not reflect conditions at other locations or areas beyond the extent of the excavation.

This report was prepared for the sole use of Caivan Communities. Permission from Caivan Communities and Paterson Group will be required to release this report to any other party.

**Paterson Group Inc.**

Jeremy Camposarcone, B.Eng.



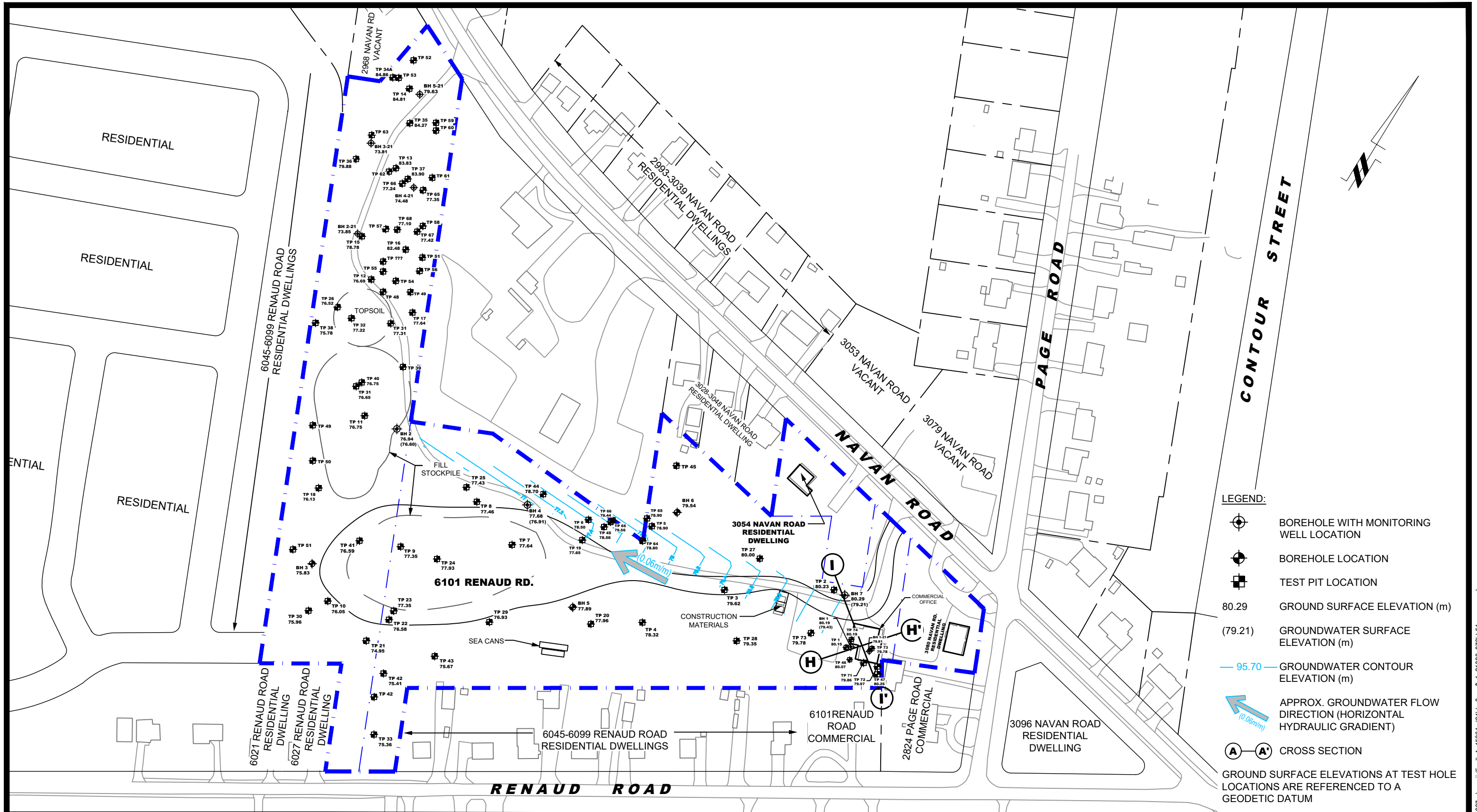
Michael Beaudoin, P.Eng., QP<sub>ESA</sub>

**Report Distribution:**

- Caivan Communities
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# **FIGURES**

**DRAWING PE4937 – REMEDIAL EXCAVATION TESTING PLANS**



- LEGEND:**
- BOREHOLE WITH MONITORING WELL LOCATION
  - BOREHOLE LOCATION
  - TEST PIT LOCATION
  - 80.29 GROUND SURFACE ELEVATION (m)
  - (79.21) GROUNDWATER SURFACE ELEVATION (m)
  - 95.70 — GROUNDWATER CONTOUR ELEVATION (m)
  - APPROX. GROUNDWATER FLOW DIRECTION (HORIZONTAL HYDRAULIC GRADIENT)
  - CROSS SECTION
- GROUND SURFACE ELEVATIONS AT TEST HOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM

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NO.	REVISIONS	DATE	INITIAL

**CAIVAN COMMUNITIES**  
**PHASE II - ENVIRONMENTAL SITE ASSESSMENT**  
**RENAUD ROAD AT NAVAN ROAD**

OTTAWA, ONTARIO

Title: **TEST HOLE LOCATION AND GROUNDWATER CONTOUR PLAN**

Scale:	1:2000	Date:	06/2021
Drawn by:	YA	Report No.:	PE4937-2
Checked by:	MW	Dwg. No.:	<b>PE4937-3</b>
Approved by:	MSD	Revision No.:	

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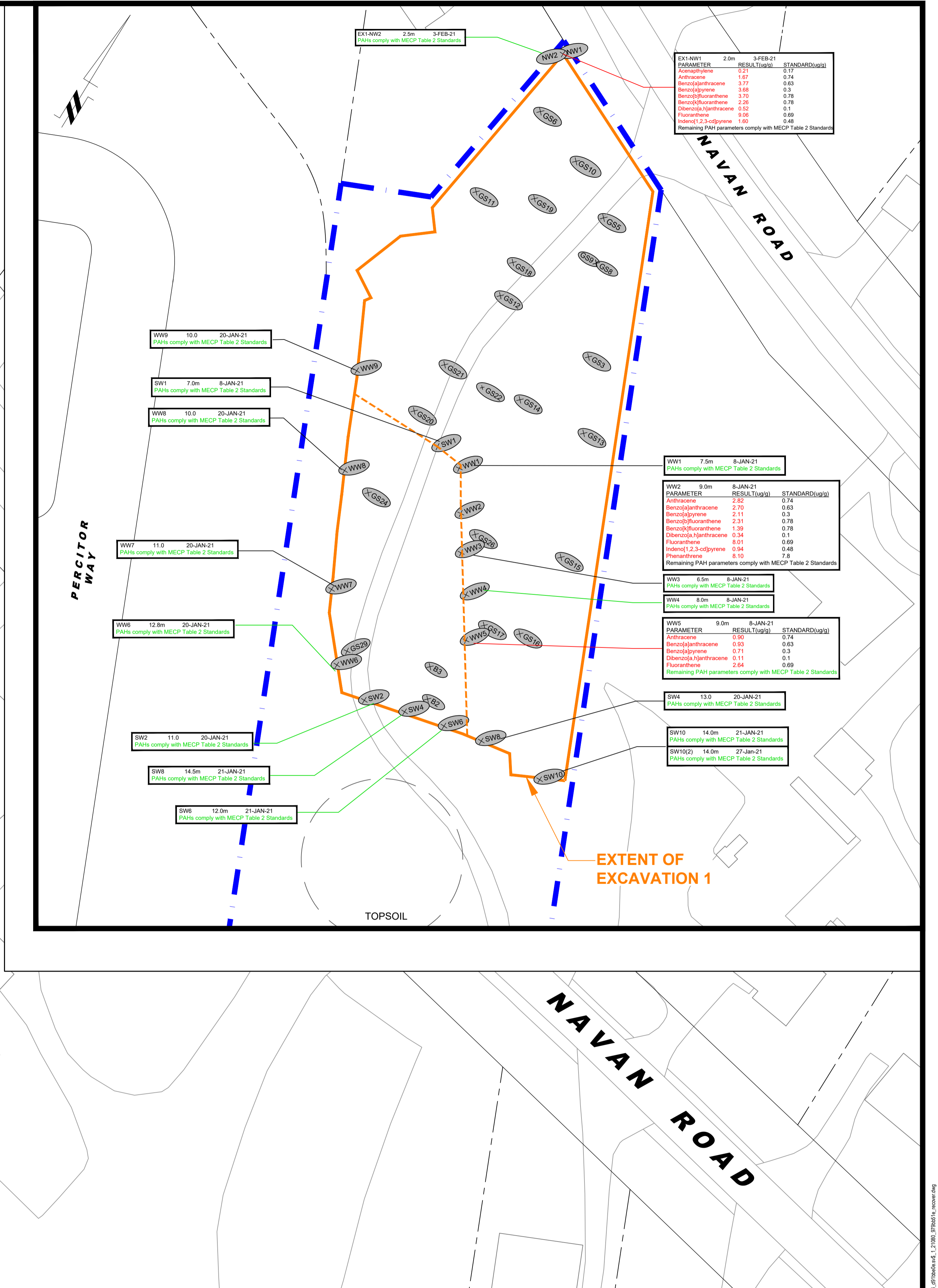
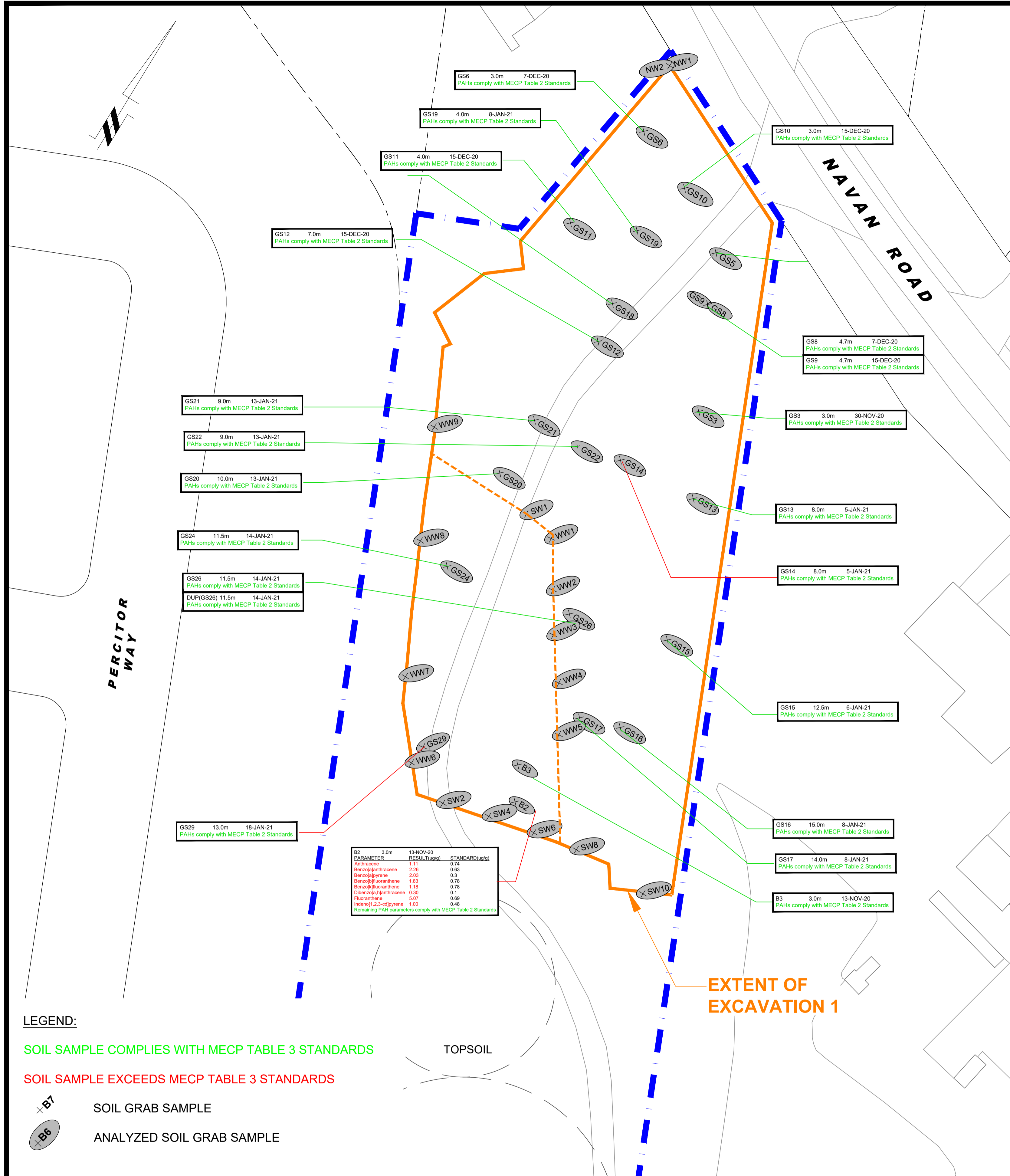












NO.	REVISIONS	DATE	INITIAL

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# **APPENDIX 1**

**ANALYTICAL RESULTS TABLES**

**LABORATORY CERTIFICATES OF ANALYSIS**

**WEIGH SCALE SUMMARY**



Parameter	Units	MDL	Regulation	B2	B3	GS3	GS5	GS6	GS8	GS8(2)	GS9	GS10	GS11	GS12	GS12(2)	GS13	GS14	GS14(2)	GS14(3)	GS15	GS16	
Sample Depth (m)			Table 2 Residential, Fine	3.0	3.0	3.0	4.5	3.0	4.7	4.7	4.7	3.0	4.0	7.0	7.0	8.0	8.0	8.0	8.0	12.5	15.0	
Sample Date				13-Nov-20	13-Nov-20	30-Nov-20	7-Dec-20	7-Dec-20	7-Dec-20	15-Dec-20	15-Dec-20	15-Dec-20	15-Dec-20	15-Dec-20	21-Dec-20	5-Jan-21	5-Jan-21	11-Jan-21	13-Jan-21	6-Jan-21	8-Jan-21	
<b>Metals</b>																						
Antimony	ug/g dry	1.0	7.5 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1.0	ND (1.0)	
Arsenic	ug/g dry	1.0	18 ug/g dry	3.0	2.8	2.3	1.5	2.6	4.0	3.2	1.2	ND (1.0)	3.3	3.3	1.1	ND (1.0)	4.9	4.1	1.9	1.5	2.7	
Barium	ug/g dry	1.0	390 ug/g dry	229	122	94.9	35.1	209	233	181	44.6	36.1	254	307	33.1	29.8	285	247	57.2	60.4	148	
Beryllium	ug/g dry	0.5	5 ug/g dry	0.6	ND (0.5)	0.5	ND (0.5)	0.8	0.9	0.9	ND (0.5)	ND (0.5)	0.9	1.1	ND (0.5)	ND (0.5)	1.4	0.9	ND (0.5)	ND (0.5)	0.7	
Boron	ug/g dry	5.0	120 ug/g dry	5.1	ND (5.0)	ND (5.0)	ND (5.0)	5.9	6.4	7.8	ND (5.0)	ND (5.0)	8.2	8.4	ND (5.0)	ND (5.0)	9.8	ND (5.0)	ND (5.0)	ND (5.0)	5.8	
Cadmium	ug/g dry	0.5	1.2 ug/g dry	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	
Chromium	ug/g dry	5.0	160 ug/g dry	73.0	41.6	57.4	25.0	79.5	122	93.8	27.8	21.8	114	129	21.3	19.3	128	122	41.1	34.4	81.3	
Cobalt	ug/g dry	1.0	22 ug/g dry	14.9	8.6	15.8	5.0	17.8	20.7	15.5	9.3	5.4	19.6	22.2	4.5	5.0	26.4	19.9	7.6	10.6	14.6	
Copper	ug/g dry	5.0	180 ug/g dry	39.6	22.8	15.2	5.1	19.7	45.9	34.9	5.1	5.8	41.5	50.5	6.4	ND (5.0)	51.0	43.4	10.2	7.8	24.3	
Lead	ug/g dry	1.0	120 ug/g dry	33.1	19.3	6.6	2.6	8.7	8.5	6.7	4.3	2.0	7.8	11.3	2.7	1.9	13.9	7.5	4.0	4.0	8.4	
Molybdenum	ug/g dry	1.0	6.9 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	
Nickel	ug/g dry	5.0	130 ug/g dry	42.0	23.7	27.4	14.3	40.3	63.5	48.3	11.5	11.1	60.9	66.5	11.7	9.7	71.0	62.4	18.8	16.7	42.6	
Selenium	ug/g dry	1.0	2.4 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	
Silver	ug/g dry	0.3	25 ug/g dry	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	
Thallium	ug/g dry	1.0	1 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	
Uranium	ug/g dry	1.0	23 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1.0	ND (1.0)	ND (1.0)	1.1	1.1	ND (1.0)	ND (1.0)	ND (1.0)	
Vanadium	ug/g dry	10.0	86 ug/g dry	68.9	39.4	60.7	26.3	63.0	86.2	71.4	36.1	22.3	78.1	92.8	25.6	22.8	94.3	88.8	44.8	34.8	66.5	
Zinc	ug/g dry	20.0	340 ug/g dry	141	57.5	52.9	26.9	72.8	98.9	79.3	40.3	23.4	90.4	115	ND (20.0)	20.8	116	105	39.1	31.3	65.8	
<b>Semi-Volatiles</b>																						
Acenaphthene	ug/g dry	0.02	29 ug/g dry	0.51	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Acenaphthylene	ug/g dry	0.02	0.17 ug/g dry	0.09	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Anthracene	ug/g dry	0.02	0.74 ug/g dry	1.11	0.03	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Benzo[a]anthracene	ug/g dry	0.02	0.63 ug/g dry	2.26	0.05	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Benzo[a]pyrene	ug/g dry	0.02	0.3 ug/g dry	2.03	0.06	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Benzo[b]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	1.83	0.06	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Benzo[g,h,i]perylene	ug/g dry	0.02	7.8 ug/g dry	1.05	0.04	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Benzo[k]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	1.18	0.03	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Chrysene	ug/g dry	0.02	7.8 ug/g dry	2.25	0.07	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	0.02	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Dibenzo[a,h]anthracene	ug/g dry	0.02	0.1 ug/g dry	0.30	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Fluoranthene	ug/g dry	0.02	0.69 ug/g dry	5.07	0.11	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	0.04	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Fluorene	ug/g dry	0.02	69 ug/g dry	0.61	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Indeno[1,2,3-cd]pyrene	ug/g dry	0.02	0.48 ug/g dry	1.00	0.03	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
1-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	0.06	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
2-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	0.05	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Methylnaphthalene (1&2)	ug/g dry	0.04	3.4 ug/g dry	0.11	ND (0.04)	ND (0.04)	ND (0.04)	ND (0.04)	ND (0.04)	N/A	ND (0.04)	ND (0.04)	ND (0.04)	ND (0.04)	N/A	ND (0.04)	ND (0.04)	N/A	N/A	ND (0.04)	ND (0.04)	
Naphthalene	ug/g dry	0.01	0.75 ug/g dry	0.08	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	N/A	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	N/A	ND (0.01)	ND (0.01)	N/A	N/A	ND (0.01)	ND (0.01)	
Phenanthrene	ug/g dry	0.02	7.8 ug/g dry	3.73	0.07	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	0.03	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Pyrene	ug/g dry	0.02	78 ug/g dry	4.09	0.09	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	0.04	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
<b>BTEX</b>																						
Benzene	ug/g dry	0.02	0.17 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	
Ethylbenzene	ug/g dry	0.05	1.6 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	
Toluene	ug/g dry	0.05	6 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	
m/p-Xylene	ug/g dry	0.05		ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	
o-Xylene	ug/g dry	0.05		ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	
Xylenes, total	ug/g dry	0.05	25 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	
<b>Hydrocarbons</b>																						
F1 PHCs (C6-C10)	ug/g dry	7	65 ug/g dry	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	N/A	ND (7)	ND (7)	ND (7)	ND (7)	N/A	ND (7)	ND (7)	N/A	N/A	ND (7)	ND (7)	
F2 PHCs (C10-C16)	ug/g dry	4	150 ug/g dry	416	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	N/A	ND (4)	ND (4)	ND (4)	ND (4)	N/A	ND (4)	ND (4)	N/A	N/A	ND (4)	ND (4)	
F3 PHCs (C16-C34)	ug/g dry	8	1300 ug/g dry	572	46	ND (8)	ND (8)	ND (8)	ND (8)	N/A	ND (8)	ND (8)	ND (8)	ND (8)	N/A	ND (8)	ND (8)	N/A	N/A	ND (8)	ND (8)	
F4 PHCs (C34-C50)	ug/g dry	6	5600 ug/g dry	185	131	ND (6)	ND (6)	ND (6)	ND (6)	N/A	ND (6)	ND (6)	ND (6)	ND (6)	N/A	ND (6)	ND (6)	N/A	N/A	ND (6)	ND (6)	
F4G PHCs (gravimetric)	ug/g dry	50	5600 ug/g dry	454	391	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.9	13.9	N/A	N/A	4.0	N/A	

2	Sample exceeds MECP Table 2 Residential Fine Grained Standard
ND (0.5)	No concentrations identified above the MDL
NA	Parameter not analysed
Grey	Soil Sample removed during remediation



Parameter	Units	MDL	Regulation	WW10	SW1	SW2	SW4	SW6	SW6(2)	SW8	SW10	SW10(2)	EX1-NW1	EX1-NW2
Sample Depth (m)			Table 2 Residential, Fine	10.0	7.0	11.0	13.0	12.0	12.0	14.5	14.0	14.0	2.0	2.5
Sample Date				2-Feb-21	8-Jan-21	20-Jan-21	20-Jan-21	21-Jan-21	27-Jan-21	21-Jan-21	21-Jan-21	27-Jan-21	3-Feb-21	3-Feb-21
<b>Metals</b>														
Antimony	ug/g dry	1.0	7.5 ug/g dry	ND (1.0)	8.1	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	12.6	3.2
Arsenic	ug/g dry	1.0	18 ug/g dry	2.0	6.4	3.1	3.6	4.1	2.7	2.7	3.6	3.4	12.3	6.1
Barium	ug/g dry	1.0	390 ug/g dry	104	206	126	147	286	207	204	327	149	200	152
Beryllium	ug/g dry	0.5	5 ug/g dry	ND (0.5)	ND (0.5)	ND (0.5)	0.6	0.7	0.6	0.6	0.7	0.5	0.7	0.5
Boron	ug/g dry	5.0	120 ug/g dry	ND (5.0)	8.1	ND (5.0)	5.9	6.6	8.8	5.4	5.3	6.1	7.7	7.6
Cadmium	ug/g dry	0.5	1.2 ug/g dry	ND (0.5)	0.8	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	0.8	ND (0.5)
Chromium	ug/g dry	5.0	160 ug/g dry	55.9	31.4	40.7	58.2	96.6	84.7	79.2	106	50.7	39.5	29.5
Cobalt	ug/g dry	1.0	22 ug/g dry	11.8	8.2	8.8	11.7	19.9	16.5	15.3	21.1	10.7	10.9	10.5
Copper	ug/g dry	5.0	180 ug/g dry	12.3	726	23.5	26.9	44.6	34.0	30.6	50.8	30.5	70.9	28.8
Lead	ug/g dry	1.0	120 ug/g dry	4.3	291	25.5	18.2	13.8	9.2	9.8	16.8	27.5	190	33.9
Molybdenum	ug/g dry	1.0	6.9 ug/g dry	ND (1.0)	1.5	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	2.9	10.1
Nickel	ug/g dry	5.0	130 ug/g dry	25.9	29.2	23.9	32.3	53.2	45.6	41.6	58.3	29.1	33.5	23.0
Selenium	ug/g dry	1.0	2.4 ug/g dry	2.0	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1.5	ND (1.0)
Silver	ug/g dry	0.3	25 ug/g dry	ND (0.3)	0.3	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)
Thallium	ug/g dry	1.0	1 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Uranium	ug/g dry	1.0	23 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1.1	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1.1	ND (1.0)
Vanadium	ug/g dry	10.0	86 ug/g dry	47.5	32.0	39.1	51.1	86.9	72.9	69.7	98.6	46.2	40.1	32.8
Zinc	ug/g dry	20.0	340 ug/g dry	51.1	626	67.1	82.1	106	91.6	83.2	123	81.6	197	74.0
<b>Semi-Volatiles</b>														
Acenaphthene	ug/g dry	0.02	29 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.02	N/A	0.33	ND (0.02)
Acenaphthylene	ug/g dry	0.02	0.17 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	0.21	ND (0.02)
Anthracene	ug/g dry	0.02	0.74 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.06	N/A	1.67	0.03
Benzo[a]anthracene	ug/g dry	0.02	0.63 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.11	N/A	3.77	0.08
Benzo[a]pyrene	ug/g dry	0.02	0.3 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.11	N/A	3.68	0.10
Benzo[b]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	N/A	N/A	0.03	ND (0.02)	0.02	N/A	ND (0.02)	0.10	N/A	3.70	0.11
Benzo[g,h,i]perylene	ug/g dry	0.02	7.8 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.06	N/A	1.73	0.06
Benzo[k]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.06	N/A	2.26	0.07
Chrysene	ug/g dry	0.02	7.8 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.11	N/A	3.54	0.11
Dibenzof[a,h]anthracene	ug/g dry	0.02	0.1 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	0.52	ND (0.02)
Fluoranthene	ug/g dry	0.02	0.69 ug/g dry	N/A	N/A	0.05	ND (0.02)	0.04	N/A	ND (0.02)	0.26	N/A	9.06	0.17
Fluorene	ug/g dry	0.02	69 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.02	N/A	0.52	ND (0.02)
Indeno[1,2,3-cd]pyrene	ug/g dry	0.02	0.48 ug/g dry	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.06	N/A	1.60	0.05
1-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	N/A	N/A	0.02	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	0.15	ND (0.02)
2-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	N/A	N/A	0.04	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	0.18	ND (0.02)
Methylnaphthalene (1&2)	ug/g dry	0.04	3.4 ug/g dry	N/A	N/A	0.06	ND (0.04)	ND (0.04)	N/A	ND (0.04)	ND (0.04)	N/A	0.33	ND (0.04)
Naphthalene	ug/g dry	0.01	0.75 ug/g dry	N/A	N/A	0.25	ND (0.01)	ND (0.01)	N/A	ND (0.01)	0.02	N/A	0.26	0.01
Phenanthrene	ug/g dry	0.02	7.8 ug/g dry	N/A	N/A	0.04	ND (0.02)	0.02	N/A	0.05	0.19	N/A	4.85	0.10
Pyrene	ug/g dry	0.02	78 ug/g dry	N/A	N/A	0.04	ND (0.02)	0.03	N/A	ND (0.02)	0.21	N/A	7.38	0.14
<b>BTEX</b>														
Benzene	ug/g dry	0.02	0.17 ug/g dry	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	ND (0.02)	ND (0.02)
Ethylbenzene	ug/g dry	0.05	1.6 ug/g dry	ND (0.05)	N/A	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)
Toluene	ug/g dry	0.05	6 ug/g dry	ND (0.05)	N/A	0.11	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	0.28	ND (0.05)
m/p-Xylene	ug/g dry	0.05		ND (0.05)	N/A	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	0.05		ND (0.05)	N/A	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	0.05	25 ug/g dry	ND (0.05)	N/A	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	ND (0.05)	ND (0.05)
<b>Hydrocarbons</b>														
F1 PHCs (C6-C10)	ug/g dry	7	65 ug/g dry	ND (7)	N/A	ND (7)	ND (7)	ND (7)	N/A	ND (7)	ND (7)	N/A	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	4	150 ug/g dry	ND (4)	N/A	ND (4)	ND (4)	ND (4)	N/A	27	20	N/A	17	ND (4)
F3 PHCs (C16-C34)	ug/g dry	8	1300 ug/g dry	ND (8)	N/A	27	23	39	N/A	47	143	N/A	554	39
F4 PHCs (C34-C50)	ug/g dry	6	5600 ug/g dry	ND (6)	N/A	58	24	34	N/A	34	60	N/A	233	49
F4G PHCs (gravimetric)	ug/g dry	50	5600 ug/g dry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	480	N/A

2	Sample exceeds MECP Table 2 Residential Fine Grain
ND (0.5)	No concentrations identified above the MDL
NA	Parameter not analysed
Grey	Soil Sample removed during remediation



Parameter	Units	MDL	Regulation	EX2-B1	EX2-B6	DUP(EX2-B6)	EX2-B8	EX2-B10	EX2-WW3	EX2-SW2	EX2-SW4	EX2-EW1	EX2-EW5	EX2-NW1	EX2-NW3
Sample Depth (m)			Table 2 Residential, Fine	3.0	3.0	3.0	3.0	3.0	2.5	2.0	0.5	1.0	2.9	1.0	1.5
Sample Date				1-Feb-21	1-Feb-21	1-Feb-21	1-Feb-21	1-Feb-21	1-Feb-21	1-Feb-21	1-Feb-21	1-Feb-21	1-Feb-21	1-Feb-21	1-Feb-21
<b>Volatiles</b>															
Benzene	ug/g dry	0.02	0.17 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Ethylbenzene	ug/g dry	0.05	1.6 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	0.05	6 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
m/p-Xylene	ug/g dry	0.05		ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	0.05		ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	0.05	25 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
<b>Hydrocarbons</b>															
F1 PHCs (C6-C10)	ug/g dry	7	65 ug/g dry	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	4	150 ug/g dry	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	80	ND (4)
F3 PHCs (C16-C34)	ug/g dry	8	1300 ug/g dry	ND (8)	ND (8)	ND (8)	15	ND (8)	ND (8)	ND (8)	ND (8)	103	ND (8)	1210	ND (8)
F4 PHCs (C34-C50)	ug/g dry	6	5600 ug/g dry	ND (6)	ND (6)	ND (6)	21	ND (6)	ND (6)	ND (6)	ND (6)	91	ND (6)	922	ND (6)
F4G PHCs (gravimetric)	ug/g dry	50	5600 ug/g dry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1730	N/A

2	Sample exceeds MECP Table 2 Residential Fine Grained Standard
ND (0.5)	No concentrations identified above the MDL
NA	Parameter not analysed

Parameter	Units	MDL	Regulation	BH2-B1	BH2-B2	BH2-NW1	BH2-EW1	BH2-EW2	BH2-SW1	BH2-SW2	BH2-WW1	BH2-WW2
Sample Depth (m)			Table 2 Residential, Fine	2.5	2.5	2.0	1.5	1.5	1.8	1.8	2.0	2.0
Sample Date				20-Nov-20	26-Nov-20	20-Nov-20	20-Nov-20	26-Nov-20	20-Nov-20	26-Nov-20	20-Nov-20	26-Nov-20
<b>Metals</b>												
Antimony	ug/g dry	1.0	7.5 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	7.6	ND (1.0)	8.0	ND (1.0)	ND (1.0)	N/A
Arsenic	ug/g dry	1.0	18 ug/g dry	1.8	1.4	2.1	6.5	1.2	7.9	2.2	3.2	N/A
Barium	ug/g dry	1.0	390 ug/g dry	51.4	44.6	57.4	150	37.8	167	64.0	64.8	N/A
Beryllium	ug/g dry	0.5	5 ug/g dry	ND (0.5)	ND (0.5)	ND (0.5)	0.6	ND (0.5)	0.6	ND (0.5)	ND (0.5)	N/A
Boron	ug/g dry	5.0	120 ug/g dry	ND (5.0)	ND (5.0)	ND (5.0)	10.4	ND (5.0)	9.2	ND (5.0)	ND (5.0)	N/A
Cadmium	ug/g dry	0.5	1.2 ug/g dry	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A
Chromium	ug/g dry	5.0	160 ug/g dry	33.5	32.3	22.2	30.1	29.2	32.1	49.1	20.3	N/A
Cobalt	ug/g dry	1.0	22 ug/g dry	5.8	6.1	4.5	6.5	5.9	8.0	9.6	4.4	N/A
Copper	ug/g dry	5.0	180 ug/g dry	11.1	9.4	9.8	54.4	10.5	38.4	15.8	14.9	N/A
Lead	ug/g dry	1.0	120 ug/g dry	3.1	2.7	8.3	91.1	2.3	88.5	4.3	22.7	N/A
Molybdenum	ug/g dry	1.0	6.9 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	2.6	ND (1.0)	1.5	ND (1.0)	ND (1.0)	N/A
Nickel	ug/g dry	5.0	130 ug/g dry	18.1	16.9	12.0	20.7	15.4	24.6	24.7	12.9	N/A
Selenium	ug/g dry	1.0	2.4 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	1.0	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	N/A
Silver	ug/g dry	0.3	25 ug/g dry	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	N/A
Thallium	ug/g dry	1.0	1 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	N/A
Uranium	ug/g dry	1.0	23 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	1.4	ND (1.0)	1.2	1.2	ND (1.0)	N/A
Vanadium	ug/g dry	10.0	86 ug/g dry	26.9	27.5	21.9	32.1	25.1	38.4	44.0	23.2	N/A
Zinc	ug/g dry	20.0	340 ug/g dry	27.6	28.0	31.3	126	23.3	124	41.3	45.9	N/A
<b>Semi-Volatiles</b>												
Acenaphthene	ug/g dry	0.02	29 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	0.60	ND (0.02)	0.14	ND (0.02)	0.06	0.06
Acenaphthylene	ug/g dry	0.02	0.17 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	0.03	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Anthracene	ug/g dry	0.02	0.74 ug/g dry	ND (0.02)	ND (0.02)	0.02	1.31	ND (0.02)	0.29	ND (0.02)	0.11	0.11
Benzo[a]anthracene	ug/g dry	0.02	0.63 ug/g dry	ND (0.02)	ND (0.02)	0.05	2.80	ND (0.02)	0.69	ND (0.02)	0.29	0.22
Benzo[a]pyrene	ug/g dry	0.02	0.3 ug/g dry	ND (0.02)	ND (0.02)	0.04	2.54	ND (0.02)	0.62	ND (0.02)	0.28	0.18
Benzo[b]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	ND (0.02)	ND (0.02)	0.06	2.93	ND (0.02)	0.76	ND (0.02)	0.35	0.27
Benzo[g,h,i]perylene	ug/g dry	0.02	7.8 ug/g dry	ND (0.02)	ND (0.02)	0.03	1.32	ND (0.02)	0.34	ND (0.02)	0.17	0.13
Benzo[k]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	ND (0.02)	ND (0.02)	0.04	1.55	ND (0.02)	0.37	ND (0.02)	0.21	0.14
Chrysene	ug/g dry	0.02	7.8 ug/g dry	ND (0.02)	ND (0.02)	0.05	2.82	ND (0.02)	0.71	ND (0.02)	0.33	0.24
Dibenzo[a,h]anthracene	ug/g dry	0.02	0.1 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	0.39	ND (0.02)	0.10	ND (0.02)	0.05	0.04
Fluoranthene	ug/g dry	0.02	0.69 ug/g dry	ND (0.02)	ND (0.02)	0.14	6.69	ND (0.02)	1.65	ND (0.02)	0.72	0.62
Fluorene	ug/g dry	0.02	69 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	0.65	ND (0.02)	0.18	ND (0.02)	0.07	0.06
Indeno[1,2,3-cd]pyrene	ug/g dry	0.02	0.48 ug/g dry	ND (0.02)	ND (0.02)	0.03	1.35	ND (0.02)	0.33	ND (0.02)	0.16	0.14
1-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	0.10	ND (0.02)	0.04	ND (0.02)	0.02	ND (0.02)
2-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	0.13	ND (0.02)	0.06	ND (0.02)	0.03	ND (0.02)
Methylnaphthalene (1&2)	ug/g dry	0.04	3.4 ug/g dry	ND (0.04)	ND (0.04)	ND (0.04)	0.22	ND (0.04)	0.10	ND (0.04)	0.05	ND (0.04)
Naphthalene	ug/g dry	0.01	0.75 ug/g dry	ND (0.01)	ND (0.01)	ND (0.01)	0.16	ND (0.01)	0.12	ND (0.01)	0.03	0.03
Phenanthrene	ug/g dry	0.02	7.8 ug/g dry	ND (0.02)	ND (0.02)	0.10	4.83	ND (0.02)	1.24	ND (0.02)	0.48	0.36
Pyrene	ug/g dry	0.02	78 ug/g dry	ND (0.02)	ND (0.02)	0.11	5.27	ND (0.02)	1.28	ND (0.02)	0.56	0.49
<b>BTEX</b>												
Benzene	ug/g dry	0.02	0.17 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Ethylbenzene	ug/g dry	0.05	1.6 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	0.05	6 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
m/p-Xylene	ug/g dry	0.05		ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	0.05		ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	0.05	25 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
<b>Hydrocarbons</b>												
F1 PHCs (C6-C10)	ug/g dry	7	65 ug/g dry	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	4	150 ug/g dry	ND (4)	ND (4)	9	26	ND (4)	35	ND (4)	9	ND (4)
F3 PHCs (C16-C34)	ug/g dry	8	1300 ug/g dry	ND (8)	ND (8)	255	929	ND (8)	1410	ND (8)	384	29
F4 PHCs (C34-C50)	ug/g dry	6	5600 ug/g dry	ND (6)	ND (6)	59	289	ND (6)	317	ND (6)	112	21
F4G PHCs (gravimetric)	ug/g dry	50	5600 ug/g dry	N/A	N/A	N/A	1130	N/A	1050	N/A	N/A	N/A

2	Sample exceeds MCCP Table 2 Residential Fine Grained Standard
ND (0.5)	No concentrations identified above the MDL
NA	Parameter not analysed
Grey	Soil Sample removed during remediation

Parameter	Units	MDL	Regulation	TP31-B1	TP31-B2	TP31-B3	TP31-NW1	TP31-NW2	TP31-EW1	TP31-EW2	TP31-SW1	TP31-SW2	TP31-SW4	TP31-WW1	TP31-WW2	TP31-WW4
Sample Depth (m)			Table 2 Residential, Fine	4.4	4.5	4.5	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.0	4.0	4.2
Sample Date				20-Nov-20	26-Nov-20	26-Nov-20	20-Nov-20	26-Nov-20	20-Nov-20	26-Nov-20	20-Nov-20	26-Nov-20	8-Dec-20	20-Nov-20	26-Nov-20	8-Dec-20
<b>Metals</b>																
Antimony	ug/g dry	1.0	7.5 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	1.2	N/A	ND (1.0)	N/A	ND (1.0)	N/A	N/A	ND (1.0)	N/A	N/A
Arsenic	ug/g dry	1.0	18 ug/g dry	3.3	2.2	1.6	4.3	N/A	3.6	N/A	1.3	N/A	N/A	3.5	N/A	N/A
Barium	ug/g dry	1.0	390 ug/g dry	334	104	65.1	258	N/A	217	N/A	34.6	N/A	N/A	308	N/A	N/A
Beryllium	ug/g dry	0.5	5 ug/g dry	0.7	ND (0.5)	ND (0.5)	0.7	N/A	0.6	N/A	ND (0.5)	N/A	N/A	0.8	N/A	N/A
Boron	ug/g dry	5.0	120 ug/g dry	6.5	ND (5.0)	ND (5.0)	7.5	N/A	6.0	N/A	ND (5.0)	N/A	N/A	7.6	N/A	N/A
Cadmium	ug/g dry	0.5	1.2 ug/g dry	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)	N/A	N/A	ND (0.5)	N/A	N/A
Chromium	ug/g dry	5.0	160 ug/g dry	116	53.2	29.8	97.2	N/A	76.8	N/A	18.2	N/A	N/A	108	N/A	N/A
Cobalt	ug/g dry	1.0	22 ug/g dry	21.6	10.3	5.2	18.2	N/A	14.9	N/A	4.2	N/A	N/A	20.7	N/A	N/A
Copper	ug/g dry	5.0	180 ug/g dry	53.2	24.2	11.4	56.0	N/A	40.9	N/A	7.9	N/A	N/A	49.6	N/A	N/A
Lead	ug/g dry	1.0	120 ug/g dry	66.9	4.2	2.9	40.1	N/A	20.4	N/A	3.4	N/A	N/A	20.6	N/A	N/A
Molybdenum	ug/g dry	1.0	6.9 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	1.8	N/A	ND (1.0)	N/A	ND (1.0)	N/A	N/A	ND (1.0)	N/A	N/A
Nickel	ug/g dry	5.0	130 ug/g dry	62.5	29.6	16.3	57.3	N/A	45.2	N/A	10.6	N/A	N/A	60.9	N/A	N/A
Selenium	ug/g dry	1.0	2.4 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	N/A	ND (1.0)	N/A	ND (1.0)	N/A	N/A	ND (1.0)	N/A	N/A
Silver	ug/g dry	0.3	25 ug/g dry	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	N/A	ND (0.3)	N/A	ND (0.3)	N/A	N/A	ND (0.3)	N/A	N/A
Thallium	ug/g dry	1.0	1 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	N/A	ND (1.0)	N/A	ND (1.0)	N/A	N/A	ND (1.0)	N/A	N/A
Uranium	ug/g dry	1.0	23 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	1.2	N/A	1.3	N/A	ND (1.0)	N/A	N/A	ND (1.0)	N/A	N/A
Vanadium	ug/g dry	10.0	86 ug/g dry	101	45.6	23.5	84.0	N/A	70.4	N/A	19.4	N/A	N/A	92.4	N/A	N/A
Zinc	ug/g dry	20.0	340 ug/g dry	132	46.1	26.2	123	N/A	172	N/A	23.6	N/A	N/A	130	N/A	N/A
<b>Semi-Volatiles</b>																
Acenaphthene	ug/g dry	0.02	29 ug/g dry	ND (0.02)	N/A	N/A	0.07	ND (0.02)	0.28	ND (0.02)	0.12	0.55	ND (0.02)	0.47	1.18	ND (0.02)
Acenaphthylene	ug/g dry	0.02	0.17 ug/g dry	ND (0.02)	N/A	N/A	0.03	ND (0.02)	0.06	ND (0.02)	ND (0.02)	0.05	ND (0.02)	0.03	0.03	ND (0.02)
Anthracene	ug/g dry	0.02	0.74 ug/g dry	ND (0.02)	N/A	N/A	0.21	ND (0.02)	0.91	ND (0.02)	0.27	1.24	ND (0.02)	1.14	1.81	ND (0.02)
Benzo[a]anthracene	ug/g dry	0.02	0.63 ug/g dry	0.03	N/A	N/A	0.53	ND (0.02)	1.97	ND (0.02)	0.43	1.45	ND (0.02)	2.04	2.69	ND (0.02)
Benzo[a]pyrene	ug/g dry	0.02	0.3 ug/g dry	0.02	N/A	N/A	0.51	ND (0.02)	1.80	ND (0.02)	0.38	1.13	ND (0.02)	1.86	2.38	ND (0.02)
Benzo[b]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	0.03	N/A	N/A	0.54	ND (0.02)	1.97	ND (0.02)	0.44	1.31	ND (0.02)	2.07	2.82	ND (0.02)
Benzo[g,h,i]perylene	ug/g dry	0.02	7.8 ug/g dry	ND (0.02)	N/A	N/A	0.28	ND (0.02)	0.96	ND (0.02)	0.23	0.52	ND (0.02)	1.01	1.30	ND (0.02)
Benzo[k]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	ND (0.02)	N/A	N/A	0.51	ND (0.02)	1.18	ND (0.02)	0.24	0.81	ND (0.02)	1.34	1.75	ND (0.02)
Chrysene	ug/g dry	0.02	7.8 ug/g dry	ND (0.02)	N/A	N/A	0.45	ND (0.02)	1.92	ND (0.02)	0.44	1.37	ND (0.02)	2.06	2.69	ND (0.02)
Dibenzo[a,h]anthracene	ug/g dry	0.02	0.1 ug/g dry	ND (0.02)	N/A	N/A	0.08	ND (0.02)	0.27	ND (0.02)	0.03	0.18	ND (0.02)	0.25	0.36	ND (0.02)
Fluoranthene	ug/g dry	0.02	0.69 ug/g dry	0.04	N/A	N/A	1.40	ND (0.02)	4.61	ND (0.02)	1.24	4.49	ND (0.02)	5.79	9.70	ND (0.02)
Fluorene	ug/g dry	0.02	69 ug/g dry	ND (0.02)	N/A	N/A	0.15	ND (0.02)	0.37	ND (0.02)	0.15	0.73	ND (0.02)	0.58	1.08	ND (0.02)
Indeno[1,2,3-cd]pyrene	ug/g dry	0.02	0.48 ug/g dry	ND (0.02)	N/A	N/A	0.27	ND (0.02)	0.90	ND (0.02)	0.21	0.58	ND (0.02)	0.96	1.37	ND (0.02)
1-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	ND (0.02)	N/A	N/A	0.03	ND (0.02)	0.08	ND (0.02)	0.05	0.16	ND (0.02)	0.19	0.08	ND (0.02)
2-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	ND (0.02)	N/A	N/A	0.03	ND (0.02)	0.11	ND (0.02)	0.07	0.21	ND (0.02)	0.28	0.15	ND (0.02)
Methylnaphthalene (1&2)	ug/g dry	0.04	3.4 ug/g dry	ND (0.04)	N/A	N/A	0.06	ND (0.04)	0.19	ND (0.04)	0.12	0.37	ND (0.04)	0.47	0.23	ND (0.04)
Naphthalene	ug/g dry	0.01	0.75 ug/g dry	ND (0.01)	N/A	N/A	0.06	ND (0.01)	0.19	ND (0.01)	0.13	0.49	ND (0.01)	0.53	0.54	ND (0.01)
Phenanthrene	ug/g dry	0.02	7.8 ug/g dry	ND (0.02)	N/A	N/A	0.66	ND (0.02)	3.11	ND (0.02)	1.14	4.40	ND (0.02)	4.34	8.70	ND (0.02)
Pyrene	ug/g dry	0.02	78 ug/g dry	0.04	N/A	N/A	1.14	ND (0.02)	4.04	ND (0.02)	1.03	3.31	ND (0.02)	4.77	7.15	ND (0.02)
<b>BTEX</b>																
Benzene	ug/g dry	0.02	0.17 ug/g dry	ND (0.02)	N/A	N/A	ND (0.02)	N/A	ND (0.02)	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A
Ethylbenzene	ug/g dry	0.05	1.6 ug/g dry	ND (0.05)	N/A	N/A	ND (0.05)	N/A	ND (0.05)	N/A	ND (0.05)	N/A	N/A	ND (0.05)	N/A	N/A
Toluene	ug/g dry	0.05	6 ug/g dry	ND (0.05)	N/A	N/A	ND (0.05)	N/A	ND (0.05)	N/A	ND (0.05)	N/A	N/A	ND (0.05)	N/A	N/A
m/p-Xylene	ug/g dry	0.05		ND (0.05)	N/A	N/A	ND (0.05)	N/A	ND (0.05)	N/A	ND (0.05)	N/A	N/A	ND (0.05)	N/A	N/A
o-Xylene	ug/g dry	0.05		ND (0.05)	N/A	N/A	ND (0.05)	N/A	ND (0.05)	N/A	ND (0.05)	N/A	N/A	ND (0.05)	N/A	N/A
Xylenes, total	ug/g dry	0.05	25 ug/g dry	ND (0.05)	N/A	N/A	ND (0.05)	N/A	ND (0.05)	N/A	ND (0.05)	N/A	N/A	ND (0.05)	N/A	N/A
<b>Hydrocarbons</b>																
F1 PHCs (C6-C10)	ug/g dry	7	65 ug/g dry	ND (7)	N/A	N/A	ND (7)	N/A	ND (7)	N/A	ND (7)	N/A	N/A	ND (7)	N/A	N/A
F2 PHCs (C10-C16)	ug/g dry	4	150 ug/g dry	16	N/A	N/A	14	N/A	17	N/A	ND (4)	N/A	N/A	11	N/A	N/A
F3 PHCs (C16-C34)	ug/g dry	8	1300 ug/g dry	106	N/A	N/A	191	N/A	263	N/A	61	N/A	N/A	186	N/A	N/A
F4 PHCs (C34-C50)	ug/g dry	6	5600 ug/g dry	18	N/A	N/A	54	N/A	77	N/A	41	N/A	N/A	58	N/A	N/A
F4G PHCs (gravimetric)	ug/g dry	50	5600 ug/g dry	66.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2	Sample exceeds MECF Table 2 Residential Fine Grained Standard
ND (0.5)	No concentrations identified above the MDL
NA	Parameter not analysed
Grey	Soil Sample removed during remediation

Parameter	Units	MDL	Regulation	TP9-B1	TP9-B2	TP9-NW1	TP9-EW1	TP9-SW1	TP9-WW1
Sample Depth (m)			Table 2 Residential, Fine	2.0	2.0	1.5	1.5	1.8	1.2
Sample Date				20-Nov-20	26-Nov-20	20-Nov-20	20-Nov-20	20-Nov-20	20-Nov-20
<b>Metals</b>									
Antimony	ug/g dry	1.0	7.5 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Arsenic	ug/g dry	1.0	18 ug/g dry	3.3	3.2	1.6	1.5	2.9	1.9
Barium	ug/g dry	1.0	390 ug/g dry	167	172	41.5	45.7	175	84.0
Beryllium	ug/g dry	0.5	5 ug/g dry	0.7	0.8	ND (0.5)	ND (0.5)	0.8	ND (0.5)
Boron	ug/g dry	5.0	120 ug/g dry	7.1	8.5	ND (5.0)	ND (5.0)	7.5	ND (5.0)
Cadmium	ug/g dry	0.5	1.2 ug/g dry	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Chromium	ug/g dry	5.0	160 ug/g dry	81.0	97.3	19.5	27.6	89.5	45.6
Cobalt	ug/g dry	1.0	22 ug/g dry	16.2	17.3	4.9	5.7	19.7	11.2
Copper	ug/g dry	5.0	180 ug/g dry	33.5	40.1	8.9	6.9	19.4	11.2
Lead	ug/g dry	1.0	120 ug/g dry	6.0	8.6	5.7	7.0	11.0	8.2
Molybdenum	ug/g dry	1.0	6.9 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Nickel	ug/g dry	5.0	130 ug/g dry	44.4	55.8	11.9	13.0	42.1	21.4
Selenium	ug/g dry	1.0	2.4 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Silver	ug/g dry	0.3	25 ug/g dry	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)
Thallium	ug/g dry	1.0	1 ug/g dry	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Uranium	ug/g dry	1.0	23 ug/g dry	ND (1.0)	ND (1.0)	1.0	ND (1.0)	1.9	ND (1.0)
Vanadium	ug/g dry	10.0	86 ug/g dry	69.4	70.4	20.4	27.4	74.2	41.8
Zinc	ug/g dry	20.0	340 ug/g dry	75.3	80.7	25.1	32.7	99.8	52.4
<b>Semi-Volatiles</b>									
Acenaphthene	ug/g dry	0.02	29 ug/g dry	ND (0.02)	ND (0.02)	0.03	ND (0.02)	ND (0.02)	ND (0.02)
Acenaphthylene	ug/g dry	0.02	0.17 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Anthracene	ug/g dry	0.02	0.74 ug/g dry	ND (0.02)	ND (0.02)	0.08	ND (0.02)	ND (0.02)	ND (0.02)
Benzo[a]anthracene	ug/g dry	0.02	0.63 ug/g dry	ND (0.02)	ND (0.02)	0.10	ND (0.02)	ND (0.02)	ND (0.02)
Benzo[a]pyrene	ug/g dry	0.02	0.3 ug/g dry	ND (0.02)	ND (0.02)	0.09	ND (0.02)	ND (0.02)	ND (0.02)
Benzo[b]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	ND (0.02)	ND (0.02)	0.10	ND (0.02)	ND (0.02)	ND (0.02)
Benzo[g,h,i]perylene	ug/g dry	0.02	7.8 ug/g dry	ND (0.02)	ND (0.02)	0.05	ND (0.02)	ND (0.02)	ND (0.02)
Benzo[k]fluoranthene	ug/g dry	0.02	0.78 ug/g dry	ND (0.02)	ND (0.02)	0.07	ND (0.02)	ND (0.02)	ND (0.02)
Chrysene	ug/g dry	0.02	7.8 ug/g dry	ND (0.02)	ND (0.02)	0.10	ND (0.02)	ND (0.02)	ND (0.02)
Dibenzo[a,h]anthracene	ug/g dry	0.02	0.1 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Fluoranthene	ug/g dry	0.02	0.69 ug/g dry	ND (0.02)	ND (0.02)	0.27	0.03	ND (0.02)	ND (0.02)
Fluorene	ug/g dry	0.02	69 ug/g dry	ND (0.02)	ND (0.02)	0.04	ND (0.02)	ND (0.02)	ND (0.02)
Indeno[1,2,3-cd]pyrene	ug/g dry	0.02	0.48 ug/g dry	ND (0.02)	ND (0.02)	0.05	ND (0.02)	ND (0.02)	ND (0.02)
1-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
2-Methylnaphthalene	ug/g dry	0.02	3.4 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Methylnaphthalene (1&2)	ug/g dry	0.04	3.4 ug/g dry	ND (0.04)	ND (0.04)	ND (0.04)	ND (0.04)	ND (0.04)	ND (0.04)
Naphthalene	ug/g dry	0.01	0.75 ug/g dry	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Phenanthrene	ug/g dry	0.02	7.8 ug/g dry	ND (0.02)	ND (0.02)	0.29	ND (0.02)	ND (0.02)	ND (0.02)
Pyrene	ug/g dry	0.02	78 ug/g dry	ND (0.02)	ND (0.02)	0.22	0.02	ND (0.02)	ND (0.02)
<b>Volatiles</b>									
Benzene	ug/g dry	0.02	0.17 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Ethylbenzene	ug/g dry	0.05	1.6 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	0.05	6 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
m/p-Xylene	ug/g dry	0.05		ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	0.05		ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	0.05	25 ug/g dry	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ug/g dry	7	65 ug/g dry	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	4	150 ug/g dry	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)
F3 PHCs (C16-C34)	ug/g dry	8	1300 ug/g dry	ND (8)	ND (8)	84	32	ND (8)	49
F4 PHCs (C34-C50)	ug/g dry	6	5600 ug/g dry	ND (6)	ND (6)	67	31	ND (6)	25
F4G PHCs (gravimetric)	ug/g dry	50	5600 ug/g dry	N/A	N/A	N/A	N/A	N/A	N/A

2	Sample exceeds MECP Table 2 Residential Fine Grained Standard
ND (0.5)	No concentrations identified above the MDL
NA	Parameter not analysed
Grey	Soil Sample removed during remediation

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mark D'Arcy

Client PO: 30213  
Project: PE4937  
Custody: 125717,716

Report Date: 8-Jun-2020  
Order Date: 2-Jun-2020

**Order #: 2023210**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2023210-01	TP1-G3
2023210-02	TP2-G1
2023210-03	TP4-G2
2023210-04	TP6-G3
2023210-05	TP7-G2
2023210-06	TP8-G1
2023210-07	TP8-G2
2023210-08	TP9-G5
2023210-09	TP11-G1
2023210-10	TP12-G2
2023210-11	TP13-G2
2023210-12	SPG-G2

Approved By:



Dale Robertson, BSc  
Laboratory Director



Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	4-Jun-20	5-Jun-20
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	4-Jun-20	6-Jun-20
Mercury by CVAA	EPA 7471B - CVAA, digestion	8-Jun-20	8-Jun-20
PHC F1	CWS Tier 1 - P&T GC-FID	4-Jun-20	5-Jun-20
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	8-Jun-20	8-Jun-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	4-Jun-20	8-Jun-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	8-Jun-20	8-Jun-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	4-Jun-20	7-Jun-20
Solids, %	Gravimetric, calculation	5-Jun-20	6-Jun-20

Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

Client ID:	TP1-G3	TP2-G1	TP4-G2	TP6-G3
Sample Date:	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00
Sample ID:	2023210-01	2023210-02	2023210-03	2023210-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	85.3	93.5	88.3	89.8
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**Metals**

Element	MDL/Units	TP1-G3	TP2-G1	TP4-G2	TP6-G3
Antimony	1.0 ug/g dry	<1.0	-	-	<1.0
Arsenic	1.0 ug/g dry	1.6	-	-	2.5
Barium	1.0 ug/g dry	24.7	-	-	104
Beryllium	0.5 ug/g dry	<0.5	-	-	<0.5
Boron	5.0 ug/g dry	<5.0	-	-	<5.0
Cadmium	0.5 ug/g dry	<0.5	-	-	<0.5
Chromium	5.0 ug/g dry	9.2	-	-	42.0
Chromium (VI)	0.2 ug/g dry	<0.2	-	-	-
Cobalt	1.0 ug/g dry	2.8	-	-	8.8
Copper	5.0 ug/g dry	6.0	-	-	20.8
Lead	1.0 ug/g dry	2.0	-	-	17.0
Mercury	0.1 ug/g dry	<0.1	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	<1.0
Nickel	5.0 ug/g dry	5.6	-	-	24.0
Selenium	1.0 ug/g dry	<1.0	-	-	<1.0
Silver	0.3 ug/g dry	<0.3	-	-	<0.3
Thallium	1.0 ug/g dry	<1.0	-	-	<1.0
Uranium	1.0 ug/g dry	<1.0	-	-	<1.0
Vanadium	10.0 ug/g dry	17.8	-	-	39.0
Zinc	20.0 ug/g dry	<20.0	-	-	51.3

**Volatiles**

Compound	MDL/Units	TP1-G3	TP2-G1	TP4-G2	TP6-G3
Benzene	0.02 ug/g dry	-	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	-
Toluene	0.05 ug/g dry	-	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	-
o-Xylene	0.05 ug/g dry	-	<0.05	-	-
Xylenes, total	0.05 ug/g dry	-	<0.05	-	-
Toluene-d8	Surrogate	-	116%	-	-

**Hydrocarbons**

PHC Group	MDL/Units	TP1-G3	TP2-G1	TP4-G2	TP6-G3
F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	-	48	12	-
F3 PHCs (C16-C34)	8 ug/g dry	-	189	26	-
F4 PHCs (C34-C50)	6 ug/g dry	-	78	9	-

Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

	Client ID:	TP1-G3	TP2-G1	TP4-G2	TP6-G3
	Sample Date:	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00
	Sample ID:	2023210-01	2023210-02	2023210-03	2023210-04
	MDL/Units	Soil	Soil	Soil	Soil

**Semi-Volatiles**

	MDL/Units	TP1-G3	TP2-G1	TP4-G2	TP6-G3
Acenaphthene	0.02 ug/g dry	-	-	0.02	-
Acenaphthylene	0.02 ug/g dry	-	-	<0.02	-
Anthracene	0.02 ug/g dry	-	-	0.04	-
Benzo [a] anthracene	0.02 ug/g dry	-	-	0.07	-
Benzo [a] pyrene	0.02 ug/g dry	-	-	0.06	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	-	0.07	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	-	0.04	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	-	0.03	-
Chrysene	0.02 ug/g dry	-	-	0.08	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	-	<0.02	-
Fluoranthene	0.02 ug/g dry	-	-	0.17	-
Fluorene	0.02 ug/g dry	-	-	0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	-	0.04	-
1-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	-	<0.04	-
Naphthalene	0.01 ug/g dry	-	-	<0.01	-
Phenanthrene	0.02 ug/g dry	-	-	0.14	-
Pyrene	0.02 ug/g dry	-	-	0.12	-
2-Fluorobiphenyl	Surrogate	-	-	79.6%	-
Terphenyl-d14	Surrogate	-	-	91.1%	-



Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

Client ID:	TP7-G2	TP8-G1	TP8-G2	TP9-G5
Sample Date:	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00
Sample ID:	2023210-05	2023210-06	2023210-07	2023210-08
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	91.4	95.6	84.3	71.9
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**Metals**

Antimony	1.0 ug/g dry	-	-	-	<1.0
Arsenic	1.0 ug/g dry	-	-	-	4.0
Barium	1.0 ug/g dry	-	-	-	390
Beryllium	0.5 ug/g dry	-	-	-	0.9
Boron	5.0 ug/g dry	-	-	-	6.2
Cadmium	0.5 ug/g dry	-	-	-	<0.5
Chromium	5.0 ug/g dry	-	-	-	146
Cobalt	1.0 ug/g dry	-	-	-	27.9
Copper	5.0 ug/g dry	-	-	-	64.7
Lead	1.0 ug/g dry	-	-	-	7.2
Molybdenum	1.0 ug/g dry	-	-	-	<1.0
Nickel	5.0 ug/g dry	-	-	-	80.7
Selenium	1.0 ug/g dry	-	-	-	<1.0
Silver	0.3 ug/g dry	-	-	-	<0.3
Thallium	1.0 ug/g dry	-	-	-	<1.0
Uranium	1.0 ug/g dry	-	-	-	<1.0
Vanadium	10.0 ug/g dry	-	-	-	125
Zinc	20.0 ug/g dry	-	-	-	140

**Volatiles**

Benzene	0.02 ug/g dry	-	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	-
Toluene	0.05 ug/g dry	-	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	-
o-Xylene	0.05 ug/g dry	-	<0.05	-	-
Xylenes, total	0.05 ug/g dry	-	<0.05	-	-
Toluene-d8	Surrogate	-	122%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	23	8	-	-
F3 PHCs (C16-C34)	8 ug/g dry	27	205	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	225 [2]	-	-
F4G PHCs (gravimetric)	50 ug/g dry	-	868	-	-

**Semi-Volatiles**

Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

	Client ID:	TP7-G2	TP8-G1	TP8-G2	TP9-G5
	Sample Date:	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00
	Sample ID:	2023210-05	2023210-06	2023210-07	2023210-08
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthene	0.02 ug/g dry	-	-	<0.02	-
Acenaphthylene	0.02 ug/g dry	-	-	<0.02	-
Anthracene	0.02 ug/g dry	-	-	0.02	-
Benzo [a] anthracene	0.02 ug/g dry	-	-	0.04	-
Benzo [a] pyrene	0.02 ug/g dry	-	-	0.04	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	-	0.05	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	-	0.03	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	-	0.02	-
Chrysene	0.02 ug/g dry	-	-	0.05	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	-	<0.02	-
Fluoranthene	0.02 ug/g dry	-	-	0.09	-
Fluorene	0.02 ug/g dry	-	-	0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	-	0.02	-
1-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	-	<0.04	-
Naphthalene	0.01 ug/g dry	-	-	0.01	-
Phenanthrene	0.02 ug/g dry	-	-	0.07	-
Pyrene	0.02 ug/g dry	-	-	0.07	-
2-Fluorobiphenyl	Surrogate	-	-	86.5%	-
Terphenyl-d14	Surrogate	-	-	88.8%	-

Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

Client ID:	TP11-G1	TP12-G2	TP13-G2	SPG-G2
Sample Date:	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00
Sample ID:	2023210-09	2023210-10	2023210-11	2023210-12
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	86.5	78.5	86.5	78.1
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	2.8	3.6	3.2	3.8
Barium	1.0 ug/g dry	117	273	169	298
Beryllium	0.5 ug/g dry	<0.5	0.7	<0.5	0.7
Boron	5.0 ug/g dry	<5.0	6.3	<5.0	5.6
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	48.6	104	47.5	50.8
Chromium (VI)	0.2 ug/g dry	<1.0 [1]	<0.2	<0.2	<0.2
Cobalt	1.0 ug/g dry	6.9	20.7	11.0	12.9
Copper	5.0 ug/g dry	19.3	47.1	28.0	25.3
Lead	1.0 ug/g dry	8.3	10.5	40.9	11.8
Mercury	0.1 ug/g dry	<0.1	<0.1	<0.1	<0.1
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	22.5	57.6	28.8	31.1
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	2.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	37.7	89.7	48.2	55.1
Zinc	20.0 ug/g dry	62.6	106	79.6	88.1

**Volatiles**

Benzene	0.02 ug/g dry	-	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	-
Toluene	0.05 ug/g dry	-	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	-
o-Xylene	0.05 ug/g dry	-	<0.05	-	-
Xylenes, total	0.05 ug/g dry	-	<0.05	-	-
Toluene-d8	Surrogate	-	121%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	-	<4	105	-
F3 PHCs (C16-C34)	8 ug/g dry	-	61	169	-
F4 PHCs (C34-C50)	6 ug/g dry	-	25	94	-

Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

Client ID:	TP11-G1	TP12-G2	TP13-G2	SPG-G2
Sample Date:	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00	28-May-20 09:00
Sample ID:	2023210-09	2023210-10	2023210-11	2023210-12
MDL/Units	Soil	Soil	Soil	Soil

**Semi-Volatiles**

	MDL/Units	TP11-G1	TP12-G2	TP13-G2	SPG-G2
Acenaphthene	0.02 ug/g dry	-	<0.02	0.10	<0.02
Acenaphthylene	0.02 ug/g dry	-	<0.02	0.07	<0.02
Anthracene	0.02 ug/g dry	-	<0.02	0.38	<0.02
Benzo [a] anthracene	0.02 ug/g dry	-	<0.02	0.54	<0.02
Benzo [a] pyrene	0.02 ug/g dry	-	<0.02	0.47	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	-	<0.02	0.56	0.03
Benzo [g,h,i] perylene	0.02 ug/g dry	-	<0.02	0.26	0.02
Benzo [k] fluoranthene	0.02 ug/g dry	-	<0.02	0.29	<0.02
Chrysene	0.02 ug/g dry	-	<0.02	0.58	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	<0.02	0.07	<0.02
Fluoranthene	0.02 ug/g dry	-	<0.02	1.19	0.03
Fluorene	0.02 ug/g dry	-	<0.02	0.14	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	<0.02	0.25	<0.02
1-Methylnaphthalene	0.02 ug/g dry	-	<0.02	0.04	<0.02
2-Methylnaphthalene	0.02 ug/g dry	-	<0.02	0.06	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	-	<0.04	0.10	<0.04
Naphthalene	0.01 ug/g dry	-	<0.01	0.12	<0.01
Phenanthrene	0.02 ug/g dry	-	<0.02	0.91	<0.02
Pyrene	0.02 ug/g dry	-	<0.02	0.97	0.03
2-Fluorobiphenyl	Surrogate	-	72.9%	79.1%	75.6%
Terphenyl-d14	Surrogate	-	84.1%	94.1%	89.3%

Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.2	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.876		ug/g		65.7	50-140			
Surrogate: Terphenyl-d14	0.884		ug/g		66.3	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	3.59		ug/g		112	50-140			

Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
F4G PHCs (gravimetric)	7600	50	ug/g dry	6110			21.8	30	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	2.6	1.0	ug/g dry	2.7			3.6	30	
Barium	108	1.0	ug/g dry	130			18.6	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	5.9	5.0	ug/g dry	454			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g dry	ND			NC	35	
Chromium	23.5	5.0	ug/g dry	ND			NC	30	
Cobalt	6.0	1.0	ug/g dry	ND			NC	30	
Copper	13.9	5.0	ug/g dry	ND			NC	30	
Lead	15.8	1.0	ug/g dry	ND			NC	30	
Mercury	ND	0.1	ug/g dry	ND			NC	30	
Molybdenum	ND	1.0	ug/g dry	3.5			NC	30	
Nickel	15.0	5.0	ug/g dry	ND			NC	30	
Selenium	ND	1.0	ug/g dry	1.2			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	1.8			NC	30	
Vanadium	29.6	10.0	ug/g dry	ND			NC	30	
Zinc	80.4	20.0	ug/g dry	ND			NC	30	
<b>Physical Characteristics</b>									
% Solids	75.1	0.1	% by Wt.	75.9			1.0	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	0.021			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	0.039			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	0.067			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	0.064			NC	40	
Benzo [b] fluoranthene	0.022	0.02	ug/g dry	0.074			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	0.040			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	0.032			NC	40	
Chrysene	ND	0.02	ug/g dry	0.082			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	0.034	0.02	ug/g dry	0.174			NC	40	
Fluorene	ND	0.02	ug/g dry	0.022			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	0.037			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	0.021	0.02	ug/g dry	0.144			NC	40	
Pyrene	0.029	0.02	ug/g dry	0.116			NC	40	
Surrogate: 2-Fluorobiphenyl	1.40		ug/g dry		92.9	50-140			
Surrogate: Terphenyl-d14	1.53		ug/g dry		101	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry				NC	50	
Ethylbenzene	ND	0.05	ug/g dry				NC	50	
Toluene	ND	0.05	ug/g dry				NC	50	
m,p-Xylenes	ND	0.05	ug/g dry				NC	50	
o-Xylene	ND	0.05	ug/g dry				NC	50	
Surrogate: Toluene-d8	4.16		ug/g dry		117	50-140			

Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	176	7	ug/g	ND	88.1	80-120			
F2 PHCs (C10-C16)	126	4	ug/g	ND	135	60-140			
F3 PHCs (C16-C34)	327	8	ug/g	ND	143	60-140			
F4 PHCs (C34-C50)	165	6	ug/g	ND	114	60-140			
F4G PHCs (gravimetric)	830	50	ug/g	ND	83.0	80-120			
<b>Metals</b>									
Antimony	45.9	1.0	ug/g	ND	91.7	70-130			
Arsenic	53.0	1.0	ug/g	1.1	104	70-130			
Barium	91.0	1.0	ug/g	51.9	78.1	70-130			QM-07
Beryllium	49.8	0.5	ug/g	ND	99.7	70-130			
Boron	45.7	5.0	ug/g	182	-272	70-130			
Cadmium	49.0	0.5	ug/g	ND	97.9	70-130			
Chromium (VI)	4.7	0.2	ug/g	ND	80.0	70-130			
Chromium	61.0	5.0	ug/g	ND	121	70-130			
Cobalt	53.5	1.0	ug/g	ND	107	70-130			
Copper	55.3	5.0	ug/g	ND	107	70-130			
Lead	54.9	1.0	ug/g	ND	110	70-130			
Mercury	1.47	0.1	ug/g	ND	98.3	70-130			
Molybdenum	50.8	1.0	ug/g	1.4	98.8	70-130			
Nickel	56.3	5.0	ug/g	ND	109	70-130			
Selenium	51.1	1.0	ug/g	ND	101	70-130			
Silver	48.0	0.3	ug/g	ND	96.1	70-130			
Thallium	47.7	1.0	ug/g	ND	95.3	70-130			
Uranium	51.5	1.0	ug/g	ND	102	70-130			
Vanadium	63.0	10.0	ug/g	ND	126	70-130			
Zinc	79.2	20.0	ug/g	ND	154	70-130			QM-07
<b>Semi-Volatiles</b>									
Acenaphthene	0.233	0.02	ug/g	0.021	112	50-140			
Acenaphthylene	0.205	0.02	ug/g	ND	108	50-140			
Anthracene	0.251	0.02	ug/g	0.039	112	50-140			
Benzo [a] anthracene	0.226	0.02	ug/g	0.067	84.1	50-140			
Benzo [a] pyrene	0.211	0.02	ug/g	0.064	78.1	50-140			
Benzo [b] fluoranthene	0.281	0.02	ug/g	0.074	109	50-140			
Benzo [g,h,i] perylene	0.245	0.02	ug/g	0.040	109	50-140			
Benzo [k] fluoranthene	0.270	0.02	ug/g	0.032	126	50-140			
Chrysene	0.255	0.02	ug/g	0.082	91.8	50-140			
Dibenzo [a,h] anthracene	0.237	0.02	ug/g	ND	125	50-140			
Fluoranthene	0.244	0.02	ug/g	0.174	36.9	50-140			QM-06
Fluorene	0.250	0.02	ug/g	0.022	121	50-140			
Indeno [1,2,3-cd] pyrene	0.236	0.02	ug/g	0.037	106	50-140			
1-Methylnaphthalene	0.254	0.02	ug/g	ND	134	50-140			
2-Methylnaphthalene	0.255	0.02	ug/g	ND	135	50-140			
Naphthalene	0.217	0.01	ug/g	ND	115	50-140			
Phenanthrene	0.239	0.02	ug/g	0.144	50.7	50-140			
Pyrene	0.247	0.02	ug/g	0.116	69.3	50-140			
Surrogate: 2-Fluorobiphenyl	1.44		ug/g		95.4	50-140			
Surrogate: Terphenyl-d14	1.68		ug/g		112	50-140			
<b>Volatiles</b>									

Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzene	2.80	0.02	ug/g	ND	70.0	60-130			
Ethylbenzene	4.06	0.05	ug/g	ND	102	60-130			
Toluene	4.05	0.05	ug/g	ND	101	60-130			
m,p-Xylenes	8.24	0.05	ug/g	ND	103	60-130			
o-Xylene	4.26	0.05	ug/g	ND	106	60-130			
Surrogate: Toluene-d8	2.92		ug/g		91.4	50-140			



Certificate of Analysis

Report Date: 08-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 2-Jun-2020

Client PO: 30213

Project Description: PE4937

**Qualifier Notes:**

**Sample Qualifiers :**

- 1 : Elevated detection limits due to the nature of the sample matrix.
- 2 : GC-FID signal did not return to baseline by C50

**QC Qualifiers :**

- QM-06 : Due to noted non-homogeneity of the QC sample matrix, the spike recoveries were out side the accepted range. Batch data accepted based on other QC.
- QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

**CCME PHC additional information:**

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



2023210

Nº 125717

Client Name: <u>Paterson Group</u>	Project Ref: <u>PE4937</u>	Page <u>1</u> of <u>2</u>
Contact Name: <u>Mark D'Arcy</u>	Quote #:	<b>Turnaround Time</b> <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular Date Required: _____
Address: <u>154 Colonnade Rd. S.</u>	PO #: <u>30213</u>	
Telephone: <u>613-226-7381</u>	E-mail: <u>mdarcy@patersongroup.ca</u>	

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis											
<input type="checkbox"/> Table 1	<input checked="" type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs: F1-F4+BTEX	VOGs	PAHs	Metals by ICP			B (HWS)	PHC F2-F4
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input checked="" type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA									Hg	CrVI			
<input checked="" type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm													
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mun: _____		Other: _____													
Sample ID/Location Name				Date	Time												
1	TP1-G3			S	1	May 28/20							X	X	X		
2	TP2-G1				2				X								
3	TP4-G2				1					X						X	
4	TP6-G3				1						X						
5	<del>TP7-G2</del> TP7-G2				1											X	
6	<del>TP8-G1</del>				2				X								
7	TP8-G2				1					X							
8	TP9-G5				1						X						
9	TP11-G1				1						X	X	X				
10	TP12-G2				2				X	X	X	X	X				

Comments:			Method of Delivery: <u>Parcel</u>		
Relinquished By (Sign): <u>N. Sullivan</u>	Received By Driver/Depot:	Received at Lab: <u>Sneepporn Dharma</u>	Verified By: <u>[Signature]</u>		
Relinquished By (Print): <u>Nick Sullivan</u>	Date/Time:	Date/Time: <u>JUN 02, 2020 04:36</u>	Date/Time: <u>06-22-2017</u>		
Date/Time: <u>June 2/2020</u>	Temperature: _____ °C	Temperature: <u>14.8</u> °C	pH Verified: <input type="checkbox"/> By: _____		



## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mark D'Arcy

Client PO: 29964  
Project: PE4937  
Custody: 125724

Report Date: 10-Jun-2020  
Order Date: 3-Jun-2020

**Order #: 2023300**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2023300-01	BH1-SS3
2023300-02	BH2-SS3
2023300-03	BH4-SS2
2023300-04	BH7-SS2B

Approved By:



Dale Robertson, BSc  
Laboratory Director

Certificate of Analysis

Report Date: 10-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 3-Jun-2020

Client PO: 29964

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	5-Jun-20	6-Jun-20
PHC F1	CWS Tier 1 - P&T GC-FID	5-Jun-20	6-Jun-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	4-Jun-20	8-Jun-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	5-Jun-20	9-Jun-20
Solids, %	Gravimetric, calculation	9-Jun-20	6-Jun-20



Certificate of Analysis

Report Date: 10-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 3-Jun-2020

Client PO: 29964

Project Description: PE4937

Client ID:	BH1-SS3	BH2-SS3	BH4-SS2	BH7-SS2B
Sample Date:	02-Jun-20 09:00	01-Jun-20 09:00	01-Jun-20 09:00	02-Jun-20 09:00
Sample ID:	2023300-01	2023300-02	2023300-03	2023300-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	79.4	84.9	84.1	82.0
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**Volatiles**

Benzene	0.02 ug/g dry	0.06	-	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	0.71	-	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	2.82	-	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	2.82	-	<0.05	<0.05
Toluene-d8	Surrogate	107%	-	104%	116%

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	30	-	12	<7
F2 PHCs (C10-C16)	4 ug/g dry	82	-	27	<4
F3 PHCs (C16-C34)	8 ug/g dry	36	-	44	<8
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	15	<6

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	-	0.53	-	-
Acenaphthylene	0.02 ug/g dry	-	0.04	-	-
Anthracene	0.02 ug/g dry	-	0.77	-	-
Benzo [a] anthracene	0.02 ug/g dry	-	2.35	-	-
Benzo [a] pyrene	0.02 ug/g dry	-	2.36	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	2.06	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	1.18	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	1.14	-	-
Chrysene	0.02 ug/g dry	-	2.50	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	0.34	-	-
Fluoranthene	0.02 ug/g dry	-	5.97	-	-
Fluorene	0.02 ug/g dry	-	0.58	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	1.26	-	-
1-Methylnaphthalene	0.02 ug/g dry	-	0.11	-	-
2-Methylnaphthalene	0.02 ug/g dry	-	0.14	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	0.25	-	-
Naphthalene	0.01 ug/g dry	-	0.17	-	-
Phenanthrene	0.02 ug/g dry	-	3.64	-	-
Pyrene	0.02 ug/g dry	-	4.45	-	-
2-Fluorobiphenyl	Surrogate	-	92.7%	-	-
Terphenyl-d14	Surrogate	-	57.4%	-	-

Certificate of Analysis

Report Date: 10-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 3-Jun-2020

Client PO: 29964

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.18		ug/g		88.6	50-140			
Surrogate: Terphenyl-d14	1.31		ug/g		97.9	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	3.61		ug/g		113	50-140			

Certificate of Analysis

Report Date: 10-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 3-Jun-2020

Client PO: 29964

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	40	ug/g dry	ND			NC	30	GEN07
F3 PHCs (C16-C34)	8160	80	ug/g dry	8340			2.2	30	
F4 PHCs (C34-C50)	3350	60	ug/g dry	3330			0.5	30	ORG01
<b>Physical Characteristics</b>									
% Solids	80.1	0.1	% by Wt.	79.4			0.9	25	
<b>Semi-Volatiles</b>									
Acenaphthene	1.70	0.02	ug/g dry	0.534			105.0	40	QR-04
Acenaphthylene	0.030	0.02	ug/g dry	0.044			37.0	40	
Anthracene	2.25	0.02	ug/g dry	0.767			98.3	40	QR-04
Benzo [a] anthracene	5.34	0.02	ug/g dry	2.35			77.7	40	QR-04
Benzo [a] pyrene	5.19	0.02	ug/g dry	2.36			75.0	40	QR-04
Benzo [b] fluoranthene	6.66	0.02	ug/g dry	2.06			106.0	40	QR-04
Benzo [g,h,i] perylene	2.68	0.02	ug/g dry	1.18			77.6	40	QR-04
Benzo [k] fluoranthene	4.31	0.02	ug/g dry	1.14			117.0	40	QR-04
Chrysene	5.77	0.02	ug/g dry	2.50			79.2	40	QR-04
Dibenzo [a,h] anthracene	0.405	0.02	ug/g dry	0.343			16.5	40	
Fluoranthene	15.4	0.02	ug/g dry	5.97			88.2	40	QR-04
Fluorene	1.76	0.02	ug/g dry	0.582			100.0	40	QR-04
Indeno [1,2,3-cd] pyrene	2.75	0.02	ug/g dry	1.26			74.1	40	QR-04
1-Methylnaphthalene	0.250	0.02	ug/g dry	0.108			78.9	40	QR-04
2-Methylnaphthalene	0.357	0.02	ug/g dry	0.141			86.9	40	QR-04
Naphthalene	0.605	0.01	ug/g dry	0.173			111.0	40	QR-04
Phenanthrene	10.6	0.02	ug/g dry	3.64			97.6	40	QR-04
Pyrene	10.9	0.02	ug/g dry	4.45			83.9	40	QR-04
Surrogate: 2-Fluorobiphenyl	1.57		ug/g dry		100	50-140			
Surrogate: Terphenyl-d14	1.34		ug/g dry		85.5	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	4.44		ug/g dry		109	50-140			



Certificate of Analysis

Report Date: 10-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 3-Jun-2020

Client PO: 29964

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	184	7	ug/g	ND	91.9	80-120			
F2 PHCs (C10-C16)	136	4	ug/g	27	115	60-140			
F3 PHCs (C16-C34)	303	8	ug/g	44	111	60-140			
F4 PHCs (C34-C50)	152	6	ug/g	15	93.0	60-140			
<b>Semi-Volatiles</b>									
Acenaphthene	0.194	0.02	ug/g	ND	116	50-140			
Acenaphthylene	0.164	0.02	ug/g	ND	98.6	50-140			
Anthracene	0.174	0.02	ug/g	ND	105	50-140			
Benzo [a] anthracene	0.156	0.02	ug/g	ND	93.4	50-140			
Benzo [a] pyrene	0.147	0.02	ug/g	ND	88.4	50-140			
Benzo [b] fluoranthene	0.195	0.02	ug/g	ND	117	50-140			
Benzo [g,h,i] perylene	0.182	0.02	ug/g	ND	109	50-140			
Benzo [k] fluoranthene	0.191	0.02	ug/g	ND	114	50-140			
Chrysene	0.183	0.02	ug/g	ND	110	50-140			
Dibenzo [a,h] anthracene	0.169	0.02	ug/g	ND	102	50-140			
Fluoranthene	0.174	0.02	ug/g	ND	104	50-140			
Fluorene	0.188	0.02	ug/g	ND	113	50-140			
Indeno [1,2,3-cd] pyrene	0.179	0.02	ug/g	ND	107	50-140			
1-Methylnaphthalene	0.196	0.02	ug/g	ND	118	50-140			
2-Methylnaphthalene	0.199	0.02	ug/g	ND	120	50-140			
Naphthalene	0.185	0.01	ug/g	ND	111	50-140			
Phenanthrene	0.182	0.02	ug/g	ND	109	50-140			
Pyrene	0.174	0.02	ug/g	ND	104	50-140			
Surrogate: 2-Fluorobiphenyl	1.24		ug/g		93.0	50-140			
Surrogate: Terphenyl-d14	1.28		ug/g		95.9	50-140			
<b>Volatiles</b>									
Benzene	2.54	0.02	ug/g	ND	63.5	60-130			
Ethylbenzene	2.89	0.05	ug/g	ND	72.4	60-130			
Toluene	4.66	0.05	ug/g	ND	117	60-130			
m,p-Xylenes	6.42	0.05	ug/g	ND	80.3	60-130			
o-Xylene	3.13	0.05	ug/g	ND	78.4	60-130			
Surrogate: Toluene-d8	3.93		ug/g		123	50-140			

Certificate of Analysis

Report Date: 10-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 3-Jun-2020

Client PO: 29964

Project Description: PE4937

**Qualifier Notes:**

**QC Qualifiers :**

GEN07 : Elevated detection limit due to dilution required because of high target analyte concentration.

ORG01 : GC-FID signal did not return to baseline by C50

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

***CCME PHC additional information:***

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mark D'Arcy

Client PO: 30523  
Project: PE4937  
Custody: 12860/601

Report Date: 10-Aug-2020  
Order Date: 5-Aug-2020

**Order #: 2032210**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2032210-01	TP17-G2
2032210-02	TP15-G4
2032210-03	TP14-G3
2032210-04	TP16-G4
2032210-05	TP16-G3
2032210-06	TP18-G2
2032210-07	TP19-G2
2032210-08	TP20-G2
2032210-09	TP22-G1
2032210-10	TP23-G1
2032210-11	TP24-G1
2032210-12	TP26-G3
2032210-13	TP27-G2
2032210-14	TP28-G2
2032210-15	TP29-G2
2032210-16	TP30-G2
2032210-17	TP31-G3
2032210-18	TP32-G3

Approved By:



Dale Robertson, BSc  
Laboratory Director

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Conductivity	MOE E3138 - probe @25 °C, water ext	7-Aug-20	7-Aug-20
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	7-Aug-20	10-Aug-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	6-Aug-20	7-Aug-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	7-Aug-20	7-Aug-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	6-Aug-20	7-Aug-20
SAR	Calculated	7-Aug-20	7-Aug-20
Solids, %	Gravimetric, calculation	10-Aug-20	10-Aug-20

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

<b>Client ID:</b>	TP17-G2	TP15-G4	TP14-G3	TP16-G4
<b>Sample Date:</b>	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00
<b>Sample ID:</b>	2032210-01	2032210-02	2032210-03	2032210-04
<b>MDL/Units</b>	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	85.0	75.8	88.5	75.5
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**General Inorganics**

SAR	0.01 N/A	0.30	0.43	1.17	0.52
Conductivity	5 uS/cm	131	1280	363	231

**Metals**

Antimony	1.0 ug/g dry	1.1	4.2	2.0	<1.0
Arsenic	1.0 ug/g dry	3.6	69.5	7.4	3.9
Barium	1.0 ug/g dry	188	2350	139	168
Beryllium	0.5 ug/g dry	0.6	<0.5	0.6	0.6
Boron	5.0 ug/g dry	6.0	12.0	8.9	5.7
Cadmium	0.5 ug/g dry	<0.5	12.4	<0.5	<0.5
Chromium	5.0 ug/g dry	73.0	170	27.5	68.7
Cobalt	1.0 ug/g dry	14.8	11.5	8.8	13.7
Copper	5.0 ug/g dry	34.2	214	189	30.5
Lead	1.0 ug/g dry	10.7	33600	141	19.0
Molybdenum	1.0 ug/g dry	<1.0	18.3	1.8	<1.0
Nickel	5.0 ug/g dry	40.8	44.6	27.1	38.0
Selenium	1.0 ug/g dry	<1.0	1.3	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	0.4	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	1.1	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	66.0	55.1	36.0	61.3
Zinc	20.0 ug/g dry	83.3	1230	201	80.1

**Hydrocarbons**

F2 PHCs (C10-C16)	4 ug/g dry	<4	153	33	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	4190	206	36
F4 PHCs (C34-C50)	6 ug/g dry	<6	758	94	97

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.40 [1]	0.40	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.40 [1]	0.36	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.40 [1]	1.00	<0.02
Benzo [a] anthracene	0.02 ug/g dry	0.04	<0.40 [1]	1.97	0.03
Benzo [a] pyrene	0.02 ug/g dry	0.05	0.43 [1]	1.72	0.04
Benzo [b] fluoranthene	0.02 ug/g dry	0.06	0.40 [1]	1.75	0.04
Benzo [g,h,i] perylene	0.02 ug/g dry	0.03	<0.40 [1]	0.71	0.02

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

	Client ID:	TP17-G2	TP15-G4	TP14-G3	TP16-G4
	Sample Date:	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00
	Sample ID:	2032210-01	2032210-02	2032210-03	2032210-04
	MDL/Units	Soil	Soil	Soil	Soil
Benzo [k] fluoranthene	0.02 ug/g dry	0.03	<0.40 [1]	0.92	<0.02
Chrysene	0.02 ug/g dry	0.06	<0.40 [1]	1.66	0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.40 [1]	0.25	<0.02
Fluoranthene	0.02 ug/g dry	0.09	0.75	4.94	0.05
Fluorene	0.02 ug/g dry	<0.02	<0.40 [1]	0.56	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.03	<0.40 [1]	0.77	0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	2.64	0.34	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	5.43	0.47	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	8.07	0.81	<0.04
Naphthalene	0.01 ug/g dry	<0.01	3.57	1.37	<0.01
Phenanthrene	0.02 ug/g dry	0.03	0.99	4.23	0.04
Pyrene	0.02 ug/g dry	0.08	1.08	4.03	0.05
2-Fluorobiphenyl	Surrogate	75.1%	124%	95.1%	117%
Terphenyl-d14	Surrogate	74.2%	117%	93.9%	84.9%

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

	Client ID:	TP16-G3	TP18-G2	TP19-G2	TP20-G2
	Sample Date:	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00
	Sample ID:	2032210-05	2032210-06	2032210-07	2032210-08
	MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

	MDL/Units	TP16-G3	TP18-G2	TP19-G2	TP20-G2
% Solids	0.1 % by Wt.	74.6	88.5	89.3	84.3

**General Inorganics**

	MDL/Units	TP16-G3	TP18-G2	TP19-G2	TP20-G2
SAR	0.01 N/A	0.43	0.97	1.68	1.41
Conductivity	5 uS/cm	423	380	253	279

**Metals**

	MDL/Units	TP16-G3	TP18-G2	TP19-G2	TP20-G2
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	3.5	2.2	2.8	2.6
Barium	1.0 ug/g dry	122	35.8	56.1	70.2
Beryllium	0.5 ug/g dry	0.6	<0.5	<0.5	<0.5
Boron	5.0 ug/g dry	<5.0	<5.0	<5.0	<5.0
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	58.8	14.6	22.5	36.7
Cobalt	1.0 ug/g dry	11.0	4.7	5.7	7.6
Copper	5.0 ug/g dry	21.4	9.3	10.0	15.1
Lead	1.0 ug/g dry	15.8	5.0	5.4	9.6
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	30.1	9.3	13.5	19.4
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	52.5	21.5	29.1	35.1
Zinc	20.0 ug/g dry	70.1	20.2	28.9	39.6

**Hydrocarbons**

	MDL/Units	TP16-G3	TP18-G2	TP19-G2	TP20-G2
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	<6

**Semi-Volatiles**

	MDL/Units	TP16-G3	TP18-G2	TP19-G2	TP20-G2
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02



Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

	Client ID:	TP16-G3	TP18-G2	TP19-G2	TP20-G2
	Sample Date:	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00
	Sample ID:	2032210-05	2032210-06	2032210-07	2032210-08
	MDL/Units	Soil	Soil	Soil	Soil
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	96.0%	103%	82.3%	110%
Terphenyl-d14	Surrogate	90.7%	107%	90.0%	89.3%

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

	Client ID:	TP22-G1	TP23-G1	TP24-G1	TP26-G3
	Sample Date:	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00
	Sample ID:	2032210-09	2032210-10	2032210-11	2032210-12
	MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

	MDL/Units	TP22-G1	TP23-G1	TP24-G1	TP26-G3
% Solids	0.1 % by Wt.	94.6	96.7	91.7	95.7

**General Inorganics**

	MDL/Units	TP22-G1	TP23-G1	TP24-G1	TP26-G3
SAR	0.01 N/A	0.11	0.08	0.27	0.25
Conductivity	5 uS/cm	298	262	268	274

**Metals**

	MDL/Units	TP22-G1	TP23-G1	TP24-G1	TP26-G3
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	7.5	3.3	4.3	4.0
Barium	1.0 ug/g dry	57.4	88.0	94.8	152
Beryllium	0.5 ug/g dry	0.9	<0.5	<0.5	0.6
Boron	5.0 ug/g dry	12.5	9.1	5.4	5.7
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	28.2	23.4	27.0	52.3
Cobalt	1.0 ug/g dry	21.4	7.5	7.2	9.6
Copper	5.0 ug/g dry	40.9	15.7	18.1	23.7
Lead	1.0 ug/g dry	13.4	8.5	35.3	12.2
Molybdenum	1.0 ug/g dry	1.1	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	38.6	17.2	16.9	27.1
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	1.6
Vanadium	10.0 ug/g dry	34.8	23.5	28.2	48.3
Zinc	20.0 ug/g dry	68.6	29.8	62.9	76.1

**Hydrocarbons**

	MDL/Units	TP22-G1	TP23-G1	TP24-G1	TP26-G3
F2 PHCs (C10-C16)	4 ug/g dry	16	4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	15	66	9	12
F4 PHCs (C34-C50)	6 ug/g dry	<6	169 [3]	23	19
F4G PHCs (gravimetric)	50 ug/g dry	-	445	-	-

**Semi-Volatiles**

	MDL/Units	TP22-G1	TP23-G1	TP24-G1	TP26-G3
Acenaphthene	0.02 ug/g dry	<0.02	<0.40 [2]	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.40 [2]	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.40 [2]	0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.40 [2]	0.08	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.40 [2]	0.09	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.40 [2]	0.11	<0.02

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

	Client ID:	TP22-G1	TP23-G1	TP24-G1	TP26-G3
	Sample Date:	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00	31-Jul-20 09:00
	Sample ID:	2032210-09	2032210-10	2032210-11	2032210-12
	MDL/Units	Soil	Soil	Soil	Soil
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.40 [2]	0.06	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.40 [2]	0.05	<0.02
Chrysene	0.02 ug/g dry	<0.02	<0.40 [2]	0.10	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.40 [2]	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	<0.40 [2]	0.20	0.03
Fluorene	0.02 ug/g dry	<0.02	<0.40 [2]	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.40 [2]	0.05	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.40 [2]	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.40 [2]	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.80 [2]	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.20 [2]	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	<0.02	<0.40 [2]	0.09	0.02
Pyrene	0.02 ug/g dry	<0.02	<0.40 [2]	0.17	0.03
2-Fluorobiphenyl	Surrogate	98.7%	121%	79.4%	87.5%
Terphenyl-d14	Surrogate	106%	119%	81.1%	89.7%

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

Client ID:	TP27-G2	TP28-G2	TP29-G2	TP30-G2
Sample Date:	04-Aug-20 09:00	04-Aug-20 09:00	04-Aug-20 09:00	04-Aug-20 09:00
Sample ID:	2032210-13	2032210-14	2032210-15	2032210-16
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	MDL/Units	TP27-G2	TP28-G2	TP29-G2	TP30-G2
0.1 % by Wt.		89.0	90.8	77.2	82.2

**General Inorganics**

Parameter	MDL/Units	TP27-G2	TP28-G2	TP29-G2	TP30-G2
SAR	0.01 N/A	0.59	0.74	3.81	1.06
Conductivity	5 uS/cm	167	266	484	504

**Metals**

Element	MDL/Units	TP27-G2	TP28-G2	TP29-G2	TP30-G2
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	2.3	2.5	4.8	4.1
Barium	1.0 ug/g dry	28.0	62.6	189	187
Beryllium	0.5 ug/g dry	<0.5	<0.5	0.8	0.7
Boron	5.0 ug/g dry	<5.0	7.9	8.7	6.8
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	14.3	21.7	94.8	84.0
Cobalt	1.0 ug/g dry	3.5	6.2	18.5	16.6
Copper	5.0 ug/g dry	8.1	14.5	37.9	36.3
Lead	1.0 ug/g dry	6.3	6.8	8.7	7.9
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	8.0	13.8	51.6	46.3
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	20.2	24.9	71.6	70.6
Zinc	20.0 ug/g dry	22.4	29.8	85.1	86.1

**Hydrocarbons**

Parameter	MDL/Units	TP27-G2	TP28-G2	TP29-G2	TP30-G2
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	18	30	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	23	25	<6	<6

**Semi-Volatiles**

Compound	MDL/Units	TP27-G2	TP28-G2	TP29-G2	TP30-G2
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

	Client ID:	TP27-G2	TP28-G2	TP29-G2	TP30-G2
	Sample Date:	04-Aug-20 09:00	04-Aug-20 09:00	04-Aug-20 09:00	04-Aug-20 09:00
	Sample ID:	2032210-13	2032210-14	2032210-15	2032210-16
	MDL/Units	Soil	Soil	Soil	Soil
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	0.03	<0.02	<0.02	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	0.02	<0.02	<0.02	<0.02
Pyrene	0.02 ug/g dry	0.02	<0.02	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	76.9%	93.3%	81.0%	73.0%
Terphenyl-d14	Surrogate	80.7%	92.0%	85.0%	77.6%

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

Client ID:	TP31-G3	TP32-G3	-	-
Sample Date:	04-Aug-20 09:00	04-Aug-20 09:00	-	-
Sample ID:	2032210-17	2032210-18	-	-
MDL/Units	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	74.7	83.2	-	-
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**General Inorganics**

SAR	0.01 N/A	2.80	0.20	-	-
Conductivity	5 uS/cm	581	105	-	-

**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	4.1	2.8	-	-
Barium	1.0 ug/g dry	256	94.6	-	-
Beryllium	0.5 ug/g dry	0.7	0.5	-	-
Boron	5.0 ug/g dry	7.3	<5.0	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	99.7	51.6	-	-
Cobalt	1.0 ug/g dry	18.9	9.7	-	-
Copper	5.0 ug/g dry	47.8	14.6	-	-
Lead	1.0 ug/g dry	15.1	8.2	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	54.3	23.8	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	1.3	-	-
Vanadium	10.0 ug/g dry	87.9	46.5	-	-
Zinc	20.0 ug/g dry	132	64.8	-	-

**Hydrocarbons**

F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	0.07	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	0.02	<0.02	-	-
Anthracene	0.02 ug/g dry	0.16	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	0.37	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	0.39	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	0.40	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	0.22	<0.02	-	-



Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

	Client ID:	TP31-G3	TP32-G3	-	-
	Sample Date:	04-Aug-20 09:00	04-Aug-20 09:00	-	-
	Sample ID:	2032210-17	2032210-18	-	-
	MDL/Units	Soil	Soil	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	0.22	<0.02	-	-
Chrysene	0.02 ug/g dry	0.41	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.05	<0.02	-	-
Fluoranthene	0.02 ug/g dry	0.98	<0.02	-	-
Fluorene	0.02 ug/g dry	0.07	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.20	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	-	-
Naphthalene	0.01 ug/g dry	0.02	<0.01	-	-
Phenanthrene	0.02 ug/g dry	0.60	<0.02	-	-
Pyrene	0.02 ug/g dry	0.82	<0.02	-	-
2-Fluorobiphenyl	Surrogate	85.7%	91.4%	-	-
Terphenyl-d14	Surrogate	86.9%	94.4%	-	-

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>General Inorganics</b>									
Conductivity	ND	5	uS/cm						
<b>Hydrocarbons</b>									
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.01		ug/g		76.1	50-140			
Surrogate: Terphenyl-d14	1.16		ug/g		86.7	50-140			

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>General Inorganics</b>									
SAR	0.19	0.01	N/A	0.30			NC	30	
Conductivity	332	5	uS/cm	342			3.0	5	
<b>Hydrocarbons</b>									
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	1.1	1.0	ug/g dry	ND			NC	30	
Arsenic	6.3	1.0	ug/g dry	6.9			7.9	30	
Barium	83.5	1.0	ug/g dry	88.7			6.1	30	
Beryllium	0.9	0.5	ug/g dry	0.9			7.6	30	
Boron	12.4	5.0	ug/g dry	11.0			11.5	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	29.1	5.0	ug/g dry	28.7			1.5	30	
Cobalt	11.8	1.0	ug/g dry	12.0			1.5	30	
Copper	30.3	5.0	ug/g dry	31.9			4.9	30	
Lead	32.3	1.0	ug/g dry	36.1			11.0	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	26.5	5.0	ug/g dry	27.1			2.2	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	38.4	10.0	ug/g dry	37.7			1.7	30	
Zinc	66.4	20.0	ug/g dry	65.7			1.1	30	
<b>Physical Characteristics</b>									
% Solids	52.4	0.1	% by Wt.	49.9			4.8	25	
<b>Semi-Volatiles</b>									
Acenaphthene	0.106	0.02	ug/g dry	0.198			60.8	40	QR-04
Acenaphthylene	0.045	0.02	ug/g dry	0.074			48.5	40	QR-04
Anthracene	0.248	0.02	ug/g dry	0.456			59.1	40	QR-04
Benzo [a] anthracene	0.766	0.02	ug/g dry	1.13			38.7	40	
Benzo [a] pyrene	0.746	0.02	ug/g dry	0.760			1.9	40	
Benzo [b] fluoranthene	0.835	0.02	ug/g dry	1.16			32.2	40	
Benzo [g,h,i] perylene	0.380	0.02	ug/g dry	0.562			38.6	40	
Benzo [k] fluoranthene	0.443	0.02	ug/g dry	0.554			22.3	40	
Chrysene	0.837	0.02	ug/g dry	1.22			37.3	40	
Dibenzo [a,h] anthracene	0.116	0.02	ug/g dry	0.170			38.2	40	
Fluoranthene	1.75	0.02	ug/g dry	2.49			34.8	40	
Fluorene	0.100	0.02	ug/g dry	0.206			68.8	40	QR-04
Indeno [1,2,3-cd] pyrene	0.367	0.02	ug/g dry	0.533			36.9	40	
1-Methylnaphthalene	0.038	0.02	ug/g dry	0.080			72.0	40	QR-04
2-Methylnaphthalene	0.047	0.02	ug/g dry	0.096			67.3	40	QR-04
Naphthalene	0.047	0.01	ug/g dry	0.093			64.7	40	QR-04
Phenanthrene	1.02	0.02	ug/g dry	1.84			56.9	40	QR-04
Pyrene	1.54	0.02	ug/g dry	2.17			34.3	40	
Surrogate: 2-Fluorobiphenyl	1.34		ug/g dry		86.5	50-140			
Surrogate: Terphenyl-d14	1.37		ug/g dry		88.7	50-140			

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F2 PHCs (C10-C16)	84	4	ug/g	ND	89.2	60-140			
F3 PHCs (C16-C34)	246	8	ug/g	ND	107	60-140			
F4 PHCs (C34-C50)	160	6	ug/g	ND	110	60-140			
F4G PHCs (gravimetric)	1000	50	ug/g	ND	100	80-120			
<b>Metals</b>									
Antimony	41.7	1.0	ug/g	ND	83.5	70-130			
Arsenic	52.7	1.0	ug/g	2.7	99.8	70-130			
Barium	80.8	1.0	ug/g	35.5	90.6	70-130			
Beryllium	47.8	0.5	ug/g	ND	94.9	70-130			
Boron	49.8	5.0	ug/g	ND	90.7	70-130			
Cadmium	46.0	0.5	ug/g	ND	91.9	70-130			
Chromium	63.1	5.0	ug/g	11.5	103	70-130			
Cobalt	54.7	1.0	ug/g	4.8	99.8	70-130			
Copper	61.3	5.0	ug/g	12.7	97.1	70-130			
Lead	61.1	1.0	ug/g	14.4	93.2	70-130			
Molybdenum	48.0	1.0	ug/g	ND	95.8	70-130			
Nickel	59.9	5.0	ug/g	10.8	98.2	70-130			
Selenium	48.3	1.0	ug/g	ND	96.4	70-130			
Silver	45.0	0.3	ug/g	ND	90.0	70-130			
Thallium	44.3	1.0	ug/g	ND	88.5	70-130			
Uranium	48.3	1.0	ug/g	ND	96.3	70-130			
Vanadium	67.2	10.0	ug/g	15.1	104	70-130			
Zinc	75.0	20.0	ug/g	26.3	97.5	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.355	0.02	ug/g	0.198	80.8	50-140			
Acenaphthylene	0.202	0.02	ug/g	0.074	65.8	50-140			
Anthracene	0.610	0.02	ug/g	0.456	79.5	50-140			
Benzo [a] anthracene	1.32	0.02	ug/g	1.13	97.5	50-140			
Benzo [a] pyrene	0.166	0.02	ug/g	ND	99.7	50-140			
Benzo [b] fluoranthene	1.39	0.02	ug/g	1.16	123	50-140			
Benzo [g,h,i] perylene	0.708	0.02	ug/g	0.562	75.8	50-140			
Benzo [k] fluoranthene	0.199	0.02	ug/g	ND	119	50-140			
Chrysene	1.42	0.02	ug/g	1.22	101	50-140			
Dibenzo [a,h] anthracene	0.327	0.02	ug/g	0.170	81.1	50-140			
Fluoranthene	0.158	0.02	ug/g	ND	94.8	50-140			
Fluorene	0.340	0.02	ug/g	0.206	69.7	50-140			
Indeno [1,2,3-cd] pyrene	0.707	0.02	ug/g	0.533	90.1	50-140			
1-Methylnaphthalene	0.250	0.02	ug/g	0.080	87.6	50-140			
2-Methylnaphthalene	0.280	0.02	ug/g	0.096	95.4	50-140			
Naphthalene	0.232	0.01	ug/g	0.093	71.9	50-140			
Phenanthrene	2.03	0.02	ug/g	1.84	98.8	50-140			
Pyrene	2.34	0.02	ug/g	2.17	89.3	50-140			
Surrogate: 2-Fluorobiphenyl	1.31		ug/g		84.9	50-140			
Surrogate: Terphenyl-d14	1.24		ug/g		80.3	50-140			

Certificate of Analysis

Report Date: 10-Aug-2020

Client: Paterson Group Consulting Engineers

Order Date: 5-Aug-2020

Client PO: 30523

Project Description: PE4937

**Qualifier Notes:**

**Sample Qualifiers :**

- 1 : Elevated detection limit because of dilution required due to the presence of high levels of non-target analytes.
- 2 : Elevated detection limits due to the nature of the sample matrix.
- 3 : GC-FID signal did not return to baseline by C50

**QC Qualifiers :**

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

***CCME PHC additional information:***

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



St. Laurent Blvd.  
Ottawa K1G 4J8  
613-919-1947  
paracellabs.com  
www.paracellabs.com

Parcel Order Number  
(Lab Use Only)

2032210

Chain Of Custody  
(Lab Use Only)

No. 128601

Client Name: <b>PATERSON</b>	Project Ref: <b>PE4937</b>	Page <u>1</u> of <u>2</u>
Contact Name: <b>MARK D'ARCY</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input checked="" type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regular
Address: <b>154 COLONNADE Rd. S OTTAWA ON.</b>	PO #: <b>30523</b>	
Telephone: <b>(613) 226-7381</b>	E-mail: <b>M.D'ARCY@PATERSONGROUP.CA</b>	
		Date Required: _____

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis													
<input checked="" type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken Date   Time		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	PHCs (F2-F4)	EC	SAR
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA															
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm															
For RSC: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Mun: _____		Other: _____															
Sample ID/Location Name				Matrix	Air Volume	# of Containers	Date	Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	PHCs (F2-F4)	EC	SAR	
1	TP17-G2			S	/	1	June 31/20			X	X				X	X	X		
2	TP15-G4				/					X	X				X	X	X		
3	TP14-G3				/					X	X				X	X	X		
4	TP16-G4				/					X	X				X	X	X		
5	TP16-G3				/					X	X				X	X	X		
6	TP18-G2				/					X	X				X	X	X		
7	TP19-G2				/					X	X				X	X	X		
8	TP20-G2				/					X	X				X	X	X		
9	TP22-G1				/					X	X				X	X	X		
10	TP23-G1			↓	/	↓	↓			X	X				X	X	X		

Comments:		Method of Delivery: <b>PARCEL COURIER</b>	
Relinquished By (Sign):	Received By Driver/Depot: <b>A. FLOUSE</b>	Received at Lab: <b>Suneeparn Dohmai</b>	Verified By: <b>[Signature]</b>
Relinquished By (Print):	Date/Time: <b>05/08/20 3:31</b>	Date/Time: <b>Aug 05, 2020 04:22</b>	Date/Time: <b>8-05-20 16:35</b>
Date/Time:	Temperature: °C <b>7.1</b>	Temperature: °C <b>11.2</b>	pH Verified: <input type="checkbox"/> By:





2032210

Nº 128600

Client Name: <b>PATERSON GROUP</b>	Project Ref: <b>PE4937</b>	Page <u>2</u> of <u>2</u>
Contact Name: <b>MARK D'ARCY</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input checked="" type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regular
Address: <b>154 COLONNADE Rd. S OTTAWA ON.</b>	PO #: <b>30523</b>	
Telephone: <b>(613) 226-7381</b>	Email: <b>mdarcy@PatersonGroup.ca</b>	
		Date Required: _____

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis																		
<input checked="" type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	HG	CrVI	B (HWS)	PHCs (F2-F4)	EC	SAR					
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA																				
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																				
For RSC: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Mun: _____		Other: _____																				
Sample ID/Location Name				Matrix	Air Volume	# of Containers	Date	Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	HG	CrVI	B (HWS)	PHCs (F2-F4)	EC	SAR						
1	TP24-G1			S	/	1	June 31/20			X	X					X	X	X						
2	TP26-G3			S	/	1	July 31/20			X	X					X	X	X						
3	TP27-G2			S	/	1	Aug 4/20			X	X					X	X	X						
4	TP28-G2			S	/	1	Aug 4/20			X	X					X	X	X						
5	TP29-G2			S	/	1	Aug 4/20			X	X					X	X	X						
6	TP30-G2			S	/	1	Aug 4/20			X	X					X	X	X						
7	TP31-G3			S	/	1	Aug 4/20			X	X					X	X	X						
8	TP32-G3			S	/	1	Aug 4/20			X	X					X	X	X						
9										X	X					X	X	X						
10										X	X					X	X	X						

Comments:		Method of Delivery: <b>PARCEL COURIER</b>	
Relinquished By (Sign):	Received By Driver/Depot: <b>A. LOUIE</b>	Received at Lab: <b>Surveypoint Ottawa</b>	Verified By: <b>[Signature]</b>
Relinquished By (Print):	Date/Time: <b>05/08/20 3:31</b>	Date/Time: <b>AVG 05.2020 04.22</b>	Date/Time: <b>8-5-20 16:35</b>
Date/Time:	Temperature: <b>°C 21</b>	Temperature: <b>11.2 °C</b>	pH Verified: <input type="checkbox"/> By:

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31411  
Project: PE4937  
Custody: 55016,55018

Report Date: 26-Oct-2020  
Order Date: 21-Oct-2020

**Order #: 2043447**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2043447-01	TP37-GS3
2043447-02	TP38-GS4
2043447-03	TP39-GS2
2043447-04	TP40-GS1
2043447-05	TP44-GS1
2043447-06	TP45-GS3
2043447-07	TP34-GS3
2043447-08	TP35-GS2
2043447-09	TP36-GS2

Approved By:



Dale Robertson, BSc  
Laboratory Director

Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	23-Oct-20	24-Oct-20
PHC F1	CWS Tier 1 - P&T GC-FID	23-Oct-20	24-Oct-20
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	26-Oct-20	26-Oct-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	22-Oct-20	23-Oct-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	26-Oct-20	26-Oct-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	22-Oct-20	24-Oct-20
Solids, %	Gravimetric, calculation	22-Oct-20	23-Oct-20

Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

Client ID:	TP37-GS3	TP38-GS4	TP39-GS2	TP40-GS1
Sample Date:	19-Oct-20 09:00	19-Oct-20 09:00	19-Oct-20 09:00	19-Oct-20 09:00
Sample ID:	2043447-01	2043447-02	2043447-03	2043447-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	87.4	83.8	68.5	83.3
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**Metals**

Element	MDL/Units	TP37-GS3	TP38-GS4	TP39-GS2	TP40-GS1
Antimony	1.0 ug/g dry	1.2	-	-	<1.0
Arsenic	1.0 ug/g dry	3.1	-	-	2.7
Barium	1.0 ug/g dry	139	-	-	82.0
Beryllium	0.5 ug/g dry	<0.5	-	-	<0.5
Boron	5.0 ug/g dry	5.4	-	-	<5.0
Cadmium	0.5 ug/g dry	<0.5	-	-	<0.5
Chromium	5.0 ug/g dry	40.0	-	-	43.3
Cobalt	1.0 ug/g dry	8.7	-	-	8.7
Copper	5.0 ug/g dry	24.2	-	-	13.2
Lead	1.0 ug/g dry	41.6	-	-	8.8
Molybdenum	1.0 ug/g dry	<1.0	-	-	<1.0
Nickel	5.0 ug/g dry	23.7	-	-	20.4
Selenium	1.0 ug/g dry	<1.0	-	-	<1.0
Silver	0.3 ug/g dry	<0.3	-	-	<0.3
Thallium	1.0 ug/g dry	<1.0	-	-	<1.0
Uranium	1.0 ug/g dry	<1.0	-	-	1.4
Vanadium	10.0 ug/g dry	43.5	-	-	41.1
Zinc	20.0 ug/g dry	73.8	-	-	53.5

**Volatiles**

Compound	MDL/Units	TP37-GS3	TP38-GS4	TP39-GS2	TP40-GS1
Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene-d8	Surrogate	125%	123%	-	-

**Hydrocarbons**

PHC Group	MDL/Units	TP37-GS3	TP38-GS4	TP39-GS2	TP40-GS1
F1 PHCs (C6-C10)	7 ug/g dry	20	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	96	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	97	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	733 [4]	<6	-	-
F4G PHCs (gravimetric)	50 ug/g dry	1110	-	-	-

**Semi-Volatiles**

Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

	Client ID: Sample Date: Sample ID:	TP37-GS3 19-Oct-20 09:00 2043447-01 Soil	TP38-GS4 19-Oct-20 09:00 2043447-02 Soil	TP39-GS2 19-Oct-20 09:00 2043447-03 Soil	TP40-GS1 19-Oct-20 09:00 2043447-04 Soil
	MDL/Units				
Acenaphthene	0.02 ug/g dry	-	<0.02	0.05	<0.02
Acenaphthylene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	-	<0.02	0.05	<0.02
Benzo [a] anthracene	0.02 ug/g dry	-	<0.02	0.08	<0.02
Benzo [a] pyrene	0.02 ug/g dry	-	<0.02	0.08	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	-	<0.02	0.09	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	-	<0.02	0.05	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	-	<0.02	0.05	<0.02
Chrysene	0.02 ug/g dry	-	<0.02	0.09	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	-	<0.02	0.26	<0.02
Fluorene	0.02 ug/g dry	-	<0.02	0.05	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	<0.02	0.04	<0.02
1-Methylnaphthalene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	-	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	-	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	-	<0.02	0.15	<0.02
Pyrene	0.02 ug/g dry	-	<0.02	0.21	<0.02
2-Fluorobiphenyl	Surrogate	-	68.7%	73.1%	65.4%
Terphenyl-d14	Surrogate	-	111%	126%	114%

Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

Client ID:	TP44-GS1	TP45-GS3	TP34-GS3	TP35-GS2
Sample Date:	19-Oct-20 09:00	19-Oct-20 09:00	19-Oct-20 09:00	19-Oct-20 09:00
Sample ID:	2043447-05	2043447-06	2043447-07	2043447-08
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	79.7	85.0	85.2	78.2
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	6.1
Arsenic	1.0 ug/g dry	3.3	1.7	-	6.7
Barium	1.0 ug/g dry	99.8	29.8	-	157
Beryllium	0.5 ug/g dry	<0.5	<0.5	-	<0.5
Boron	5.0 ug/g dry	5.6	<5.0	-	8.3
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	<0.5
Chromium	5.0 ug/g dry	33.6	17.1	-	35.8
Cobalt	1.0 ug/g dry	7.7	4.5	-	9.2
Copper	5.0 ug/g dry	26.4	5.2	-	139
Lead	1.0 ug/g dry	21.2	4.5	-	134
Molybdenum	1.0 ug/g dry	2.6	<1.0	-	1.4
Nickel	5.0 ug/g dry	19.6	13.9	-	28.2
Selenium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	-	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Vanadium	10.0 ug/g dry	31.7	22.2	-	37.0
Zinc	20.0 ug/g dry	80.9	29.5	-	227

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	-	<0.05	0.08
o-Xylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	-	<0.05	0.08
Toluene-d8	Surrogate	124%	-	125%	124%

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	8	15
F3 PHCs (C16-C34)	8 ug/g dry	165	-	208	167
F4 PHCs (C34-C50)	6 ug/g dry	101	-	99	76

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	-	0.15	0.07
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Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

	Client ID:	TP44-GS1	TP45-GS3	TP34-GS3	TP35-GS2
	Sample Date:	19-Oct-20 09:00	19-Oct-20 09:00	19-Oct-20 09:00	19-Oct-20 09:00
	Sample ID:	2043447-05	2043447-06	2043447-07	2043447-08
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	<0.02	-	0.11	0.03
Anthracene	0.02 ug/g dry	<0.02	-	0.36	0.24
Benzo [a] anthracene	0.02 ug/g dry	0.03	-	0.78	0.60
Benzo [a] pyrene	0.02 ug/g dry	0.03	-	0.78	0.74
Benzo [b] fluoranthene	0.02 ug/g dry	0.04	-	0.84	0.75
Benzo [g,h,i] perylene	0.02 ug/g dry	0.04	-	0.45	0.45
Benzo [k] fluoranthene	0.02 ug/g dry	0.02	-	0.56	0.43
Chrysene	0.02 ug/g dry	0.04	-	0.80	0.63
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	-	0.13	0.13
Fluoranthene	0.02 ug/g dry	0.06	-	1.74	1.41
Fluorene	0.02 ug/g dry	<0.02	-	0.18	0.12
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.02	-	0.43	0.46
1-Methylnaphthalene	0.02 ug/g dry	<0.02	-	0.05	0.07
2-Methylnaphthalene	0.02 ug/g dry	<0.02	-	0.07	0.08
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	-	0.11	0.15
Naphthalene	0.01 ug/g dry	<0.01	-	0.12	0.09
Phenanthrene	0.02 ug/g dry	0.03	-	1.17	0.85
Pyrene	0.02 ug/g dry	0.06	-	1.44	1.12
2-Fluorobiphenyl	Surrogate	74.9%	-	67.0%	71.5%
Terphenyl-d14	Surrogate	134%	-	113%	123%

Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

<b>Client ID:</b>	TP36-GS2	-	-	-
<b>Sample Date:</b>	19-Oct-20 09:00	-	-	-
<b>Sample ID:</b>	2043447-09	-	-	-
<b>MDL/Units</b>	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	90.8	-	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	4.4	-	-	-
Barium	1.0 ug/g dry	146	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	5.1	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	20.7	-	-	-
Cobalt	1.0 ug/g dry	6.3	-	-	-
Copper	5.0 ug/g dry	18.2	-	-	-
Lead	1.0 ug/g dry	91.2	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	14.9	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	25.4	-	-	-
Zinc	20.0 ug/g dry	89.8	-	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	124%	-	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	70	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	59	-	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	3.38	-	-	-
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Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

	Client ID:	TP36-GS2	-	-	-
	Sample Date:	19-Oct-20 09:00	-	-	-
	Sample ID:	2043447-09	-	-	-
	MDL/Units	Soil	-	-	-
Acenaphthylene	0.02 ug/g dry	0.94	-	-	-
Anthracene	0.02 ug/g dry	10.8	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	13.7	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	13.3	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	12.5	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	8.79	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	6.69	-	-	-
Chrysene	0.02 ug/g dry	14.4	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	2.44	-	-	-
Fluoranthene	0.02 ug/g dry	37.4	-	-	-
Fluorene	0.02 ug/g dry	5.17	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	8.46	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	0.96	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	1.01	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	1.97	-	-	-
Naphthalene	0.01 ug/g dry	2.27	-	-	-
Phenanthrene	0.02 ug/g dry	32.5	-	-	-
Pyrene	0.02 ug/g dry	29.7	-	-	-
2-Fluorobiphenyl	Surrogate	94.2%	-	-	-
Terphenyl-d14	Surrogate	120%	-	-	-

Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.901		ug/g		67.6	50-140			
Surrogate: Terphenyl-d14	1.41		ug/g		106	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	9.10		ug/g		114	50-140			

Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	12	8	ug/g dry	12			1.7	30	
F4 PHCs (C34-C50)	40	6	ug/g dry	48			18.5	30	
<b>Metals</b>									
Antimony	1.6	1.0	ug/g dry	1.2			26.6	30	
Arsenic	3.0	1.0	ug/g dry	3.1			2.5	30	
Barium	136	1.0	ug/g dry	139			2.4	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	5.4	5.0	ug/g dry	5.4			1.4	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	37.3	5.0	ug/g dry	40.0			6.9	30	
Cobalt	8.2	1.0	ug/g dry	8.7			5.4	30	
Copper	23.7	5.0	ug/g dry	24.2			2.1	30	
Lead	40.9	1.0	ug/g dry	41.6			1.7	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	22.3	5.0	ug/g dry	23.7			5.9	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	39.6	10.0	ug/g dry	43.5			9.5	30	
Zinc	71.6	20.0	ug/g dry	73.8			3.0	30	
<b>Physical Characteristics</b>									
% Solids	96.5	0.1	% by Wt.	95.7			0.8	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.02		ug/g dry		73.4	50-140			
Surrogate: Terphenyl-d14	1.64		ug/g dry		118	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	11.1		ug/g dry		124	50-140			

Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	212	7	ug/g	ND	106	80-120			
F2 PHCs (C10-C16)	78	4	ug/g	ND	93.0	60-140			
F3 PHCs (C16-C34)	208	8	ug/g	12	95.8	60-140			
F4 PHCs (C34-C50)	159	6	ug/g	48	85.9	60-140			
F4G PHCs (gravimetric)	980	50	ug/g	ND	98.0	80-120			
<b>Metals</b>									
Antimony	40.9	1.0	ug/g	ND	80.8	70-130			
Arsenic	48.2	1.0	ug/g	1.2	94.0	70-130			
Barium	98.2	1.0	ug/g	55.8	84.7	70-130			
Beryllium	45.0	0.5	ug/g	ND	89.6	70-130			
Boron	39.8	5.0	ug/g	ND	75.2	70-130			
Cadmium	42.6	0.5	ug/g	ND	85.2	70-130			
Chromium	61.9	5.0	ug/g	16.0	91.7	70-130			
Cobalt	49.0	1.0	ug/g	3.5	91.1	70-130			
Copper	53.9	5.0	ug/g	9.7	88.3	70-130			
Lead	60.1	1.0	ug/g	16.7	86.9	70-130			
Molybdenum	42.5	1.0	ug/g	ND	84.6	70-130			
Nickel	53.9	5.0	ug/g	9.5	88.9	70-130			
Selenium	44.3	1.0	ug/g	ND	88.4	70-130			
Silver	40.7	0.3	ug/g	ND	81.3	70-130			
Thallium	44.0	1.0	ug/g	ND	87.8	70-130			
Uranium	45.4	1.0	ug/g	ND	90.4	70-130			
Vanadium	62.8	10.0	ug/g	17.4	90.8	70-130			
Zinc	71.7	20.0	ug/g	29.5	84.4	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.157	0.02	ug/g	ND	90.3	50-140			
Acenaphthylene	0.143	0.02	ug/g	ND	82.1	50-140			
Anthracene	0.141	0.02	ug/g	ND	81.3	50-140			
Benzo [a] anthracene	0.131	0.02	ug/g	ND	75.3	50-140			
Benzo [a] pyrene	0.151	0.02	ug/g	ND	86.5	50-140			
Benzo [b] fluoranthene	0.192	0.02	ug/g	ND	110	50-140			
Benzo [g,h,i] perylene	0.154	0.02	ug/g	ND	88.4	50-140			
Benzo [k] fluoranthene	0.170	0.02	ug/g	ND	97.6	50-140			
Chrysene	0.153	0.02	ug/g	ND	87.9	50-140			
Dibenzo [a,h] anthracene	0.153	0.02	ug/g	ND	87.7	50-140			
Fluoranthene	0.140	0.02	ug/g	ND	80.6	50-140			
Fluorene	0.144	0.02	ug/g	ND	82.5	50-140			
Indeno [1,2,3-cd] pyrene	0.146	0.02	ug/g	ND	84.0	50-140			
1-Methylnaphthalene	0.149	0.02	ug/g	ND	85.5	50-140			
2-Methylnaphthalene	0.131	0.02	ug/g	ND	75.5	50-140			
Naphthalene	0.173	0.01	ug/g	ND	99.2	50-140			
Phenanthrene	0.138	0.02	ug/g	ND	79.0	50-140			
Pyrene	0.145	0.02	ug/g	ND	83.2	50-140			
Surrogate: 2-Fluorobiphenyl	0.967		ug/g		69.5	50-140			
Surrogate: Terphenyl-d14	1.67		ug/g		120	50-140			
<b>Volatiles</b>									
Benzene	4.15	0.02	ug/g	ND	104	60-130			
Ethylbenzene	4.31	0.05	ug/g	ND	108	60-130			



Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Toluene	4.75	0.05	ug/g	ND	119	60-130			
m,p-Xylenes	8.43	0.05	ug/g	ND	105	60-130			
o-Xylene	4.56	0.05	ug/g	ND	114	60-130			
Surrogate: Toluene-d8	8.69		ug/g		109	50-140			

Certificate of Analysis

Report Date: 26-Oct-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Oct-2020

Client PO: 31411

Project Description: PE4937

**Qualifier Notes:**

***Login Qualifiers :***

Container(s) - Labeled improperly/insufficient information - The methanol vial is labelled TP38-G4

*Applies to samples: TP38-GS4*

Container and COC sample IDs don't match - The methanol vial is labelled TP44-GS2

*Applies to samples: TP44-GS1*

Container and COC sample IDs don't match - The soil jar is labelled BH37-GS3

*Applies to samples: TP37-GS3*

***Sample Qualifiers :***

4 : GC-FID signal did not return to baseline by C50

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

***CCME PHC additional information:***

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.





Blvd. 3 4JB	Parcel Order Number (Lab Use Only) <b>243447</b>	Chain Of Custody (Lab Use Only) Nº 55018
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Client Name: <b>Paterson</b>	Project Ref: <b>PEA93't</b>	Page <b>2</b> of <b>2</b>
Contact Name: <b>Michael Beaudoin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular
Address: <b>154 Colonnade Road</b>	PO #: <b>3411</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>mbeaudoin@patersongroup.ca</b>	Date Required: _____

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)			Required Analysis														
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken Date      Time		BTEX/PAHs	PAHs	ICP Metals									
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA																	<input type="checkbox"/> SU - Sani
<input checked="" type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other																				
<input type="checkbox"/> Table _____																					
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No																					
Sample ID/Location Name																					
1	TP34 - GS3	S	2	10/19/2020						✓	✓										
2	TP35 - GS2	S	2							✓	✓	✓									
3	TP36 - GS2	S	2							✓	✓	✓									
4	TP47 - GS2	S	2							✓			HOLD								
5	TP47 - GS3	S	2							✓			HOLD								
6																					
7																					
8																					
9																					
10																					

Comments:		Method of Delivery: <b>PARCEL COURIER</b>	
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot: <b>A. DENISE</b>	Received at Lab: <b>Shreefarm Dharma</b>	Verified By: <i>[Signature]</i>
Relinquished By (Print): <b>Jeremy Camposarone</b>	Date/Time: <b>21/10/20 4:11</b>	Date/Time: <b>Oct 21, 2020 04:55</b>	Date/Time: <b>Oct 20 11:14</b>
Date/Time: <b>10/21/2020</b>	Temperature: <b>°C PA.</b>	Temperature: <b>11.5 °C</b>	pH Verified: <input type="checkbox"/> By: _____

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31431  
Project: PE4937  
Custody: 55085

Report Date: 12-Nov-2020  
Order Date: 10-Nov-2020

**Order #: 2046206**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2046206-01	TP48-G2
2046206-02	TP49-G2
2046206-03	TP50-G2
2046206-04	TP51-G2

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor



Certificate of Analysis

Report Date: 12-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 10-Nov-2020

Client PO: 31431

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	10-Nov-20	12-Nov-20
PHC F1	CWS Tier 1 - P&T GC-FID	10-Nov-20	12-Nov-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	11-Nov-20	12-Nov-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	12-Nov-20	12-Nov-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	11-Nov-20	12-Nov-20
Solids, %	Gravimetric, calculation	11-Nov-20	12-Nov-20

Certificate of Analysis

Report Date: 12-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 10-Nov-2020

Client PO: 31431

Project Description: PE4937

Client ID:	TP48-G2	TP49-G2	TP50-G2	TP51-G2
Sample Date:	10-Nov-20 09:00	10-Nov-20 09:00	10-Nov-20 09:00	10-Nov-20 09:00
Sample ID:	2046206-01	2046206-02	2046206-03	2046206-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	78.6	79.5	75.1	73.9
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**Metals**

Element	MDL/Units	<1.0	<1.0	<1.0	1.7
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	1.7
Arsenic	1.0 ug/g dry	2.7	3.3	3.3	4.3
Barium	1.0 ug/g dry	146	203	257	280
Beryllium	0.5 ug/g dry	<0.5	0.6	0.6	0.7
Boron	5.0 ug/g dry	<5.0	5.3	5.6	6.3
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	51.7	79.2	67.8	94.7
Cobalt	1.0 ug/g dry	10.5	15.7	13.2	18.4
Copper	5.0 ug/g dry	26.4	37.1	29.3	52.3
Lead	1.0 ug/g dry	17.3	25.4	8.3	56.5
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	28.8	42.9	37.3	52.4
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	1.8
Vanadium	10.0 ug/g dry	47.3	70.4	58.0	89.2
Zinc	20.0 ug/g dry	65.8	88.0	73.0	140

**Volatiles**

Compound	MDL/Units	<0.02	<0.02	<0.02	<0.02
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	109%	108%	108%	107%

**Hydrocarbons**

PHC Group	MDL/Units	<7	<7	<7	<7
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	18
F3 PHCs (C16-C34)	8 ug/g dry	<8	9	<8	68
F4 PHCs (C34-C50)	6 ug/g dry	<6	12	<6	14

**Semi-Volatiles**

Compound	MDL/Units	<0.02	<0.02	<0.02	0.02
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.02

Certificate of Analysis

Report Date: 12-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 10-Nov-2020

Client PO: 31431

Project Description: PE4937

	Client ID:	TP48-G2	TP49-G2	TP50-G2	TP51-G2
	Sample Date:	10-Nov-20 09:00	10-Nov-20 09:00	10-Nov-20 09:00	10-Nov-20 09:00
	Sample ID:	2046206-01	2046206-02	2046206-03	2046206-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.04
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.05
Benzo [a] anthracene	0.02 ug/g dry	0.03	0.03	<0.02	0.13
Benzo [a] pyrene	0.02 ug/g dry	0.04	0.03	<0.02	0.13
Benzo [b] fluoranthene	0.02 ug/g dry	0.04	0.03	<0.02	0.14
Benzo [g,h,i] perylene	0.02 ug/g dry	0.03	0.02	<0.02	0.09
Benzo [k] fluoranthene	0.02 ug/g dry	0.02	0.02	<0.02	0.09
Chrysene	0.02 ug/g dry	0.03	0.03	<0.02	0.15
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.03
Fluoranthene	0.02 ug/g dry	0.06	0.05	<0.02	0.31
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.02	<0.02	<0.02	0.08
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	0.01
Phenanthrene	0.02 ug/g dry	0.03	0.02	<0.02	0.15
Pyrene	0.02 ug/g dry	0.05	0.04	<0.02	0.25
2-Fluorobiphenyl	Surrogate	62.2%	80.3%	71.4%	78.0%
Terphenyl-d14	Surrogate	96.6%	125%	103%	122%

Certificate of Analysis

Report Date: 12-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 10-Nov-2020

Client PO: 31431

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.860		ug/g		64.5	50-140			
Surrogate: Terphenyl-d14	1.41		ug/g		106	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.36		ug/g		104	50-140			

Certificate of Analysis

Report Date: 12-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 10-Nov-2020

Client PO: 31431

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Arsenic	6.8	1.0	ug/g dry	6.5			4.7	30	
Barium	248	1.0	ug/g dry	224			10.3	30	
Beryllium	0.5	0.5	ug/g dry	ND			NC	30	
Boron	7.8	5.0	ug/g dry	6.8			12.5	30	
Cadmium	0.7	0.5	ug/g dry	0.8			7.1	30	
Chromium	32.3	5.0	ug/g dry	28.6			12.0	30	
Cobalt	9.2	1.0	ug/g dry	8.0			14.3	30	
Copper	110	5.0	ug/g dry	102			6.8	30	
Lead	507	1.0	ug/g dry	399			24.0	30	
Molybdenum	1.5	1.0	ug/g dry	1.2			20.1	30	
Nickel	22.0	5.0	ug/g dry	19.6			11.3	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	0.4	0.3	ug/g dry	0.4			16.8	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	36.2	10.0	ug/g dry	32.5			10.8	30	
Zinc	326	20.0	ug/g dry	292			11.3	30	
<b>Physical Characteristics</b>									
% Solids	91.5	0.1	% by Wt.	91.2			0.3	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.01		ug/g dry		70.1	50-140			
Surrogate: Terphenyl-d14	1.51		ug/g dry		105	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	9.76		ug/g dry		107	50-140			



Certificate of Analysis

Report Date: 12-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 10-Nov-2020

Client PO: 31431

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	208	7	ug/g	ND	104	80-120			
F2 PHCs (C10-C16)	93	4	ug/g	ND	91.3	60-140			
F3 PHCs (C16-C34)	226	8	ug/g	ND	90.6	60-140			
F4 PHCs (C34-C50)	140	6	ug/g	ND	88.9	60-140			
<b>Metals</b>									
Antimony	53.1	1.0	ug/g	4.5	97.2	70-130			
Arsenic	53.9	1.0	ug/g	2.6	103	70-130			
Barium	142	1.0	ug/g	89.5	106	70-130			
Beryllium	50.8	0.5	ug/g	ND	101	70-130			
Boron	47.4	5.0	ug/g	ND	89.3	70-130			
Cadmium	49.2	0.5	ug/g	ND	97.8	70-130			
Chromium	63.4	5.0	ug/g	11.5	104	70-130			
Cobalt	53.4	1.0	ug/g	3.2	100	70-130			
Copper	86.6	5.0	ug/g	41.0	91.4	70-130			
Lead	217	1.0	ug/g	159	115	70-130			
Molybdenum	49.0	1.0	ug/g	ND	97.0	70-130			
Nickel	56.6	5.0	ug/g	7.9	97.5	70-130			
Selenium	49.8	1.0	ug/g	ND	99.2	70-130			
Silver	44.8	0.3	ug/g	ND	89.4	70-130			
Thallium	49.1	1.0	ug/g	ND	98.1	70-130			
Uranium	50.0	1.0	ug/g	ND	99.7	70-130			
Vanadium	65.0	10.0	ug/g	13.0	104	70-130			
Zinc	167	20.0	ug/g	117	100	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.146	0.02	ug/g	ND	80.8	50-140			
Acenaphthylene	0.132	0.02	ug/g	ND	73.0	50-140			
Anthracene	0.149	0.02	ug/g	ND	82.7	50-140			
Benzo [a] anthracene	0.113	0.02	ug/g	ND	62.8	50-140			
Benzo [a] pyrene	0.128	0.02	ug/g	ND	70.7	50-140			
Benzo [b] fluoranthene	0.148	0.02	ug/g	ND	82.1	50-140			
Benzo [g,h,i] perylene	0.133	0.02	ug/g	ND	73.6	50-140			
Benzo [k] fluoranthene	0.157	0.02	ug/g	ND	86.9	50-140			
Chrysene	0.134	0.02	ug/g	ND	74.2	50-140			
Dibenzo [a,h] anthracene	0.129	0.02	ug/g	ND	71.2	50-140			
Fluoranthene	0.166	0.02	ug/g	ND	91.8	50-140			
Fluorene	0.124	0.02	ug/g	ND	68.7	50-140			
Indeno [1,2,3-cd] pyrene	0.135	0.02	ug/g	ND	74.9	50-140			
1-Methylnaphthalene	0.134	0.02	ug/g	ND	74.4	50-140			
2-Methylnaphthalene	0.154	0.02	ug/g	ND	85.0	50-140			
Naphthalene	0.190	0.01	ug/g	ND	105	50-140			
Phenanthrene	0.143	0.02	ug/g	ND	79.0	50-140			
Pyrene	0.168	0.02	ug/g	ND	92.9	50-140			
Surrogate: 2-Fluorobiphenyl	1.41		ug/g		97.5	50-140			
Surrogate: Terphenyl-d14	1.47		ug/g		102	50-140			
<b>Volatiles</b>									
Benzene	4.52	0.02	ug/g	ND	113	60-130			
Ethylbenzene	3.90	0.05	ug/g	ND	97.6	60-130			
Toluene	3.97	0.05	ug/g	ND	99.1	60-130			

Certificate of Analysis

Report Date: 12-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 10-Nov-2020

Client PO: 31431

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	7.37	0.05	ug/g	ND	92.2	60-130			
o-Xylene	3.67	0.05	ug/g	ND	91.7	60-130			
Surrogate: Toluene-d8	8.19		ug/g		102	50-140			

Certificate of Analysis

Report Date: 12-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 10-Nov-2020

Client PO: 31431

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31177  
Project: PE4937  
Custody: 130146

Report Date: 19-Nov-2020  
Order Date: 13-Nov-2020

**Order #: 2046576**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2046576-01	B2
2046576-02	B3

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor



Certificate of Analysis

Report Date: 19-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31177

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	17-Nov-20	17-Nov-20
PHC F1	CWS Tier 1 - P&T GC-FID	17-Nov-20	17-Nov-20
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	16-Nov-20	18-Nov-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	16-Nov-20	18-Nov-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	19-Nov-20	19-Nov-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	14-Nov-20	19-Nov-20
Solids, %	Gravimetric, calculation	18-Nov-20	19-Nov-20

Certificate of Analysis

Report Date: 19-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31177

Project Description: PE4937

<b>Client ID:</b>	B2	B3	-	-
<b>Sample Date:</b>	13-Nov-20 09:00	13-Nov-20 09:00	-	-
<b>Sample ID:</b>	2046576-01	2046576-02	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	81.5	89.4	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	3.0	2.8	-	-
Barium	1.0 ug/g dry	229	122	-	-
Beryllium	0.5 ug/g dry	0.6	<0.5	-	-
Boron	5.0 ug/g dry	5.1	<5.0	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	73.0	41.6	-	-
Cobalt	1.0 ug/g dry	14.9	8.6	-	-
Copper	5.0 ug/g dry	39.6	22.8	-	-
Lead	1.0 ug/g dry	33.1	19.3	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	42.0	23.7	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	<1.0	-	-
Vanadium	10.0 ug/g dry	68.9	39.4	-	-
Zinc	20.0 ug/g dry	141	57.5	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene-d8	Surrogate	108%	108%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	416	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	572	46	-	-
F4 PHCs (C34-C50)	6 ug/g dry	185 [1]	131 [1]	-	-
F4G PHCs (gravimetric)	50 ug/g dry	454	391	-	-

**Semi-Volatiles**

Certificate of Analysis

Report Date: 19-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31177

Project Description: PE4937

	Client ID:	B2	B3	-	-
	Sample Date:	13-Nov-20 09:00	13-Nov-20 09:00	-	-
	Sample ID:	2046576-01	2046576-02	-	-
	MDL/Units	Soil	Soil	-	-
Acenaphthene	0.02 ug/g dry	0.51	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	0.09	<0.02	-	-
Anthracene	0.02 ug/g dry	1.11	0.03	-	-
Benzo [a] anthracene	0.02 ug/g dry	2.26	0.05	-	-
Benzo [a] pyrene	0.02 ug/g dry	2.03	0.06	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	1.83	0.06	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	1.05	0.04	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	1.18	0.03	-	-
Chrysene	0.02 ug/g dry	2.25	0.07	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.30	<0.02	-	-
Fluoranthene	0.02 ug/g dry	5.07	0.11	-	-
Fluorene	0.02 ug/g dry	0.61	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	1.00	0.03	-	-
1-Methylnaphthalene	0.02 ug/g dry	0.06	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	0.05	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	0.11	<0.04	-	-
Naphthalene	0.01 ug/g dry	0.08	<0.01	-	-
Phenanthrene	0.02 ug/g dry	3.73	0.07	-	-
Pyrene	0.02 ug/g dry	4.09	0.09	-	-
2-Fluorobiphenyl	Surrogate	52.4%	66.9%	-	-
Terphenyl-d14	Surrogate	62.8%	71.1%	-	-

Certificate of Analysis

Report Date: 19-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31177

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.33		ug/g		99.7	50-140			
Surrogate: Terphenyl-d14	1.57		ug/g		117	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.41		ug/g		105	50-140			

Certificate of Analysis

Report Date: 19-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31177

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	1.1	1.0	ug/g dry	ND			NC	30	
Arsenic	3.1	1.0	ug/g dry	2.9			8.6	30	
Barium	56.1	1.0	ug/g dry	55.8			0.5	30	
Beryllium	0.5	0.5	ug/g dry	ND			NC	30	
Boron	6.4	5.0	ug/g dry	6.9			8.8	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	16.3	5.0	ug/g dry	16.9			3.9	30	
Cobalt	4.9	1.0	ug/g dry	4.7			3.8	30	
Copper	8.4	5.0	ug/g dry	8.3			1.1	30	
Lead	11.0	1.0	ug/g dry	10.9			1.3	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	8.7	5.0	ug/g dry	8.8			0.8	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	26.6	10.0	ug/g dry	29.4			10.1	30	
Zinc	52.0	20.0	ug/g dry	51.7			0.5	30	
<b>Physical Characteristics</b>									
% Solids	92.7	0.1	% by Wt.	92.1			0.6	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.49		ug/g dry		89.3	50-140			
Surrogate: Terphenyl-d14	1.24		ug/g dry		74.5	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	9.16		ug/g dry		109	50-140			



Certificate of Analysis

Report Date: 19-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31177

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	188	7	ug/g	ND	94.0	80-120			
F2 PHCs (C10-C16)	118	4	ug/g	ND	119	60-140			
F3 PHCs (C16-C34)	279	8	ug/g	ND	115	60-140			
F4 PHCs (C34-C50)	157	6	ug/g	ND	103	60-140			
F4G PHCs (gravimetric)	980	50	ug/g	ND	98.0	80-120			
<b>Metals</b>									
Antimony	46.3	1.0	ug/g	ND	91.8	70-130			
Arsenic	50.3	1.0	ug/g	1.2	98.2	70-130			
Barium	71.3	1.0	ug/g	22.3	97.9	70-130			
Beryllium	51.5	0.5	ug/g	ND	103	70-130			
Boron	47.4	5.0	ug/g	ND	89.2	70-130			
Cadmium	46.9	0.5	ug/g	ND	93.7	70-130			
Chromium	56.9	5.0	ug/g	6.8	100	70-130			
Cobalt	50.1	1.0	ug/g	1.9	96.4	70-130			
Copper	51.1	5.0	ug/g	ND	95.6	70-130			
Lead	51.3	1.0	ug/g	4.3	93.8	70-130			
Molybdenum	47.8	1.0	ug/g	ND	95.1	70-130			
Nickel	52.1	5.0	ug/g	ND	97.1	70-130			
Selenium	48.1	1.0	ug/g	ND	95.9	70-130			
Silver	40.5	0.3	ug/g	ND	81.0	70-130			
Thallium	48.8	1.0	ug/g	ND	97.5	70-130			
Uranium	49.6	1.0	ug/g	ND	98.8	70-130			
Vanadium	61.4	10.0	ug/g	11.8	99.2	70-130			
Zinc	67.8	20.0	ug/g	20.7	94.3	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.164	0.02	ug/g	ND	79.0	50-140			
Acenaphthylene	0.144	0.02	ug/g	ND	69.4	50-140			
Anthracene	0.200	0.02	ug/g	ND	96.1	50-140			
Benzo [a] anthracene	0.182	0.02	ug/g	ND	87.6	50-140			
Benzo [a] pyrene	0.178	0.02	ug/g	ND	85.8	50-140			
Benzo [b] fluoranthene	0.279	0.02	ug/g	ND	134	50-140			
Benzo [g,h,i] perylene	0.197	0.02	ug/g	ND	94.8	50-140			
Benzo [k] fluoranthene	0.257	0.02	ug/g	ND	124	50-140			
Chrysene	0.189	0.02	ug/g	ND	90.8	50-140			
Dibenzo [a,h] anthracene	0.211	0.02	ug/g	ND	101	50-140			
Fluoranthene	0.198	0.02	ug/g	ND	95.0	50-140			
Fluorene	0.165	0.02	ug/g	ND	79.4	50-140			
Indeno [1,2,3-cd] pyrene	0.204	0.02	ug/g	ND	98.2	50-140			
1-Methylnaphthalene	0.222	0.02	ug/g	ND	107	50-140			
2-Methylnaphthalene	0.238	0.02	ug/g	ND	114	50-140			
Naphthalene	0.199	0.01	ug/g	ND	95.8	50-140			
Phenanthrene	0.177	0.02	ug/g	ND	85.2	50-140			
Pyrene	0.196	0.02	ug/g	ND	94.4	50-140			
Surrogate: 2-Fluorobiphenyl	1.39		ug/g		83.4	50-140			
Surrogate: Terphenyl-d14	1.34		ug/g		80.5	50-140			
<b>Volatiles</b>									
Benzene	3.07	0.02	ug/g	ND	76.6	60-130			
Ethylbenzene	3.16	0.05	ug/g	ND	78.9	60-130			

Certificate of Analysis  
**Client: Paterson Group Consulting Engineers**  
**Client PO: 31177**

Report Date: 19-Nov-2020  
 Order Date: 13-Nov-2020  
**Project Description: PE4937**

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Toluene	3.16	0.05	ug/g	ND	79.1	60-130			
m,p-Xylenes	5.90	0.05	ug/g	ND	73.8	60-130			
o-Xylene	2.92	0.05	ug/g	ND	73.0	60-130			
<i>Surrogate: Toluene-d8</i>	8.27		ug/g		103	50-140			

Certificate of Analysis

Client: Paterson Group Consulting Engineers

Client PO: 31177

Report Date: 19-Nov-2020

Order Date: 13-Nov-2020

Project Description: PE4937

**Qualifier Notes:**

*Sample Qualifiers :*

1 : GC-FID signal did not return to baseline by C50

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



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paracellabs.com  
@paracellabs.com

Parcel Order Number  
(Lab Use Only)

2046576

Chain Of Custody  
(Lab Use Only)

No 130146

Client Name: Patterson Project Ref: PEA937 Page 1 of 1

Contact Name: Michael Beaudoin Quote #:

Address: 154 Colomade Road PO #: 31177 Turnaround Time  
 1 day  3 day  
 2 day  Regular

Telephone: 613-226-7381 E-mail: jcomposarone@pattersongroup.ca  
mbeaudoin@pattersongroup.ca Date Required: \_\_\_\_\_

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis										
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time							
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm												
<input type="checkbox"/> Table _____		Mun: _____														
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Other: _____														
Sample ID/Location Name																
1	<u>B2</u>			<u>S</u>		<u>2</u>	<u>11/13/2020</u>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
2	<u>B3</u>			<u>S</u>		<u>2</u>	<u>+</u>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
3																
4																
5																
6																
7																
8																
9																
10																

Comments:

Method of Delivery: D/B

Relinquished By (Sign): [Signature] Received By Driver/Depot: \_\_\_\_\_ Received at Lab: [Signature] Verified By: [Signature]

Relinquished By (Print): Jeremy Composarone Date/Time: \_\_\_\_\_ Date/Time: 11-13-2016 13:00 Date/Time: 11-13-2016 16:02

Date/Time: 11/13/2020 Temperature: \_\_\_\_\_ °C Temperature: 12.3 °C pH Verified:  By: \_\_\_\_\_

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31176  
Project: PE4937  
Custody: 130145

Report Date: 17-Nov-2020  
Order Date: 13-Nov-2020

**Order #: 2046578**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2046578-01	TP53-G1
2046578-02	TP54-G1
2046578-03	TP55-G1
2046578-04	TP56-G1

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor



Certificate of Analysis

Report Date: 17-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31176

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	16-Nov-20	17-Nov-20
PHC F1	CWS Tier 1 - P&T GC-FID	16-Nov-20	17-Nov-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	14-Nov-20	17-Nov-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	17-Nov-20	17-Nov-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	14-Nov-20	17-Nov-20
Solids, %	Gravimetric, calculation	16-Nov-20	17-Nov-20

Certificate of Analysis

Report Date: 17-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31176

Project Description: PE4937

Client ID:	TP53-G1	TP54-G1	TP55-G1	TP56-G1
Sample Date:	13-Nov-20 09:00	13-Nov-20 09:00	13-Nov-20 09:00	13-Nov-20 09:00
Sample ID:	2046578-01	2046578-02	2046578-03	2046578-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	86.0	75.8	84.7	84.4
----------	--------------	------	------	------	------

**Metals**

Element	MDL/Units	TP53-G1	TP54-G1	TP55-G1	TP56-G1
Antimony	1.0 ug/g dry	5.2	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	5.6	2.9	2.2	3.2
Barium	1.0 ug/g dry	194	210	59.9	101
Beryllium	0.5 ug/g dry	0.6	0.8	<0.5	<0.5
Boron	5.0 ug/g dry	8.5	<5.0	<5.0	<5.0
Cadmium	0.5 ug/g dry	1.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	34.6	89.7	30.6	39.5
Cobalt	1.0 ug/g dry	8.7	16.6	6.0	8.3
Copper	5.0 ug/g dry	382	33.8	14.9	22.8
Lead	1.0 ug/g dry	279	9.4	7.4	21.7
Molybdenum	1.0 ug/g dry	1.4	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	27.9	47.4	16.3	23.1
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	1.4	1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	41.0	74.4	27.6	36.0
Zinc	20.0 ug/g dry	765	86.5	32.6	52.8

**Volatiles**

Compound	MDL/Units	TP53-G1	TP54-G1	TP55-G1	TP56-G1
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	114%	116%	118%	119%

**Hydrocarbons**

PHC Group	MDL/Units	TP53-G1	TP54-G1	TP55-G1	TP56-G1
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	21	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	418	<8	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	99	<6	<6	<6

**Semi-Volatiles**

Compound	MDL/Units	TP53-G1	TP54-G1	TP55-G1	TP56-G1
Acenaphthene	0.02 ug/g dry	0.17	<0.02	<0.02	<0.02

Certificate of Analysis

Report Date: 17-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31176

Project Description: PE4937

	Client ID:	TP53-G1	TP54-G1	TP55-G1	TP56-G1
	Sample Date:	13-Nov-20 09:00	13-Nov-20 09:00	13-Nov-20 09:00	13-Nov-20 09:00
	Sample ID:	2046578-01	2046578-02	2046578-03	2046578-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	0.07	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	0.53	<0.02	<0.02	0.02
Benzo [a] anthracene	0.02 ug/g dry	0.93	<0.02	0.04	0.07
Benzo [a] pyrene	0.02 ug/g dry	0.94	<0.02	0.04	0.07
Benzo [b] fluoranthene	0.02 ug/g dry	0.96	<0.02	0.04	0.09
Benzo [g,h,i] perylene	0.02 ug/g dry	0.52	<0.02	0.02	0.05
Benzo [k] fluoranthene	0.02 ug/g dry	0.56	<0.02	0.02	0.04
Chrysene	0.02 ug/g dry	0.95	<0.02	0.04	0.08
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.14	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	2.21	<0.02	0.08	0.17
Fluorene	0.02 ug/g dry	0.21	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.51	<0.02	0.02	0.05
1-Methylnaphthalene	0.02 ug/g dry	0.06	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	0.08	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	0.14	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	0.14	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	1.56	<0.02	0.07	0.08
Pyrene	0.02 ug/g dry	1.83	<0.02	0.07	0.13
2-Fluorobiphenyl	Surrogate	57.7%	57.1%	59.5%	68.2%
Terphenyl-d14	Surrogate	79.5%	94.8%	76.6%	109%

Certificate of Analysis

Report Date: 17-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31176

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.836		ug/g		62.7	50-140			
Surrogate: Terphenyl-d14	1.31		ug/g		98.2	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.29		ug/g		104	50-140			

Certificate of Analysis

Report Date: 17-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31176

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	3.4	1.0	ug/g dry	4.0			16.3	30	
Barium	70.2	1.0	ug/g dry	87.3			21.7	30	
Beryllium	0.6	0.5	ug/g dry	0.7			7.6	30	
Boron	5.5	5.0	ug/g dry	5.8			5.2	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	25.8	5.0	ug/g dry	30.9			18.0	30	
Cobalt	5.5	1.0	ug/g dry	6.6			17.9	30	
Copper	11.7	5.0	ug/g dry	13.7			16.0	30	
Lead	12.8	1.0	ug/g dry	15.3			17.7	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	14.8	5.0	ug/g dry	17.8			18.6	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	25.7	10.0	ug/g dry	30.9			18.5	30	
Zinc	49.0	20.0	ug/g dry	57.4			15.8	30	
<b>Physical Characteristics</b>									
% Solids	83.4	0.1	% by Wt.	86.0			3.0	25	
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	8.72		ug/g dry		109	50-140			



Certificate of Analysis

Report Date: 17-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31176

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	189	7	ug/g	ND	94.6	80-120			
F2 PHCs (C10-C16)	89	4	ug/g	ND	96.0	60-140			
F3 PHCs (C16-C34)	221	8	ug/g	ND	97.0	60-140			
F4 PHCs (C34-C50)	136	6	ug/g	ND	94.0	60-140			
<b>Metals</b>									
Antimony	48.5	1.0	ug/g	ND	96.9	70-130			
Arsenic	50.5	1.0	ug/g	1.6	97.9	70-130			
Barium	79.9	1.0	ug/g	34.9	90.1	70-130			
Beryllium	52.2	0.5	ug/g	ND	104	70-130			
Boron	48.1	5.0	ug/g	ND	91.7	70-130			
Cadmium	47.8	0.5	ug/g	ND	95.3	70-130			
Chromium	61.7	5.0	ug/g	12.4	98.7	70-130			
Cobalt	49.8	1.0	ug/g	2.6	94.4	70-130			
Copper	52.6	5.0	ug/g	5.5	94.3	70-130			
Lead	51.0	1.0	ug/g	6.1	89.9	70-130			
Molybdenum	47.8	1.0	ug/g	ND	95.2	70-130			
Nickel	54.7	5.0	ug/g	7.1	95.1	70-130			
Selenium	48.7	1.0	ug/g	ND	96.8	70-130			
Silver	42.3	0.3	ug/g	ND	84.5	70-130			
Thallium	47.4	1.0	ug/g	ND	94.6	70-130			
Uranium	47.5	1.0	ug/g	ND	94.5	70-130			
Vanadium	61.9	10.0	ug/g	12.4	99.0	70-130			
Zinc	68.6	20.0	ug/g	23.0	91.2	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.146	0.02	ug/g	ND	87.9	50-140			
Acenaphthylene	0.139	0.02	ug/g	ND	83.1	50-140			
Anthracene	0.122	0.02	ug/g	ND	73.2	50-140			
Benzo [a] anthracene	0.099	0.02	ug/g	ND	59.3	50-140			
Benzo [a] pyrene	0.091	0.02	ug/g	ND	54.5	50-140			
Benzo [b] fluoranthene	0.115	0.02	ug/g	ND	68.9	50-140			
Benzo [g,h,i] perylene	0.096	0.02	ug/g	ND	57.8	50-140			
Benzo [k] fluoranthene	0.151	0.02	ug/g	ND	90.7	50-140			
Chrysene	0.114	0.02	ug/g	ND	68.1	50-140			
Dibenzo [a,h] anthracene	0.094	0.02	ug/g	ND	56.7	50-140			
Fluoranthene	0.110	0.02	ug/g	ND	66.1	50-140			
Fluorene	0.131	0.02	ug/g	ND	78.8	50-140			
Indeno [1,2,3-cd] pyrene	0.094	0.02	ug/g	ND	56.5	50-140			
1-Methylnaphthalene	0.130	0.02	ug/g	ND	78.3	50-140			
2-Methylnaphthalene	0.101	0.02	ug/g	ND	60.6	50-140			
Naphthalene	0.152	0.01	ug/g	ND	91.4	50-140			
Phenanthrene	0.112	0.02	ug/g	ND	67.2	50-140			
Pyrene	0.121	0.02	ug/g	ND	72.8	50-140			
Surrogate: 2-Fluorobiphenyl	0.896		ug/g		67.2	50-140			
Surrogate: Terphenyl-d14	1.14		ug/g		85.2	50-140			
<b>Volatiles</b>									
Benzene	3.47	0.02	ug/g	ND	86.8	60-130			
Ethylbenzene	3.74	0.05	ug/g	ND	93.6	60-130			
Toluene	3.79	0.05	ug/g	ND	94.9	60-130			

Certificate of Analysis

Report Date: 17-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31176

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	6.92	0.05	ug/g	ND	86.5	60-130			
o-Xylene	3.43	0.05	ug/g	ND	85.7	60-130			
Surrogate: Toluene-d8	8.67		ug/g		108	50-140			

Certificate of Analysis

Report Date: 17-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 13-Nov-2020

Client PO: 31176

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



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Paracel Order Number  
(Lab Use Only)

2046578

Chain Of Custody  
(Lab Use Only)

No 130145

Client Name: Paterson Project Ref: PEA937 Page 1 of 1

Contact Name: Michael Beaudoin Quote #:

Address: 154 Colonnade Road PO #: 31176 Turnaround Time  
 1 day  3 day  
 2 day  Regular

Telephone: 613-226-7381 E-mail: jcamosarcone@patersongroup.ca  
mbeaudoin@patersongroup.ca Date Required: \_\_\_\_\_

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis										
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time							
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU-Sani	<input type="checkbox"/> SU-Storm												
<input type="checkbox"/> Table _____		Mun: _____														
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Other: _____														
Sample ID/Location Name																
1	TP53-G1			S		2	11/13/2020			✓	✓	✓				
2	TP54-G1			↓		↓	↓			✓	✓	✓				
3	TP55-G1			↓		↓	↓			✓	✓	✓				
4	TP56-G1			↓		↓	↓			✓	✓	✓				
5																
6																
7																
8																
9																
10																

Comments: \_\_\_\_\_ Method of Delivery: D/B

Relinquished By (Sign): [Signature] Received By Driver/Depot: \_\_\_\_\_ Received at Lab: [Signature] Verified By: [Signature]

Relinquished By (Print): Jerome Camposarcone Date/Time: \_\_\_\_\_ Date/Time: 11-13-201630 Date/Time: 11-13-20 16:34

Date/Time: 11/13/2020 Temperature: \_\_\_\_\_ °C Temperature: 12.3 °C pH Verified:  By: \_\_\_\_\_

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31278  
Project: PE4937  
Custody: 57005

Report Date: 23-Nov-2020  
Order Date: 20-Nov-2020

**Order #: 2047623**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2047623-01	TP60-G1
2047623-02	TP61-G1
2047623-03	TP62-G1
2047623-04	TP63-G1

Approved By:



Dale Robertson, BSc  
Laboratory Director

Certificate of Analysis

Report Date: 23-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31278

Project Description: PE4937

### Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	20-Nov-20	23-Nov-20
PHC F1	CWS Tier 1 - P&T GC-FID	20-Nov-20	23-Nov-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	21-Nov-20	21-Nov-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	23-Nov-20	23-Nov-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	20-Nov-20	21-Nov-20
Solids, %	Gravimetric, calculation	23-Nov-20	23-Nov-20



Certificate of Analysis

Report Date: 23-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31278

Project Description: PE4937

Client ID:	TP60-G1	TP61-G1	TP62-G1	TP63-G1
Sample Date:	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00
Sample ID:	2047623-01	2047623-02	2047623-03	2047623-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	81.1	83.4	85.9	87.4
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**Metals**

	MDL/Units	TP60-G1	TP61-G1	TP62-G1	TP63-G1
Antimony	1.0 ug/g dry	10.2	1.9	36.0	6.8
Arsenic	1.0 ug/g dry	6.6	6.3	4.5	7.0
Barium	1.0 ug/g dry	212	251	175	177
Beryllium	0.5 ug/g dry	0.6	0.7	0.5	0.6
Boron	5.0 ug/g dry	11.5	8.8	8.3	7.3
Cadmium	0.5 ug/g dry	1.0	<0.5	0.7	0.9
Chromium	5.0 ug/g dry	34.0	30.9	29.9	32.9
Cobalt	1.0 ug/g dry	9.2	8.3	8.0	8.8
Copper	5.0 ug/g dry	460	211	54.3	812
Lead	1.0 ug/g dry	564	210	150	279
Molybdenum	1.0 ug/g dry	2.3	3.3	1.3	1.9
Nickel	5.0 ug/g dry	38.1	28.5	20.2	34.5
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	0.3	<0.3	<0.3	0.4
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	1.4	1.2	<1.0	1.1
Vanadium	10.0 ug/g dry	42.6	35.1	36.4	35.9
Zinc	20.0 ug/g dry	606	210	160	650

**Volatiles**

	MDL/Units	TP60-G1	TP61-G1	TP62-G1	TP63-G1
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	0.10	<0.05	3.30	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	6.88	<0.05
Xylenes, total	0.05 ug/g dry	0.10	<0.05	10.2	<0.05
Toluene-d8	Surrogate	57.4%	54.4%	53.1%	54.9%

**Hydrocarbons**

	MDL/Units	TP60-G1	TP61-G1	TP62-G1	TP63-G1
F1 PHCs (C6-C10)	7 ug/g dry	26	<7	3860	<7
F2 PHCs (C10-C16)	4 ug/g dry	25	<4	645	18
F3 PHCs (C16-C34)	8 ug/g dry	189	84	220	165
F4 PHCs (C34-C50)	6 ug/g dry	37	29	121	65

**Semi-Volatiles**

	MDL/Units	TP60-G1	TP61-G1	TP62-G1	TP63-G1
Acenaphthene	0.02 ug/g dry	0.90	0.21	0.33	0.14

Certificate of Analysis

Report Date: 23-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31278

Project Description: PE4937

	Client ID:	TP60-G1	TP61-G1	TP62-G1	TP63-G1
	Sample Date:	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00
	Sample ID:	2047623-01	2047623-02	2047623-03	2047623-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	0.15	0.08	0.09	0.09
Anthracene	0.02 ug/g dry	2.31	0.54	0.60	0.46
Benzo [a] anthracene	0.02 ug/g dry	4.60	1.02	0.83	1.06
Benzo [a] pyrene	0.02 ug/g dry	4.06	0.94	0.70	1.12
Benzo [b] fluoranthene	0.02 ug/g dry	4.43	1.07	0.77	1.22
Benzo [g,h,i] perylene	0.02 ug/g dry	2.00	0.53	0.37	0.76
Benzo [k] fluoranthene	0.02 ug/g dry	2.87	0.57	0.43	0.72
Chrysene	0.02 ug/g dry	4.51	1.07	0.68	1.09
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.64	0.15	0.12	0.20
Fluoranthene	0.02 ug/g dry	10.5	2.30	2.12	2.10
Fluorene	0.02 ug/g dry	1.28	0.29	0.56	0.19
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	2.10	0.50	0.36	0.71
1-Methylnaphthalene	0.02 ug/g dry	0.33	0.09	0.76	0.06
2-Methylnaphthalene	0.02 ug/g dry	0.48	0.13	0.90	0.07
Methylnaphthalene (1&2)	0.04 ug/g dry	0.81	0.22	1.66	0.14
Naphthalene	0.01 ug/g dry	1.04	0.21	0.78	0.09
Phenanthrene	0.02 ug/g dry	7.99	1.97	2.44	1.35
Pyrene	0.02 ug/g dry	8.04	1.82	1.78	1.80
2-Fluorobiphenyl	Surrogate	59.7%	95.1%	110%	121%
Terphenyl-d14	Surrogate	55.1%	80.4%	87.8%	96.2%

Certificate of Analysis

Report Date: 23-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31278

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.21		ug/g		90.9	50-140			
Surrogate: Terphenyl-d14	1.07		ug/g		80.4	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	9.71		ug/g		121	50-140			

Certificate of Analysis

Report Date: 23-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31278

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	8.8	1.0	ug/g dry	10.2			15.2	30	
Arsenic	6.3	1.0	ug/g dry	6.6			4.1	30	
Barium	202	1.0	ug/g dry	212			4.8	30	
Beryllium	0.6	0.5	ug/g dry	0.6			3.7	30	
Boron	10.3	5.0	ug/g dry	11.5			11.5	30	
Cadmium	1.0	0.5	ug/g dry	1.0			4.6	30	
Chromium	32.4	5.0	ug/g dry	34.0			4.7	30	
Cobalt	8.9	1.0	ug/g dry	9.2			3.4	30	
Copper	446	5.0	ug/g dry	460			3.1	30	
Lead	731	1.0	ug/g dry	564			25.8	30	
Molybdenum	2.2	1.0	ug/g dry	2.3			5.0	30	
Nickel	36.5	5.0	ug/g dry	38.1			4.2	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	0.4	0.3	ug/g dry	0.3			3.1	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	1.4	1.0	ug/g dry	1.4			5.2	30	
Vanadium	41.0	10.0	ug/g dry	42.6			3.9	30	
Zinc	584	20.0	ug/g dry	606			3.7	30	
<b>Physical Characteristics</b>									
% Solids	92.8	0.1	% by Wt.	92.5			0.4	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.42		ug/g dry		95.7	50-140			
Surrogate: Terphenyl-d14	1.48		ug/g dry		100	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	11.0		ug/g dry		59.4	50-140			

Certificate of Analysis

Report Date: 23-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31278

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	166	7	ug/g	ND	83.2	80-120			
F2 PHCs (C10-C16)	97	4	ug/g	ND	118	60-140			
F3 PHCs (C16-C34)	275	8	ug/g	ND	136	60-140			
F4 PHCs (C34-C50)	169	6	ug/g	ND	131	60-140			
<b>Metals</b>									
Antimony	53.7	1.0	ug/g	4.1	99.1	70-130			
Arsenic	55.2	1.0	ug/g	2.6	105	70-130			
Barium	139	1.0	ug/g	84.9	109	70-130			
Beryllium	55.9	0.5	ug/g	ND	111	70-130			
Boron	54.8	5.0	ug/g	ND	100	70-130			
Cadmium	50.5	0.5	ug/g	ND	100	70-130			
Chromium	68.4	5.0	ug/g	13.6	110	70-130			
Cobalt	57.1	1.0	ug/g	3.7	107	70-130			
Copper	230	5.0	ug/g	184	92.8	70-130			
Lead	268	1.0	ug/g	226	85.6	70-130			
Molybdenum	52.9	1.0	ug/g	ND	104	70-130			
Nickel	67.0	5.0	ug/g	15.2	103	70-130			
Selenium	50.6	1.0	ug/g	ND	100	70-130			
Silver	43.9	0.3	ug/g	ND	87.5	70-130			
Thallium	49.0	1.0	ug/g	ND	97.8	70-130			
Uranium	49.8	1.0	ug/g	ND	98.5	70-130			
Vanadium	72.3	10.0	ug/g	17.1	111	70-130			
Zinc	291	20.0	ug/g	242	97.5	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.140	0.02	ug/g	ND	75.7	50-140			
Acenaphthylene	0.124	0.02	ug/g	ND	67.1	50-140			
Anthracene	0.184	0.02	ug/g	ND	99.4	50-140			
Benzo [a] anthracene	0.175	0.02	ug/g	ND	94.4	50-140			
Benzo [a] pyrene	0.171	0.02	ug/g	ND	92.7	50-140			
Benzo [b] fluoranthene	0.238	0.02	ug/g	ND	129	50-140			
Benzo [g,h,i] perylene	0.179	0.02	ug/g	ND	96.9	50-140			
Benzo [k] fluoranthene	0.203	0.02	ug/g	ND	110	50-140			
Chrysene	0.185	0.02	ug/g	ND	100	50-140			
Dibenzo [a,h] anthracene	0.175	0.02	ug/g	ND	94.6	50-140			
Fluoranthene	0.170	0.02	ug/g	ND	91.9	50-140			
Fluorene	0.186	0.02	ug/g	ND	101	50-140			
Indeno [1,2,3-cd] pyrene	0.173	0.02	ug/g	ND	93.7	50-140			
1-Methylnaphthalene	0.173	0.02	ug/g	ND	93.4	50-140			
2-Methylnaphthalene	0.183	0.02	ug/g	ND	98.8	50-140			
Naphthalene	0.156	0.01	ug/g	ND	84.4	50-140			
Phenanthrene	0.169	0.02	ug/g	ND	91.1	50-140			
Pyrene	0.178	0.02	ug/g	ND	96.3	50-140			
Surrogate: 2-Fluorobiphenyl	1.75		ug/g		118	50-140			
Surrogate: Terphenyl-d14	1.52		ug/g		103	50-140			
<b>Volatiles</b>									
Benzene	3.20	0.02	ug/g	ND	79.9	60-130			
Ethylbenzene	3.52	0.05	ug/g	ND	88.0	60-130			
Toluene	3.91	0.05	ug/g	ND	97.8	60-130			

Certificate of Analysis

Report Date: 23-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31278

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	7.38	0.05	ug/g	ND	92.3	60-130			
o-Xylene	4.00	0.05	ug/g	ND	100	60-130			



Certificate of Analysis

Report Date: 23-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31278

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Laurent Blvd.  
Ario K1G 4J8  
H-1947  
paracellabs.com  
www.paracellabs.com

Parcel Order Number  
(Lab Use Only)

2047623

Chain Of Custody  
(Lab Use Only)

No 57005

Client Name: <u>Peterson</u>	Project Ref: <u>PEA934</u>	Page <u>1</u> of <u>1</u>
Contact Name: <u>Michael Beaudoin</u>	Quote #:	Turnaround Time <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regular
Address: <u>15A Colonnade Rd</u>	PO #: <u>31278</u>	
Telephone: <u>(03-226-7381)</u>	E-mail: <u>jcompson@petersongroup.ca</u> <u>mbeaudoin@petersongroup.ca</u>	
Date Required: _____		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)			Required Analysis													
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		BTEXPHG	PAHs	ICP Metals								
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA									Date	Time						
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mun: _____	Other: _____																	
Sample ID/Location Name																				
1	TP60 - G1						2	11/20/2020												
2	TP61 - G1						↓	↓												
3	TP62 - G1						↓	↓												
4	TP63 - G1						↓	↓												
5																				
6																				
7																				
8																				
9																				
10																				

Comments: \_\_\_\_\_

Method of Delivery: Drop Bot

Relinquished By (Sign): <u>[Signature]</u>	Received By Driver/Depot: _____	Received at Lab: <u>[Signature]</u>	Verified By: <u>[Signature]</u>
Relinquished By (Print): <u>Jeremy Compson</u>	Date/Time: _____	Date/Time: <u>20 NOV 2020 14:31</u>	Date/Time: <u>20 NOV 2020 14:43</u>
Date/Time: <u>8/20/2020</u>	Temperature: _____ °C	Temperature: <u>17.6</u> °C	pH Verified: <input type="checkbox"/> By: <u>NA</u>

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31284  
Project: PE4937  
Custody: 52437

Report Date: 24-Nov-2020  
Order Date: 20-Nov-2020

**Order #: 2047661**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2047661-01	TP9-B1
2047661-02	TP9-NW1
2047661-03	TP9-EW1
2047661-04	TP9-SW1
2047661-05	TP9-WW1
2047661-06	TP31-B1
2047661-07	TP31-NW1
2047661-08	TP31-EW1
2047661-09	TP31-SW1
2047661-10	TP31-WW1

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	23-Nov-20	24-Nov-20
PHC F1	CWS Tier 1 - P&T GC-FID	23-Nov-20	24-Nov-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	21-Nov-20	23-Nov-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	24-Nov-20	24-Nov-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	21-Nov-20	23-Nov-20
Solids, %	Gravimetric, calculation	23-Nov-20	24-Nov-20

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

Client ID:	TP9-B1	TP9-NW1	TP9-EW1	TP9-SW1
Sample Date:	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00
Sample ID:	2047661-01	2047661-02	2047661-03	2047661-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	81.4	85.4	82.6	82.9
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**Metals**

Element	MDL/Units	<1.0	<1.0	<1.0	<1.0
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	3.3	1.6	1.5	2.9
Barium	1.0 ug/g dry	167	41.5	45.7	175
Beryllium	0.5 ug/g dry	0.7	<0.5	<0.5	0.8
Boron	5.0 ug/g dry	7.1	<5.0	<5.0	7.5
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	81.0	19.5	27.6	89.5
Cobalt	1.0 ug/g dry	16.2	4.9	5.7	19.7
Copper	5.0 ug/g dry	33.5	8.9	6.9	19.4
Lead	1.0 ug/g dry	6.0	5.7	7.0	11.0
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	44.4	11.9	13.0	42.1
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	1.0	<1.0	1.9
Vanadium	10.0 ug/g dry	69.4	20.4	27.4	74.2
Zinc	20.0 ug/g dry	75.3	25.1	32.7	99.8

**Volatiles**

Compound	MDL/Units	<0.02	<0.02	<0.02	<0.02
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	110%	108%	105%	111%

**Hydrocarbons**

PHC Group	MDL/Units	<7	<7	<7	<7
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	84	32	<8
F4 PHCs (C34-C50)	6 ug/g dry	<6	67	31	<6

**Semi-Volatiles**

Compound	MDL/Units	<0.02	0.03	<0.02	<0.02
Acenaphthene	0.02 ug/g dry	<0.02	0.03	<0.02	<0.02

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

	Client ID:	TP9-B1	TP9-NW1	TP9-EW1	TP9-SW1
	Sample Date:	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00
	Sample ID:	2047661-01	2047661-02	2047661-03	2047661-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	0.08	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	0.10	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	0.09	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	0.10	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	0.05	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	0.07	<0.02	<0.02
Chrysene	0.02 ug/g dry	<0.02	0.10	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	0.27	0.03	<0.02
Fluorene	0.02 ug/g dry	<0.02	0.04	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	0.05	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	<0.02	0.29	<0.02	<0.02
Pyrene	0.02 ug/g dry	<0.02	0.22	0.02	<0.02
2-Fluorobiphenyl	Surrogate	91.4%	84.0%	86.0%	91.7%
Terphenyl-d14	Surrogate	91.5%	81.2%	76.6%	94.1%



Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

Client ID:	TP9-WW1	TP31-B1	TP31-NW1	TP31-EW1
Sample Date:	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00
Sample ID:	2047661-05	2047661-06	2047661-07	2047661-08
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	80.3	64.7	76.3	73.7
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	1.2	<1.0
Arsenic	1.0 ug/g dry	1.9	3.3	4.3	3.6
Barium	1.0 ug/g dry	84.0	334	258	217
Beryllium	0.5 ug/g dry	<0.5	0.7	0.7	0.6
Boron	5.0 ug/g dry	<5.0	6.5	7.5	6.0
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	45.6	116	97.2	76.8
Cobalt	1.0 ug/g dry	11.2	21.6	18.2	14.9
Copper	5.0 ug/g dry	11.2	53.2	56.0	40.9
Lead	1.0 ug/g dry	8.2	66.9	40.1	20.4
Molybdenum	1.0 ug/g dry	<1.0	<1.0	1.8	<1.0
Nickel	5.0 ug/g dry	21.4	62.5	57.3	45.2
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	1.2	1.3
Vanadium	10.0 ug/g dry	41.8	101	84.0	70.4
Zinc	20.0 ug/g dry	52.4	132	123	172

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	109%	110%	109%	108%

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	16	14	17
F3 PHCs (C16-C34)	8 ug/g dry	49	106	191	263 [1]
F4 PHCs (C34-C50)	6 ug/g dry	25	18	54	77

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	0.07	0.28
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Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

	Client ID:	TP9-WW1	TP31-B1	TP31-NW1	TP31-EW1
	Sample Date:	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00
	Sample ID:	2047661-05	2047661-06	2047661-07	2047661-08
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	0.03	0.06
Anthracene	0.02 ug/g dry	<0.02	<0.02	0.21	0.91
Benzo [a] anthracene	0.02 ug/g dry	<0.02	0.03	0.53	1.97
Benzo [a] pyrene	0.02 ug/g dry	<0.02	0.02	0.51	1.80
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	0.03	0.54	1.97
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	0.28	0.96
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	0.51	1.18
Chrysene	0.02 ug/g dry	<0.02	<0.02	0.45	1.92
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	0.08	0.27
Fluoranthene	0.02 ug/g dry	<0.02	0.04	1.40	4.61
Fluorene	0.02 ug/g dry	<0.02	<0.02	0.15	0.37
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	0.27	0.90
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.03	0.08
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.03	0.11
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	0.06	0.19
Naphthalene	0.01 ug/g dry	<0.01	<0.01	0.06	0.19
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	0.66	3.11
Pyrene	0.02 ug/g dry	<0.02	0.04	1.14	4.04
2-Fluorobiphenyl	Surrogate	96.6%	88.1%	114%	114%
Terphenyl-d14	Surrogate	92.9%	83.7%	109%	105%

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

<b>Client ID:</b>	TP31-SW1	TP31-WW1	-	-
<b>Sample Date:</b>	20-Nov-20 09:00	20-Nov-20 09:00	-	-
<b>Sample ID:</b>	2047661-09	2047661-10	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	85.9	66.9	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	1.3	3.5	-	-
Barium	1.0 ug/g dry	34.6	308	-	-
Beryllium	0.5 ug/g dry	<0.5	0.8	-	-
Boron	5.0 ug/g dry	<5.0	7.6	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	18.2	108	-	-
Cobalt	1.0 ug/g dry	4.2	20.7	-	-
Copper	5.0 ug/g dry	7.9	49.6	-	-
Lead	1.0 ug/g dry	3.4	20.6	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	10.6	60.9	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	<1.0	-	-
Vanadium	10.0 ug/g dry	19.4	92.4	-	-
Zinc	20.0 ug/g dry	23.6	130	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene-d8	Surrogate	110%	108%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	11	-	-
F3 PHCs (C16-C34)	8 ug/g dry	61	186 [1]	-	-
F4 PHCs (C34-C50)	6 ug/g dry	41	58	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	0.12	0.47	-	-
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Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

	Client ID:	TP31-SW1	TP31-WW1	-	-
	Sample Date:	20-Nov-20 09:00	20-Nov-20 09:00	-	-
	Sample ID:	2047661-09	2047661-10	-	-
	MDL/Units	Soil	Soil	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	0.03	-	-
Anthracene	0.02 ug/g dry	0.27	1.14	-	-
Benzo [a] anthracene	0.02 ug/g dry	0.43	2.04	-	-
Benzo [a] pyrene	0.02 ug/g dry	0.38	1.86	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	0.44	2.07	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	0.23	1.01	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	0.24	1.34	-	-
Chrysene	0.02 ug/g dry	0.44	2.06	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.03	0.25	-	-
Fluoranthene	0.02 ug/g dry	1.24	5.79	-	-
Fluorene	0.02 ug/g dry	0.15	0.58	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.21	0.96	-	-
1-Methylnaphthalene	0.02 ug/g dry	0.05	0.19	-	-
2-Methylnaphthalene	0.02 ug/g dry	0.07	0.28	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	0.12	0.47	-	-
Naphthalene	0.01 ug/g dry	0.13	0.53	-	-
Phenanthrene	0.02 ug/g dry	1.14	4.34	-	-
Pyrene	0.02 ug/g dry	1.03	4.77	-	-
2-Fluorobiphenyl	Surrogate	100%	89.1%	-	-
Terphenyl-d14	Surrogate	92.0%	85.7%	-	-

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.29		ug/g		96.5	50-140			
Surrogate: Terphenyl-d14	1.16		ug/g		86.7	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.58		ug/g		107	50-140			

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	15	4	ug/g dry	12			18.1	30	
F3 PHCs (C16-C34)	231	8	ug/g dry	199			15.0	30	
F4 PHCs (C34-C50)	141	6	ug/g dry	149			5.0	30	
<b>Metals</b>									
Antimony	1.6	1.0	ug/g dry	1.6			1.4	30	
Arsenic	5.5	1.0	ug/g dry	6.0			8.7	30	
Barium	76.8	1.0	ug/g dry	80.0			4.0	30	
Beryllium	ND	0.5	ug/g dry	0.5			NC	30	
Boron	7.2	5.0	ug/g dry	8.1			10.9	30	
Cadmium	ND	0.5	ug/g dry	0.5			NC	30	
Chromium	14.6	5.0	ug/g dry	16.9			14.5	30	
Cobalt	4.6	1.0	ug/g dry	5.2			12.0	30	
Copper	26.6	5.0	ug/g dry	30.4			13.3	30	
Lead	92.8	1.0	ug/g dry	90.9			2.1	30	
Molybdenum	1.3	1.0	ug/g dry	1.4			3.0	30	
Nickel	11.7	5.0	ug/g dry	12.1			3.1	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	0.5	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	20.5	10.0	ug/g dry	23.2			12.5	30	
Zinc	216	20.0	ug/g dry	244			11.9	30	
<b>Physical Characteristics</b>									
% Solids	68.7	0.1	% by Wt.	68.3			0.5	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.76		ug/g dry		108	50-140			
Surrogate: Terphenyl-d14	1.74		ug/g dry		106	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	9.63		ug/g dry		108	50-140			



Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	191	7	ug/g	ND	95.3	80-120			
F2 PHCs (C10-C16)	114	4	ug/g	12	103	60-140			
F3 PHCs (C16-C34)	474	8	ug/g	199	114	60-140			
F4 PHCs (C34-C50)	328	6	ug/g	149	117	60-140			
<b>Metals</b>									
Antimony	46.1	1.0	ug/g	ND	91.0	70-130			
Arsenic	50.2	1.0	ug/g	2.4	95.5	70-130			
Barium	78.4	1.0	ug/g	32.0	92.7	70-130			
Beryllium	47.8	0.5	ug/g	ND	95.2	70-130			
Boron	46.7	5.0	ug/g	ND	86.9	70-130			
Cadmium	46.1	0.5	ug/g	ND	91.8	70-130			
Chromium	54.9	5.0	ug/g	6.8	96.2	70-130			
Cobalt	48.5	1.0	ug/g	2.1	92.9	70-130			
Copper	56.5	5.0	ug/g	12.2	88.7	70-130			
Lead	83.7	1.0	ug/g	36.4	94.7	70-130			
Molybdenum	47.1	1.0	ug/g	ND	93.2	70-130			
Nickel	50.9	5.0	ug/g	ND	92.1	70-130			
Selenium	45.6	1.0	ug/g	ND	90.7	70-130			
Silver	45.5	0.3	ug/g	ND	91.0	70-130			
Thallium	46.6	1.0	ug/g	ND	93.1	70-130			
Uranium	48.5	1.0	ug/g	ND	96.6	70-130			
Vanadium	55.3	10.0	ug/g	ND	92.1	70-130			
Zinc	131	20.0	ug/g	97.4	67.7	70-130			QM-07
<b>Semi-Volatiles</b>									
Acenaphthene	0.183	0.02	ug/g	ND	89.5	50-140			
Acenaphthylene	0.161	0.02	ug/g	ND	78.8	50-140			
Anthracene	0.233	0.02	ug/g	ND	114	50-140			
Benzo [a] anthracene	0.222	0.02	ug/g	ND	108	50-140			
Benzo [a] pyrene	0.207	0.02	ug/g	ND	101	50-140			
Benzo [b] fluoranthene	0.232	0.02	ug/g	ND	113	50-140			
Benzo [g,h,i] perylene	0.219	0.02	ug/g	ND	107	50-140			
Benzo [k] fluoranthene	0.238	0.02	ug/g	ND	116	50-140			
Chrysene	0.226	0.02	ug/g	ND	110	50-140			
Dibenzo [a,h] anthracene	0.206	0.02	ug/g	ND	101	50-140			
Fluoranthene	0.223	0.02	ug/g	ND	109	50-140			
Fluorene	0.212	0.02	ug/g	ND	104	50-140			
Indeno [1,2,3-cd] pyrene	0.212	0.02	ug/g	ND	103	50-140			
1-Methylnaphthalene	0.225	0.02	ug/g	ND	110	50-140			
2-Methylnaphthalene	0.237	0.02	ug/g	ND	116	50-140			
Naphthalene	0.212	0.01	ug/g	ND	104	50-140			
Phenanthrene	0.214	0.02	ug/g	ND	105	50-140			
Pyrene	0.228	0.02	ug/g	ND	111	50-140			
Surrogate: 2-Fluorobiphenyl	1.61		ug/g		98.5	50-140			
Surrogate: Terphenyl-d14	1.48		ug/g		90.5	50-140			
<b>Volatiles</b>									
Benzene	4.46	0.02	ug/g	ND	111	60-130			
Ethylbenzene	4.34	0.05	ug/g	ND	108	60-130			
Toluene	4.19	0.05	ug/g	ND	105	60-130			

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	8.03	0.05	ug/g	ND	100	60-130			
o-Xylene	4.06	0.05	ug/g	ND	101	60-130			
Surrogate: Toluene-d8	8.29		ug/g		104	50-140			

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Qualifier Notes:**

**Sample Qualifiers :**

- 1 : Some peak(s) in the GC-FID Chromatogram are not typical of petroleum hydrocarbon distillates. May be the result of high concentrations of non-mineral based compounds not completely removed by the method cleanup. Results may be biased high.

**QC Qualifiers :**

- QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

***CCME PHC additional information:***

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31284  
Project: PE4937  
Custody: 52436

Report Date: 24-Nov-2020  
Order Date: 20-Nov-2020

**Order #: 2047662**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2047662-01	BH2-B1
2047662-02	BH2-NW1
2047662-03	BH2-EW1
2047662-04	BH2-SW1
2047662-05	BH2-WW1

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	23-Nov-20	24-Nov-20
PHC F1	CWS Tier 1 - P&T GC-FID	23-Nov-20	24-Nov-20
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	23-Nov-20	24-Nov-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	21-Nov-20	24-Nov-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	24-Nov-20	24-Nov-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	21-Nov-20	24-Nov-20
Solids, %	Gravimetric, calculation	23-Nov-20	24-Nov-20



Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

<b>Client ID:</b>	BH2-B1	BH2-NW1	BH2-EW1	BH2-SW1
<b>Sample Date:</b>	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00
<b>Sample ID:</b>	2047662-01	2047662-02	2047662-03	2047662-04
<b>MDL/Units</b>	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	84.6	80.7	64.5	75.3
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	7.6	8.0
Arsenic	1.0 ug/g dry	1.8	2.1	6.5	7.9
Barium	1.0 ug/g dry	51.4	57.4	150	167
Beryllium	0.5 ug/g dry	<0.5	<0.5	0.6	0.6
Boron	5.0 ug/g dry	<5.0	<5.0	10.4	9.2
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	33.5	22.2	30.1	32.1
Cobalt	1.0 ug/g dry	5.8	4.5	6.5	8.0
Copper	5.0 ug/g dry	11.1	9.8	54.4	38.4
Lead	1.0 ug/g dry	3.1	8.3	91.1	88.5
Molybdenum	1.0 ug/g dry	<1.0	<1.0	2.6	1.5
Nickel	5.0 ug/g dry	18.1	12.0	20.7	24.6
Selenium	1.0 ug/g dry	<1.0	<1.0	1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	1.4	1.2
Vanadium	10.0 ug/g dry	26.9	21.9	32.1	38.4
Zinc	20.0 ug/g dry	27.6	31.3	126	124

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	109%	108%	108%	108%

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	9	26	35
F3 PHCs (C16-C34)	8 ug/g dry	<8	255	929	1410
F4 PHCs (C34-C50)	6 ug/g dry	<6	59	289 [1]	317 [1]
F4G PHCs (gravimetric)	50 ug/g dry	-	-	1130	1050

**Semi-Volatiles**

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

	Client ID:	BH2-B1	BH2-NW1	BH2-EW1	BH2-SW1
	Sample Date:	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00	20-Nov-20 09:00
	Sample ID:	2047662-01	2047662-02	2047662-03	2047662-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	0.60	0.14
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	0.03	<0.02
Anthracene	0.02 ug/g dry	<0.02	0.02	1.31	0.29
Benzo [a] anthracene	0.02 ug/g dry	<0.02	0.05	2.80	0.69
Benzo [a] pyrene	0.02 ug/g dry	<0.02	0.04	2.54	0.62
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	0.06	2.93	0.76
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	0.03	1.32	0.34
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	0.04	1.55	0.37
Chrysene	0.02 ug/g dry	<0.02	0.05	2.82	0.71
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	0.39	0.10
Fluoranthene	0.02 ug/g dry	<0.02	0.14	6.69	1.65
Fluorene	0.02 ug/g dry	<0.02	<0.02	0.65	0.18
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	0.03	1.35	0.33
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.10	0.04
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.13	0.06
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	0.22	0.10
Naphthalene	0.01 ug/g dry	<0.01	<0.01	0.16	0.12
Phenanthrene	0.02 ug/g dry	<0.02	0.10	4.83	1.24
Pyrene	0.02 ug/g dry	<0.02	0.11	5.27	1.28
2-Fluorobiphenyl	Surrogate	98.8%	91.1%	107%	107%
Terphenyl-d14	Surrogate	91.3%	87.0%	87.7%	94.1%

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

Client ID:	BH2-WW1	-	-	-
Sample Date:	20-Nov-20 09:00	-	-	-
Sample ID:	2047662-05	-	-	-
MDL/Units	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	79.3	-	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	3.2	-	-	-
Barium	1.0 ug/g dry	64.8	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	20.3	-	-	-
Cobalt	1.0 ug/g dry	4.4	-	-	-
Copper	5.0 ug/g dry	14.9	-	-	-
Lead	1.0 ug/g dry	22.7	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	12.9	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	23.2	-	-	-
Zinc	20.0 ug/g dry	45.9	-	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	108%	-	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	9	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	384	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	112	-	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	0.06	-	-	-
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Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

	MDL/Units	Soil	-	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	-	-	-
Anthracene	0.02 ug/g dry	0.11	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	0.29	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	0.28	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	0.35	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	0.17	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	0.21	-	-	-
Chrysene	0.02 ug/g dry	0.33	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.05	-	-	-
Fluoranthene	0.02 ug/g dry	0.72	-	-	-
Fluorene	0.02 ug/g dry	0.07	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.16	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	0.03	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	0.05	-	-	-
Naphthalene	0.01 ug/g dry	0.03	-	-	-
Phenanthrene	0.02 ug/g dry	0.48	-	-	-
Pyrene	0.02 ug/g dry	0.56	-	-	-
2-Fluorobiphenyl	Surrogate	101%	-	-	-
Terphenyl-d14	Surrogate	87.2%	-	-	-

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.29		ug/g		96.5	50-140			
Surrogate: Terphenyl-d14	1.16		ug/g		86.7	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.58		ug/g		107	50-140			

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	15	4	ug/g dry	12			18.1	30	
F3 PHCs (C16-C34)	231	8	ug/g dry	199			15.0	30	
F4 PHCs (C34-C50)	141	6	ug/g dry	149			5.0	30	
<b>Metals</b>									
Antimony	1.6	1.0	ug/g dry	1.6			1.4	30	
Arsenic	5.5	1.0	ug/g dry	6.0			8.7	30	
Barium	76.8	1.0	ug/g dry	80.0			4.0	30	
Beryllium	ND	0.5	ug/g dry	0.5			NC	30	
Boron	7.2	5.0	ug/g dry	8.1			10.9	30	
Cadmium	ND	0.5	ug/g dry	0.5			NC	30	
Chromium	14.6	5.0	ug/g dry	16.9			14.5	30	
Cobalt	4.6	1.0	ug/g dry	5.2			12.0	30	
Copper	26.6	5.0	ug/g dry	30.4			13.3	30	
Lead	92.8	1.0	ug/g dry	90.9			2.1	30	
Molybdenum	1.3	1.0	ug/g dry	1.4			3.0	30	
Nickel	11.7	5.0	ug/g dry	12.1			3.1	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	0.5	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	20.5	10.0	ug/g dry	23.2			12.5	30	
Zinc	216	20.0	ug/g dry	244			11.9	30	
<b>Physical Characteristics</b>									
% Solids	68.7	0.1	% by Wt.	68.3			0.5	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.76		ug/g dry		108	50-140			
Surrogate: Terphenyl-d14	1.74		ug/g dry		106	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	9.63		ug/g dry		108	50-140			



Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	191	7	ug/g	ND	95.3	80-120			
F2 PHCs (C10-C16)	114	4	ug/g	12	103	60-140			
F3 PHCs (C16-C34)	474	8	ug/g	199	114	60-140			
F4 PHCs (C34-C50)	328	6	ug/g	149	117	60-140			
F4G PHCs (gravimetric)	1010	50	ug/g	ND	101	80-120			
<b>Metals</b>									
Antimony	46.1	1.0	ug/g	ND	91.0	70-130			
Arsenic	50.2	1.0	ug/g	2.4	95.5	70-130			
Barium	78.4	1.0	ug/g	32.0	92.7	70-130			
Beryllium	47.8	0.5	ug/g	ND	95.2	70-130			
Boron	46.7	5.0	ug/g	ND	86.9	70-130			
Cadmium	46.1	0.5	ug/g	ND	91.8	70-130			
Chromium	54.9	5.0	ug/g	6.8	96.2	70-130			
Cobalt	48.5	1.0	ug/g	2.1	92.9	70-130			
Copper	56.5	5.0	ug/g	12.2	88.7	70-130			
Lead	83.7	1.0	ug/g	36.4	94.7	70-130			
Molybdenum	47.1	1.0	ug/g	ND	93.2	70-130			
Nickel	50.9	5.0	ug/g	ND	92.1	70-130			
Selenium	45.6	1.0	ug/g	ND	90.7	70-130			
Silver	45.5	0.3	ug/g	ND	91.0	70-130			
Thallium	46.6	1.0	ug/g	ND	93.1	70-130			
Uranium	48.5	1.0	ug/g	ND	96.6	70-130			
Vanadium	55.3	10.0	ug/g	ND	92.1	70-130			
Zinc	131	20.0	ug/g	97.4	67.7	70-130			QM-07
<b>Semi-Volatiles</b>									
Acenaphthene	0.183	0.02	ug/g	ND	89.5	50-140			
Acenaphthylene	0.161	0.02	ug/g	ND	78.8	50-140			
Anthracene	0.233	0.02	ug/g	ND	114	50-140			
Benzo [a] anthracene	0.222	0.02	ug/g	ND	108	50-140			
Benzo [a] pyrene	0.207	0.02	ug/g	ND	101	50-140			
Benzo [b] fluoranthene	0.232	0.02	ug/g	ND	113	50-140			
Benzo [g,h,i] perylene	0.219	0.02	ug/g	ND	107	50-140			
Benzo [k] fluoranthene	0.238	0.02	ug/g	ND	116	50-140			
Chrysene	0.226	0.02	ug/g	ND	110	50-140			
Dibenzo [a,h] anthracene	0.206	0.02	ug/g	ND	101	50-140			
Fluoranthene	0.223	0.02	ug/g	ND	109	50-140			
Fluorene	0.212	0.02	ug/g	ND	104	50-140			
Indeno [1,2,3-cd] pyrene	0.212	0.02	ug/g	ND	103	50-140			
1-Methylnaphthalene	0.225	0.02	ug/g	ND	110	50-140			
2-Methylnaphthalene	0.237	0.02	ug/g	ND	116	50-140			
Naphthalene	0.212	0.01	ug/g	ND	104	50-140			
Phenanthrene	0.214	0.02	ug/g	ND	105	50-140			
Pyrene	0.228	0.02	ug/g	ND	111	50-140			
Surrogate: 2-Fluorobiphenyl	1.61		ug/g		98.5	50-140			
Surrogate: Terphenyl-d14	1.48		ug/g		90.5	50-140			
<b>Volatiles</b>									
Benzene	4.46	0.02	ug/g	ND	111	60-130			
Ethylbenzene	4.34	0.05	ug/g	ND	108	60-130			

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Toluene	4.19	0.05	ug/g	ND	105	60-130			
m,p-Xylenes	8.03	0.05	ug/g	ND	100	60-130			
o-Xylene	4.06	0.05	ug/g	ND	101	60-130			
Surrogate: Toluene-d8	8.29		ug/g		104	50-140			

Certificate of Analysis

Report Date: 24-Nov-2020

Client: Paterson Group Consulting Engineers

Order Date: 20-Nov-2020

Client PO: 31284

Project Description: PE4937

**Qualifier Notes:**

*Sample Qualifiers :*

1 : GC-FID signal did not return to baseline by C50

*QC Qualifiers :*

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



2047662

Nº 52436

Client Name: <u>Patterson</u>	Project Ref: <u>PE4937</u>	Page <u>  </u> of <u>  </u>
Contact Name: <u>Mike Beaudin</u>	Quote #:	<b>Turnaround Time</b> <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regular Date Required: _____
Address: <u>154 Colonnade Rd</u>	PO #: <u>3128A</u>	
Telephone: <u>613-226-7381</u>	E-mail: <u>jcamposarone@pattersongroup.ca</u> <u>mbeaudin@pattersongroup.ca</u>	

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis															
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		BTEXPAHs	PAHs	ICP Metals									
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time												
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																	
<input type="checkbox"/> Table _____			Mun: _____																		
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Other: _____																		
Sample ID/Location Name																					
1	<u>BH2-B1</u>			<u>S</u>		<u>2</u>	<u>11/20/2020</u>			<u>✓</u>	<u>✓</u>	<u>✓</u>									
2	<u>BH2-NW1</u>			<u>↓</u>		<u>1</u>	<u>↓</u>			<u>↓</u>	<u>↓</u>	<u>↓</u>									
3	<u>BH2-EW1</u>			<u>↓</u>			<u>↓</u>			<u>↓</u>	<u>↓</u>	<u>↓</u>									
4	<u>BH2-SW1</u>			<u>↓</u>			<u>↓</u>			<u>↓</u>	<u>↓</u>	<u>↓</u>									
5	<u>BH2-WW1</u>			<u>↓</u>			<u>↓</u>			<u>↓</u>	<u>↓</u>	<u>↓</u>									
6																					
7																					
8																					
9																					
10																					

Comments:			Method of Delivery: <u>Drop Box</u>		
Relinquished By (Sign): <u>[Signature]</u>	Received By Driver/Depot:	Received at Lab: <u>Blam</u>	Verified By: <u>[Signature]</u>		
Relinquished By (Print): <u>Jeremy Camposarone</u>	Date/Time:	Date/Time: <u>Nov 20, 20 18:10</u>	Date/Time: <u>Nov 20, 20 18:28</u>		
Date/Time: <u>11/20/2020</u>	Temperature: _____ °C	Temperature: <u>15.6</u> °C	pH Verified: <input type="checkbox"/> By: _____		

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31434  
Project: PE4937  
Custody: 55503

Report Date: 1-Dec-2020  
Order Date: 27-Nov-2020

**Order #: 2048539**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2048539-01	TP9-B2

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31434

Project Description: PE4937

### Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	30-Nov-20	1-Dec-20
PHC F1	CWS Tier 1 - P&T GC-FID	30-Nov-20	1-Dec-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	27-Nov-20	28-Nov-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	30-Nov-20	30-Nov-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	27-Nov-20	29-Nov-20
Solids, %	Gravimetric, calculation	30-Nov-20	30-Nov-20



Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31434

Project Description: PE4937

<b>Client ID:</b>	TP9-B2	-	-	-
<b>Sample Date:</b>	26-Nov-20 09:00	-	-	-
<b>Sample ID:</b>	2048539-01	-	-	-
<b>MDL/Units</b>	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	75.6	-	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	3.2	-	-	-
Barium	1.0 ug/g dry	172	-	-	-
Beryllium	0.5 ug/g dry	0.8	-	-	-
Boron	5.0 ug/g dry	8.5	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	97.3	-	-	-
Cobalt	1.0 ug/g dry	17.3	-	-	-
Copper	5.0 ug/g dry	40.1	-	-	-
Lead	1.0 ug/g dry	8.6	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	55.8	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	70.4	-	-	-
Zinc	20.0 ug/g dry	80.7	-	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	125%	-	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	-	-	-
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Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31434

Project Description: PE4937

	Client ID:	TP9-B2	-	-	-
	Sample Date:	26-Nov-20 09:00	-	-	-
	Sample ID:	2048539-01	-	-	-
	MDL/Units	Soil	-	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	-	-	-
Anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Chrysene	0.02 ug/g dry	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	-	-	-
Fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Fluorene	0.02 ug/g dry	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	-	-	-
Naphthalene	0.01 ug/g dry	<0.01	-	-	-
Phenanthrene	0.02 ug/g dry	<0.02	-	-	-
Pyrene	0.02 ug/g dry	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	77.9%	-	-	-
Terphenyl-d14	Surrogate	87.4%	-	-	-

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31434

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.996		ug/g		74.7	50-140			
Surrogate: Terphenyl-d14	1.42		ug/g		106	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	10.1		ug/g		126	50-140			

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31434

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	4.5	1.0	ug/g dry	4.2			7.2	30	
Arsenic	4.9	1.0	ug/g dry	5.0			2.4	30	
Barium	219	1.0	ug/g dry	220			0.6	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	9.5	5.0	ug/g dry	9.0			4.7	30	
Cadmium	1.4	0.5	ug/g dry	1.4			2.1	30	
Chromium	31.9	5.0	ug/g dry	32.4			1.6	30	
Cobalt	5.3	1.0	ug/g dry	5.3			0.3	30	
Copper	109	5.0	ug/g dry	111			2.2	30	
Lead	282	1.0	ug/g dry	229			20.8	30	
Molybdenum	1.6	1.0	ug/g dry	1.7			10.7	30	
Nickel	20.8	5.0	ug/g dry	18.9			9.3	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	2.1	0.3	ug/g dry	2.0			4.9	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	15.9	10.0	ug/g dry	15.8			0.8	30	
Zinc	377	20.0	ug/g dry	383			1.6	30	
<b>Physical Characteristics</b>									
% Solids	93.9	0.1	% by Wt.	94.5			0.6	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.13		ug/g dry		64.2	50-140			
Surrogate: Terphenyl-d14	1.45		ug/g dry		82.5	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	12.0		ug/g dry		125	50-140			

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31434

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	201	7	ug/g	ND	100	80-120			
F2 PHCs (C10-C16)	118	4	ug/g	ND	109	60-140			
F3 PHCs (C16-C34)	346	8	ug/g	ND	130	60-140			
F4 PHCs (C34-C50)	238	6	ug/g	ND	141	60-140			
<b>Metals</b>									
Antimony	48.3	1.0	ug/g	1.7	93.2	70-130			
Arsenic	49.9	1.0	ug/g	2.0	95.8	70-130			
Barium	131	1.0	ug/g	88.2	85.6	70-130			
Beryllium	48.2	0.5	ug/g	ND	96.2	70-130			
Boron	47.4	5.0	ug/g	ND	87.6	70-130			
Cadmium	46.4	0.5	ug/g	0.6	91.7	70-130			
Chromium	60.5	5.0	ug/g	13.0	95.1	70-130			
Cobalt	49.3	1.0	ug/g	2.1	94.3	70-130			
Copper	88.9	5.0	ug/g	44.5	88.8	70-130			
Lead	149	1.0	ug/g	91.7	115	70-130			
Molybdenum	47.4	1.0	ug/g	ND	93.4	70-130			
Nickel	54.6	5.0	ug/g	7.6	94.0	70-130			
Selenium	44.9	1.0	ug/g	ND	89.4	70-130			
Silver	48.7	0.3	ug/g	0.8	95.9	70-130			
Thallium	45.6	1.0	ug/g	ND	91.1	70-130			
Uranium	46.9	1.0	ug/g	ND	93.5	70-130			
Vanadium	54.3	10.0	ug/g	ND	95.9	70-130			
Zinc	190	20.0	ug/g	153	73.5	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.150	0.02	ug/g	ND	68.2	50-140			
Acenaphthylene	0.139	0.02	ug/g	ND	62.8	50-140			
Anthracene	0.177	0.02	ug/g	ND	80.4	50-140			
Benzo [a] anthracene	0.168	0.02	ug/g	ND	76.2	50-140			
Benzo [a] pyrene	0.165	0.02	ug/g	ND	74.8	50-140			
Benzo [b] fluoranthene	0.246	0.02	ug/g	ND	112	50-140			
Benzo [g,h,i] perylene	0.182	0.02	ug/g	ND	82.5	50-140			
Benzo [k] fluoranthene	0.233	0.02	ug/g	ND	106	50-140			
Chrysene	0.173	0.02	ug/g	ND	78.3	50-140			
Dibenzo [a,h] anthracene	0.199	0.02	ug/g	ND	90.4	50-140			
Fluoranthene	0.174	0.02	ug/g	ND	78.9	50-140			
Fluorene	0.154	0.02	ug/g	ND	70.0	50-140			
Indeno [1,2,3-cd] pyrene	0.200	0.02	ug/g	ND	90.9	50-140			
1-Methylnaphthalene	0.143	0.02	ug/g	ND	64.9	50-140			
2-Methylnaphthalene	0.145	0.02	ug/g	ND	65.8	50-140			
Naphthalene	0.164	0.01	ug/g	ND	74.3	50-140			
Phenanthrene	0.150	0.02	ug/g	ND	68.2	50-140			
Pyrene	0.169	0.02	ug/g	ND	76.7	50-140			
Surrogate: 2-Fluorobiphenyl	1.25		ug/g		71.0	50-140			
Surrogate: Terphenyl-d14	1.50		ug/g		85.3	50-140			
<b>Volatiles</b>									
Benzene	2.91	0.02	ug/g	ND	72.7	60-130			
Ethylbenzene	3.60	0.05	ug/g	ND	89.9	60-130			
Toluene	3.99	0.05	ug/g	ND	99.8	60-130			

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31434

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	7.55	0.05	ug/g	ND	94.3	60-130			
o-Xylene	3.75	0.05	ug/g	ND	93.7	60-130			
Surrogate: Toluene-d8	8.83		ug/g		110	50-140			



Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31434

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31436  
Project: PE4937  
Custody: 55504

Report Date: 1-Dec-2020  
Order Date: 27-Nov-2020

**Order #: 2048550**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2048550-01	BH2-B2
2048550-02	BH2-SW2
2048550-03	BH2-EW2
2048550-04	BH2-WW2
2048550-05	TP31-B2
2048550-06	TP31-B3
2048550-07	TP31-SW2
2048550-08	TP31-EW2
2048550-09	TP31-WW2
2048550-10	TP31-NW2

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

### Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	30-Nov-20	1-Dec-20
PHC F1	CWS Tier 1 - P&T GC-FID	30-Nov-20	1-Dec-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	27-Nov-20	28-Nov-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	30-Nov-20	30-Nov-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	27-Nov-20	29-Nov-20
Solids, %	Gravimetric, calculation	30-Nov-20	30-Nov-20

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

Client ID:	BH2-B2	BH2-SW2	BH2-EW2	BH2-WW2
Sample Date:	26-Nov-20 09:00	26-Nov-20 09:00	26-Nov-20 09:00	26-Nov-20 09:00
Sample ID:	2048550-01	2048550-02	2048550-03	2048550-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	86.2	84.4	78.2	65.7
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**Metals**

Element	MDL/Units	86.2	84.4	78.2	65.7
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Arsenic	1.0 ug/g dry	1.4	2.2	1.2	-
Barium	1.0 ug/g dry	44.6	64.0	37.8	-
Beryllium	0.5 ug/g dry	<0.5	<0.5	<0.5	-
Boron	5.0 ug/g dry	<5.0	<5.0	<5.0	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	-
Chromium	5.0 ug/g dry	32.3	49.1	29.2	-
Cobalt	1.0 ug/g dry	6.1	9.6	5.9	-
Copper	5.0 ug/g dry	9.4	15.8	10.5	-
Lead	1.0 ug/g dry	2.7	4.3	2.3	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Nickel	5.0 ug/g dry	16.9	24.7	15.4	-
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	-
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Uranium	1.0 ug/g dry	<1.0	1.2	<1.0	-
Vanadium	10.0 ug/g dry	27.5	44.0	25.1	-
Zinc	20.0 ug/g dry	28.0	41.3	23.3	-

**Volatiles**

Compound	MDL/Units	86.2	84.4	78.2	65.7
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	125%	126%	126%	126%

**Hydrocarbons**

PHC Group	MDL/Units	86.2	84.4	78.2	65.7
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	29
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	21

**Semi-Volatiles**

Compound	MDL/Units	86.2	84.4	78.2	65.7
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.06

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

	Client ID:	BH2-B2	BH2-SW2	BH2-EW2	BH2-WW2
	Sample Date:	26-Nov-20 09:00	26-Nov-20 09:00	26-Nov-20 09:00	26-Nov-20 09:00
	Sample ID:	2048550-01	2048550-02	2048550-03	2048550-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.11
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.22
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.18
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.27
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.13
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.14
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.24
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.04
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.62
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.06
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.14
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	0.03
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.36
Pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	0.49
2-Fluorobiphenyl	Surrogate	61.4%	58.0%	67.3%	68.3%
Terphenyl-d14	Surrogate	62.7%	76.6%	90.9%	93.9%



Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

Client ID:	TP31-B2	TP31-B3	TP31-SW2	TP31-EW2
Sample Date:	26-Nov-20 09:00	26-Nov-20 09:00	26-Nov-20 09:00	26-Nov-20 09:00
Sample ID:	2048550-05	2048550-06	2048550-07	2048550-08
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	75.0	79.3	73.2	82.9
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	2.2	1.6	-	-
Barium	1.0 ug/g dry	104	65.1	-	-
Beryllium	0.5 ug/g dry	<0.5	<0.5	-	-
Boron	5.0 ug/g dry	<5.0	<5.0	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	53.2	29.8	-	-
Cobalt	1.0 ug/g dry	10.3	5.2	-	-
Copper	5.0 ug/g dry	24.2	11.4	-	-
Lead	1.0 ug/g dry	4.2	2.9	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	29.6	16.3	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	<1.0	-	-
Vanadium	10.0 ug/g dry	45.6	23.5	-	-
Zinc	20.0 ug/g dry	46.1	26.2	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	-	-	0.55	<0.02
Acenaphthylene	0.02 ug/g dry	-	-	0.05	<0.02
Anthracene	0.02 ug/g dry	-	-	1.24	<0.02
Benzo [a] anthracene	0.02 ug/g dry	-	-	1.45	<0.02
Benzo [a] pyrene	0.02 ug/g dry	-	-	1.13	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	-	-	1.31	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	-	-	0.52	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	-	-	0.81	<0.02
Chrysene	0.02 ug/g dry	-	-	1.37	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	-	0.18	<0.02
Fluoranthene	0.02 ug/g dry	-	-	4.49	<0.02
Fluorene	0.02 ug/g dry	-	-	0.73	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	-	0.58	<0.02
1-Methylnaphthalene	0.02 ug/g dry	-	-	0.16	<0.02

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

	Client ID:	TP31-B2	TP31-B3	TP31-SW2	TP31-EW2
	Sample Date:	26-Nov-20 09:00	26-Nov-20 09:00	26-Nov-20 09:00	26-Nov-20 09:00
	Sample ID:	2048550-05	2048550-06	2048550-07	2048550-08
	MDL/Units	Soil	Soil	Soil	Soil
2-Methylnaphthalene	0.02 ug/g dry	-	-	0.21	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	-	-	0.37	<0.04
Naphthalene	0.01 ug/g dry	-	-	0.49	<0.01
Phenanthrene	0.02 ug/g dry	-	-	4.40	<0.02
Pyrene	0.02 ug/g dry	-	-	3.31	<0.02
2-Fluorobiphenyl	Surrogate	-	-	63.7%	63.3%
Terphenyl-d14	Surrogate	-	-	91.5%	61.7%

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

<b>Client ID:</b>	TP31-WW2	TP31-NW2	-	-
<b>Sample Date:</b>	26-Nov-20 09:00	26-Nov-20 09:00	-	-
<b>Sample ID:</b>	2048550-09	2048550-10	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	76.6	83.4	-	-
----------	--------------	------	------	---	---

**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	2.0	-	-	-
Barium	1.0 ug/g dry	101	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	44.0	-	-	-
Cobalt	1.0 ug/g dry	8.5	-	-	-
Copper	5.0 ug/g dry	20.5	-	-	-
Lead	1.0 ug/g dry	6.8	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	24.6	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	38.1	-	-	-
Zinc	20.0 ug/g dry	49.8	-	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	1.18	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	0.03	<0.02	-	-
Anthracene	0.02 ug/g dry	1.81	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	2.69	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	2.38	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	2.82	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	1.30	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	1.75	<0.02	-	-
Chrysene	0.02 ug/g dry	2.69	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.36	<0.02	-	-
Fluoranthene	0.02 ug/g dry	9.70	<0.02	-	-
Fluorene	0.02 ug/g dry	1.08	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	1.37	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	0.08	<0.02	-	-

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

	Client ID:	TP31-WW2	TP31-NW2	-	-
	Sample Date:	26-Nov-20 09:00	26-Nov-20 09:00	-	-
	Sample ID:	2048550-09	2048550-10	-	-
	MDL/Units	Soil	Soil	-	-
2-Methylnaphthalene	0.02 ug/g dry	0.15	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	0.23	<0.04	-	-
Naphthalene	0.01 ug/g dry	0.54	<0.01	-	-
Phenanthrene	0.02 ug/g dry	8.70	<0.02	-	-
Pyrene	0.02 ug/g dry	7.15	<0.02	-	-
2-Fluorobiphenyl	Surrogate	68.2%	63.4%	-	-
Terphenyl-d14	Surrogate	88.6%	76.3%	-	-

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.996		ug/g		74.7	50-140			
Surrogate: Terphenyl-d14	1.42		ug/g		106	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	10.1		ug/g		126	50-140			

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	1.2	1.0	ug/g dry	1.4			14.9	30	
Barium	12.5	1.0	ug/g dry	11.9			5.3	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	6.6	5.0	ug/g dry	6.1			7.0	30	
Cobalt	1.6	1.0	ug/g dry	1.6			2.2	30	
Copper	ND	5.0	ug/g dry	ND			NC	30	
Lead	2.1	1.0	ug/g dry	2.1			3.2	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	ND	5.0	ug/g dry	ND			NC	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	14.8	10.0	ug/g dry	14.3			3.8	30	
Zinc	ND	20.0	ug/g dry	ND			NC	30	
<b>Physical Characteristics</b>									
% Solids	93.9	0.1	% by Wt.	94.5			0.6	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.13		ug/g dry		64.2	50-140			
Surrogate: Terphenyl-d14	1.45		ug/g dry		82.5	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	12.0		ug/g dry		125	50-140			



Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	201	7	ug/g	ND	100	80-120			
F2 PHCs (C10-C16)	94	4	ug/g	ND	98.4	60-140			
F3 PHCs (C16-C34)	240	8	ug/g	ND	103	60-140			
F4 PHCs (C34-C50)	153	6	ug/g	ND	104	60-140			
<b>Metals</b>									
Antimony	46.9	1.0	ug/g	ND	93.5	70-130			
Arsenic	48.6	1.0	ug/g	ND	96.1	70-130			
Barium	52.3	1.0	ug/g	4.8	95.0	70-130			
Beryllium	49.2	0.5	ug/g	ND	98.3	70-130			
Boron	45.4	5.0	ug/g	ND	89.3	70-130			
Cadmium	46.0	0.5	ug/g	ND	91.8	70-130			
Chromium	51.8	5.0	ug/g	ND	98.7	70-130			
Cobalt	48.7	1.0	ug/g	ND	96.1	70-130			
Copper	48.1	5.0	ug/g	ND	94.5	70-130			
Lead	45.0	1.0	ug/g	ND	88.4	70-130			
Molybdenum	47.6	1.0	ug/g	ND	94.9	70-130			
Nickel	48.4	5.0	ug/g	ND	94.2	70-130			
Selenium	45.7	1.0	ug/g	ND	91.2	70-130			
Silver	40.8	0.3	ug/g	ND	81.6	70-130			
Thallium	46.2	1.0	ug/g	ND	92.4	70-130			
Uranium	48.0	1.0	ug/g	ND	95.7	70-130			
Vanadium	53.9	10.0	ug/g	ND	96.4	70-130			
Zinc	50.3	20.0	ug/g	ND	93.6	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.150	0.02	ug/g	ND	68.2	50-140			
Acenaphthylene	0.139	0.02	ug/g	ND	62.8	50-140			
Anthracene	0.177	0.02	ug/g	ND	80.4	50-140			
Benzo [a] anthracene	0.168	0.02	ug/g	ND	76.2	50-140			
Benzo [a] pyrene	0.165	0.02	ug/g	ND	74.8	50-140			
Benzo [b] fluoranthene	0.246	0.02	ug/g	ND	112	50-140			
Benzo [g,h,i] perylene	0.182	0.02	ug/g	ND	82.5	50-140			
Benzo [k] fluoranthene	0.233	0.02	ug/g	ND	106	50-140			
Chrysene	0.173	0.02	ug/g	ND	78.3	50-140			
Dibenzo [a,h] anthracene	0.199	0.02	ug/g	ND	90.4	50-140			
Fluoranthene	0.174	0.02	ug/g	ND	78.9	50-140			
Fluorene	0.154	0.02	ug/g	ND	70.0	50-140			
Indeno [1,2,3-cd] pyrene	0.200	0.02	ug/g	ND	90.9	50-140			
1-Methylnaphthalene	0.143	0.02	ug/g	ND	64.9	50-140			
2-Methylnaphthalene	0.145	0.02	ug/g	ND	65.8	50-140			
Naphthalene	0.164	0.01	ug/g	ND	74.3	50-140			
Phenanthrene	0.150	0.02	ug/g	ND	68.2	50-140			
Pyrene	0.169	0.02	ug/g	ND	76.7	50-140			
Surrogate: 2-Fluorobiphenyl	1.25		ug/g		71.0	50-140			
Surrogate: Terphenyl-d14	1.50		ug/g		85.3	50-140			
<b>Volatiles</b>									
Benzene	2.91	0.02	ug/g	ND	72.7	60-130			
Ethylbenzene	3.60	0.05	ug/g	ND	89.9	60-130			
Toluene	3.99	0.05	ug/g	ND	99.8	60-130			

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	7.55	0.05	ug/g	ND	94.3	60-130			
o-Xylene	3.75	0.05	ug/g	ND	93.7	60-130			
Surrogate: Toluene-d8	8.83		ug/g		110	50-140			

Certificate of Analysis

Report Date: 01-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 27-Nov-2020

Client PO: 31436

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.


 Blvd.  
4J8

**Parcel Order Number**  
(Lab Use Only)

**Chain Of Custody**  
(Lab Use Only)

ps.com

2048550

No 55504

Client Name: Paterson

Project Ref: PE4937

Page 1 of 1

Contact Name: Mike Beaudoin

Quote #:

**Turnaround Time**

Address: 154 Colonnade Road

PO #: 31436

- 
- 1 day
- 
- 3 day
- 
- 
- 2 day
- 
- Regular

Telephone: 613-226-7381

 E-mail: jcamposarcone@patersongroup.ca  
 mbeaudoin@patersongroup.ca

Date Required:

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)			Required Analysis													
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken	Date	Time	BTEXPHS	PAHS	ICP Metals							
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA																
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm	Mun:															
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Other:																		
Sample ID/Location Name																				
1	BH2-B2			S		2	11/26/2020				✓	✓	✓							
2	BH2-SW2					2					✓	✓	✓							
3	BH2-EW2					2					✓	✓	✓							
4	BH2-WW2					2					✓	✓								
5	TP31-B2					1							✓							
6	TP31-B3					1								✓						
7	TP31-SW2					1								✓						
8	TP31-EW2					1								✓						
9	TP31-WW2					1								✓	✓					
10	TP31-NW2					1								✓						

Comments:

Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot: A. TROUPE	Received at Lab: <i>[Signature]</i>	Method of Delivery: PALACE COURIER
Relinquished By (Print): Jeremy Camposarcone	Date/Time: 27/11/20 10:07	Date/Time: NOV 27 2020 1543	Verified By: <i>[Signature]</i>
Date/Time: 11/26/2020	Temperature: °C <i>11</i>	Temperature: °C <i>10.9</i>	Date/Time: 11-27-20 14:30
			pH Verified: <input type="checkbox"/> By:

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31438  
Project: PE4937  
Custody: 55505

Report Date: 2-Dec-2020  
Order Date: 30-Nov-2020

**Order #: 2049109**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2049109-01	GS3

Approved By:



Dale Robertson, BSc  
Laboratory Director

Certificate of Analysis

Report Date: 02-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 30-Nov-2020

Client PO: 31438

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	1-Dec-20	1-Dec-20
PHC F1	CWS Tier 1 - P&T GC-FID	1-Dec-20	1-Dec-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	1-Dec-20	2-Dec-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	2-Dec-20	2-Dec-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	1-Dec-20	1-Dec-20
Solids, %	Gravimetric, calculation	1-Dec-20	1-Dec-20

Certificate of Analysis

Report Date: 02-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 30-Nov-2020

Client PO: 31438

Project Description: PE4937

<b>Client ID:</b>	GS3	-	-	-
<b>Sample Date:</b>	30-Nov-20 09:00	-	-	-
<b>Sample ID:</b>	2049109-01	-	-	-
<b>MDL/Units</b>	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	83.6	-	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	2.3	-	-	-
Barium	1.0 ug/g dry	94.9	-	-	-
Beryllium	0.5 ug/g dry	0.5	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	57.4	-	-	-
Cobalt	1.0 ug/g dry	15.8	-	-	-
Copper	5.0 ug/g dry	15.2	-	-	-
Lead	1.0 ug/g dry	6.6	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	27.4	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	60.7	-	-	-
Zinc	20.0 ug/g dry	52.9	-	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	124%	-	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	-	-	-
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Certificate of Analysis

Report Date: 02-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 30-Nov-2020

Client PO: 31438

Project Description: PE4937

	Client ID:	GS3	-	-	-
	Sample Date:	30-Nov-20 09:00	-	-	-
	Sample ID:	2049109-01	-	-	-
	MDL/Units	Soil	-	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	-	-	-
Anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Chrysene	0.02 ug/g dry	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	-	-	-
Fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Fluorene	0.02 ug/g dry	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	-	-	-
Naphthalene	0.01 ug/g dry	<0.01	-	-	-
Phenanthrene	0.02 ug/g dry	<0.02	-	-	-
Pyrene	0.02 ug/g dry	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	63.8%	-	-	-
Terphenyl-d14	Surrogate	86.5%	-	-	-

Certificate of Analysis

Report Date: 02-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 30-Nov-2020

Client PO: 31438

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.941		ug/g		70.5	50-140			
Surrogate: Terphenyl-d14	1.29		ug/g		96.7	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	9.99		ug/g		125	50-140			

Certificate of Analysis

Report Date: 02-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 30-Nov-2020

Client PO: 31438

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	1.9	1.0	ug/g dry	1.8			5.7	30	
Barium	34.8	1.0	ug/g dry	35.3			1.3	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	11.0	5.0	ug/g dry	10.6			3.5	30	
Cobalt	4.3	1.0	ug/g dry	4.2			1.5	30	
Copper	9.4	5.0	ug/g dry	8.8			6.0	30	
Lead	8.9	1.0	ug/g dry	4.6			NC	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	8.7	5.0	ug/g dry	8.5			1.7	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	17.2	10.0	ug/g dry	16.8			2.3	30	
Zinc	22.3	20.0	ug/g dry	22.8			2.3	30	
<b>Physical Characteristics</b>									
% Solids	86.5	0.1	% by Wt.	85.5			1.3	25	
<b>Semi-Volatiles</b>									
Acenaphthene	0.044	0.02	ug/g wet	0.038			15.7	40	
Acenaphthylene	0.396	0.02	ug/g wet	0.440			10.4	40	
Anthracene	0.349	0.02	ug/g wet	0.355			1.7	40	
Benzo [a] anthracene	0.663	0.02	ug/g wet	0.683			3.0	40	
Benzo [a] pyrene	1.02	0.02	ug/g wet	1.08			5.3	40	
Benzo [b] fluoranthene	1.10	0.02	ug/g wet	1.16			5.9	40	
Benzo [g,h,i] perylene	0.683	0.02	ug/g wet	0.749			9.1	40	
Benzo [k] fluoranthene	0.674	0.02	ug/g wet	0.682			1.2	40	
Chrysene	0.619	0.02	ug/g wet	0.539			13.8	40	
Dibenzo [a,h] anthracene	0.225	0.02	ug/g wet	0.238			5.7	40	
Fluoranthene	1.16	0.02	ug/g wet	1.18			1.2	40	
Fluorene	0.182	0.02	ug/g wet	0.191			4.6	40	
Indeno [1,2,3-cd] pyrene	0.679	0.02	ug/g wet	0.746			9.3	40	
1-Methylnaphthalene	0.027	0.02	ug/g wet	0.029			5.9	40	
2-Methylnaphthalene	0.026	0.02	ug/g wet	0.032			23.0	40	
Naphthalene	0.039	0.01	ug/g wet	0.042			8.3	40	
Phenanthrene	0.685	0.02	ug/g wet	0.657			4.1	40	
Pyrene	0.966	0.02	ug/g wet	0.972			0.6	40	
Surrogate: 2-Fluorobiphenyl	0.857		ug/g wet		64.3	50-140			
Surrogate: Terphenyl-d14	1.08		ug/g wet		80.8	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	11.3		ug/g dry		124	50-140			

Certificate of Analysis

Report Date: 02-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 30-Nov-2020

Client PO: 31438

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	201	7	ug/g	ND	100	80-120			
<b>Metals</b>									
Antimony	50.3	1.0	ug/g	ND	100	70-130			
Arsenic	52.6	1.0	ug/g	ND	104	70-130			
Barium	66.2	1.0	ug/g	14.1	104	70-130			
Beryllium	50.5	0.5	ug/g	ND	101	70-130			
Boron	48.5	5.0	ug/g	ND	93.6	70-130			
Cadmium	49.8	0.5	ug/g	ND	99.5	70-130			
Chromium	55.6	5.0	ug/g	ND	103	70-130			
Cobalt	53.3	1.0	ug/g	1.7	103	70-130			
Copper	53.7	5.0	ug/g	ND	100	70-130			
Lead	49.8	1.0	ug/g	1.9	96.0	70-130			
Molybdenum	50.2	1.0	ug/g	ND	100	70-130			
Nickel	54.2	5.0	ug/g	ND	102	70-130			
Selenium	49.1	1.0	ug/g	ND	98.1	70-130			
Silver	43.4	0.3	ug/g	ND	86.9	70-130			
Thallium	48.3	1.0	ug/g	ND	96.5	70-130			
Uranium	47.5	1.0	ug/g	ND	94.6	70-130			
Vanadium	59.8	10.0	ug/g	ND	106	70-130			
Zinc	57.9	20.0	ug/g	ND	97.5	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.105	0.02	ug/g	ND	63.1	50-140			
Acenaphthylene	0.098	0.02	ug/g	ND	58.9	50-140			
Anthracene	0.121	0.02	ug/g	ND	72.6	50-140			
Benzo [a] anthracene	0.116	0.02	ug/g	ND	69.3	50-140			
Benzo [a] pyrene	0.116	0.02	ug/g	ND	69.7	50-140			
Benzo [b] fluoranthene	0.143	0.02	ug/g	ND	85.8	50-140			
Benzo [g,h,i] perylene	0.109	0.02	ug/g	ND	65.5	50-140			
Benzo [k] fluoranthene	0.161	0.02	ug/g	ND	96.4	50-140			
Chrysene	0.117	0.02	ug/g	ND	70.0	50-140			
Dibenzo [a,h] anthracene	0.120	0.02	ug/g	ND	72.3	50-140			
Fluoranthene	0.119	0.02	ug/g	ND	71.5	50-140			
Fluorene	0.118	0.02	ug/g	ND	70.7	50-140			
Indeno [1,2,3-cd] pyrene	0.119	0.02	ug/g	ND	71.5	50-140			
1-Methylnaphthalene	0.118	0.02	ug/g	ND	71.0	50-140			
2-Methylnaphthalene	0.125	0.02	ug/g	ND	75.1	50-140			
Naphthalene	0.140	0.01	ug/g	ND	83.9	50-140			
Phenanthrene	0.101	0.02	ug/g	ND	60.5	50-140			
Pyrene	0.115	0.02	ug/g	ND	69.1	50-140			
Surrogate: 2-Fluorobiphenyl	1.06		ug/g		79.8	50-140			
Surrogate: Terphenyl-d14	1.09		ug/g		81.7	50-140			
<b>Volatiles</b>									
Benzene	3.02	0.02	ug/g	ND	75.5	60-130			
Ethylbenzene	3.68	0.05	ug/g	ND	91.9	60-130			
Toluene	3.76	0.05	ug/g	ND	94.1	60-130			
m,p-Xylenes	7.71	0.05	ug/g	ND	96.4	60-130			
o-Xylene	3.91	0.05	ug/g	ND	97.6	60-130			
Surrogate: Toluene-d8	7.98		ug/g		99.7	50-140			

Certificate of Analysis

Report Date: 02-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 30-Nov-2020

Client PO: 31438

Project Description: PE4937

**Qualifier Notes:**

*QC Qualifiers :*

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Laurent Blvd.  
rio K1G 4J8  
-1947  
aracellabs.com  
labs.com

Parcel Order Number  
(Lab Use Only)

2049109

Chain Of Custody  
(Lab Use Only)

Nº 55505

Client Name: <b>Paterson</b>	Project Ref: <b>PE4937</b>	Page <u>1</u> of <u>1</u>
Contact Name: <b>Mike Beaudin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input checked="" type="checkbox"/> 2 day <input type="checkbox"/> Regular Date Required: _____
Address: <b>154 Colonnade Road</b>	PO #: <b>31438</b>	
Telephone:	E-mail: <b>jcamposarcone@patersongroup.ca</b> <b>mbeaudin@patersongroup.ca</b>	

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis															
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		BTEX/PAHs	PAH	ICP Metals									
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time												
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																	
<input type="checkbox"/> Table _____			Mun: _____																		
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Other: _____																		
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Date	Time															
1	G53	✓		2	11/30/2020																
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Comments:			Method of Delivery: <b>Drop Box</b>		
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot:	Received at Lab: <b>Sumnerpark</b>	Verified By: <i>[Signature]</i>		
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: _____	Date/Time: <b>Nov 30, 2020 04:40</b>	Date/Time: <b>11-30-20 16:48</b>		
Date/Time: <b>11/30/2020</b>	Temperature: _____ °C	Temperature: <b>18.4°C</b>	pH Verified: <input type="checkbox"/>	By: _____	

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31440  
Project: PE4937  
Custody: 55507

Report Date: 11-Dec-2020  
Order Date: 8-Dec-2020

**Order #: 2050225**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2050225-01	GS5
2050225-02	GS6
2050225-03	GS8

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor



Certificate of Analysis

Report Date: 11-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31440

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	9-Dec-20	10-Dec-20
PHC F1	CWS Tier 1 - P&T GC-FID	9-Dec-20	10-Dec-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	9-Dec-20	10-Dec-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	11-Dec-20	11-Dec-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	9-Dec-20	9-Dec-20
Solids, %	Gravimetric, calculation	9-Dec-20	9-Dec-20

Certificate of Analysis

Report Date: 11-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31440

Project Description: PE4937

<b>Client ID:</b>	GS5	GS6	GS8	-
<b>Sample Date:</b>	07-Dec-20 09:00	07-Dec-20 09:00	07-Dec-20 09:00	-
<b>Sample ID:</b>	2050225-01	2050225-02	2050225-03	-
<b>MDL/Units</b>	Soil	Soil	Soil	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	83.0	71.2	74.7	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Arsenic	1.0 ug/g dry	1.5	2.6	4.0	-
Barium	1.0 ug/g dry	35.1	209	233	-
Beryllium	0.5 ug/g dry	<0.5	0.8	0.9	-
Boron	5.0 ug/g dry	<5.0	5.9	6.4	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	-
Chromium	5.0 ug/g dry	25.0	79.5	122	-
Cobalt	1.0 ug/g dry	5.0	17.8	20.7	-
Copper	5.0 ug/g dry	5.1	19.7	45.9	-
Lead	1.0 ug/g dry	2.6	8.7	8.5	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Nickel	5.0 ug/g dry	14.3	40.3	63.5	-
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	-
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Vanadium	10.0 ug/g dry	26.3	63.0	86.2	-
Zinc	20.0 ug/g dry	26.9	72.8	98.9	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene-d8	Surrogate	109%	110%	109%	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
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Certificate of Analysis

Report Date: 11-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31440

Project Description: PE4937

	Client ID:	GS5	GS6	GS8	-
	Sample Date:	07-Dec-20 09:00	07-Dec-20 09:00	07-Dec-20 09:00	-
	Sample ID:	2050225-01	2050225-02	2050225-03	-
	MDL/Units	Soil	Soil	Soil	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	-
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
2-Fluorobiphenyl	Surrogate	69.5%	98.6%	87.4%	-
Terphenyl-d14	Surrogate	79.3%	107%	101%	-

Certificate of Analysis

Report Date: 11-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31440

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.26		ug/g		94.4	50-140			
Surrogate: Terphenyl-d14	1.57		ug/g		118	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.51		ug/g		106	50-140			

Certificate of Analysis

Report Date: 11-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31440

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	4.3	1.0	ug/g dry	4.3			0.8	30	
Barium	76.5	1.0	ug/g dry	78.6			2.6	30	
Beryllium	0.6	0.5	ug/g dry	0.6			4.1	30	
Boron	8.7	5.0	ug/g dry	8.6			1.3	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	21.1	5.0	ug/g dry	21.8			3.2	30	
Cobalt	8.2	1.0	ug/g dry	8.3			1.8	30	
Copper	20.1	5.0	ug/g dry	21.0			4.5	30	
Lead	23.5	1.0	ug/g dry	25.0			6.0	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	17.7	5.0	ug/g dry	18.4			3.7	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	29.8	10.0	ug/g dry	30.7			2.8	30	
Zinc	64.3	20.0	ug/g dry	65.6			2.0	30	
<b>Physical Characteristics</b>									
% Solids	83.2	0.1	% by Wt.	83.0			0.2	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.30		ug/g dry		83.9	50-140			
Surrogate: Terphenyl-d14	1.60		ug/g dry		103	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	12.2		ug/g dry		109	50-140			

Certificate of Analysis

Report Date: 11-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31440

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	198	7	ug/g	ND	99.2	80-120			
F2 PHCs (C10-C16)	136	4	ug/g	ND	137	60-140			
F3 PHCs (C16-C34)	324	8	ug/g	ND	133	60-140			
F4 PHCs (C34-C50)	194	6	ug/g	ND	126	60-140			
<b>Metals</b>									
Antimony	47.0	1.0	ug/g	ND	93.5	70-130			
Arsenic	50.2	1.0	ug/g	1.7	96.8	70-130			
Barium	78.4	1.0	ug/g	31.4	93.9	70-130			
Beryllium	48.6	0.5	ug/g	ND	96.6	70-130			
Boron	47.0	5.0	ug/g	ND	87.0	70-130			
Cadmium	45.9	0.5	ug/g	ND	91.6	70-130			
Chromium	58.1	5.0	ug/g	8.7	98.8	70-130			
Cobalt	52.3	1.0	ug/g	3.3	98.0	70-130			
Copper	55.3	5.0	ug/g	8.4	93.9	70-130			
Lead	54.9	1.0	ug/g	10.0	89.8	70-130			
Molybdenum	47.5	1.0	ug/g	ND	94.5	70-130			
Nickel	54.2	5.0	ug/g	7.4	93.8	70-130			
Selenium	46.9	1.0	ug/g	ND	93.5	70-130			
Silver	41.2	0.3	ug/g	ND	82.3	70-130			
Thallium	46.0	1.0	ug/g	ND	91.9	70-130			
Uranium	47.4	1.0	ug/g	ND	94.5	70-130			
Vanadium	62.3	10.0	ug/g	12.3	100	70-130			
Zinc	72.5	20.0	ug/g	26.2	92.5	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.181	0.02	ug/g	ND	93.2	50-140			
Acenaphthylene	0.142	0.02	ug/g	ND	73.0	50-140			
Anthracene	0.153	0.02	ug/g	ND	78.9	50-140			
Benzo [a] anthracene	0.150	0.02	ug/g	ND	77.0	50-140			
Benzo [a] pyrene	0.158	0.02	ug/g	ND	81.3	50-140			
Benzo [b] fluoranthene	0.247	0.02	ug/g	ND	127	50-140			
Benzo [g,h,i] perylene	0.183	0.02	ug/g	ND	94.5	50-140			
Benzo [k] fluoranthene	0.212	0.02	ug/g	ND	109	50-140			
Chrysene	0.178	0.02	ug/g	ND	91.6	50-140			
Dibenzo [a,h] anthracene	0.184	0.02	ug/g	ND	94.5	50-140			
Fluoranthene	0.160	0.02	ug/g	ND	82.5	50-140			
Fluorene	0.212	0.02	ug/g	ND	109	50-140			
Indeno [1,2,3-cd] pyrene	0.180	0.02	ug/g	ND	92.5	50-140			
1-Methylnaphthalene	0.185	0.02	ug/g	ND	95.5	50-140			
2-Methylnaphthalene	0.197	0.02	ug/g	ND	102	50-140			
Naphthalene	0.177	0.01	ug/g	ND	91.4	50-140			
Phenanthrene	0.189	0.02	ug/g	ND	97.1	50-140			
Pyrene	0.152	0.02	ug/g	ND	78.1	50-140			
Surrogate: 2-Fluorobiphenyl	1.48		ug/g		95.2	50-140			
Surrogate: Terphenyl-d14	1.70		ug/g		109	50-140			
<b>Volatiles</b>									
Benzene	4.72	0.02	ug/g	ND	118	60-130			
Ethylbenzene	4.51	0.05	ug/g	ND	113	60-130			
Toluene	4.61	0.05	ug/g	ND	115	60-130			

Certificate of Analysis

Report Date: 11-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31440

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	8.32	0.05	ug/g	ND	104	60-130			
o-Xylene	4.06	0.05	ug/g	ND	102	60-130			
Surrogate: Toluene-d8	8.37		ug/g		105	50-140			



Certificate of Analysis

Report Date: 11-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31440

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



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Parcel Order Number  
(Lab Use Only)

2050225

Chain Of Custody

(Lab Use Only)

Nº 55507

Client Name: <b>Paterson</b>	Project Ref: <b>PE4937</b>	Page <u>1</u> of <u>1</u>
Contact Name: <b>Mitke Beaudoin</b>	Quote #:	<b>Turnaround Time</b> <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular
Address: <b>154 Colomade Rd</b>	PO #: <b>31440</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>jcamposarcone@patersongroup.ca</b> <b>mbeaudoin@patersongroup.ca</b>	
Date Required: _____		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis																
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		BTEX/PHS	PAHs	ICP Metals										
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA																		
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																		
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No			Mun: _____	<input type="checkbox"/> Other: _____																		
Sample ID/Location Name				Date	Time																	
1	G55			S	2	12/7/2020				✓	✓	✓										
2	G56			↓	↓	↓				✓	✓	✓										
3	G58			↓	↓	↓				✓	✓	✓										
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Comments:			Method of Delivery: <b>PARACEL COURIER</b>		
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot: <i>[Signature]</i>	Received at Lab: <b>Chemeparm Dolmar</b>	Verified By: <i>[Signature]</i>		
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: <b>08/12/20 3:00</b>	Date/Time: <b>DEC 08 2020 04:30</b>	Date/Time: <b>DEC 08 2020 17:00</b>		
Date/Time: <b>12/8/2020</b>	Temperature: _____ °C	Temperature: <b>17.8</b> °C	pH Verified: <input type="checkbox"/> By: _____		

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31441  
Project: PE4937  
Custody: 55508

Report Date: 10-Dec-2020  
Order Date: 8-Dec-2020

**Order #: 2050230**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2050230-01	TP31-SW4
2050230-02	TP31-WW4

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 10-Dec-2020

Client: **Paterson Group Consulting Engineers**

Order Date: 8-Dec-2020

Client PO: 31441

Project Description: **PE4937**

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	9-Dec-20	10-Dec-20
Solids, %	Gravimetric, calculation	9-Dec-20	9-Dec-20

Certificate of Analysis

Report Date: 10-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31441

Project Description: PE4937

<b>Client ID:</b>	TP31-SW4	TP31-WW4	-	-
<b>Sample Date:</b>	08-Dec-20 09:00	08-Dec-20 09:00	-	-
<b>Sample ID:</b>	2050230-01	2050230-02	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	84.3	73.0	-	-
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**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	-	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	-	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	-	-
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	-	-
Pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
2-Fluorobiphenyl	Surrogate	85.3%	72.5%	-	-
Terphenyl-d14	Surrogate	97.8%	80.2%	-	-

Certificate of Analysis

Report Date: 10-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31441

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.26		ug/g		94.4	50-140			
Surrogate: Terphenyl-d14	1.57		ug/g		118	50-140			

Certificate of Analysis

Report Date: 10-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31441

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Physical Characteristics</b>									
% Solids	83.2	0.1	% by Wt.	83.0			0.2	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.30		ug/g dry		83.9	50-140			
Surrogate: Terphenyl-d14	1.60		ug/g dry		103	50-140			



Certificate of Analysis

Report Date: 10-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31441

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Semi-Volatiles</b>									
Acenaphthene	0.181	0.02	ug/g	ND	93.2	50-140			
Acenaphthylene	0.142	0.02	ug/g	ND	73.0	50-140			
Anthracene	0.153	0.02	ug/g	ND	78.9	50-140			
Benzo [a] anthracene	0.150	0.02	ug/g	ND	77.0	50-140			
Benzo [a] pyrene	0.158	0.02	ug/g	ND	81.3	50-140			
Benzo [b] fluoranthene	0.247	0.02	ug/g	ND	127	50-140			
Benzo [g,h,i] perylene	0.183	0.02	ug/g	ND	94.5	50-140			
Benzo [k] fluoranthene	0.212	0.02	ug/g	ND	109	50-140			
Chrysene	0.178	0.02	ug/g	ND	91.6	50-140			
Dibenzo [a,h] anthracene	0.184	0.02	ug/g	ND	94.5	50-140			
Fluoranthene	0.160	0.02	ug/g	ND	82.5	50-140			
Fluorene	0.212	0.02	ug/g	ND	109	50-140			
Indeno [1,2,3-cd] pyrene	0.180	0.02	ug/g	ND	92.5	50-140			
1-Methylnaphthalene	0.185	0.02	ug/g	ND	95.5	50-140			
2-Methylnaphthalene	0.197	0.02	ug/g	ND	102	50-140			
Naphthalene	0.177	0.01	ug/g	ND	91.4	50-140			
Phenanthrene	0.189	0.02	ug/g	ND	97.1	50-140			
Pyrene	0.152	0.02	ug/g	ND	78.1	50-140			
Surrogate: 2-Fluorobiphenyl	1.48		ug/g		95.2	50-140			
Surrogate: Terphenyl-d14	1.70		ug/g		109	50-140			

Certificate of Analysis

Report Date: 10-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 8-Dec-2020

Client PO: 31441

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.



Parcel Order Number  
(Lab Use Only)  
2050230

Chain Of Custody  
(Lab Use Only)  
Nº 55508

Client Name: Paterson  
Contact Name: Mike Beaudoin  
Address: 154 Colonnade Rd  
Telephone: (613)-226-7381

Project Ref: PE4937  
Quote #: \_\_\_\_\_  
PO #: 31441  
E-mail: jcamposarcone@patersongroup.ca  
mbeaudoin@patersongroup.ca

Page 1 of 1  
Turnaround Time  
 1 day       3 day  
 2 day       Regular  
Date Required: \_\_\_\_\_

Regulation 153/04  
 Table 1    Res/Park    Med/Fine  
 Table 2    Ind/Comm    Coarse  
 Table 3    Agri/Other  
 Table \_\_\_\_\_  
For RSC:  Yes    No

Other Regulation  
 REG 558    PWQO  
 CCME    MISA  
 SU - Sani    SU - Storm  
Mun: \_\_\_\_\_  
 Other: \_\_\_\_\_

Matrix Type: S (Soil/Sed.) GW (Ground Water)  
SW (Surface Water) SS (Storm/Sanitary Sewer)  
P (Paint) A (Air) O (Other)

**Required Analysis**

Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken		PAWS	Required Analysis														
				Date	Time																
1 TP31-SW4	S		1	12/8/2020		✓															
2 TP31-WW4	↓		↓	↓		✓															
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Comments: \_\_\_\_\_ Method of Delivery: Force!

Relinquished By (Sign): [Signature] Received By Driver/Depot: [Signature] Received at Lab: [Signature] Verified By: [Signature]

Relinquished By (Print): Jeremy Camposarcone Date/Time: 08/12/20 3:00 Date/Time: 12-8-20 16:30 Date/Time: 12-8-20 16:43

Date/Time: 12/8/2020 Temperature: \_\_\_\_\_ °C pH: \_\_\_\_\_ Temperature: 7.8 °C pH Verified:  By: \_\_\_\_\_

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31443  
Project: PE4937  
Custody: 55511

Report Date: 21-Dec-2020  
Order Date: 16-Dec-2020

**Order #: 2051312**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2051312-01	GS8(2)
2051312-02	GS9
2051312-03	GS10
2051312-04	GS11
2051312-05	GS12

Approved By:



Dale Robertson, BSc  
Laboratory Director

Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	17-Dec-20	18-Dec-20
PHC F1	CWS Tier 1 - P&T GC-FID	17-Dec-20	18-Dec-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	16-Dec-20	18-Dec-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	18-Dec-20	18-Dec-20
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	16-Dec-20	17-Dec-20
Solids, %	Gravimetric, calculation	16-Dec-20	17-Dec-20

Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

Client ID:	GS8(2)	GS9	GS10	GS11
Sample Date:	15-Dec-20 09:00	15-Dec-20 09:00	15-Dec-20 09:00	15-Dec-20 09:00
Sample ID:	2051312-01	2051312-02	2051312-03	2051312-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	72.9	81.4	82.5	70.4
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**Metals**

Element	MDL/Units	GS8(2)	GS9	GS10	GS11
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	3.2	1.2	<1.0	3.3
Barium	1.0 ug/g dry	181	44.6	36.1	254
Beryllium	0.5 ug/g dry	0.9	<0.5	<0.5	0.9
Boron	5.0 ug/g dry	7.8	<5.0	<5.0	8.2
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	93.8	27.8	21.8	114
Cobalt	1.0 ug/g dry	15.5	9.3	5.4	19.6
Copper	5.0 ug/g dry	34.9	5.1	5.8	41.5
Lead	1.0 ug/g dry	6.7	4.3	2.0	7.8
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	48.3	11.5	11.1	60.9
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	71.4	36.1	22.3	78.1
Zinc	20.0 ug/g dry	79.3	40.3	23.4	90.4

**Volatiles**

Compound	MDL/Units	GS8(2)	GS9	GS10	GS11
Benzene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	-	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	-	108%	110%	110%

**Hydrocarbons**

Parameter	MDL/Units	GS8(2)	GS9	GS10	GS11
F1 PHCs (C6-C10)	7 ug/g dry	-	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	-	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	-	<8	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	-	<6	<6	<6

**Semi-Volatiles**

Compound	MDL/Units	GS8(2)	GS9	GS10	GS11
Acenaphthene	0.02 ug/g dry	-	<0.02	<0.02	<0.02

Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

	Client ID:	GS8(2)	GS9	GS10	GS11
	Sample Date:	15-Dec-20 09:00	15-Dec-20 09:00	15-Dec-20 09:00	15-Dec-20 09:00
	Sample ID:	2051312-01	2051312-02	2051312-03	2051312-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Chrysene	0.02 ug/g dry	-	0.02	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	-	0.04	<0.02	<0.02
Fluorene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	-	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	-	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	-	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	-	0.03	<0.02	<0.02
Pyrene	0.02 ug/g dry	-	0.04	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	-	90.6%	51.6%	89.7%
Terphenyl-d14	Surrogate	-	109%	63.4%	106%



Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

Client ID:	GS12	-	-	-
Sample Date:	15-Dec-20 09:00	-	-	-
Sample ID:	2051312-05	-	-	-
MDL/Units	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	61.5	-	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	3.3	-	-	-
Barium	1.0 ug/g dry	307	-	-	-
Beryllium	0.5 ug/g dry	1.1	-	-	-
Boron	5.0 ug/g dry	8.4	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	129	-	-	-
Cobalt	1.0 ug/g dry	22.2	-	-	-
Copper	5.0 ug/g dry	50.5	-	-	-
Lead	1.0 ug/g dry	11.3	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	66.5	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	1.0	-	-	-
Vanadium	10.0 ug/g dry	92.8	-	-	-
Zinc	20.0 ug/g dry	115	-	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	110%	-	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	-	-	-
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Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

	MDL/Units	Soil			
Acenaphthylene	0.02 ug/g dry	<0.02	-	-	-
Anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Chrysene	0.02 ug/g dry	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	-	-	-
Fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Fluorene	0.02 ug/g dry	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	-	-	-
Naphthalene	0.01 ug/g dry	<0.01	-	-	-
Phenanthrene	0.02 ug/g dry	<0.02	-	-	-
Pyrene	0.02 ug/g dry	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	66.3%	-	-	-
Terphenyl-d14	Surrogate	86.5%	-	-	-

Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.49		ug/g		112	50-140			
Surrogate: Terphenyl-d14	1.69		ug/g		127	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.66		ug/g		108	50-140			

Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	2.7	1.0	ug/g dry	2.1			22.4	30	
Barium	44.7	1.0	ug/g dry	38.6			14.6	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	6.1	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	17.8	5.0	ug/g dry	15.9			11.2	30	
Cobalt	5.5	1.0	ug/g dry	4.8			13.4	30	
Copper	9.8	5.0	ug/g dry	8.6			12.9	30	
Lead	3.6	1.0	ug/g dry	3.0			18.5	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	10.1	5.0	ug/g dry	9.0			11.5	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	31.5	10.0	ug/g dry	27.5			13.7	30	
Zinc	22.5	20.0	ug/g dry	ND			NC	30	
<b>Physical Characteristics</b>									
% Solids	94.5	0.1	% by Wt.	94.3			0.3	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.46		ug/g dry		105	50-140			
Surrogate: Terphenyl-d14	1.46		ug/g dry		105	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	8.87		ug/g dry		108	50-140			

Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	193	7	ug/g	ND	96.7	80-120			
F2 PHCs (C10-C16)	120	4	ug/g	ND	132	60-140			
F3 PHCs (C16-C34)	293	8	ug/g	ND	132	60-140			
F4 PHCs (C34-C50)	186	6	ug/g	ND	132	60-140			
<b>Metals</b>									
Antimony	46.6	1.0	ug/g	ND	93.1	70-130			
Arsenic	50.6	1.0	ug/g	ND	99.5	70-130			
Barium	61.2	1.0	ug/g	15.4	91.5	70-130			
Beryllium	50.7	0.5	ug/g	ND	101	70-130			
Boron	48.4	5.0	ug/g	ND	92.8	70-130			
Cadmium	45.1	0.5	ug/g	ND	90.2	70-130			
Chromium	56.9	5.0	ug/g	6.4	101	70-130			
Cobalt	51.8	1.0	ug/g	1.9	99.8	70-130			
Copper	51.9	5.0	ug/g	ND	96.9	70-130			
Lead	45.6	1.0	ug/g	1.2	88.8	70-130			
Molybdenum	48.6	1.0	ug/g	ND	97.0	70-130			
Nickel	51.4	5.0	ug/g	ND	95.5	70-130			
Selenium	46.7	1.0	ug/g	ND	93.4	70-130			
Silver	41.5	0.3	ug/g	ND	83.1	70-130			
Thallium	44.9	1.0	ug/g	ND	89.7	70-130			
Uranium	46.8	1.0	ug/g	ND	93.2	70-130			
Vanadium	61.9	10.0	ug/g	11.0	102	70-130			
Zinc	55.9	20.0	ug/g	ND	95.9	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.115	0.02	ug/g	ND	66.3	50-140			
Acenaphthylene	0.104	0.02	ug/g	ND	59.7	50-140			
Anthracene	0.112	0.02	ug/g	ND	64.6	50-140			
Benzo [a] anthracene	0.106	0.02	ug/g	ND	61.2	50-140			
Benzo [a] pyrene	0.128	0.02	ug/g	ND	73.9	50-140			
Benzo [b] fluoranthene	0.162	0.02	ug/g	ND	93.4	50-140			
Benzo [g,h,i] perylene	0.118	0.02	ug/g	ND	68.2	50-140			
Benzo [k] fluoranthene	0.146	0.02	ug/g	ND	84.3	50-140			
Chrysene	0.133	0.02	ug/g	ND	76.8	50-140			
Dibenzo [a,h] anthracene	0.103	0.02	ug/g	ND	59.5	50-140			
Fluoranthene	0.113	0.02	ug/g	ND	65.1	50-140			
Fluorene	0.118	0.02	ug/g	ND	67.7	50-140			
Indeno [1,2,3-cd] pyrene	0.109	0.02	ug/g	ND	62.7	50-140			
1-Methylnaphthalene	0.134	0.02	ug/g	ND	76.9	50-140			
2-Methylnaphthalene	0.142	0.02	ug/g	ND	82.0	50-140			
Naphthalene	0.139	0.01	ug/g	ND	79.8	50-140			
Phenanthrene	0.120	0.02	ug/g	ND	69.2	50-140			
Pyrene	0.117	0.02	ug/g	ND	67.2	50-140			
Surrogate: 2-Fluorobiphenyl	1.10		ug/g		79.0	50-140			
Surrogate: Terphenyl-d14	1.28		ug/g		91.9	50-140			
<b>Volatiles</b>									
Benzene	4.15	0.02	ug/g	ND	104	60-130			
Ethylbenzene	4.13	0.05	ug/g	ND	103	60-130			
Toluene	4.16	0.05	ug/g	ND	104	60-130			

Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	7.16	0.05	ug/g	ND	89.6	60-130			
o-Xylene	3.58	0.05	ug/g	ND	89.4	60-130			
Surrogate: Toluene-d8	8.46		ug/g		106	50-140			

Certificate of Analysis

Report Date: 21-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Dec-2020

Client PO: 31443

Project Description: PE4937

**Qualifier Notes:**

*Login Qualifiers :*

Container(s) - Labeled improperly/insufficient information - date labelled as Dec 15th.

*Applies to samples: GS8(2), GS9, GS10, GS11, GS12*

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.





2051312

Nº 55511

Client Name: <b>Paterson</b>	Project Ref: <b>PE4937</b>	Page <u>1</u> of <u>1</u>
Contact Name: <b>Mike Beaudoin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular
Address: <b>154 Colonnade Rd</b>	PO #: <b>31443</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>jcamposarcone@patersongroup.ca</b> <b>mbeaudoin@patersongroup.ca</b>	
Date Required: _____		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis															
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken Date      Time		BTEX PHCS	PAHS	ICR Metals									
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA																	
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																	
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mun: _____		Other: _____																	
Sample ID/Location Name																					
1	GS8 (2)		S		1				✓		✓		✓								
2	GS9		S		2				✓		✓		✓								
3	GS10		S		1				✓		✓		✓								
4	GS11		S		1				✓		✓		✓								
5	GS12		S		1				✓		✓		✓								
6																					
7																					
8																					
9																					
10																					

Comments:		Method of Delivery: <b>Pick up</b>	
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Dept: <b>Donna Bloom</b>	Received at Lab: <b>Imperial Oil</b>	Verified By: <i>[Signature]</i>
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: <b>12/15/2020</b>	Date/Time: <b>DEC 16, 2020 12:29</b>	Date/Time: <b>Dec 16, 2020 13:10</b>
Date/Time: <b>12/15/2020</b>	Temperature: _____ °C	Temperature: <b>9.8</b> °C	pH Verified: <input type="checkbox"/> By: _____

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31446  
Project: PE4937  
Custody: 55596

Report Date: 23-Dec-2020  
Order Date: 21-Dec-2020

**Order #: 2052111**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2052111-01	GS12(2)

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 23-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Dec-2020

Client PO: 31446

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	23-Dec-20	23-Dec-20
Solids, %	Gravimetric, calculation	21-Dec-20	22-Dec-20

Certificate of Analysis

Report Date: 23-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Dec-2020

Client PO: 31446

Project Description: PE4937

<b>Client ID:</b>	GS12(2)	-	-	-
<b>Sample Date:</b>	21-Dec-20 09:00	-	-	-
<b>Sample ID:</b>	2052111-01	-	-	-
<b>MDL/Units</b>	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	91.7	-	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	1.1	-	-	-
Barium	1.0 ug/g dry	33.1	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	21.3	-	-	-
Cobalt	1.0 ug/g dry	4.5	-	-	-
Copper	5.0 ug/g dry	6.4	-	-	-
Lead	1.0 ug/g dry	2.7	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	11.7	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	25.6	-	-	-
Zinc	20.0 ug/g dry	<20.0	-	-	-

Certificate of Analysis

Report Date: 23-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Dec-2020

Client PO: 31446

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						

Certificate of Analysis

Report Date: 23-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Dec-2020

Client PO: 31446

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	1.1	1.0	ug/g dry	ND			NC	30	
Arsenic	5.3	1.0	ug/g dry	6.0			12.2	30	
Barium	45.0	1.0	ug/g dry	50.0			10.6	30	
Beryllium	0.7	0.5	ug/g dry	0.7			5.8	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	24.3	5.0	ug/g dry	27.4			12.0	30	
Cobalt	7.4	1.0	ug/g dry	8.6			14.0	30	
Copper	11.5	5.0	ug/g dry	13.2			13.6	30	
Lead	11.9	1.0	ug/g dry	13.0			8.5	30	
Molybdenum	1.8	1.0	ug/g dry	1.8			0.6	30	
Nickel	15.3	5.0	ug/g dry	17.9			15.4	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	32.4	10.0	ug/g dry	36.9			13.0	30	
Zinc	32.4	20.0	ug/g dry	36.5			11.9	30	
<b>Physical Characteristics</b>									
% Solids	77.5	0.1	% by Wt.	76.5			1.4	25	

Certificate of Analysis

Report Date: 23-Dec-2020

Client: Paterson Group Consulting Engineers

Order Date: 21-Dec-2020

Client PO: 31446

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	44.7	1.0	ug/g	ND	89.2	70-130			
Arsenic	49.1	1.0	ug/g	2.4	93.4	70-130			
Barium	63.0	1.0	ug/g	20.0	86.0	70-130			
Beryllium	48.2	0.5	ug/g	ND	95.9	70-130			
Boron	45.8	5.0	ug/g	ND	88.5	70-130			
Cadmium	44.2	0.5	ug/g	ND	88.4	70-130			
Chromium	56.8	5.0	ug/g	11.0	91.7	70-130			
Cobalt	48.0	1.0	ug/g	3.4	89.2	70-130			
Copper	49.3	5.0	ug/g	5.3	88.2	70-130			
Lead	48.3	1.0	ug/g	5.2	86.2	70-130			
Molybdenum	47.3	1.0	ug/g	ND	93.3	70-130			
Nickel	52.6	5.0	ug/g	7.2	90.9	70-130			
Selenium	45.6	1.0	ug/g	ND	90.8	70-130			
Silver	41.3	0.3	ug/g	ND	82.4	70-130			
Thallium	43.7	1.0	ug/g	ND	87.2	70-130			
Uranium	45.6	1.0	ug/g	ND	90.6	70-130			
Vanadium	60.4	10.0	ug/g	14.8	91.2	70-130			
Zinc	57.2	20.0	ug/g	ND	85.1	70-130			



Certificate of Analysis

**Client: Paterson Group Consulting Engineers**

**Client PO: 31446**

Report Date: 23-Dec-2020

Order Date: 21-Dec-2020

**Project Description: PE4937**

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.



## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31638  
Project: PE4937  
Custody: 55613

Report Date: 8-Jan-2021  
Order Date: 5-Jan-2021

**Order #: 2102166**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2102166-01	GS13
2102166-02	GS14

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Jan-2021

Client PO: 31638

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	6-Jan-21	7-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	6-Jan-21	7-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	5-Jan-21	7-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	7-Jan-21	7-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	7-Jan-21	7-Jan-21
Solids, %	Gravimetric, calculation	6-Jan-21	6-Jan-21

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Jan-2021

Client PO: 31638

Project Description: PE4937

<b>Client ID:</b>	GS13	GS14	-	-
<b>Sample Date:</b>	05-Jan-21 09:00	05-Jan-21 09:00	-	-
<b>Sample ID:</b>	2102166-01	2102166-02	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	82.4	73.7	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	<1.0	4.9	-	-
Barium	1.0 ug/g dry	29.8	285	-	-
Beryllium	0.5 ug/g dry	<0.5	1.4	-	-
Boron	5.0 ug/g dry	<5.0	9.8	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	19.3	128	-	-
Cobalt	1.0 ug/g dry	5.0	26.4	-	-
Copper	5.0 ug/g dry	<5.0	51.0	-	-
Lead	1.0 ug/g dry	1.9	13.9	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	9.7	71.0	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	1.1	-	-
Vanadium	10.0 ug/g dry	22.8	94.3	-	-
Zinc	20.0 ug/g dry	20.8	116	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene-d8	Surrogate	109%	108%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	-	-
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Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Jan-2021

Client PO: 31638

Project Description: PE4937

	Client ID:	GS13	GS14	-	-
	Sample Date:	05-Jan-21 09:00	05-Jan-21 09:00	-	-
	Sample ID:	2102166-01	2102166-02	-	-
	MDL/Units	Soil	Soil	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	-	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	-	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	-	-
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	-	-
Pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
2-Fluorobiphenyl	Surrogate	70.1%	55.2%	-	-
Terphenyl-d14	Surrogate	102%	86.0%	-	-

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Jan-2021

Client PO: 31638

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.813		ug/g		61.0	50-140			
Surrogate: Terphenyl-d14	1.30		ug/g		97.2	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.45		ug/g		106	50-140			



Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Jan-2021

Client PO: 31638

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	44	8	ug/g dry	50			13.7	30	
F4 PHCs (C34-C50)	44	6	ug/g dry	60			NC	30	
<b>Metals</b>									
Antimony	2.9	1.0	ug/g dry	2.9			1.3	30	
Arsenic	8.5	1.0	ug/g dry	8.0			5.8	30	
Barium	123	1.0	ug/g dry	112			9.7	30	
Beryllium	0.7	0.5	ug/g dry	0.6			12.5	30	
Boron	11.0	5.0	ug/g dry	10.6			3.3	30	
Cadmium	0.5	0.5	ug/g dry	0.5			3.3	30	
Chromium	26.0	5.0	ug/g dry	24.0			7.9	30	
Cobalt	9.4	1.0	ug/g dry	8.5			9.3	30	
Copper	66.4	5.0	ug/g dry	62.6			6.0	30	
Lead	167	1.0	ug/g dry	161			3.8	30	
Molybdenum	1.2	1.0	ug/g dry	1.3			1.5	30	
Nickel	27.1	5.0	ug/g dry	23.5			14.2	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	0.3	0.3	ug/g dry	0.3			5.9	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	29.7	10.0	ug/g dry	28.3			5.1	30	
Zinc	183	20.0	ug/g dry	175			4.4	30	
<b>Physical Characteristics</b>									
% Solids	82.5	0.1	% by Wt.	82.4			0.1	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	0.048			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	0.050			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	0.052			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	0.030			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	0.034			NC	40	
Chrysene	0.025	0.02	ug/g dry	0.070			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	0.051	0.02	ug/g dry	0.154			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	0.026			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	0.042	0.02	ug/g dry	0.147			NC	40	
Pyrene	0.040	0.02	ug/g dry	0.123			NC	40	
Surrogate: 2-Fluorobiphenyl	1.14		ug/g dry		74.1	50-140			
Surrogate: Terphenyl-d14	1.60		ug/g dry		104	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	9.28		ug/g dry		108	50-140			

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Jan-2021

Client PO: 31638

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	207	7	ug/g	ND	104	80-120			
F2 PHCs (C10-C16)	94	4	ug/g	ND	95.9	60-140			
F3 PHCs (C16-C34)	292	8	ug/g	50	101	60-140			
F4 PHCs (C34-C50)	214	6	ug/g	60	102	60-140			
<b>Metals</b>									
Antimony	48.0	1.0	ug/g	1.2	93.7	70-130			
Arsenic	53.1	1.0	ug/g	3.2	99.8	70-130			
Barium	90.3	1.0	ug/g	44.8	91.0	70-130			
Beryllium	54.4	0.5	ug/g	ND	108	70-130			
Boron	54.3	5.0	ug/g	ND	100	70-130			
Cadmium	46.7	0.5	ug/g	ND	92.9	70-130			
Chromium	60.2	5.0	ug/g	9.6	101	70-130			
Cobalt	52.1	1.0	ug/g	3.4	97.4	70-130			
Copper	68.1	5.0	ug/g	25.0	86.2	70-130			
Lead	101	1.0	ug/g	64.5	73.3	70-130			
Molybdenum	49.3	1.0	ug/g	ND	97.6	70-130			
Nickel	59.1	5.0	ug/g	9.4	99.5	70-130			
Selenium	49.4	1.0	ug/g	ND	98.3	70-130			
Silver	47.7	0.3	ug/g	ND	95.2	70-130			
Thallium	47.7	1.0	ug/g	ND	95.2	70-130			
Uranium	48.5	1.0	ug/g	ND	96.5	70-130			
Vanadium	61.5	10.0	ug/g	11.3	100	70-130			
Zinc	108	20.0	ug/g	70.1	75.0	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.211	0.02	ug/g	ND	109	50-140			
Acenaphthylene	0.159	0.02	ug/g	ND	82.3	50-140			
Anthracene	0.199	0.02	ug/g	ND	103	50-140			
Benzo [a] anthracene	0.194	0.02	ug/g	0.048	75.8	50-140			
Benzo [a] pyrene	0.210	0.02	ug/g	0.050	82.8	50-140			
Benzo [b] fluoranthene	0.256	0.02	ug/g	0.052	106	50-140			
Benzo [g,h,i] perylene	0.181	0.02	ug/g	0.030	78.5	50-140			
Benzo [k] fluoranthene	0.206	0.02	ug/g	0.034	89.3	50-140			
Chrysene	0.245	0.02	ug/g	0.070	90.3	50-140			
Dibenzo [a,h] anthracene	0.167	0.02	ug/g	ND	86.5	50-140			
Fluoranthene	0.352	0.02	ug/g	0.154	103	50-140			
Fluorene	0.190	0.02	ug/g	ND	98.3	50-140			
Indeno [1,2,3-cd] pyrene	0.179	0.02	ug/g	0.026	79.5	50-140			
1-Methylnaphthalene	0.150	0.02	ug/g	ND	77.8	50-140			
2-Methylnaphthalene	0.157	0.02	ug/g	ND	81.4	50-140			
Naphthalene	0.198	0.01	ug/g	ND	103	50-140			
Phenanthrene	0.325	0.02	ug/g	0.147	92.4	50-140			
Pyrene	0.308	0.02	ug/g	0.123	95.5	50-140			
Surrogate: 2-Fluorobiphenyl	1.19		ug/g		77.2	50-140			
Surrogate: Terphenyl-d14	1.67		ug/g		108	50-140			
<b>Volatiles</b>									
Benzene	4.90	0.02	ug/g	ND	122	60-130			
Ethylbenzene	4.45	0.05	ug/g	ND	111	60-130			
Toluene	4.63	0.05	ug/g	ND	116	60-130			

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Jan-2021

Client PO: 31638

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	8.46	0.05	ug/g	ND	106	60-130			
o-Xylene	4.27	0.05	ug/g	ND	107	60-130			
Surrogate: Toluene-d8	8.16		ug/g		102	50-140			

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Jan-2021

Client PO: 31638

Project Description: PE4937

**Qualifier Notes:**

*QC Qualifiers :*

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



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Parcel Order Number  
(Lab Use Only)  
*2102166*

Chain Of Custody  
(Lab Use Only)  
Nº 55613

Client Name: *Paterson* Project Ref: *PE4937* Page 1 of 1  
 Contact Name: *Mike Beaudoin* Quote #:  
 Address: *154 Colonnade Rd* PO #: *31638*  
 Telephone: *613-226-7381* E-mail: *jcamposarcone@patersongroup.ca*  
*mbeaudoin@patersongroup.ca*

Turnaround Time  
 1 day  3 day  
 2 day  Regular  
 Date Required: \_\_\_\_\_

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)			Required Analysis															
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHC/BTEX	PAH	ICP Metals										
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA									Date	Time								
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																		
<input type="checkbox"/> Table _____		Mun: _____																				
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Other: _____																		
Sample ID/Location Name																						
1	<i>GS13</i>			<i>↓</i>		<i>2</i>	<i>1/5/2021</i>		<i>✓</i>	<i>✓</i>	<i>✓</i>											
2	<i>GS14</i>			<i>↓</i>		<i>↓</i>	<i>↓</i>		<i>✓</i>	<i>✓</i>	<i>✓</i>											
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Comments: \_\_\_\_\_ Method of Delivery: *TRACEL COURIER*

Relinquished By (Sign): *[Signature]* Received By Driver/Depot: *[Signature]* Received at Lab: *[Signature]* Verified By: *[Signature]*

Relinquished By (Print): *Jeremy Camposarcone* Date/Time: *05/01/21 3:25* Date/Time: *1-5-21 16:58* Date/Time: *1-5-21 17:10*

Date/Time: *1/5/2021* Temperature: \_\_\_\_\_ °C *PA* Temperature: *6.4* °C pH Verified:  By: \_\_\_\_\_

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31639  
Project: PE4937  
Custody: 55614

Report Date: 8-Jan-2021  
Order Date: 6-Jan-2021

**Order #: 2102260**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2102260-01	GS15

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 6-Jan-2021

Client PO: 31639

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	7-Jan-21	7-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	7-Jan-21	7-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	7-Jan-21	7-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	8-Jan-21	8-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	7-Jan-21	7-Jan-21
Solids, %	Gravimetric, calculation	7-Jan-21	7-Jan-21



Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 6-Jan-2021

Client PO: 31639

Project Description: PE4937

<b>Client ID:</b>	GS15	-	-	-
<b>Sample Date:</b>	06-Jan-21 09:00	-	-	-
<b>Sample ID:</b>	2102260-01	-	-	-
<b>MDL/Units</b>	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	81.3	-	-	-
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**Metals**

Antimony	1.0 ug/g dry	1.0	-	-	-
Arsenic	1.0 ug/g dry	1.5	-	-	-
Barium	1.0 ug/g dry	60.4	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	34.4	-	-	-
Cobalt	1.0 ug/g dry	10.6	-	-	-
Copper	5.0 ug/g dry	7.8	-	-	-
Lead	1.0 ug/g dry	4.0	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	16.7	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	34.8	-	-	-
Zinc	20.0 ug/g dry	31.3	-	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	121%	-	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	-	-	-
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Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 6-Jan-2021

Client PO: 31639

Project Description: PE4937

	Client ID:	GS15	-	-	-
	Sample Date:	06-Jan-21 09:00	-	-	-
	Sample ID:	2102260-01	-	-	-
	MDL/Units	Soil	-	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	-	-	-
Anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Chrysene	0.02 ug/g dry	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	-	-	-
Fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Fluorene	0.02 ug/g dry	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	-	-	-
Naphthalene	0.01 ug/g dry	<0.01	-	-	-
Phenanthrene	0.02 ug/g dry	<0.02	-	-	-
Pyrene	0.02 ug/g dry	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	81.3%	-	-	-
Terphenyl-d14	Surrogate	115%	-	-	-

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 6-Jan-2021

Client PO: 31639

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.813		ug/g		61.0	50-140			
Surrogate: Terphenyl-d14	1.30		ug/g		97.2	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	9.78		ug/g		122	50-140			

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 6-Jan-2021

Client PO: 31639

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g wet	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	44	8	ug/g dry	50			13.7	30	
F4 PHCs (C34-C50)	44	6	ug/g dry	60			NC	30	
<b>Metals</b>									
Antimony	3.0	1.0	ug/g dry	2.7			7.9	30	
Arsenic	4.1	1.0	ug/g dry	4.2			1.7	30	
Barium	193	1.0	ug/g dry	192			0.8	30	
Boron	12.2	5.0	ug/g dry	12.7			3.4	30	
Cadmium	0.6	0.5	ug/g dry	0.6			1.8	30	
Chromium	34.4	5.0	ug/g dry	35.5			3.1	30	
Cobalt	10.3	1.0	ug/g dry	10.5			1.9	30	
Copper	41.7	5.0	ug/g dry	41.0			1.5	30	
Lead	97.1	1.0	ug/g dry	98.8			1.7	30	
Molybdenum	1.1	1.0	ug/g dry	ND			NC	30	
Nickel	21.1	5.0	ug/g dry	21.8			3.4	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	48.3	10.0	ug/g dry	50.2			3.9	30	
Zinc	205	20.0	ug/g dry	203			1.3	30	
<b>Physical Characteristics</b>									
% Solids	86.4	0.1	% by Wt.	86.6			0.2	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	0.048			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	0.050			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	0.052			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	0.030			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	0.034			NC	40	
Chrysene	0.025	0.02	ug/g dry	0.070			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	0.051	0.02	ug/g dry	0.154			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	0.026			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	0.042	0.02	ug/g dry	0.147			NC	40	
Pyrene	0.040	0.02	ug/g dry	0.123			NC	40	
Surrogate: 2-Fluorobiphenyl	1.14		ug/g dry		74.1	50-140			
Surrogate: Terphenyl-d14	1.60		ug/g dry		104	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g wet	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g wet	ND			NC	50	
Toluene	ND	0.05	ug/g wet	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g wet	ND			NC	50	
o-Xylene	ND	0.05	ug/g wet	ND			NC	50	
Surrogate: Toluene-d8	9.47		ug/g wet		118	50-140			

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 6-Jan-2021

Client PO: 31639

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	204	7	ug/g	ND	102	80-120			
F2 PHCs (C10-C16)	94	4	ug/g	ND	95.9	60-140			
F3 PHCs (C16-C34)	292	8	ug/g	50	101	60-140			
F4 PHCs (C34-C50)	214	6	ug/g	60	102	60-140			
<b>Metals</b>									
Antimony	44.7	1.0	ug/g	1.1	87.2	70-130			
Arsenic	48.5	1.0	ug/g	1.7	93.7	70-130			
Barium	47.3	1.0	ug/g	ND	94.6	70-130			
Beryllium	50.8	0.5	ug/g	ND	101	70-130			
Boron	46.1	5.0	ug/g	5.1	82.0	70-130			
Cadmium	47.1	0.5	ug/g	ND	93.7	70-130			
Chromium	49.4	5.0	ug/g	ND	98.9	70-130			
Cobalt	46.3	1.0	ug/g	4.2	84.3	70-130			
Copper	48.5	5.0	ug/g	ND	97.1	70-130			
Lead	44.4	1.0	ug/g	ND	88.9	70-130			
Molybdenum	46.0	1.0	ug/g	ND	91.2	70-130			
Nickel	47.7	5.0	ug/g	8.7	78.0	70-130			
Selenium	47.2	1.0	ug/g	ND	94.1	70-130			
Silver	46.4	0.3	ug/g	ND	92.6	70-130			
Thallium	45.2	1.0	ug/g	ND	90.2	70-130			
Uranium	44.4	1.0	ug/g	ND	88.4	70-130			
Vanadium	48.2	10.0	ug/g	ND	96.4	70-130			
Zinc	47.9	20.0	ug/g	ND	95.7	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.211	0.02	ug/g	ND	109	50-140			
Acenaphthylene	0.159	0.02	ug/g	ND	82.3	50-140			
Anthracene	0.199	0.02	ug/g	ND	103	50-140			
Benzo [a] anthracene	0.194	0.02	ug/g	0.048	75.8	50-140			
Benzo [a] pyrene	0.210	0.02	ug/g	0.050	82.8	50-140			
Benzo [b] fluoranthene	0.256	0.02	ug/g	0.052	106	50-140			
Benzo [g,h,i] perylene	0.181	0.02	ug/g	0.030	78.5	50-140			
Benzo [k] fluoranthene	0.206	0.02	ug/g	0.034	89.3	50-140			
Chrysene	0.245	0.02	ug/g	0.070	90.3	50-140			
Dibenzo [a,h] anthracene	0.167	0.02	ug/g	ND	86.5	50-140			
Fluoranthene	0.352	0.02	ug/g	0.154	103	50-140			
Fluorene	0.190	0.02	ug/g	ND	98.3	50-140			
Indeno [1,2,3-cd] pyrene	0.179	0.02	ug/g	0.026	79.5	50-140			
1-Methylnaphthalene	0.150	0.02	ug/g	ND	77.8	50-140			
2-Methylnaphthalene	0.157	0.02	ug/g	ND	81.4	50-140			
Naphthalene	0.198	0.01	ug/g	ND	103	50-140			
Phenanthrene	0.325	0.02	ug/g	0.147	92.4	50-140			
Pyrene	0.308	0.02	ug/g	0.123	95.5	50-140			
Surrogate: 2-Fluorobiphenyl	1.19		ug/g		77.2	50-140			
Surrogate: Terphenyl-d14	1.67		ug/g		108	50-140			
<b>Volatiles</b>									
Benzene	4.62	0.02	ug/g	ND	116	60-130			
Ethylbenzene	4.51	0.05	ug/g	ND	113	60-130			
Toluene	4.94	0.05	ug/g	ND	123	60-130			

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 6-Jan-2021

Client PO: 31639

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	9.03	0.05	ug/g	ND	113	60-130			
o-Xylene	4.69	0.05	ug/g	ND	117	60-130			
Surrogate: Toluene-d8	7.05		ug/g		88.2	50-140			

Certificate of Analysis

Report Date: 08-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 6-Jan-2021

Client PO: 31639

Project Description: PE4937

**Qualifier Notes:**

QC Qualifiers :

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.





Parcel ID: 2102260



ht Blvd.  
G 4J8

labs.com  
om

Parcel Order Number  
(Lab Use Only)

2102260

Chain Of Custody  
(Lab Use Only)

Nº 55614

Client Name: <u>Paterson</u>	Project Ref:	Page <u>1</u> of <u>1</u>
Contact Name: <u>Mike Beaudin</u>	Quote #:	<b>Turnaround Time</b> <input type="checkbox"/> 1 day <input checked="" type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regular Date Required: _____
Address: <u>154 Colonnade Rd</u>	PO #:	
	E-mail:	
Telephone:		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis															
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHC/BTEX	PMTs	ICP Metals									
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time												
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																	
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mun: _____		Other: _____																	
Sample ID/Location Name																					
1	GS15			5	2	1/6/2021				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Comments:			Method of Delivery: <u>FALACEL COURIER</u>		
Relinquished By (Sign): <u>[Signature]</u>	Received By Driver/Depot: <u>A. FROUDE</u>	Received at Lab: <u>[Signature]</u>	Verified By: <u>[Signature]</u>		
Relinquished By (Print): <u>Jeremy Casparone</u>	Date/Time: <u>06/01/21 2:44</u>	Date/Time: <u>1-6-21 16:15</u>	Date/Time: <u>1-8-21 16:21</u>		
Date/Time: <u>1/6/2021</u>	Temperature: _____ °C <u>PH.</u>	Temperature: <u>13.3</u> °C	pH Verified: <input type="checkbox"/>	By: _____	

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31641  
Project: PE4937  
Custody: 55615

Report Date: 12-Jan-2021  
Order Date: 8-Jan-2021

**Order #: 2102474**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2102474-01	WW3
2102474-02	WW4
2102474-03	WW5
2102474-04	GS16
2102474-05	GS17
2102474-06	GS18
2102474-07	GS19

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	11-Jan-21	12-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	11-Jan-21	12-Jan-21
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	12-Jan-21	12-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	8-Jan-21	11-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	12-Jan-21	12-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	11-Jan-21	11-Jan-21
Solids, %	Gravimetric, calculation	11-Jan-21	11-Jan-21

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

Client ID:	WW3	WW4	WW5	GS16
Sample Date:	08-Jan-21 09:00	08-Jan-21 09:00	08-Jan-21 09:00	08-Jan-21 09:00
Sample ID:	2102474-01	2102474-02	2102474-03	2102474-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	82.6	76.5	76.6	79.3
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**Metals**

	MDL/Units	82.6	76.5	76.6	79.3
Antimony	1.0 ug/g dry	2.3	1.1	<1.0	<1.0
Arsenic	1.0 ug/g dry	4.2	4.0	3.5	2.7
Barium	1.0 ug/g dry	213	314	216	148
Beryllium	0.5 ug/g dry	0.6	0.7	0.5	0.7
Boron	5.0 ug/g dry	6.3	5.1	6.5	5.8
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	49.8	82.3	48.0	81.3
Cobalt	1.0 ug/g dry	11.6	17.4	10.5	14.6
Copper	5.0 ug/g dry	90.9	47.9	31.3	24.3
Lead	1.0 ug/g dry	85.9	86.9	133	8.4
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	33.3	48.0	29.5	42.6
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	50.8	80.1	53.8	66.5
Zinc	20.0 ug/g dry	147	139	123	65.8

**Volatiles**

Benzene	0.02 ug/g dry	0.10	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	114%	116%	116%	117%

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	12	17	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	23	131	20	<4
F3 PHCs (C16-C34)	8 ug/g dry	224	175	1260	<8
F4 PHCs (C34-C50)	6 ug/g dry	252 [1]	78	337 [1]	<6
F4G PHCs (gravimetric)	50 ug/g dry	690	-	1020	-

**Semi-Volatiles**

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

	Client ID:	WW3	WW4	WW5	GS16
	Sample Date:	08-Jan-21 09:00	08-Jan-21 09:00	08-Jan-21 09:00	08-Jan-21 09:00
	Sample ID:	2102474-01	2102474-02	2102474-03	2102474-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthene	0.02 ug/g dry	0.05	0.05	0.27	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	0.05	<0.02
Anthracene	0.02 ug/g dry	0.11	0.05	0.90	<0.02
Benzo [a] anthracene	0.02 ug/g dry	0.21	0.09	0.93	<0.02
Benzo [a] pyrene	0.02 ug/g dry	0.22	0.09	0.71	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	0.23	0.10	0.75	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	0.13	0.05	0.28	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	0.12	0.05	0.44	<0.02
Chrysene	0.02 ug/g dry	0.25	0.11	0.93	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.04	<0.02	0.11	<0.02
Fluoranthene	0.02 ug/g dry	0.58	0.28	2.64	<0.02
Fluorene	0.02 ug/g dry	0.06	0.05	0.45	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.11	0.05	0.29	<0.02
1-Methylnaphthalene	0.02 ug/g dry	0.06	<0.02	0.07	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.10	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	0.07	<0.04	0.17	<0.04
Naphthalene	0.01 ug/g dry	0.02	<0.01	0.33	<0.01
Phenanthrene	0.02 ug/g dry	0.39	0.10	2.58	<0.02
Pyrene	0.02 ug/g dry	0.49	0.24	1.97	<0.02
2-Fluorobiphenyl	Surrogate	79.1%	77.9%	75.6%	74.0%
Terphenyl-d14	Surrogate	113%	117%	98.3%	127%

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

<b>Client ID:</b>	GS17	GS18	GS19	-
<b>Sample Date:</b>	08-Jan-21 09:00	08-Jan-21 09:00	08-Jan-21 09:00	-
<b>Sample ID:</b>	2102474-05	2102474-06	2102474-07	-
<b>MDL/Units</b>	Soil	Soil	Soil	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	80.5	79.6	62.6	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Arsenic	1.0 ug/g dry	2.5	1.3	3.3	-
Barium	1.0 ug/g dry	141	34.4	177	-
Beryllium	0.5 ug/g dry	0.6	<0.5	0.9	-
Boron	5.0 ug/g dry	6.1	<5.0	7.1	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	-
Chromium	5.0 ug/g dry	72.7	17.3	80.2	-
Cobalt	1.0 ug/g dry	13.9	6.2	16.6	-
Copper	5.0 ug/g dry	21.6	7.5	32.7	-
Lead	1.0 ug/g dry	7.6	3.8	11.3	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Nickel	5.0 ug/g dry	37.2	11.1	43.9	-
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	-
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Uranium	1.0 ug/g dry	1.3	<1.0	<1.0	-
Vanadium	10.0 ug/g dry	57.5	20.5	60.8	-
Zinc	20.0 ug/g dry	69.0	<20.0	81.2	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene-d8	Surrogate	117%	118%	118%	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
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Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

	Client ID:	GS17	GS18	GS19	-
	Sample Date:	08-Jan-21 09:00	08-Jan-21 09:00	08-Jan-21 09:00	-
	Sample ID:	2102474-05	2102474-06	2102474-07	-
	MDL/Units	Soil	Soil	Soil	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Fluoranthene	0.02 ug/g dry	<0.02	0.04	<0.02	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	-
Phenanthrene	0.02 ug/g dry	<0.02	0.04	<0.02	-
Pyrene	0.02 ug/g dry	<0.02	0.03	<0.02	-
2-Fluorobiphenyl	Surrogate	73.2%	62.2%	73.0%	-
Terphenyl-d14	Surrogate	108%	101%	108%	-



Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.17		ug/g		88.1	50-140			
Surrogate: Terphenyl-d14	1.62		ug/g		121	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	9.76		ug/g		122	50-140			

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	3.2	1.0	ug/g dry	2.9			8.8	30	
Barium	44.5	1.0	ug/g dry	45.5			2.3	30	
Beryllium	0.5	0.5	ug/g dry	ND			NC	30	
Boron	8.6	5.0	ug/g dry	8.5			1.4	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	13.5	5.0	ug/g dry	15.1			11.4	30	
Cobalt	4.4	1.0	ug/g dry	4.4			0.6	30	
Copper	18.8	5.0	ug/g dry	19.6			4.1	30	
Lead	23.7	1.0	ug/g dry	23.8			0.6	30	
Molybdenum	4.5	1.0	ug/g dry	4.6			1.9	30	
Nickel	11.0	5.0	ug/g dry	11.2			2.3	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	19.3	10.0	ug/g dry	18.0			6.7	30	
Zinc	209	20.0	ug/g dry	215			2.5	30	
<b>Physical Characteristics</b>									
% Solids	83.5	0.1	% by Wt.	86.8			3.9	25	
<b>Semi-Volatiles</b>									
Acenaphthene	0.088	0.02	ug/g dry	0.051			52.5	40	QR-04
Acenaphthylene	0.028	0.02	ug/g dry	ND			NC	40	
Anthracene	0.221	0.02	ug/g dry	0.109			67.8	40	QR-04
Benzo [a] anthracene	0.441	0.02	ug/g dry	0.210			70.8	40	QR-04
Benzo [a] pyrene	0.449	0.02	ug/g dry	0.218			69.4	40	QR-04
Benzo [b] fluoranthene	0.478	0.02	ug/g dry	0.233			68.9	40	QR-04
Benzo [g,h,i] perylene	0.253	0.02	ug/g dry	0.131			63.4	40	QR-04
Benzo [k] fluoranthene	0.262	0.02	ug/g dry	0.122			72.9	40	QR-04
Chrysene	0.480	0.02	ug/g dry	0.254			61.7	40	QR-04
Dibenzo [a,h] anthracene	0.071	0.02	ug/g dry	0.036			64.9	40	QR-04
Fluoranthene	1.19	0.02	ug/g dry	0.578			69.1	40	QR-04
Fluorene	0.101	0.02	ug/g dry	0.057			55.8	40	QR-04
Indeno [1,2,3-cd] pyrene	0.229	0.02	ug/g dry	0.111			69.6	40	QR-04
1-Methylnaphthalene	0.059	0.02	ug/g dry	0.058			0.4	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	0.043	0.01	ug/g dry	0.023			62.6	40	QR-04
Phenanthrene	0.808	0.02	ug/g dry	0.391			69.6	40	QR-04
Pyrene	0.952	0.02	ug/g dry	0.492			63.8	40	QR-04
Surrogate: 2-Fluorobiphenyl	1.20		ug/g dry		74.0	50-140			
Surrogate: Terphenyl-d14	1.88		ug/g dry		116	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	11.9		ug/g dry		118	50-140			

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	212	7	ug/g	ND	106	80-120			
F2 PHCs (C10-C16)	90	4	ug/g	ND	93.8	60-140			
F3 PHCs (C16-C34)	257	8	ug/g	ND	110	60-140			
F4 PHCs (C34-C50)	173	6	ug/g	ND	117	60-140			
F4G PHCs (gravimetric)	950	50	ug/g	ND	95.0	80-120			
<b>Metals</b>									
Antimony	41.8	1.0	ug/g	ND	83.4	70-130			
Arsenic	47.5	1.0	ug/g	1.2	92.7	70-130			
Barium	60.1	1.0	ug/g	18.2	83.9	70-130			
Beryllium	47.2	0.5	ug/g	ND	94.2	70-130			
Boron	46.9	5.0	ug/g	ND	87.1	70-130			
Cadmium	42.8	0.5	ug/g	ND	85.4	70-130			
Chromium	51.8	5.0	ug/g	6.0	91.5	70-130			
Cobalt	45.7	1.0	ug/g	1.8	88.0	70-130			
Copper	50.0	5.0	ug/g	7.8	84.4	70-130			
Lead	50.1	1.0	ug/g	9.5	81.1	70-130			
Molybdenum	46.6	1.0	ug/g	1.8	89.6	70-130			
Nickel	48.6	5.0	ug/g	ND	88.2	70-130			
Selenium	44.6	1.0	ug/g	ND	89.0	70-130			
Silver	37.6	0.3	ug/g	ND	75.2	70-130			
Thallium	42.6	1.0	ug/g	ND	85.1	70-130			
Uranium	43.7	1.0	ug/g	ND	86.9	70-130			
Vanadium	54.2	10.0	ug/g	ND	94.0	70-130			
Zinc	49.6	20.0	ug/g	ND	99.2	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.226	0.02	ug/g	0.051	86.4	50-140			
Acenaphthylene	0.186	0.02	ug/g	ND	92.3	50-140			
Anthracene	0.268	0.02	ug/g	0.109	78.8	50-140			
Benzo [a] anthracene	0.323	0.02	ug/g	0.210	56.1	50-140			
Benzo [a] pyrene	0.330	0.02	ug/g	0.218	55.5	50-140			
Benzo [b] fluoranthene	0.414	0.02	ug/g	0.233	89.9	50-140			
Benzo [g,h,i] perylene	0.269	0.02	ug/g	0.131	68.5	50-140			
Benzo [k] fluoranthene	0.319	0.02	ug/g	0.122	97.8	50-140			
Chrysene	0.361	0.02	ug/g	0.254	53.2	50-140			
Dibenzo [a,h] anthracene	0.204	0.02	ug/g	0.036	83.2	50-140			
Fluoranthene	0.116	0.02	ug/g	ND	69.4	50-140			
Fluorene	0.233	0.02	ug/g	0.057	87.3	50-140			
Indeno [1,2,3-cd] pyrene	0.243	0.02	ug/g	0.111	65.4	50-140			
1-Methylnaphthalene	0.195	0.02	ug/g	0.058	67.9	50-140			
2-Methylnaphthalene	0.189	0.02	ug/g	ND	93.5	50-140			
Naphthalene	0.233	0.01	ug/g	0.023	104	50-140			
Phenanthrene	0.099	0.02	ug/g	ND	59.3	50-140			
Pyrene	0.118	0.02	ug/g	ND	70.5	50-140			
Surrogate: 2-Fluorobiphenyl	1.25		ug/g		77.5	50-140			
Surrogate: Terphenyl-d14	1.69		ug/g		104	50-140			
<b>Volatiles</b>									
Benzene	5.12	0.02	ug/g	ND	128	60-130			
Ethylbenzene	4.51	0.05	ug/g	ND	113	60-130			

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Toluene	5.14	0.05	ug/g	ND	128	60-130			
m,p-Xylenes	8.92	0.05	ug/g	ND	112	60-130			
o-Xylene	4.33	0.05	ug/g	ND	108	60-130			
Surrogate: Toluene-d8	8.22		ug/g		103	50-140			

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31641

Project Description: PE4937

**Qualifier Notes:**

*Sample Qualifiers :*

1 : GC-FID signal did not return to baseline by C50

*QC Qualifiers :*

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Parcel ID: 2102474



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Parcel Order Number (Lab Use Only) <b>2102474</b>	Chain Of Custody (Lab Use Only) No: 55615
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Client Name: <b>Peterson</b>	Project Ref: <b>PE4937</b>	Page <u>1</u> of <u>1</u>
Contact Name: <b>Mikie Beaudoin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input checked="" type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regular
Address: <b>154 Colonnade</b>	PO #: <b>31641</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>jcamposarcone@patersongroup.ca</b> <b>mbeaudoin@patersongroup.ca</b>	
Date Required: _____		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis																			
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park <input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken Date		Time	BTEXPAC	PAHs	ICP Metals													
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA																						
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other	<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm	Mun: _____																					
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Other: _____																							
Sample ID/Location Name																									
1	WW3	S	2																						
2	WW4																								
3	WW5																								
4	GS16																								
5	GS17																								
6	GS18																								
7	GS19																								
8																									
9																									
10																									

Comments:		Method of Delivery: <b>PARACEL COURIER</b>	
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot: <i>[Signature]</i>	Received at Lab: <i>[Signature]</i>	Verified By: <i>[Signature]</i>
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: <b>08/01/21 3:50</b>	Date/Time: <b>1-8-21 16:40</b>	Date/Time: <b>1-8-21 16:49</b>
Date/Time: <b>1/8/2021</b>	Temperature: _____ °C	Temperature: <b>7.4</b> °C	pH Verified: <input type="checkbox"/> By: _____

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31640  
Project: PE4937  
Custody: 55542

Report Date: 11-Jan-2021  
Order Date: 8-Jan-2021

**Order #: 2102478**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2102478-01	SW1
2102478-02	WW1
2102478-03	WW2

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor



Certificate of Analysis  
**Client: Paterson Group Consulting Engineers**  
**Client PO: 31640**

Report Date: 11-Jan-2021  
 Order Date: 8-Jan-2021  
**Project Description: PE4937**

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	8-Jan-21	11-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	8-Jan-21	11-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	8-Jan-21	11-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	11-Jan-21	11-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	11-Jan-21	11-Jan-21
Solids, %	Gravimetric, calculation	11-Jan-21	11-Jan-21

Certificate of Analysis

Report Date: 11-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31640

Project Description: PE4937

<b>Client ID:</b>	SW1	WW1	WW2	-
<b>Sample Date:</b>	08-Jan-21 09:00	08-Jan-21 09:00	08-Jan-21 09:00	-
<b>Sample ID:</b>	2102478-01	2102478-02	2102478-03	-
<b>MDL/Units</b>	Soil	Soil	Soil	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	78.2	78.1	86.8	-
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**Metals**

Antimony	1.0 ug/g dry	8.1	7.7	3.0	-
Arsenic	1.0 ug/g dry	6.4	5.5	6.2	-
Barium	1.0 ug/g dry	206	177	137	-
Beryllium	0.5 ug/g dry	<0.5	0.6	0.5	-
Boron	5.0 ug/g dry	8.1	7.8	6.9	-
Cadmium	0.5 ug/g dry	0.8	0.9	<0.5	-
Chromium	5.0 ug/g dry	31.4	32.5	27.0	-
Cobalt	1.0 ug/g dry	8.2	8.3	6.9	-
Copper	5.0 ug/g dry	726	547	364	-
Lead	1.0 ug/g dry	291	201	218	-
Molybdenum	1.0 ug/g dry	1.5	1.3	1.5	-
Nickel	5.0 ug/g dry	29.2	27.9	22.9	-
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Silver	0.3 ug/g dry	0.3	0.3	<0.3	-
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Uranium	1.0 ug/g dry	<1.0	1.0	<1.0	-
Vanadium	10.0 ug/g dry	32.0	33.5	30.1	-
Zinc	20.0 ug/g dry	626	468	287	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene-d8	Surrogate	119%	119%	118%	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	-
F2 PHCs (C10-C16)	4 ug/g dry	22	21	42	-
F3 PHCs (C16-C34)	8 ug/g dry	288	220	464	-
F4 PHCs (C34-C50)	6 ug/g dry	114	82	176	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	0.03	0.04	0.99	-
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Certificate of Analysis

Report Date: 11-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31640

Project Description: PE4937

	Client ID:	SW1	WW1	WW2	-
	Sample Date:	08-Jan-21 09:00	08-Jan-21 09:00	08-Jan-21 09:00	-
	Sample ID:	2102478-01	2102478-02	2102478-03	-
	MDL/Units	Soil	Soil	Soil	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	0.05	-
Anthracene	0.02 ug/g dry	0.06	0.10	2.82	-
Benzo [a] anthracene	0.02 ug/g dry	0.14	0.19	2.70	-
Benzo [a] pyrene	0.02 ug/g dry	0.15	0.22	2.11	-
Benzo [b] fluoranthene	0.02 ug/g dry	0.16	0.24	2.31	-
Benzo [g,h,i] perylene	0.02 ug/g dry	0.10	0.16	0.90	-
Benzo [k] fluoranthene	0.02 ug/g dry	0.09	0.13	1.39	-
Chrysene	0.02 ug/g dry	0.17	0.19	2.56	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.02	0.04	0.34	-
Fluoranthene	0.02 ug/g dry	0.38	0.46	8.01	-
Fluorene	0.02 ug/g dry	0.04	0.05	1.38	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.08	0.15	0.94	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.20	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.30	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	0.50	-
Naphthalene	0.01 ug/g dry	0.02	0.04	0.64	-
Phenanthrene	0.02 ug/g dry	0.28	0.33	8.10	-
Pyrene	0.02 ug/g dry	0.30	0.37	5.79	-
2-Fluorobiphenyl	Surrogate	80.8%	64.2%	84.8%	-
Terphenyl-d14	Surrogate	110%	106%	103%	-

Certificate of Analysis

Report Date: 11-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31640

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.17		ug/g		88.1	50-140			
Surrogate: Terphenyl-d14	1.62		ug/g		121	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	9.42		ug/g		118	50-140			

Certificate of Analysis

Report Date: 11-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31640

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	1.4	1.0	ug/g dry	1.2			14.4	30	
Barium	21.4	1.0	ug/g dry	20.6			3.5	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	12.0	5.0	ug/g dry	11.6			3.3	30	
Cobalt	2.5	1.0	ug/g dry	2.4			5.1	30	
Copper	ND	5.0	ug/g dry	ND			NC	30	
Lead	4.3	1.0	ug/g dry	4.2			2.0	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	5.5	5.0	ug/g dry	5.2			5.9	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	17.8	10.0	ug/g dry	16.9			4.8	30	
Zinc	ND	20.0	ug/g dry	ND			NC	30	
<b>Physical Characteristics</b>									
% Solids	83.5	0.1	% by Wt.	86.8			3.9	25	
<b>Semi-Volatiles</b>									
Acenaphthene	0.088	0.02	ug/g dry	0.051			52.5	40	QR-04
Acenaphthylene	0.028	0.02	ug/g dry	ND			NC	40	
Anthracene	0.221	0.02	ug/g dry	0.109			67.8	40	QR-04
Benzo [a] anthracene	0.441	0.02	ug/g dry	0.210			70.8	40	QR-04
Benzo [a] pyrene	0.449	0.02	ug/g dry	0.218			69.4	40	QR-04
Benzo [b] fluoranthene	0.478	0.02	ug/g dry	0.233			68.9	40	QR-04
Benzo [g,h,i] perylene	0.253	0.02	ug/g dry	0.131			63.4	40	QR-04
Benzo [k] fluoranthene	0.262	0.02	ug/g dry	0.122			72.9	40	QR-04
Chrysene	0.480	0.02	ug/g dry	0.254			61.7	40	QR-04
Dibenzo [a,h] anthracene	0.071	0.02	ug/g dry	0.036			64.9	40	QR-04
Fluoranthene	1.19	0.02	ug/g dry	0.578			69.1	40	QR-04
Fluorene	0.101	0.02	ug/g dry	0.057			55.8	40	QR-04
Indeno [1,2,3-cd] pyrene	0.229	0.02	ug/g dry	0.111			69.6	40	QR-04
1-Methylnaphthalene	0.059	0.02	ug/g dry	0.058			0.4	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	0.043	0.01	ug/g dry	0.023			62.6	40	QR-04
Phenanthrene	0.808	0.02	ug/g dry	0.391			69.6	40	QR-04
Pyrene	0.952	0.02	ug/g dry	0.492			63.8	40	QR-04
Surrogate: 2-Fluorobiphenyl	1.20		ug/g dry		74.0	50-140			
Surrogate: Terphenyl-d14	1.88		ug/g dry		116	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	13.9		ug/g dry		118	50-140			

Certificate of Analysis

Report Date: 11-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31640

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	193	7	ug/g	ND	96.3	80-120			
F2 PHCs (C10-C16)	90	4	ug/g	ND	93.8	60-140			
F3 PHCs (C16-C34)	257	8	ug/g	ND	110	60-140			
F4 PHCs (C34-C50)	173	6	ug/g	ND	117	60-140			
<b>Metals</b>									
Antimony	47.3	1.0	ug/g	ND	94.2	70-130			
Arsenic	48.8	1.0	ug/g	ND	96.7	70-130			
Barium	56.0	1.0	ug/g	8.3	95.5	70-130			
Beryllium	50.8	0.5	ug/g	ND	102	70-130			
Boron	47.1	5.0	ug/g	ND	93.0	70-130			
Cadmium	46.7	0.5	ug/g	ND	93.3	70-130			
Chromium	53.1	5.0	ug/g	ND	97.0	70-130			
Cobalt	46.5	1.0	ug/g	ND	91.0	70-130			
Copper	48.1	5.0	ug/g	ND	93.5	70-130			
Lead	46.6	1.0	ug/g	1.7	89.9	70-130			
Molybdenum	46.5	1.0	ug/g	ND	92.7	70-130			
Nickel	49.0	5.0	ug/g	ND	93.8	70-130			
Selenium	48.4	1.0	ug/g	ND	96.5	70-130			
Silver	46.7	0.3	ug/g	ND	93.2	70-130			
Thallium	44.5	1.0	ug/g	ND	89.0	70-130			
Uranium	46.1	1.0	ug/g	ND	91.8	70-130			
Vanadium	54.7	10.0	ug/g	ND	95.8	70-130			
Zinc	51.2	20.0	ug/g	ND	93.1	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.226	0.02	ug/g	0.051	86.4	50-140			
Acenaphthylene	0.186	0.02	ug/g	ND	92.3	50-140			
Anthracene	0.268	0.02	ug/g	0.109	78.8	50-140			
Benzo [a] anthracene	0.323	0.02	ug/g	0.210	56.1	50-140			
Benzo [a] pyrene	0.330	0.02	ug/g	0.218	55.5	50-140			
Benzo [b] fluoranthene	0.414	0.02	ug/g	0.233	89.9	50-140			
Benzo [g,h,i] perylene	0.269	0.02	ug/g	0.131	68.5	50-140			
Benzo [k] fluoranthene	0.319	0.02	ug/g	0.122	97.8	50-140			
Chrysene	0.361	0.02	ug/g	0.254	53.2	50-140			
Dibenzo [a,h] anthracene	0.204	0.02	ug/g	0.036	83.2	50-140			
Fluoranthene	0.607	0.02	ug/g	0.578	14.5	50-140			QM-06
Fluorene	0.233	0.02	ug/g	0.057	87.3	50-140			
Indeno [1,2,3-cd] pyrene	0.243	0.02	ug/g	0.111	65.4	50-140			
1-Methylnaphthalene	0.195	0.02	ug/g	0.058	67.9	50-140			
2-Methylnaphthalene	0.189	0.02	ug/g	ND	93.5	50-140			
Naphthalene	0.233	0.01	ug/g	0.023	104	50-140			
Phenanthrene	0.423	0.02	ug/g	0.391	15.6	50-140			QM-06
Pyrene	0.548	0.02	ug/g	0.492	27.7	50-140			QM-06
Surrogate: 2-Fluorobiphenyl	1.25		ug/g		77.5	50-140			
Surrogate: Terphenyl-d14	1.69		ug/g		104	50-140			
<b>Volatiles</b>									
Benzene	4.58	0.02	ug/g	ND	115	60-130			
Ethylbenzene	5.00	0.05	ug/g	ND	125	60-130			
Toluene	4.58	0.05	ug/g	ND	115	60-130			

Certificate of Analysis

Report Date: 11-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31640

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	9.82	0.05	ug/g	ND	123	60-130			
o-Xylene	4.79	0.05	ug/g	ND	120	60-130			
Surrogate: Toluene-d8	8.15		ug/g		102	50-140			



Certificate of Analysis

Report Date: 11-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 8-Jan-2021

Client PO: 31640

Project Description: PE4937

**Qualifier Notes:**

**QC Qualifiers :**

QM-06 : Due to noted non-homogeneity of the QC sample matrix, the spike recoveries were out side the accepted range. Batch data accepted based on other QC.

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

***CCME PHC additional information:***

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Parcel ID: 2102478



Head Office  
 00-2319 St. Laurent Blvd.  
 Ottawa, Ontario K1G 4J8  
 1-800-749-1947  
 parcel@paracellabs.com  
 www.paracellabs.com

Parcel Order Number (Lab Use Only) <b>2102478</b>	Chain Of Custody (Lab Use Only) Nº 55542
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Client Name: <b>Paterson</b>	Project Ref: <b>PEA937</b>	Page <u>1</u> of <u>1</u>
Contact Name: <b>Mike Beaudoin</b>	Quote #:	Turnaround Time <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regular Date Required: _____
Address: <b>154 Colonnade Road</b>	PO #: <b>31640</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>camposarcone@patersongroup.ca</b> <b>mbeaudoin@patersongroup.ca</b>	

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis															
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		BTEX/PAC	PAH	ICP Metals									
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time												
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																	
<input type="checkbox"/> Table _____			Mun: _____	Other: _____																	
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No																					
Sample ID/Location Name																					
1	SW1				S		2	1/8/2021													
2	WW1				↑		↓	↓													
3	WW2				↓		↓	↓													
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Comments:			Method of Delivery: <b>PARCEL CARRIER</b>		
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot: <b>A. FLOUVE</b>	Received at Lab: <i>[Signature]</i>	Verified By: <i>[Signature]</i>		
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: <b>08/01/21 3:50</b>	Date/Time: <b>1-8-21 1616</b>	Date/Time: <b>1-8-21 1616</b>		
Date/Time: <b>1/8/2021</b>	Temperature: <b>7.4 °C</b>	Temperature: <b>7.4 °C</b>	pH Verified: <input type="checkbox"/>	By: _____	

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31642  
Project: PE4937  
Custody: 55544

Report Date: 12-Jan-2021  
Order Date: 11-Jan-2021

**Order #: 2103099**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2103099-01	GS14(2)

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 11-Jan-2021

Client PO: 31642

Project Description: PE4937

### Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	12-Jan-21	12-Jan-21
Solids, %	Gravimetric, calculation	12-Jan-21	12-Jan-21

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 11-Jan-2021

Client PO: 31642

Project Description: PE4937

<b>Client ID:</b>	GS14(2)	-	-	-
<b>Sample Date:</b>	11-Jan-21 09:00	-	-	-
<b>Sample ID:</b>	2103099-01	-	-	-
<b>MDL/Units</b>	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	69.9	-	-	-
----------	--------------	------	---	---	---

**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	4.1	-	-	-
Barium	1.0 ug/g dry	247	-	-	-
Beryllium	0.5 ug/g dry	0.9	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	122	-	-	-
Cobalt	1.0 ug/g dry	19.9	-	-	-
Copper	5.0 ug/g dry	43.4	-	-	-
Lead	1.0 ug/g dry	7.5	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	62.4	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	1.1	-	-	-
Vanadium	10.0 ug/g dry	88.8	-	-	-
Zinc	20.0 ug/g dry	105	-	-	-

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 11-Jan-2021

Client PO: 31642

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 11-Jan-2021

Client PO: 31642

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	3.2	1.0	ug/g dry	2.9			8.8	30	
Barium	44.5	1.0	ug/g dry	45.5			2.3	30	
Beryllium	0.5	0.5	ug/g dry	ND			NC	30	
Boron	8.6	5.0	ug/g dry	8.5			1.4	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	13.5	5.0	ug/g dry	15.1			11.4	30	
Cobalt	4.4	1.0	ug/g dry	4.4			0.6	30	
Copper	18.8	5.0	ug/g dry	19.6			4.1	30	
Lead	23.7	1.0	ug/g dry	23.8			0.6	30	
Molybdenum	4.5	1.0	ug/g dry	4.6			1.9	30	
Nickel	11.0	5.0	ug/g dry	11.2			2.3	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	19.3	10.0	ug/g dry	18.0			6.7	30	
Zinc	209	20.0	ug/g dry	215			2.5	30	
<b>Physical Characteristics</b>									
% Solids	62.9	0.1	% by Wt.	76.7			19.8	25	



Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 11-Jan-2021

Client PO: 31642

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	41.8	1.0	ug/g	ND	83.4	70-130			
Arsenic	47.5	1.0	ug/g	1.2	92.7	70-130			
Barium	60.1	1.0	ug/g	18.2	83.9	70-130			
Beryllium	47.2	0.5	ug/g	ND	94.2	70-130			
Boron	46.9	5.0	ug/g	ND	87.1	70-130			
Cadmium	42.8	0.5	ug/g	ND	85.4	70-130			
Chromium	51.8	5.0	ug/g	6.0	91.5	70-130			
Cobalt	45.7	1.0	ug/g	1.8	88.0	70-130			
Copper	50.0	5.0	ug/g	7.8	84.4	70-130			
Lead	50.1	1.0	ug/g	9.5	81.1	70-130			
Molybdenum	46.6	1.0	ug/g	1.8	89.6	70-130			
Nickel	48.6	5.0	ug/g	ND	88.2	70-130			
Selenium	44.6	1.0	ug/g	ND	89.0	70-130			
Silver	37.6	0.3	ug/g	ND	75.2	70-130			
Thallium	42.6	1.0	ug/g	ND	85.1	70-130			
Uranium	43.7	1.0	ug/g	ND	86.9	70-130			
Vanadium	54.2	10.0	ug/g	ND	94.0	70-130			
Zinc	49.6	20.0	ug/g	ND	99.2	70-130			

Certificate of Analysis

Report Date: 12-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 11-Jan-2021

Client PO: 31642

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.



Parcel ID: 2103099



Head Office  
 100-2319 St. Laurent Blvd.  
 Ottawa, Ontario K1G 4J8  
 : 1-800-749-1947  
 : parcel@paracellabs.com  
 www.paracellabs.com

Parcel Order Number  
 (Lab Use Only)

2103099

Chain Of Custody  
 (Lab Use Only)

No 55544

Client Name: <u>Patterson</u>	Project Ref: <u>PE4937</u>	Page <u>1</u> of <u>1</u>
Contact Name: <u>Mike Brandon</u>	Quote #:	<input checked="" type="checkbox"/> Turnaround Time <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regul Date Required: _____
Address: <u>154 Colomade Road</u>	PO #: <u>31642</u> E-mail: <u>jeanposarconi@pattersongroup.ca</u> <u>mbrandon@pattersongroup.ca</u>	
Telephone: <u>613-226-7381</u>		

Regulation 15 <del>3</del> / <u>04</u>		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)			Required Analysis										
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		ICP Metals							
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time								
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm													
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mun: _____		Other: _____													
Sample ID/Location Name																	
1	<u>GSI4(2)</u>			S		1	<u>1/11/2021</u>			<input checked="" type="checkbox"/>							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Comments:			Method of Delivery: <u>D/B</u>			
Relinquished By (Sign): <u>[Signature]</u>	Received By Driver/Depot:	Received at Lab: <u>[Signature]</u>	Verified By: <u>[Signature]</u>			
Relinquished By (Print): <u>Jeromy Camposarconi</u>	Date/Time: _____	Date/Time: <u>1-11-21 16:36</u>	Date/Time: <u>1-11-21 16:46</u>			
Date/Time: <u>1/11/2021</u>	Temperature: _____ °C	Temperature: <u>9.4</u> °C	pH Verified: <input type="checkbox"/> By: _____			

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31643  
Project: PE4937  
Custody: 130210

Report Date: 19-Jan-2021  
Order Date: 13-Jan-2021

**Order #: 2103335**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2103335-01	GS20
2103335-02	GS21
2103335-03	GS22

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 13-Jan-2021

Client PO: 31643

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	14-Jan-21	14-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	14-Jan-21	14-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	13-Jan-21	15-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	18-Jan-21	18-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	14-Jan-21	18-Jan-21
Solids, %	Gravimetric, calculation	14-Jan-21	15-Jan-21

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 13-Jan-2021

Client PO: 31643

Project Description: PE4937

<b>Client ID:</b>	GS20	GS21	GS22	-
<b>Sample Date:</b>	13-Jan-21 09:00	13-Jan-21 09:00	13-Jan-21 09:00	-
<b>Sample ID:</b>	2103335-01	2103335-02	2103335-03	-
<b>MDL/Units</b>	Soil	Soil	Soil	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	82.7	81.7	78.9	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Arsenic	1.0 ug/g dry	1.4	2.4	2.5	-
Barium	1.0 ug/g dry	58.0	107	116	-
Beryllium	0.5 ug/g dry	<0.5	0.6	0.6	-
Boron	5.0 ug/g dry	<5.0	<5.0	<5.0	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	-
Chromium	5.0 ug/g dry	39.6	72.1	65.4	-
Cobalt	1.0 ug/g dry	10.0	13.6	15.3	-
Copper	5.0 ug/g dry	7.1	13.1	22.3	-
Lead	1.0 ug/g dry	4.9	6.6	6.2	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Nickel	5.0 ug/g dry	17.9	29.8	32.9	-
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	-
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Uranium	1.0 ug/g dry	<1.0	1.2	<1.0	-
Vanadium	10.0 ug/g dry	40.2	63.5	59.5	-
Zinc	20.0 ug/g dry	45.5	74.8	56.4	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene-d8	Surrogate	114%	115%	114%	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	17	<8	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	36	<6	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
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Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 13-Jan-2021

Client PO: 31643

Project Description: PE4937

	Client ID:	GS20	GS21	GS22	-
	Sample Date:	13-Jan-21 09:00	13-Jan-21 09:00	13-Jan-21 09:00	-
	Sample ID:	2103335-01	2103335-02	2103335-03	-
	MDL/Units	Soil	Soil	Soil	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	-
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
2-Fluorobiphenyl	Surrogate	56.7%	75.7%	62.7%	-
Terphenyl-d14	Surrogate	81.4%	105%	82.3%	-



Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 13-Jan-2021

Client PO: 31643

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.18		ug/g		88.6	50-140			
Surrogate: Terphenyl-d14	1.61		ug/g		121	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	9.17		ug/g		115	50-140			

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 13-Jan-2021

Client PO: 31643

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	23			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	17			NC	30	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	4.4	1.0	ug/g dry	4.5			1.8	30	
Barium	67.2	1.0	ug/g dry	67.0			0.3	30	
Beryllium	0.6	0.5	ug/g dry	0.6			4.9	30	
Boron	8.0	5.0	ug/g dry	8.3			3.0	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	18.7	5.0	ug/g dry	18.9			0.7	30	
Cobalt	7.4	1.0	ug/g dry	7.6			3.5	30	
Copper	23.2	5.0	ug/g dry	22.6			2.5	30	
Lead	22.3	1.0	ug/g dry	23.0			3.1	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	16.8	5.0	ug/g dry	16.7			0.5	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	25.7	10.0	ug/g dry	26.6			3.5	30	
Zinc	215	20.0	ug/g dry	198			8.4	30	
<b>Physical Characteristics</b>									
% Solids	93.3	0.1	% by Wt.	93.4			0.1	25	
<b>Semi-Volatiles</b>									
Acenaphthene	0.021	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.35		ug/g dry		83.6	50-140			
Surrogate: Terphenyl-d14	1.93		ug/g dry		120	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	9.66		ug/g dry		112	50-140			

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 13-Jan-2021

Client PO: 31643

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	206	7	ug/g	ND	103	80-120			
F2 PHCs (C10-C16)	92	4	ug/g	ND	103	60-140			
F3 PHCs (C16-C34)	263	8	ug/g	23	110	60-140			
F4 PHCs (C34-C50)	163	6	ug/g	17	106	60-140			
<b>Metals</b>									
Antimony	48.6	1.0	ug/g	ND	96.6	70-130			
Arsenic	52.5	1.0	ug/g	1.8	101	70-130			
Barium	73.9	1.0	ug/g	26.8	94.2	70-130			
Beryllium	49.9	0.5	ug/g	ND	99.3	70-130			
Boron	48.4	5.0	ug/g	ND	90.3	70-130			
Cadmium	46.8	0.5	ug/g	ND	93.3	70-130			
Chromium	58.3	5.0	ug/g	7.5	101	70-130			
Cobalt	52.6	1.0	ug/g	3.0	99.1	70-130			
Copper	56.2	5.0	ug/g	9.0	94.4	70-130			
Lead	55.5	1.0	ug/g	9.2	92.7	70-130			
Molybdenum	50.7	1.0	ug/g	ND	101	70-130			
Nickel	55.3	5.0	ug/g	6.7	97.3	70-130			
Selenium	46.5	1.0	ug/g	ND	92.9	70-130			
Silver	52.1	0.3	ug/g	ND	104	70-130			
Thallium	47.6	1.0	ug/g	ND	95.1	70-130			
Uranium	49.6	1.0	ug/g	ND	98.9	70-130			
Vanadium	61.7	10.0	ug/g	10.6	102	70-130			
Zinc	130	20.0	ug/g	79.2	101	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.185	0.02	ug/g	ND	91.6	50-140			
Acenaphthylene	0.155	0.02	ug/g	ND	77.1	50-140			
Anthracene	0.155	0.02	ug/g	ND	76.9	50-140			
Benzo [a] anthracene	0.133	0.02	ug/g	ND	66.2	50-140			
Benzo [a] pyrene	0.154	0.02	ug/g	ND	76.6	50-140			
Benzo [b] fluoranthene	0.188	0.02	ug/g	ND	93.1	50-140			
Benzo [g,h,i] perylene	0.166	0.02	ug/g	ND	82.2	50-140			
Benzo [k] fluoranthene	0.171	0.02	ug/g	ND	84.8	50-140			
Chrysene	0.160	0.02	ug/g	ND	79.2	50-140			
Dibenzo [a,h] anthracene	0.179	0.02	ug/g	ND	89.1	50-140			
Fluoranthene	0.156	0.02	ug/g	ND	77.6	50-140			
Fluorene	0.165	0.02	ug/g	ND	81.7	50-140			
Indeno [1,2,3-cd] pyrene	0.168	0.02	ug/g	ND	83.3	50-140			
1-Methylnaphthalene	0.151	0.02	ug/g	ND	75.1	50-140			
2-Methylnaphthalene	0.166	0.02	ug/g	ND	82.5	50-140			
Naphthalene	0.185	0.01	ug/g	ND	91.9	50-140			
Phenanthrene	0.159	0.02	ug/g	ND	79.1	50-140			
Pyrene	0.152	0.02	ug/g	ND	75.6	50-140			
Surrogate: 2-Fluorobiphenyl	1.11		ug/g		69.0	50-140			
Surrogate: Terphenyl-d14	1.59		ug/g		98.7	50-140			
<b>Volatiles</b>									
Benzene	4.83	0.02	ug/g	ND	121	60-130			
Ethylbenzene	4.16	0.05	ug/g	ND	104	60-130			
Toluene	4.63	0.05	ug/g	ND	116	60-130			

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 13-Jan-2021

Client PO: 31643

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	8.22	0.05	ug/g	ND	103	60-130			
o-Xylene	4.03	0.05	ug/g	ND	101	60-130			
Surrogate: Toluene-d8	7.97		ug/g		99.6	50-140			

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 13-Jan-2021

Client PO: 31643

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



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K1G 4J8  
47  
cellabs.com  
s.com

Parcel Order Number  
(Lab Use Only)

2103335

Chain Of Custody  
(Lab Use Only)

No 130210

Client Name: Paterson Project Ref: PE4937 Page 1 of 1

Contact Name: Mike Beaudoin Quote #:

Address: 154 Colonnade Road PO #: 31643 Turnaround Time

Telephone: 613-226-7381 E-mail: jcamposarcone@patersongroup.ca  1 day  3 day

mbeaudoin@patersongroup.ca  2 day  Regular

Date Required: \_\_\_\_\_

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis										
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	HG	CrVI	B (HWS)
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA												
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm												
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mun: _____														
Sample ID/Location Name				Date	Time											
1	GS20			S	2	V13/2021										
2	GS21			↓	↓	↓										
3	GS22			↓	↓	↓										
4																
5																
6																
7																
8																
9																
10																

Comments:

Relinquished By (Sign): [Signature] Received By Driver/Depot: A. JENNE Received at Lab: [Signature] Method of Delivery: PARACEL COURIER

Relinquished By (Print): Jeremy Camposarcone Date/Time: 13/01/21 3:05 Date/Time: 1-13-21 6:27 Date/Time: 1-13-21 16:38 Verified By: [Signature]

Date/Time: 1/13/2021 Temperature: 7.1 °C Temperature: 13.0 °C pH Verified:  By: \_\_\_\_\_

Chain of Custody (Env.) xlsx

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31645  
Project: PE4937  
Custody: 130211

Report Date: 20-Jan-2021  
Order Date: 15-Jan-2021

**Order #: 2103530**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2103530-01	GS24
2103530-02	GS26
2103530-03	DUP

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor



Certificate of Analysis

Report Date: 20-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31645

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	18-Jan-21	18-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	18-Jan-21	18-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	18-Jan-21	19-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	19-Jan-21	19-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	15-Jan-21	19-Jan-21
Solids, %	Gravimetric, calculation	18-Jan-21	18-Jan-21

Certificate of Analysis

Report Date: 20-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31645

Project Description: PE4937

<b>Client ID:</b>	GS24	GS26	DUP	-
<b>Sample Date:</b>	14-Jan-21 09:00	14-Jan-21 09:00	14-Jan-21 09:00	-
<b>Sample ID:</b>	2103530-01	2103530-02	2103530-03	-
<b>MDL/Units</b>	Soil	Soil	Soil	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	81.7	72.4	72.2	-
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**Metals**

Antimony	1.0 ug/g dry	2.1	<1.0	-	-
Arsenic	1.0 ug/g dry	3.5	2.4	-	-
Barium	1.0 ug/g dry	145	150	-	-
Beryllium	0.5 ug/g dry	0.8	0.6	-	-
Boron	5.0 ug/g dry	15.2	5.6	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	89.0	82.4	-	-
Cobalt	1.0 ug/g dry	15.0	13.1	-	-
Copper	5.0 ug/g dry	19.2	16.2	-	-
Lead	1.0 ug/g dry	7.7	6.3	-	-
Molybdenum	1.0 ug/g dry	1.7	<1.0	-	-
Nickel	5.0 ug/g dry	38.6	38.3	-	-
Selenium	1.0 ug/g dry	1.5	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	1.3	1.2	-	-
Vanadium	10.0 ug/g dry	70.5	52.2	-	-
Zinc	20.0 ug/g dry	88.4	84.3	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene-d8	Surrogate	107%	107%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	-	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
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Certificate of Analysis

Report Date: 20-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31645

Project Description: PE4937

	Client ID:	GS24	GS26	DUP	-
	Sample Date:	14-Jan-21 09:00	14-Jan-21 09:00	14-Jan-21 09:00	-
	Sample ID:	2103530-01	2103530-02	2103530-03	-
	MDL/Units	Soil	Soil	Soil	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	-
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
2-Fluorobiphenyl	Surrogate	64.3%	90.3%	60.8%	-
Terphenyl-d14	Surrogate	93.6%	112%	86.1%	-

Certificate of Analysis

Report Date: 20-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31645

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.784		ug/g		58.8	50-140			
Surrogate: Terphenyl-d14	1.12		ug/g		83.7	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.45		ug/g		106	50-140			

Certificate of Analysis

Report Date: 20-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31645

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	2.1	1.0	ug/g dry	ND			NC	30	
Arsenic	2.0	1.0	ug/g dry	1.5			NC	30	
Barium	21.6	1.0	ug/g dry	17.3			22.1	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	7.5	5.0	ug/g dry	5.4			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	12.0	5.0	ug/g dry	8.7			NC	30	
Cobalt	4.7	1.0	ug/g dry	3.5			30.0	30	
Copper	8.6	5.0	ug/g dry	6.7			25.0	30	
Molybdenum	2.0	1.0	ug/g dry	ND			NC	30	
Nickel	7.0	5.0	ug/g dry	5.2			29.0	30	
Selenium	1.5	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	21.7	10.0	ug/g dry	13.9			NC	30	
Zinc	ND	20.0	ug/g dry	ND			NC	30	
<b>Physical Characteristics</b>									
% Solids	81.8	0.1	% by Wt.	81.7			0.1	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	0.037	0.02	ug/g dry	0.026			34.8	40	
Benzo [a] anthracene	0.063	0.02	ug/g dry	0.057			9.9	40	
Benzo [a] pyrene	0.070	0.02	ug/g dry	0.067			3.9	40	
Benzo [b] fluoranthene	0.103	0.02	ug/g dry	0.111			7.4	40	
Benzo [g,h,i] perylene	0.059	0.02	ug/g dry	0.061			3.6	40	
Benzo [k] fluoranthene	0.043	0.02	ug/g dry	0.043			1.1	40	
Chrysene	0.098	0.02	ug/g dry	0.095			3.7	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	0.220	0.02	ug/g dry	0.205			7.0	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	0.042	0.02	ug/g dry	0.047			10.6	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	0.010	0.01	ug/g dry	0.011			5.5	40	
Phenanthrene	0.101	0.02	ug/g dry	0.086			16.7	40	
Pyrene	0.187	0.02	ug/g dry	0.175			6.5	40	
Surrogate: 2-Fluorobiphenyl	1.68		ug/g dry		80.7	50-140			
Surrogate: Terphenyl-d14	2.30		ug/g dry		111	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	9.90		ug/g dry		108	50-140			

Certificate of Analysis

Report Date: 20-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31645

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	190	7	ug/g	ND	94.9	80-120			
F2 PHCs (C10-C16)	102	4	ug/g	ND	104	60-140			
F3 PHCs (C16-C34)	263	8	ug/g	ND	110	60-140			
F4 PHCs (C34-C50)	169	6	ug/g	ND	111	60-140			
<b>Metals</b>									
Antimony	45.4	1.0	ug/g	ND	90.5	70-130			
Arsenic	55.5	1.0	ug/g	ND	110	70-130			
Barium	60.7	1.0	ug/g	6.9	108	70-130			
Beryllium	52.2	0.5	ug/g	ND	104	70-130			
Boron	49.6	5.0	ug/g	ND	94.8	70-130			
Cadmium	51.2	0.5	ug/g	ND	102	70-130			
Chromium	61.0	5.0	ug/g	ND	115	70-130			
Cobalt	57.3	1.0	ug/g	1.4	112	70-130			
Copper	55.7	5.0	ug/g	ND	106	70-130			
Lead	77.5	1.0	ug/g	22.7	109	70-130			
Molybdenum	54.0	1.0	ug/g	ND	108	70-130			
Nickel	57.1	5.0	ug/g	ND	110	70-130			
Selenium	48.2	1.0	ug/g	ND	96.0	70-130			
Silver	45.7	0.3	ug/g	ND	91.4	70-130			
Thallium	50.5	1.0	ug/g	ND	101	70-130			
Uranium	51.3	1.0	ug/g	ND	102	70-130			
Vanadium	65.3	10.0	ug/g	ND	119	70-130			
Zinc	56.6	20.0	ug/g	ND	104	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.258	0.02	ug/g	ND	98.9	50-140			
Acenaphthylene	0.226	0.02	ug/g	ND	86.7	50-140			
Anthracene	0.239	0.02	ug/g	0.026	81.8	50-140			
Benzo [a] anthracene	0.265	0.02	ug/g	0.057	80.0	50-140			
Benzo [a] pyrene	0.271	0.02	ug/g	0.067	78.2	50-140			
Benzo [b] fluoranthene	0.412	0.02	ug/g	0.111	115	50-140			
Benzo [g,h,i] perylene	0.266	0.02	ug/g	0.061	78.5	50-140			
Benzo [k] fluoranthene	0.324	0.02	ug/g	0.043	108	50-140			
Chrysene	0.340	0.02	ug/g	0.095	94.2	50-140			
Dibenzo [a,h] anthracene	0.229	0.02	ug/g	ND	87.7	50-140			
Fluoranthene	0.418	0.02	ug/g	0.205	81.8	50-140			
Fluorene	0.238	0.02	ug/g	ND	91.2	50-140			
Indeno [1,2,3-cd] pyrene	0.255	0.02	ug/g	0.047	79.7	50-140			
1-Methylnaphthalene	0.228	0.02	ug/g	ND	87.4	50-140			
2-Methylnaphthalene	0.257	0.02	ug/g	ND	98.6	50-140			
Naphthalene	0.270	0.01	ug/g	0.011	99.5	50-140			
Phenanthrene	0.294	0.02	ug/g	0.086	80.0	50-140			
Pyrene	0.353	0.02	ug/g	0.175	68.3	50-140			
Surrogate: 2-Fluorobiphenyl	1.53		ug/g		73.5	50-140			
Surrogate: Terphenyl-d14	1.99		ug/g		95.4	50-140			
<b>Volatiles</b>									
Benzene	3.63	0.02	ug/g	ND	90.9	60-130			
Ethylbenzene	4.69	0.05	ug/g	ND	117	60-130			
Toluene	4.55	0.05	ug/g	ND	114	60-130			

Certificate of Analysis

Report Date: 20-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31645

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	7.82	0.05	ug/g	ND	97.8	60-130			
o-Xylene	3.89	0.05	ug/g	ND	97.2	60-130			
Surrogate: Toluene-d8	8.17		ug/g		102	50-140			



Certificate of Analysis

Report Date: 20-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31645

Project Description: PE4937

**Qualifier Notes:**

QC Qualifiers :

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



2103530

No 130211

Client Name: <b>Paterson</b>	Project Ref: <b>PE4937</b>	Page <u>1</u> of <u>1</u>
Contact Name: <b>Mike Beaudin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular
Address: <b>154 Colonnade Road</b>	PO #: <b>31645</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>jcamposarcone@patersongroup.ca</b> <b>mbeaudin@patersongroup.ca</b>	
Date Required: _____		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis											
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken Date      Time		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	Cr-VI	B (HWS)	
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA													
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm													
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mun: _____		Other: _____													
Sample ID/Location Name																	
1	GS24			S		2	1/14/2021										
2	GS26					2											
3	DUP					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Comments:			Method of Delivery: <b>PARACEL COURIER</b>		
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot: <b>A. Bouie</b>	Received at Lab: <b>Shreejain Dohmai</b>	Verified By: <i>[Signature]</i>		
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: <b>15/01/21 2:55</b>	Date/Time: <b>Jan 15, 2021 04:46</b>	Date/Time: <b>1-15-21 16:50</b>		
Date/Time: <b>1/15/2021</b>	Temperature: _____ °C <b>PA</b>	Temperature: <b>9.8</b> °C	pH Verified: <input type="checkbox"/> By: _____		

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31646  
Project: PE4937  
Custody: 130212

Report Date: 19-Jan-2021  
Order Date: 15-Jan-2021

**Order #: 2103533**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2103533-01	GS14 (3)

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 19-Jan-2021

Client: **Paterson Group Consulting Engineers**

Order Date: 15-Jan-2021

Client PO: 31646

Project Description: **PE4937**

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	19-Jan-21	19-Jan-21
Solids, %	Gravimetric, calculation	18-Jan-21	18-Jan-21

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31646

Project Description: PE4937

<b>Client ID:</b>	GS14 (3)	-	-	-
<b>Sample Date:</b>	13-Jan-21 00:00	-	-	-
<b>Sample ID:</b>	2103533-01	-	-	-
<b>MDL/Units</b>	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	82.6	-	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	1.9	-	-	-
Barium	1.0 ug/g dry	57.2	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	41.1	-	-	-
Cobalt	1.0 ug/g dry	7.6	-	-	-
Copper	5.0 ug/g dry	10.2	-	-	-
Lead	1.0 ug/g dry	4.0	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	18.8	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	44.8	-	-	-
Zinc	20.0 ug/g dry	39.1	-	-	-

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31646

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31646

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	2.1	1.0	ug/g dry	ND			NC	30	
Arsenic	2.0	1.0	ug/g dry	1.5			NC	30	
Barium	21.6	1.0	ug/g dry	17.3			22.1	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	7.5	5.0	ug/g dry	5.4			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	12.0	5.0	ug/g dry	8.7			NC	30	
Cobalt	4.7	1.0	ug/g dry	3.5			30.0	30	
Copper	8.6	5.0	ug/g dry	6.7			25.0	30	
Molybdenum	2.0	1.0	ug/g dry	ND			NC	30	
Nickel	7.0	5.0	ug/g dry	5.2			29.0	30	
Selenium	1.5	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	21.7	10.0	ug/g dry	13.9			NC	30	
Zinc	ND	20.0	ug/g dry	ND			NC	30	
<b>Physical Characteristics</b>									
% Solids	81.8	0.1	% by Wt.	81.7			0.1	25	



Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31646

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	45.4	1.0	ug/g	ND	90.5	70-130			
Arsenic	55.5	1.0	ug/g	ND	110	70-130			
Barium	60.7	1.0	ug/g	6.9	108	70-130			
Beryllium	52.2	0.5	ug/g	ND	104	70-130			
Boron	49.6	5.0	ug/g	ND	94.8	70-130			
Cadmium	51.2	0.5	ug/g	ND	102	70-130			
Chromium	61.0	5.0	ug/g	ND	115	70-130			
Cobalt	57.3	1.0	ug/g	1.4	112	70-130			
Copper	55.7	5.0	ug/g	ND	106	70-130			
Lead	77.5	1.0	ug/g	22.7	109	70-130			
Molybdenum	54.0	1.0	ug/g	ND	108	70-130			
Nickel	57.1	5.0	ug/g	ND	110	70-130			
Selenium	48.2	1.0	ug/g	ND	96.0	70-130			
Silver	45.7	0.3	ug/g	ND	91.4	70-130			
Thallium	50.5	1.0	ug/g	ND	101	70-130			
Uranium	51.3	1.0	ug/g	ND	102	70-130			
Vanadium	65.3	10.0	ug/g	ND	119	70-130			
Zinc	56.6	20.0	ug/g	ND	104	70-130			

Certificate of Analysis

Report Date: 19-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 15-Jan-2021

Client PO: 31646

Project Description: PE4937

**Qualifier Notes:**

*QC Qualifiers :*

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.



2103533

No 130212

Client Name: <b>Paterson</b>	Project Ref: <b>PE4a37</b>	Page <u>1</u> of <u>1</u>
Contact Name: <b>Mike Beaudoin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input checked="" type="checkbox"/> 2 day <input type="checkbox"/> Regular
Address: <b>154 Colonnade Road</b>	PO #: <b>31646</b>	
Telephone: <b>613-226-17381</b>	E-mail: <b>camposarcone@patersongroup.ca</b> <b>mbeaudoin@patersongroup.ca</b>	
Date Required: _____		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis										
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken Date		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP			B (HWS)
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA									Hg	CrVI		
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm												
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No			Mun: _____	<input type="checkbox"/> Other: _____												
Sample ID/Location Name																
1	GS14(3)			S		1										
2																
3																
4																
5																
6																
7																
8																
9																
10																

Comments:		Method of Delivery: <b>PARACEL COURIER</b>	
Relinquished By (Sign):	Received By Driver/Depot: <b>A. FLOUJE</b>	Received at Lab: <b>Summer Farm Dolmen</b>	Verified By:
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: <b>15/01/21 2:55</b>	Date/Time: <b>Jan 15, 2021 04:46</b>	Date/Time: <b>1-15-21 16:15</b>
Date/Time: <b>1/15/2021</b>	Temperature: <b>7.1</b> °C	Temperature: <b>9.8</b> °C	pH Verified: <input type="checkbox"/> By: _____

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31647  
Project: PE4937  
Custody: 128890

Report Date: 22-Jan-2021  
Order Date: 19-Jan-2021

**Order #: 2104184**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2104184-01	TP64-G1
2104184-02	TP65(2)-G2
2104184-03	TP66(2)-G1
2104184-04	Dup1
2104184-05	Dup2
2104184-06	GS29

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	20-Jan-21	20-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	20-Jan-21	20-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	20-Jan-21	21-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	21-Jan-21	21-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	19-Jan-21	21-Jan-21
Solids, %	Gravimetric, calculation	20-Jan-21	20-Jan-21
Texture - Coarse Med/Fine	Based on ASTM D2487	20-Jan-21	21-Jan-21

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

<b>Client ID:</b>	TP64-G1	TP65(2)-G2	TP66(2)-G1	Dup1
<b>Sample Date:</b>	18-Jan-21 09:00	18-Jan-21 09:00	18-Jan-21 09:00	18-Jan-21 09:00
<b>Sample ID:</b>	2104184-01	2104184-02	2104184-03	2104184-04
<b>MDL/Units</b>	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	86.4	79.3	77.3	80.3
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	2.4	3.2	3.2	3.0
Barium	1.0 ug/g dry	57.6	98.6	168	91.4
Beryllium	0.5 ug/g dry	<0.5	0.5	0.6	<0.5
Boron	5.0 ug/g dry	<5.0	<5.0	<5.0	<5.0
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	20.3	37.0	72.1	35.6
Cobalt	1.0 ug/g dry	5.2	7.8	13.5	7.6
Copper	5.0 ug/g dry	10.6	19.7	29.2	19.9
Lead	1.0 ug/g dry	4.4	13.8	13.1	14.1
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	13.4	23.1	37.3	22.7
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	24.9	36.7	62.3	35.2
Zinc	20.0 ug/g dry	25.2	50.5	75.8	49.0

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene-d8	Surrogate	107%	105%	107%	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
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Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

	Client ID:	TP64-G1	TP65(2)-G2	TP66(2)-G1	Dup1
	Sample Date:	18-Jan-21 09:00	18-Jan-21 09:00	18-Jan-21 09:00	18-Jan-21 09:00
	Sample ID:	2104184-01	2104184-02	2104184-03	2104184-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	0.02	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	0.03	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	0.04	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	0.04	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	0.04	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	0.02	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	-
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	0.03	-
Pyrene	0.02 ug/g dry	<0.02	<0.02	0.03	-
2-Fluorobiphenyl	Surrogate	69.6%	66.3%	87.0%	-
Terphenyl-d14	Surrogate	98.5%	94.7%	119%	-



Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

<b>Client ID:</b>	Dup2	GS29	-	-
<b>Sample Date:</b>	18-Jan-21 09:00	18-Jan-21 09:00	-	-
<b>Sample ID:</b>	2104184-05	2104184-06	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	71.2	71.4	-	-
>75 um	0.1 %	-	0.4	-	-
<75 um	0.1 %	-	99.6	-	-
Texture	0.1 %	-	Med/Fine	-	-

**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	3.9	4.2	-	-
Barium	1.0 ug/g dry	266	307	-	-
Beryllium	0.5 ug/g dry	0.8	0.9	-	-
Boron	5.0 ug/g dry	6.1	6.1	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	126	125	-	-
Cobalt	1.0 ug/g dry	22.3	23.2	-	-
Copper	5.0 ug/g dry	48.2	50.3	-	-
Lead	1.0 ug/g dry	6.8	7.7	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	67.4	67.0	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	<1.0	-	-
Vanadium	10.0 ug/g dry	97.0	106	-	-
Zinc	20.0 ug/g dry	109	117	-	-

**Volatiles**

Benzene	0.02 ug/g dry	-	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	-
Toluene	0.05 ug/g dry	-	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	-
o-Xylene	0.05 ug/g dry	-	<0.05	-	-
Xylenes, total	0.05 ug/g dry	-	<0.05	-	-
Toluene-d8	Surrogate	-	106%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	-	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	-	<8	-	-

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

	Client ID:	Dup2	GS29	-	-
	Sample Date:	18-Jan-21 09:00	18-Jan-21 09:00	-	-
	Sample ID:	2104184-05	2104184-06	-	-
	MDL/Units	Soil	Soil	-	-
F4 PHCs (C34-C50)	6 ug/g dry	-	<6	-	-
<b>Semi-Volatiles</b>					
Acenaphthene	0.02 ug/g dry	-	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	-	<0.02	-	-
Anthracene	0.02 ug/g dry	-	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	-	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	-	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Chrysene	0.02 ug/g dry	-	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	<0.02	-	-
Fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Fluorene	0.02 ug/g dry	-	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	-	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	-	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	<0.04	-	-
Naphthalene	0.01 ug/g dry	-	<0.01	-	-
Phenanthrene	0.02 ug/g dry	-	<0.02	-	-
Pyrene	0.02 ug/g dry	-	<0.02	-	-
2-Fluorobiphenyl	Surrogate	-	57.1%	-	-
Terphenyl-d14	Surrogate	-	82.6%	-	-

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.856		ug/g		64.2	50-140			
Surrogate: Terphenyl-d14	1.31		ug/g		98.3	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.45		ug/g		106	50-140			

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	1.7	1.0	ug/g dry	ND			NC	30	
Arsenic	5.3	1.0	ug/g dry	5.7			7.3	30	
Barium	57.1	1.0	ug/g dry	64.4			12.0	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	17.3	5.0	ug/g dry	19.4			11.3	30	
Cobalt	5.2	1.0	ug/g dry	5.7			8.0	30	
Copper	8.3	5.0	ug/g dry	9.0			8.0	30	
Lead	31.7	1.0	ug/g dry	37.5			16.8	30	
Molybdenum	1.7	1.0	ug/g dry	ND			NC	30	
Nickel	10.1	5.0	ug/g dry	10.9			7.8	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	23.1	10.0	ug/g dry	24.9			7.7	30	
Zinc	40.0	20.0	ug/g dry	42.8			6.7	30	
<b>Physical Characteristics</b>									
% Solids	92.4	0.1	% by Wt.	93.1			0.8	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.14		ug/g dry		61.4	50-140			
Surrogate: Terphenyl-d14	1.82		ug/g dry		97.3	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	11.2		ug/g dry		107	50-140			

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	209	7	ug/g	ND	105	80-120			
F2 PHCs (C10-C16)	110	4	ug/g	ND	118	60-140			
F3 PHCs (C16-C34)	283	8	ug/g	ND	125	60-140			
F4 PHCs (C34-C50)	184	6	ug/g	ND	128	60-140			
<b>Metals</b>									
Antimony	41.0	1.0	ug/g	ND	81.7	70-130			
Arsenic	49.1	1.0	ug/g	2.3	93.7	70-130			
Barium	67.6	1.0	ug/g	25.8	83.7	70-130			
Beryllium	48.2	0.5	ug/g	ND	96.0	70-130			
Boron	45.2	5.0	ug/g	ND	86.9	70-130			
Cadmium	43.8	0.5	ug/g	ND	87.5	70-130			
Chromium	53.7	5.0	ug/g	7.8	92.0	70-130			
Cobalt	48.3	1.0	ug/g	2.3	92.1	70-130			
Copper	48.9	5.0	ug/g	ND	90.7	70-130			
Lead	55.9	1.0	ug/g	15.0	81.9	70-130			
Molybdenum	46.7	1.0	ug/g	ND	92.6	70-130			
Nickel	48.9	5.0	ug/g	ND	89.0	70-130			
Selenium	45.7	1.0	ug/g	ND	91.1	70-130			
Silver	43.3	0.3	ug/g	ND	86.4	70-130			
Thallium	43.5	1.0	ug/g	ND	86.9	70-130			
Uranium	45.3	1.0	ug/g	ND	90.2	70-130			
Vanadium	56.0	10.0	ug/g	10.0	92.2	70-130			
Zinc	60.4	20.0	ug/g	ND	86.5	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.187	0.02	ug/g	ND	80.2	50-140			
Acenaphthylene	0.156	0.02	ug/g	ND	66.7	50-140			
Anthracene	0.190	0.02	ug/g	ND	81.3	50-140			
Benzo [a] anthracene	0.146	0.02	ug/g	ND	62.6	50-140			
Benzo [a] pyrene	0.181	0.02	ug/g	ND	77.5	50-140			
Benzo [b] fluoranthene	0.203	0.02	ug/g	ND	86.8	50-140			
Benzo [g,h,i] perylene	0.186	0.02	ug/g	ND	79.8	50-140			
Benzo [k] fluoranthene	0.180	0.02	ug/g	ND	77.2	50-140			
Chrysene	0.180	0.02	ug/g	ND	77.1	50-140			
Dibenzo [a,h] anthracene	0.200	0.02	ug/g	ND	85.9	50-140			
Fluoranthene	0.177	0.02	ug/g	ND	75.9	50-140			
Fluorene	0.180	0.02	ug/g	ND	77.1	50-140			
Indeno [1,2,3-cd] pyrene	0.193	0.02	ug/g	ND	82.8	50-140			
1-Methylnaphthalene	0.168	0.02	ug/g	ND	72.1	50-140			
2-Methylnaphthalene	0.188	0.02	ug/g	ND	80.6	50-140			
Naphthalene	0.197	0.01	ug/g	ND	84.4	50-140			
Phenanthrene	0.165	0.02	ug/g	ND	70.6	50-140			
Pyrene	0.176	0.02	ug/g	ND	75.5	50-140			
Surrogate: 2-Fluorobiphenyl	1.23		ug/g		65.7	50-140			
Surrogate: Terphenyl-d14	1.73		ug/g		92.7	50-140			
<b>Volatiles</b>									
Benzene	3.56	0.02	ug/g	ND	89.1	60-130			
Ethylbenzene	4.28	0.05	ug/g	ND	107	60-130			
Toluene	4.26	0.05	ug/g	ND	106	60-130			

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	7.87	0.05	ug/g	ND	98.4	60-130			
o-Xylene	3.93	0.05	ug/g	ND	98.1	60-130			
Surrogate: Toluene-d8	8.07		ug/g		101	50-140			

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 19-Jan-2021

Client PO: 31647

Project Description: PE4937

**Qualifier Notes:**

*Sample Qualifiers :*

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.





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Parcel Order Number  
(Lab Use Only)

2104184

Chain Of Custody  
(Lab Use Only)

No 128890

Client Name: Paterson  
Contact Name: Mikle Beaudoin  
Address: 154 Colonnade Road  
Telephone: 613-226-7381

Project Ref: PEA937  
Quote #:  
PO #: 31647  
E-mail: jcomposarcone@patersongroup.ca  
mbeaudoin@patersongroup.ca

Page 1 of 1  
Turnaround Time  
 1 day  3 day  
 2 day  Regular  
Date Required: \_\_\_\_\_

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis											
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken Date   Time		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	Gran Size (g)
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA													
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm													
<input type="checkbox"/> Table _____		Mun: _____															
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Other: _____															
Sample ID/Location Name																	
1	TP64-G1			S		2	V18/2021			✓	✓	✓					
2	TP65(2)-G2									✓	✓	✓					
3	TP66(2)-G1									✓	✓	✓					
4	DUP1					1						✓					
5	DUP2					1						✓					
6	GS29					2				✓	✓	✓					✓
7																	
8																	
9																	
10																	

Comments:

Method of Delivery: PARACEL COURIER

Relinquished By (Sign): <u>[Signature]</u>	Received By Driver/Depot: <u>A. Brouse</u>	Received at Lab: <u>Shree firm</u>	Verified By: <u>[Signature]</u>
Relinquished By (Print): <u>Jeremy Composarcone</u>	Date/Time: <u>19/01/21 3:46</u>	Date/Time: <u>Jan 19, 2021 04:20</u>	Date/Time: <u>1-19-21 1613/1</u>
Date/Time: <u>19/2021</u>	Temperature: <u>7.1 °C</u>	Temperature: <u>7.5 °C</u>	pH Verified: <input type="checkbox"/> By: _____

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31649  
Project: PE4937  
Custody: 128892

Report Date: 22-Jan-2021  
Order Date: 21-Jan-2021

**Order #: 2104373**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2104373-01	WW6
2104373-02	WW8
2104373-03	SW2
2104373-04	SW4

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31649

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	21-Jan-21	22-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	21-Jan-21	22-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	20-Jan-21	21-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	22-Jan-21	22-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	21-Jan-21	22-Jan-21
Solids, %	Gravimetric, calculation	21-Jan-21	21-Jan-21

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31649

Project Description: PE4937

Client ID:	WW6	WW8	SW2	SW4
Sample Date:	20-Jan-21 09:00	20-Jan-21 09:00	20-Jan-21 09:00	20-Jan-21 09:00
Sample ID:	2104373-01	2104373-02	2104373-03	2104373-04
MDL/Units	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	81.6	68.6	81.4	70.1
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	1.7	3.4	3.1	3.6
Barium	1.0 ug/g dry	62.7	299	126	147
Beryllium	0.5 ug/g dry	<0.5	0.7	<0.5	0.6
Boron	5.0 ug/g dry	<5.0	7.1	<5.0	5.9
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	29.9	106	40.7	58.2
Cobalt	1.0 ug/g dry	7.8	20.6	8.8	11.7
Copper	5.0 ug/g dry	11.4	47.6	23.5	26.9
Lead	1.0 ug/g dry	12.1	14.5	25.5	18.2
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	15.4	58.1	23.9	32.3
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	30.8	91.7	39.1	51.1
Zinc	20.0 ug/g dry	42.8	113	67.1	82.1

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	0.11	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	106%	107%	106%	106%

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	48	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	144	27	23
F4 PHCs (C34-C50)	6 ug/g dry	<6	48	58	24

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
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Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31649

Project Description: PE4937

	Client ID:	WW6	WW8	SW2	SW4
	Sample Date:	20-Jan-21 09:00	20-Jan-21 09:00	20-Jan-21 09:00	20-Jan-21 09:00
	Sample ID:	2104373-01	2104373-02	2104373-03	2104373-04
	MDL/Units	Soil	Soil	Soil	Soil
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	0.03	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	0.07	0.05	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.04	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	0.06	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	0.25	<0.01
Phenanthrene	0.02 ug/g dry	<0.02	0.08	0.04	<0.02
Pyrene	0.02 ug/g dry	<0.02	0.05	0.04	<0.02
2-Fluorobiphenyl	Surrogate	69.3%	67.4%	66.7%	68.9%
Terphenyl-d14	Surrogate	118%	95.9%	87.1%	96.7%

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31649

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.20		ug/g		90.1	50-140			
Surrogate: Terphenyl-d14	1.51		ug/g		113	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.21		ug/g		103	50-140			

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31649

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	14	8	ug/g dry	12			17.9	30	
F4 PHCs (C34-C50)	17	6	ug/g dry	13			28.8	30	
<b>Metals</b>									
Antimony	1.4	1.0	ug/g dry	ND			NC	30	
Arsenic	1.6	1.0	ug/g dry	1.7			2.4	30	
Barium	31.2	1.0	ug/g dry	29.3			6.2	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	8.1	5.0	ug/g dry	8.9			9.7	30	
Cobalt	2.1	1.0	ug/g dry	2.3			7.4	30	
Copper	9.7	5.0	ug/g dry	10.7			10.0	30	
Lead	23.7	1.0	ug/g dry	26.6			11.4	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	ND	5.0	ug/g dry	5.0			NC	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	11.5	10.0	ug/g dry	12.3			6.3	30	
Zinc	22.9	20.0	ug/g dry	24.5			7.0	30	
<b>Physical Characteristics</b>									
% Solids	68.6	0.1	% by Wt.	68.6			0.0	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.53		ug/g dry		82.0	50-140			
Surrogate: Terphenyl-d14	2.08		ug/g dry		111	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	10.3		ug/g dry		106	50-140			

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31649

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	202	7	ug/g	ND	101	80-120			
F2 PHCs (C10-C16)	98	4	ug/g	ND	115	60-140			
F3 PHCs (C16-C34)	265	8	ug/g	12	121	60-140			
F4 PHCs (C34-C50)	179	6	ug/g	13	126	60-140			
<b>Metals</b>									
Antimony	40.8	1.0	ug/g	ND	81.3	70-130			
Arsenic	46.4	1.0	ug/g	ND	91.6	70-130			
Barium	57.0	1.0	ug/g	11.7	90.7	70-130			
Beryllium	44.8	0.5	ug/g	ND	89.4	70-130			
Boron	42.5	5.0	ug/g	ND	83.3	70-130			
Cadmium	43.8	0.5	ug/g	ND	87.5	70-130			
Chromium	49.1	5.0	ug/g	ND	91.2	70-130			
Cobalt	47.3	1.0	ug/g	ND	92.8	70-130			
Copper	47.7	5.0	ug/g	ND	86.8	70-130			
Lead	52.6	1.0	ug/g	10.6	83.9	70-130			
Molybdenum	45.9	1.0	ug/g	ND	91.5	70-130			
Nickel	47.7	5.0	ug/g	ND	91.4	70-130			
Selenium	43.4	1.0	ug/g	ND	86.6	70-130			
Silver	42.3	0.3	ug/g	ND	84.6	70-130			
Thallium	42.6	1.0	ug/g	ND	85.2	70-130			
Uranium	42.0	1.0	ug/g	ND	83.8	70-130			
Vanadium	51.2	10.0	ug/g	ND	92.5	70-130			
Zinc	53.5	20.0	ug/g	ND	87.4	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.218	0.02	ug/g	ND	93.3	50-140			
Acenaphthylene	0.189	0.02	ug/g	ND	81.1	50-140			
Anthracene	0.186	0.02	ug/g	ND	79.7	50-140			
Benzo [a] anthracene	0.163	0.02	ug/g	ND	69.9	50-140			
Benzo [a] pyrene	0.177	0.02	ug/g	ND	75.8	50-140			
Benzo [b] fluoranthene	0.237	0.02	ug/g	ND	102	50-140			
Benzo [g,h,i] perylene	0.192	0.02	ug/g	ND	82.2	50-140			
Benzo [k] fluoranthene	0.215	0.02	ug/g	ND	92.2	50-140			
Chrysene	0.200	0.02	ug/g	ND	85.7	50-140			
Dibenzo [a,h] anthracene	0.202	0.02	ug/g	ND	86.8	50-140			
Fluoranthene	0.176	0.02	ug/g	ND	75.5	50-140			
Fluorene	0.199	0.02	ug/g	ND	85.2	50-140			
Indeno [1,2,3-cd] pyrene	0.193	0.02	ug/g	ND	82.7	50-140			
1-Methylnaphthalene	0.190	0.02	ug/g	ND	81.4	50-140			
2-Methylnaphthalene	0.208	0.02	ug/g	ND	89.1	50-140			
Naphthalene	0.235	0.01	ug/g	ND	101	50-140			
Phenanthrene	0.187	0.02	ug/g	ND	80.1	50-140			
Pyrene	0.179	0.02	ug/g	ND	76.9	50-140			
Surrogate: 2-Fluorobiphenyl	1.33		ug/g		71.3	50-140			
Surrogate: Terphenyl-d14	1.88		ug/g		101	50-140			
<b>Volatiles</b>									
Benzene	3.58	0.02	ug/g	ND	89.4	60-130			
Ethylbenzene	4.31	0.05	ug/g	ND	108	60-130			
Toluene	4.23	0.05	ug/g	ND	106	60-130			



Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31649

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	8.07	0.05	ug/g	ND	101	60-130			
o-Xylene	3.99	0.05	ug/g	ND	99.6	60-130			
Surrogate: Toluene-d8	7.93		ug/g		99.1	50-140			

Certificate of Analysis

Report Date: 22-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31649

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



2104373

No 128892

Client Name: Paterson	Project Ref: PE4937	Page 1 of 1
Contact Name: Mikie Beaudoin	Quote #:	Turnaround Time <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regular Date Required: _____
Address: 154 Colonnade	PO #: 31649	
Telephone: 613-226-7381	E-mail: mbeaudoin@patersongroup.ca jcamposarcone@patersongroup.ca	

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)			Required Analysis									
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	SHAHS	Metals by ICP	Hg	CrVI	B (HWS)
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time							
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm												
<input type="checkbox"/> Table _____		Mun: _____		Other: _____												
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No																
Sample ID/Location Name																
1	WW6			S		2	1/20/2021			✓	✓	✓				
2	WW8			↓		↓				↓	↓	↓				
3	SW2															
4	SW4			↓		↓				↓	↓	↓				
5																
6																
7																
8																
9																
10																

Comments:			Method of Delivery: PARACEL COURIER			
Relinquished By (Sign):	Received By Driver/Depot: A. J. J. J.	Received at Lab: Senechal Dolman	Verified By:			
Relinquished By (Print): Jeremy Camposarcone	Date/Time: 21/01/21 10:05	Date/Time: 2021 01 21 12:15	Date/Time: 1-21-21/2021			
Date/Time: 1/21/2021	Temperature: °C AH	Temperature: 6.0 °C	pH Verified: <input type="checkbox"/> By: _____			

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31650  
Project: PE4937  
Custody: 128893

Report Date: 27-Jan-2021  
Order Date: 21-Jan-2021

**Order #: 2104393**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2104393-01	WW7
2104393-02	WW9

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31650

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	22-Jan-21	22-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	22-Jan-21	22-Jan-21
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	27-Jan-21	27-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	21-Jan-21	22-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	22-Jan-21	22-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	21-Jan-21	22-Jan-21
Solids, %	Gravimetric, calculation	21-Jan-21	21-Jan-21

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31650

Project Description: PE4937

<b>Client ID:</b>	WW7	WW9	-	-
<b>Sample Date:</b>	20-Jan-21 09:00	20-Jan-21 09:00	-	-
<b>Sample ID:</b>	2104393-01	2104393-02	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	58.5	82.1	-	-
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**Metals**

Antimony	1.0 ug/g dry	28.1	<1.0	-	-
Arsenic	1.0 ug/g dry	19.8	1.4	-	-
Barium	1.0 ug/g dry	926	54.5	-	-
Beryllium	0.5 ug/g dry	<0.5	<0.5	-	-
Boron	5.0 ug/g dry	52.9	<5.0	-	-
Cadmium	0.5 ug/g dry	24.5	<0.5	-	-
Chromium	5.0 ug/g dry	133	30.5	-	-
Cobalt	1.0 ug/g dry	25.5	8.4	-	-
Copper	5.0 ug/g dry	353	8.5	-	-
Lead	1.0 ug/g dry	1930	7.0	-	-
Molybdenum	1.0 ug/g dry	13.8	<1.0	-	-
Nickel	5.0 ug/g dry	199	14.9	-	-
Selenium	1.0 ug/g dry	1.2	<1.0	-	-
Silver	0.3 ug/g dry	2.6	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	<1.0	-	-
Vanadium	10.0 ug/g dry	50.4	30.8	-	-
Zinc	20.0 ug/g dry	4000	34.5	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene-d8	Surrogate	111%	109%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	194	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	5060	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	1930 [1]	<6	-	-
F4G PHCs (gravimetric)	50 ug/g dry	5060	-	-	-

**Semi-Volatiles**

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31650

Project Description: PE4937

	Client ID:	WW7	WW9	-	-
	Sample Date:	20-Jan-21 09:00	20-Jan-21 09:00	-	-
	Sample ID:	2104393-01	2104393-02	-	-
	MDL/Units	Soil	Soil	-	-
Acenaphthene	0.02 ug/g dry	0.11	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	0.04	<0.02	-	-
Anthracene	0.02 ug/g dry	0.10	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	0.17	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	0.15	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	0.17	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	0.10	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	0.08	<0.02	-	-
Chrysene	0.02 ug/g dry	0.22	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.02	<0.02	-	-
Fluoranthene	0.02 ug/g dry	0.44	<0.02	-	-
Fluorene	0.02 ug/g dry	0.12	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.07	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	0.09	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	0.14	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	0.23	<0.04	-	-
Naphthalene	0.01 ug/g dry	0.10	<0.01	-	-
Phenanthrene	0.02 ug/g dry	0.40	<0.02	-	-
Pyrene	0.02 ug/g dry	0.49	<0.02	-	-
2-Fluorobiphenyl	Surrogate	75.3%	97.1%	-	-
Terphenyl-d14	Surrogate	97.0%	129%	-	-

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31650

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.20		ug/g		90.1	50-140			
Surrogate: Terphenyl-d14	1.51		ug/g		113	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.73		ug/g		109	50-140			



Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31650

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	305	4	ug/g dry	194			44.4	30	QR-05
F3 PHCs (C16-C34)	6150	8	ug/g dry	5060			19.3	30	
F4 PHCs (C34-C50)	1940	6	ug/g dry	1930			0.6	30	ORG01
<b>Metals</b>									
Antimony	1.4	1.0	ug/g dry	ND			NC	30	
Arsenic	1.6	1.0	ug/g dry	1.7			2.4	30	
Barium	31.2	1.0	ug/g dry	29.3			6.2	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	8.1	5.0	ug/g dry	8.9			9.7	30	
Cobalt	2.1	1.0	ug/g dry	2.3			7.4	30	
Copper	9.7	5.0	ug/g dry	10.7			10.0	30	
Lead	23.7	1.0	ug/g dry	26.6			11.4	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	ND	5.0	ug/g dry	5.0			NC	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	11.5	10.0	ug/g dry	12.3			6.3	30	
Zinc	22.9	20.0	ug/g dry	24.5			7.0	30	
<b>Physical Characteristics</b>									
% Solids	68.6	0.1	% by Wt.	68.6			0.0	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.53		ug/g dry		82.0	50-140			
Surrogate: Terphenyl-d14	2.08		ug/g dry		111	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	15.2		ug/g dry		111	50-140			

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31650

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	200	7	ug/g	ND	100	80-120			
F2 PHCs (C10-C16)	79	4	ug/g	ND	99.2	80-120			
F3 PHCs (C16-C34)	214	8	ug/g	ND	109	80-120			
F4 PHCs (C34-C50)	135	6	ug/g	ND	109	80-120			
F4G PHCs (gravimetric)	820	50	ug/g	ND	82.0	80-120			
<b>Metals</b>									
Antimony	40.8	1.0	ug/g	ND	81.3	70-130			
Arsenic	46.4	1.0	ug/g	ND	91.6	70-130			
Barium	57.0	1.0	ug/g	11.7	90.7	70-130			
Beryllium	44.8	0.5	ug/g	ND	89.4	70-130			
Boron	42.5	5.0	ug/g	ND	83.3	70-130			
Cadmium	43.8	0.5	ug/g	ND	87.5	70-130			
Chromium	49.1	5.0	ug/g	ND	91.2	70-130			
Cobalt	47.3	1.0	ug/g	ND	92.8	70-130			
Copper	47.7	5.0	ug/g	ND	86.8	70-130			
Lead	52.6	1.0	ug/g	10.6	83.9	70-130			
Molybdenum	45.9	1.0	ug/g	ND	91.5	70-130			
Nickel	47.7	5.0	ug/g	ND	91.4	70-130			
Selenium	43.4	1.0	ug/g	ND	86.6	70-130			
Silver	42.3	0.3	ug/g	ND	84.6	70-130			
Thallium	42.6	1.0	ug/g	ND	85.2	70-130			
Uranium	42.0	1.0	ug/g	ND	83.8	70-130			
Vanadium	51.2	10.0	ug/g	ND	92.5	70-130			
Zinc	53.5	20.0	ug/g	ND	87.4	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.218	0.02	ug/g	ND	93.3	50-140			
Acenaphthylene	0.189	0.02	ug/g	ND	81.1	50-140			
Anthracene	0.186	0.02	ug/g	ND	79.7	50-140			
Benzo [a] anthracene	0.163	0.02	ug/g	ND	69.9	50-140			
Benzo [a] pyrene	0.177	0.02	ug/g	ND	75.8	50-140			
Benzo [b] fluoranthene	0.237	0.02	ug/g	ND	102	50-140			
Benzo [g,h,i] perylene	0.192	0.02	ug/g	ND	82.2	50-140			
Benzo [k] fluoranthene	0.215	0.02	ug/g	ND	92.2	50-140			
Chrysene	0.200	0.02	ug/g	ND	85.7	50-140			
Dibenzo [a,h] anthracene	0.202	0.02	ug/g	ND	86.8	50-140			
Fluoranthene	0.176	0.02	ug/g	ND	75.5	50-140			
Fluorene	0.199	0.02	ug/g	ND	85.2	50-140			
Indeno [1,2,3-cd] pyrene	0.193	0.02	ug/g	ND	82.7	50-140			
1-Methylnaphthalene	0.190	0.02	ug/g	ND	81.4	50-140			
2-Methylnaphthalene	0.208	0.02	ug/g	ND	89.1	50-140			
Naphthalene	0.235	0.01	ug/g	ND	101	50-140			
Phenanthrene	0.187	0.02	ug/g	ND	80.1	50-140			
Pyrene	0.179	0.02	ug/g	ND	76.9	50-140			
Surrogate: 2-Fluorobiphenyl	1.33		ug/g		71.3	50-140			
Surrogate: Terphenyl-d14	1.88		ug/g		101	50-140			
<b>Volatiles</b>									
Benzene	4.49	0.02	ug/g	ND	112	60-130			
Ethylbenzene	4.80	0.05	ug/g	ND	120	60-130			

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31650

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Toluene	4.18	0.05	ug/g	ND	104	60-130			
m,p-Xylenes	9.78	0.05	ug/g	ND	122	60-130			
o-Xylene	4.93	0.05	ug/g	ND	123	60-130			
Surrogate: Toluene-d8	7.12		ug/g		89.0	50-140			

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 21-Jan-2021

Client PO: 31650

Project Description: PE4937

**Qualifier Notes:**

**Sample Qualifiers :**

1 : GC-FID signal did not return to baseline by C50

**QC Qualifiers :**

ORG01 : GC-FID signal did not return to baseline by C50

QR-05 : Duplicate RPDs higher than normally accepted. Remaining batch QA/QC was acceptable. May be sample effect.

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

***CCME PHC additional information:***

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



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Parcel Order Number (Lab Use Only) <b>2104393</b>	Chain Of Custody (Lab Use Only) No 128893
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Client Name: <b>Patterson</b>	Project Ref: <b>PE4937</b>	Page <u>1</u> of <u>1</u>
Contact Name: <b>Mille Beaudoin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular
Address: <b>154 Colonnade Road</b>	PO #: <b>31650</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>mbeaudoin@pattersongroup.ca</b> <b>jcamposarcone@pattersongroup.ca</b>	
Date Required: _____		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis											
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time								
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm													
Table _____		Mun: _____															
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Other: _____															
Sample ID/Location Name																	
1	WW7	S	2	1/20/2021													
2	WW9	S	2														
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Comments:			Method of Delivery: <b>PARACEL COURIER</b>		
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot: <i>[Signature]</i>	Received at Lab: <b>Symee-pain Dohman</b>	Verified By: <i>[Signature]</i>		
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: <b>21/01/21 10:05</b>	Date/Time: <b>Jan 21, 2021 12:15</b>	Date/Time: <b>1-21-21 (12:15)</b>		
Date/Time: <b>1/21/2021</b>	Temperature: _____ °C <b>AM</b>	Temperature: <b>6.0</b> °C	pH Verified: <input type="checkbox"/> By: _____		

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31651  
Project: PE4937  
Custody: 128894

Report Date: 26-Jan-2021  
Order Date: 22-Jan-2021

**Order #: 2104491**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2104491-01	SW6
2104491-02	SW8
2104491-03	SW10

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 26-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 22-Jan-2021

Client PO: 31651

Project Description: PE4937

### Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	22-Jan-21	23-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	22-Jan-21	23-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	22-Jan-21	25-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	25-Jan-21	25-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	22-Jan-21	25-Jan-21
Solids, %	Gravimetric, calculation	22-Jan-21	22-Jan-21

Certificate of Analysis

Report Date: 26-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 22-Jan-2021

Client PO: 31651

Project Description: PE4937

<b>Client ID:</b>	SW6	SW8	SW10	-
<b>Sample Date:</b>	21-Jan-21 09:00	21-Jan-21 09:00	21-Jan-21 09:00	-
<b>Sample ID:</b>	2104491-01	2104491-02	2104491-03	-
<b>MDL/Units</b>	Soil	Soil	Soil	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	78.9	67.8	69.7	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Arsenic	1.0 ug/g dry	4.1	2.7	3.6	-
Barium	1.0 ug/g dry	286	204	327	-
Beryllium	0.5 ug/g dry	0.7	0.6	0.7	-
Boron	5.0 ug/g dry	6.6	5.4	5.3	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	-
Chromium	5.0 ug/g dry	96.6	79.2	106	-
Cobalt	1.0 ug/g dry	19.9	15.3	21.1	-
Copper	5.0 ug/g dry	44.6	30.6	50.8	-
Lead	1.0 ug/g dry	13.8	9.8	16.8	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Nickel	5.0 ug/g dry	53.2	41.6	58.3	-
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	-
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Uranium	1.0 ug/g dry	1.1	<1.0	<1.0	-
Vanadium	10.0 ug/g dry	86.9	69.7	98.6	-
Zinc	20.0 ug/g dry	106	83.2	123	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene-d8	Surrogate	109%	109%	109%	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	27	20	-
F3 PHCs (C16-C34)	8 ug/g dry	39	47	143	-
F4 PHCs (C34-C50)	6 ug/g dry	34	34	60	-

**Semi-Volatiles**

Acenaphthene	0.02 ug/g dry	<0.02	<0.02	0.02	-
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Certificate of Analysis

Report Date: 26-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 22-Jan-2021

Client PO: 31651

Project Description: PE4937

	Client ID:	SW6	SW8	SW10	-
	Sample Date:	21-Jan-21 09:00	21-Jan-21 09:00	21-Jan-21 09:00	-
	Sample ID:	2104491-01	2104491-02	2104491-03	-
	MDL/Units	Soil	Soil	Soil	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	0.06	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	0.11	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	0.11	-
Benzo [b] fluoranthene	0.02 ug/g dry	0.02	<0.02	0.10	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	0.06	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	0.06	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	0.11	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Fluoranthene	0.02 ug/g dry	0.04	<0.02	0.26	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	0.06	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	0.02	-
Phenanthrene	0.02 ug/g dry	0.02	0.05	0.19	-
Pyrene	0.02 ug/g dry	0.03	<0.02	0.21	-
2-Fluorobiphenyl	Surrogate	68.7%	73.1%	78.9%	-
Terphenyl-d14	Surrogate	86.3%	88.7%	107%	-

Certificate of Analysis

Report Date: 26-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 22-Jan-2021

Client PO: 31651

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.899		ug/g		67.4	50-140			
Surrogate: Terphenyl-d14	1.36		ug/g		102	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.73		ug/g		109	50-140			

Certificate of Analysis

Report Date: 26-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 22-Jan-2021

Client PO: 31651

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	35	8	ug/g dry	33			5.6	30	
F4 PHCs (C34-C50)	42	6	ug/g dry	44			3.4	30	
<b>Metals</b>									
Antimony	1.5	1.0	ug/g dry	1.4			5.3	30	
Arsenic	8.9	1.0	ug/g dry	9.2			3.6	30	
Barium	29.0	1.0	ug/g dry	30.4			4.6	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	9.1	5.0	ug/g dry	9.1			0.7	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	19.2	5.0	ug/g dry	18.9			1.3	30	
Cobalt	8.2	1.0	ug/g dry	8.7			6.6	30	
Copper	13.2	5.0	ug/g dry	13.3			1.0	30	
Lead	26.6	1.0	ug/g dry	28.5			6.9	30	
Molybdenum	4.4	1.0	ug/g dry	4.5			3.3	30	
Nickel	18.1	5.0	ug/g dry	19.2			5.6	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	23.0	10.0	ug/g dry	23.1			0.7	30	
Zinc	27.3	20.0	ug/g dry	28.0			2.5	30	
<b>Physical Characteristics</b>									
% Solids	93.0	0.1	% by Wt.	92.2			0.9	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	0.022	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	0.031	0.02	ug/g dry	0.027			15.6	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.02		ug/g dry		73.0	50-140			
Surrogate: Terphenyl-d14	1.40		ug/g dry		100	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	15.2		ug/g dry		111	50-140			

Certificate of Analysis

Report Date: 26-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 22-Jan-2021

Client PO: 31651

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	200	7	ug/g	ND	100	80-120			
F2 PHCs (C10-C16)	130	4	ug/g	ND	109	60-140			
F3 PHCs (C16-C34)	376	8	ug/g	33	117	60-140			
F4 PHCs (C34-C50)	269	6	ug/g	44	121	60-140			
<b>Metals</b>									
Antimony	40.8	1.0	ug/g	ND	80.4	70-130			
Arsenic	50.3	1.0	ug/g	3.7	93.3	70-130			
Barium	56.9	1.0	ug/g	12.2	89.6	70-130			
Beryllium	43.7	0.5	ug/g	ND	87.0	70-130			
Boron	42.1	5.0	ug/g	ND	77.0	70-130			
Cadmium	44.6	0.5	ug/g	ND	89.2	70-130			
Chromium	55.8	5.0	ug/g	7.6	96.4	70-130			
Cobalt	49.2	1.0	ug/g	3.5	91.4	70-130			
Copper	49.6	5.0	ug/g	5.3	88.6	70-130			
Lead	51.1	1.0	ug/g	11.4	79.3	70-130			
Molybdenum	47.7	1.0	ug/g	1.8	91.8	70-130			
Nickel	52.2	5.0	ug/g	7.7	89.0	70-130			
Selenium	42.9	1.0	ug/g	ND	85.2	70-130			
Silver	43.1	0.3	ug/g	ND	86.2	70-130			
Thallium	41.3	1.0	ug/g	ND	82.4	70-130			
Uranium	42.0	1.0	ug/g	ND	83.5	70-130			
Vanadium	57.9	10.0	ug/g	ND	97.3	70-130			
Zinc	52.7	20.0	ug/g	ND	82.9	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.161	0.02	ug/g	ND	92.4	50-140			
Acenaphthylene	0.140	0.02	ug/g	ND	80.5	50-140			
Anthracene	0.142	0.02	ug/g	ND	81.4	50-140			
Benzo [a] anthracene	0.151	0.02	ug/g	ND	86.9	50-140			
Benzo [a] pyrene	0.203	0.02	ug/g	ND	117	50-140			
Benzo [b] fluoranthene	0.215	0.02	ug/g	ND	123	50-140			
Benzo [g,h,i] perylene	0.152	0.02	ug/g	ND	87.5	50-140			
Benzo [k] fluoranthene	0.195	0.02	ug/g	ND	112	50-140			
Chrysene	0.172	0.02	ug/g	ND	98.8	50-140			
Dibenzo [a,h] anthracene	0.162	0.02	ug/g	ND	93.1	50-140			
Fluoranthene	0.145	0.02	ug/g	ND	83.1	50-140			
Fluorene	0.151	0.02	ug/g	ND	87.0	50-140			
Indeno [1,2,3-cd] pyrene	0.152	0.02	ug/g	ND	87.5	50-140			
1-Methylnaphthalene	0.158	0.02	ug/g	ND	91.1	50-140			
2-Methylnaphthalene	0.181	0.02	ug/g	0.027	89.0	50-140			
Naphthalene	0.175	0.01	ug/g	ND	100	50-140			
Phenanthrene	0.149	0.02	ug/g	ND	85.9	50-140			
Pyrene	0.144	0.02	ug/g	ND	82.7	50-140			
Surrogate: 2-Fluorobiphenyl	1.01		ug/g		72.4	50-140			
Surrogate: Terphenyl-d14	1.37		ug/g		98.4	50-140			
<b>Volatiles</b>									
Benzene	4.49	0.02	ug/g	ND	112	60-130			
Ethylbenzene	4.80	0.05	ug/g	ND	120	60-130			
Toluene	4.18	0.05	ug/g	ND	104	60-130			

Certificate of Analysis

Report Date: 26-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 22-Jan-2021

Client PO: 31651

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	9.78	0.05	ug/g	ND	122	60-130			
o-Xylene	4.93	0.05	ug/g	ND	123	60-130			
Surrogate: Toluene-d8	7.12		ug/g		89.0	50-140			

Certificate of Analysis

Report Date: 26-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 22-Jan-2021

Client PO: 31651

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable  
ND: Not Detected  
MDL: Method Detection Limit  
Source Result: Data used as source for matrix and duplicate samples  
%REC: Percent recovery.  
RPD: Relative percent difference.  
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.  
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



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1G 4J8  
  
labs.com  
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Parcel Order Number  
(Lab Use Only)

2104491

Chain Of Custody  
(Lab Use Only)

No 128894

Client Name: <u>Paterson</u>	Project Ref: <u>PE4937</u>	Page <u>1</u> of <u>1</u>
Contact Name: <u>Mike Beaudoin</u>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input checked="" type="checkbox"/> 2 day <input type="checkbox"/> Regular
Address: <u>154 Colonnade Road</u>	PO #: <u>31651</u>	
Telephone: <u>613-226-7381</u>	E-mail: <u>mbeaudoin@patersongroup.ca</u> <u>jcampasarcione@patersongroup.ca</u>	Date Required: _____

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis										
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time							
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm												
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mun: _____		Other: _____												
Sample ID/Location Name																
1	SWG	S	2	1/21/2021												
2	SW8															
3	SW10															
4																
5																
6																
7																
8																
9																
10																

Comments:		Method of Delivery: <u>Drop Box</u>	
Relinquished By (Sign): <u>[Signature]</u>	Received By Driver/Depot:	Received at Lab: <u>[Signature]</u>	Verified By: <u>[Signature]</u>
Relinquished By (Print): <u>Jeremy Campasarcione</u>	Date/Time:	Date/Time: <u>Jan 22 2021 11:20</u>	Date/Time: <u>Jan 22 2021</u>
Date/Time: <u>1/22/2021</u>	Temperature: _____ °C	Temperature: <u>8.8</u> °C	pH Verified: <input type="checkbox"/> By: <u>11:20</u>

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31652  
Project: PE4937  
Custody: 128895

Report Date: 27-Jan-2021  
Order Date: 25-Jan-2021

**Order #: 2105085**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2105085-01	GS29(2)
2105085-02	WW8(2)

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor



Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 25-Jan-2021

Client PO: 31652

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	27-Jan-21	27-Jan-21
Solids, %	Gravimetric, calculation	26-Jan-21	27-Jan-21

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 25-Jan-2021

Client PO: 31652

Project Description: PE4937

<b>Client ID:</b>	GS29(2)	WW8(2)	-	-
<b>Sample Date:</b>	25-Jan-21 09:00	25-Jan-21 09:00	-	-
<b>Sample ID:</b>	2105085-01	2105085-02	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	83.1	74.8	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	3.4	3.8	-	-
Barium	1.0 ug/g dry	153	162	-	-
Beryllium	0.5 ug/g dry	0.5	0.6	-	-
Boron	5.0 ug/g dry	<5.0	<5.0	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	47.3	57.9	-	-
Cobalt	1.0 ug/g dry	10.0	11.7	-	-
Copper	5.0 ug/g dry	28.7	28.1	-	-
Lead	1.0 ug/g dry	25.6	19.9	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	27.1	32.6	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	<1.0	-	-
Vanadium	10.0 ug/g dry	43.9	53.4	-	-
Zinc	20.0 ug/g dry	77.6	81.5	-	-

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 25-Jan-2021

Client PO: 31652

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 25-Jan-2021

Client PO: 31652

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	1.2	1.0	ug/g dry	1.3			6.9	30	
Arsenic	2.0	1.0	ug/g dry	2.1			3.3	30	
Barium	32.3	1.0	ug/g dry	33.5			3.5	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	11.1	5.0	ug/g dry	11.3			1.6	30	
Cobalt	3.5	1.0	ug/g dry	3.5			0.5	30	
Copper	9.2	5.0	ug/g dry	9.1			0.9	30	
Lead	4.0	1.0	ug/g dry	4.1			3.2	30	
Molybdenum	1.7	1.0	ug/g dry	1.6			5.5	30	
Nickel	7.1	5.0	ug/g dry	6.8			4.7	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	19.0	10.0	ug/g dry	19.9			4.8	30	
Zinc	34.2	20.0	ug/g dry	33.9			0.9	30	
<b>Physical Characteristics</b>									
% Solids	80.9	0.1	% by Wt.	81.9			1.2	25	

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 25-Jan-2021

Client PO: 31652

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	43.1	1.0	ug/g	ND	85.1	70-130			
Arsenic	51.0	1.0	ug/g	ND	100	70-130			
Barium	62.5	1.0	ug/g	13.4	98.2	70-130			
Beryllium	47.2	0.5	ug/g	ND	94.2	70-130			
Boron	45.8	5.0	ug/g	ND	87.8	70-130			
Cadmium	47.3	0.5	ug/g	ND	94.6	70-130			
Chromium	55.4	5.0	ug/g	ND	102	70-130			
Cobalt	50.1	1.0	ug/g	1.4	97.5	70-130			
Copper	50.6	5.0	ug/g	ND	94.0	70-130			
Lead	47.3	1.0	ug/g	1.6	91.3	70-130			
Molybdenum	49.9	1.0	ug/g	ND	98.5	70-130			
Nickel	51.6	5.0	ug/g	ND	97.8	70-130			
Selenium	45.8	1.0	ug/g	ND	91.2	70-130			
Silver	45.0	0.3	ug/g	ND	90.1	70-130			
Thallium	45.2	1.0	ug/g	ND	90.2	70-130			
Uranium	47.1	1.0	ug/g	ND	93.7	70-130			
Vanadium	58.9	10.0	ug/g	ND	102	70-130			
Zinc	59.5	20.0	ug/g	ND	91.8	70-130			

Certificate of Analysis

Report Date: 27-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 25-Jan-2021

Client PO: 31652

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.



Parcel ID: 2105085



Office  
2319 St. Laurent Blvd.  
Va, Ontario K1G 4J8  
300-749-1947  
parcel@paracellabs.com  
paracellabs.com

Parcel Order Number  
(Lab Use Only)

2105085

Chain Of Custody  
(Lab Use Only)

No 128895

Client Name: <b>Paterson</b>	Project Ref: <b>PE4937</b>	Page <b>1</b> of <b>1</b>
Contact Name: <b>Mike Beaudoin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input checked="" type="checkbox"/> 2 day <input type="checkbox"/> Regular Date Required: _____
Address: <b>154 Colonnade Rd</b>	PO #: <b>31652</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>mbeaudoin@patersongroup.ca</b> <b>camposarcone@patersongroup.ca</b>	

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis										
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken Date      Time		PHCS F1-F4+BTEX	VOCs	PAHs	Metals by ICP	HG	CrVI	B (HWS)
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA												
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm												
<input type="checkbox"/> Table _____		Mun: _____														
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Other: _____														
Sample ID/Location Name																
1	GS29(2)			S		1	1/25/2021						<input checked="" type="checkbox"/>			
2	WW8(2)			S		1							<input checked="" type="checkbox"/>			
3																
4																
5																
6																
7																
8																
9																
10																

Comments:		Method of Delivery: <b>PARACEL COURIER</b>	
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot: <b>A. J. PLONNE</b>	Received at Lab: <i>[Signature]</i>	Verified By: <i>[Signature]</i>
Relinquished By (Print): <b>Jerry Camposarcone</b>	Date/Time: <b>25/01/21 3:00</b>	Date/Time: <b>1-25-21 15:14</b>	Date/Time: <b>1-25-21 15:18</b>
Date/Time: <b>1/25/2021</b>	Temperature: _____ °C <b>PT.</b>	Temperature: <b>9.0</b> °C	pH Verified: <input type="checkbox"/> By: _____

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31654  
Project: PE4937  
Custody: 128896

Report Date: 28-Jan-2021  
Order Date: 27-Jan-2021

**Order #: 2105268**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2105268-01	TP70-G2
2105268-02	TP71-G2

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor



Certificate of Analysis

Report Date: 28-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 27-Jan-2021

Client PO: 31654

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	27-Jan-21	27-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	27-Jan-21	27-Jan-21
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	28-Jan-21	28-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	26-Jan-21	28-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	28-Jan-21	28-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	27-Jan-21	27-Jan-21
Solids, %	Gravimetric, calculation	27-Jan-21	28-Jan-21

Certificate of Analysis

Report Date: 28-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 27-Jan-2021

Client PO: 31654

Project Description: PE4937

<b>Client ID:</b>	TP70-G2	TP71-G2	-	-
<b>Sample Date:</b>	26-Jan-21 09:00	26-Jan-21 09:00	-	-
<b>Sample ID:</b>	2105268-01	2105268-02	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	89.5	88.7	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	4.6	2.0	-	-
Barium	1.0 ug/g dry	82.0	130	-	-
Beryllium	0.5 ug/g dry	<0.5	0.5	-	-
Boron	5.0 ug/g dry	10.7	7.4	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	23.8	26.4	-	-
Cobalt	1.0 ug/g dry	7.8	9.6	-	-
Copper	5.0 ug/g dry	19.9	22.0	-	-
Lead	1.0 ug/g dry	39.4	6.3	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	17.9	19.7	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	<1.0	-	-
Vanadium	10.0 ug/g dry	28.1	40.1	-	-
Zinc	20.0 ug/g dry	53.0	44.2	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene-d8	Surrogate	110%	105%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	11	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	819	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	3680	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	805 [1]	<6	-	-
F4G PHCs (gravimetric)	50 ug/g dry	2160	-	-	-

**Semi-Volatiles**

Certificate of Analysis

Report Date: 28-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 27-Jan-2021

Client PO: 31654

Project Description: PE4937

	Client ID:	TP70-G2	TP71-G2	-	-
	Sample Date:	26-Jan-21 09:00	26-Jan-21 09:00	-	-
	Sample ID:	2105268-01	2105268-02	-	-
	MDL/Units	Soil	Soil	-	-
Acenaphthene	0.02 ug/g dry	0.19	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	0.13	<0.02	-	-
Anthracene	0.02 ug/g dry	0.11	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	0.11	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	0.13	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	0.13	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	0.10	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	0.06	<0.02	-	-
Chrysene	0.02 ug/g dry	0.13	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g dry	0.33	<0.02	-	-
Fluorene	0.02 ug/g dry	0.39	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.07	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	2.01	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	0.04	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	2.05	<0.04	-	-
Naphthalene	0.01 ug/g dry	0.11	<0.01	-	-
Phenanthrene	0.02 ug/g dry	0.69	<0.02	-	-
Pyrene	0.02 ug/g dry	0.34	<0.02	-	-
2-Fluorobiphenyl	Surrogate	93.0%	63.0%	-	-
Terphenyl-d14	Surrogate	107%	69.8%	-	-

Certificate of Analysis

Report Date: 28-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 27-Jan-2021

Client PO: 31654

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.970		ug/g		72.7	50-140			
Surrogate: Terphenyl-d14	1.22		ug/g		91.3	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.30		ug/g		104	50-140			

Certificate of Analysis

Report Date: 28-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 27-Jan-2021

Client PO: 31654

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	68	8	ug/g dry	70			2.7	30	
F4 PHCs (C34-C50)	94	6	ug/g dry	96			2.6	30	
<b>Metals</b>									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	1.5	1.0	ug/g dry	1.4			11.5	30	
Barium	10.2	1.0	ug/g dry	9.8			4.3	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	5.9	5.0	ug/g dry	5.2			11.7	30	
Cobalt	2.0	1.0	ug/g dry	1.8			9.8	30	
Copper	ND	5.0	ug/g dry	ND			NC	30	
Lead	3.0	1.0	ug/g dry	2.8			5.3	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	5.5	5.0	ug/g dry	ND			NC	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	13.9	10.0	ug/g dry	12.3			12.3	30	
Zinc	ND	20.0	ug/g dry	ND			NC	30	
<b>Physical Characteristics</b>									
% Solids	92.6	0.1	% by Wt.	93.5			1.0	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.13		ug/g dry		62.8	50-140			
Surrogate: Terphenyl-d14	1.47		ug/g dry		82.0	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	11.0		ug/g dry		107	50-140			

Certificate of Analysis

Report Date: 28-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 27-Jan-2021

Client PO: 31654

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	214	7	ug/g	ND	107	80-120			
F2 PHCs (C10-C16)	113	4	ug/g	ND	110	60-140			
F3 PHCs (C16-C34)	333	8	ug/g	70	105	60-140			
F4 PHCs (C34-C50)	275	6	ug/g	96	112	60-140			
F4G PHCs (gravimetric)	820	50	ug/g	ND	82.0	80-120			
<b>Metals</b>									
Antimony	43.4	1.0	ug/g	ND	86.8	70-130			
Arsenic	50.9	1.0	ug/g	ND	101	70-130			
Barium	53.5	1.0	ug/g	3.9	99.1	70-130			
Beryllium	48.3	0.5	ug/g	ND	96.5	70-130			
Boron	45.2	5.0	ug/g	ND	88.9	70-130			
Cadmium	48.3	0.5	ug/g	ND	96.5	70-130			
Chromium	52.4	5.0	ug/g	ND	101	70-130			
Cobalt	49.7	1.0	ug/g	ND	98.0	70-130			
Copper	48.9	5.0	ug/g	ND	94.9	70-130			
Lead	47.3	1.0	ug/g	1.1	92.2	70-130			
Molybdenum	50.8	1.0	ug/g	ND	101	70-130			
Nickel	50.0	5.0	ug/g	ND	96.4	70-130			
Selenium	45.1	1.0	ug/g	ND	90.1	70-130			
Silver	43.2	0.3	ug/g	ND	86.4	70-130			
Thallium	48.3	1.0	ug/g	ND	96.6	70-130			
Uranium	49.9	1.0	ug/g	ND	99.7	70-130			
Vanadium	55.1	10.0	ug/g	ND	100	70-130			
Zinc	50.7	20.0	ug/g	ND	93.2	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.161	0.02	ug/g	ND	71.8	50-140			
Acenaphthylene	0.134	0.02	ug/g	ND	59.6	50-140			
Anthracene	0.173	0.02	ug/g	ND	77.2	50-140			
Benzo [a] anthracene	0.121	0.02	ug/g	ND	53.7	50-140			
Benzo [a] pyrene	0.156	0.02	ug/g	ND	69.6	50-140			
Benzo [b] fluoranthene	0.185	0.02	ug/g	ND	82.1	50-140			
Benzo [g,h,i] perylene	0.182	0.02	ug/g	ND	80.8	50-140			
Benzo [k] fluoranthene	0.168	0.02	ug/g	ND	74.9	50-140			
Chrysene	0.147	0.02	ug/g	ND	65.4	50-140			
Dibenzo [a,h] anthracene	0.203	0.02	ug/g	ND	90.5	50-140			
Fluoranthene	0.180	0.02	ug/g	ND	80.0	50-140			
Fluorene	0.151	0.02	ug/g	ND	67.3	50-140			
Indeno [1,2,3-cd] pyrene	0.189	0.02	ug/g	ND	84.1	50-140			
1-Methylnaphthalene	0.134	0.02	ug/g	ND	59.7	50-140			
2-Methylnaphthalene	0.150	0.02	ug/g	ND	67.0	50-140			
Naphthalene	0.165	0.01	ug/g	ND	73.5	50-140			
Phenanthrene	0.169	0.02	ug/g	ND	75.3	50-140			
Pyrene	0.177	0.02	ug/g	ND	78.9	50-140			
Surrogate: 2-Fluorobiphenyl	1.15		ug/g		64.0	50-140			
Surrogate: Terphenyl-d14	1.57		ug/g		87.2	50-140			
<b>Volatiles</b>									
Benzene	3.36	0.02	ug/g	ND	84.0	60-130			
Ethylbenzene	4.12	0.05	ug/g	ND	103	60-130			

Certificate of Analysis

Report Date: 28-Jan-2021

Client: Paterson Group Consulting Engineers

Order Date: 27-Jan-2021

Client PO: 31654

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Toluene	3.93	0.05	ug/g	ND	98.3	60-130			
m,p-Xylenes	7.51	0.05	ug/g	ND	93.8	60-130			
o-Xylene	3.71	0.05	ug/g	ND	92.9	60-130			
Surrogate: Toluene-d8	8.00		ug/g		100	50-140			

Certificate of Analysis

Client: Paterson Group Consulting Engineers

Client PO: 31654

Report Date: 28-Jan-2021

Order Date: 27-Jan-2021

Project Description: PE4937

**Qualifier Notes:**

*Sample Qualifiers :*

1 : GC-FID signal did not return to baseline by C50

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.





Blvd.  
4J8  
s.com  
1

Parcel Order Number  
(Lab Use Only)

2105268

Chain Of Custody  
(Lab Use Only)

No 128896

Client Name: <b>Paterson</b>	Project Ref: <b>PE4937</b>	Page <u>1</u> of <u>1</u>
Contact Name: <b>Mike Beaudoin</b>	Quote #:	Turnaround Time <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> Regular Date Required: _____
Address: <b>154 Colomade Road</b>	PO #: <b>31654</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>jcamposarcone@patersongroup.ca</b> <b>mbeaudoin@patersongroup.ca</b>	

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis										
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time							
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm												
<input type="checkbox"/> Table _____		Mun: _____														
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Other: _____														
Sample ID/Location Name																
1	TP70-G2			S		2	1/26/2021			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
2	TP71-G2			S		1				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
3																
4																
5																
6																
7																
8																
9																
10																

Comment: **Potential elevated hydrocarbon impacts!**

Method of Delivery: **Drop Box**

Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot:	Received at Lab: <b>Sumee.parm Dohrai</b>	Verified By: <i>[Signature]</i>
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: _____	Date/Time: <b>1/27/2021 12:30</b>	Date/Time: <b>1-27-21 12:47</b>
Date/Time: <b>1/27/2021</b>	Temperature: _____ °C	Temperature: <b>19.9</b> °C	pH Verified: <input type="checkbox"/> By: _____

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31653  
Project: PE4937  
Custody: 128897

Report Date: 1-Feb-2021  
Order Date: 28-Jan-2021

**Order #: 2105385**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2105385-01	SW6 (2)
2105385-02	SW10 (2)

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 01-Feb-2021

Client: **Paterson Group Consulting Engineers**

Order Date: 28-Jan-2021

Client PO: 31653

Project Description: **PE4937**

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	1-Feb-21	1-Feb-21
Solids, %	Gravimetric, calculation	29-Jan-21	29-Jan-21

Certificate of Analysis

Report Date: 01-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 28-Jan-2021

Client PO: 31653

Project Description: PE4937

<b>Client ID:</b>	SW6 (2)	SW10 (2)	-	-
<b>Sample Date:</b>	27-Jan-21 09:00	27-Jan-21 09:00	-	-
<b>Sample ID:</b>	2105385-01	2105385-02	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	67.0	82.3	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	2.7	3.4	-	-
Barium	1.0 ug/g dry	207	149	-	-
Beryllium	0.5 ug/g dry	0.6	0.5	-	-
Boron	5.0 ug/g dry	8.8	6.1	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	84.7	50.7	-	-
Cobalt	1.0 ug/g dry	16.5	10.7	-	-
Copper	5.0 ug/g dry	34.0	30.5	-	-
Lead	1.0 ug/g dry	9.2	27.5	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	45.6	29.1	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	<1.0	-	-
Vanadium	10.0 ug/g dry	72.9	46.2	-	-
Zinc	20.0 ug/g dry	91.6	81.6	-	-

Certificate of Analysis

Report Date: 01-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 28-Jan-2021

Client PO: 31653

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						

Certificate of Analysis

Report Date: 01-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 28-Jan-2021

Client PO: 31653

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	1.1	1.0	ug/g dry	ND			NC	30	
Arsenic	1.7	1.0	ug/g dry	1.7			1.9	30	
Barium	13.6	1.0	ug/g dry	12.6			7.0	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	5.9	5.0	ug/g dry	6.3			6.1	30	
Cobalt	2.0	1.0	ug/g dry	2.2			9.8	30	
Copper	5.8	5.0	ug/g dry	6.4			11.0	30	
Lead	3.4	1.0	ug/g dry	3.5			3.1	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	ND	5.0	ug/g dry	ND			NC	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	12.3	10.0	ug/g dry	12.4			0.9	30	
Zinc	ND	20.0	ug/g dry	ND			NC	30	
<b>Physical Characteristics</b>									
% Solids	91.8	0.1	% by Wt.	92.1			0.3	25	

Certificate of Analysis

Report Date: 01-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 28-Jan-2021

Client PO: 31653

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Metals</b>									
Antimony	38.4	1.0	ug/g	ND	76.9	70-130			
Arsenic	47.2	1.0	ug/g	ND	93.1	70-130			
Barium	48.4	1.0	ug/g	5.1	86.7	70-130			
Beryllium	43.8	0.5	ug/g	ND	87.5	70-130			
Boron	39.1	5.0	ug/g	ND	75.3	70-130			
Cadmium	43.2	0.5	ug/g	ND	86.3	70-130			
Chromium	48.8	5.0	ug/g	ND	92.7	70-130			
Cobalt	46.6	1.0	ug/g	ND	91.5	70-130			
Copper	45.9	5.0	ug/g	ND	86.7	70-130			
Lead	43.1	1.0	ug/g	1.4	83.3	70-130			
Molybdenum	45.9	1.0	ug/g	ND	91.5	70-130			
Nickel	46.1	5.0	ug/g	ND	88.5	70-130			
Selenium	42.6	1.0	ug/g	ND	85.1	70-130			
Silver	40.1	0.3	ug/g	ND	80.1	70-130			
Thallium	41.9	1.0	ug/g	ND	83.8	70-130			
Uranium	43.2	1.0	ug/g	ND	86.0	70-130			
Vanadium	51.8	10.0	ug/g	ND	93.6	70-130			
Zinc	49.4	20.0	ug/g	ND	83.3	70-130			

Certificate of Analysis

Report Date: 01-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 28-Jan-2021

Client PO: 31653

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.





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Parcel Order Number (Lab Use Only)  <i>2105385</i>	Chain Of Custody (Lab Use Only)  No 128897
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Client Name: <i>Paterson</i>	Project Ref: <i>PEA937</i>	Page <u>1</u> of <u>1</u>
Contact Name: <i>Mike Beaudoin</i>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input checked="" type="checkbox"/> 2 day <input type="checkbox"/> 3 day <input type="checkbox"/> Regular Date Required: _____
Address: <i>154 Colonnade Road</i>	PO #: <i>31653</i>	
	E-mail: <i>jcamposarcone@patersongroup.ca</i> <i>mbeaudoin@patersongroup.ca</i>	
Telephone: <i>613-226-7381</i>		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)	Required Analysis																
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558		<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP Hg CrVI	B (HWS)						
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA	Date				Time												
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU-Sani	<input type="checkbox"/> SU-Storm																	
<input type="checkbox"/> Table _____			Mun: _____																		
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Other: _____																		
Sample ID/Location Name					Matrix	Air Volume	# of Containers	Date	Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP Hg CrVI	B (HWS)							
1	<i>SWG(2)</i>				<i>S</i>		<i>1</i>	<i>1/27/2021</i>					<input checked="" type="checkbox"/>								
2	<i>SW10(2)</i>																				
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Comments:

Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot:	Received at Lab:	Method of Delivery: <i>Drop Bot</i>
Relinquished By (Print): <i>Jeremy Camposarcone</i>	Date/Time:	Date/Time: <i>Jan 28 2021 13:17</i>	Verified By: <i>[Signature]</i>
Date/Time: <i>1/28/2021</i>	Temperature: _____ °C	Temperature: <i>18.3</i> °C	pH Verified: <input type="checkbox"/> By:

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31896  
Project: PE4937  
Custody: 128898, 128899

Report Date: 4-Feb-2021  
Order Date: 2-Feb-2021

**Order #: 2106195**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Parcel ID	Client ID
2106195-01	EX2-B1
2106195-02	EX2-B5
2106195-03	EX2-B6
2106195-04	EX2-B8
2106195-05	EX2-B10
2106195-06	EX2-WW3
2106195-07	EX2-SW2
2106195-08	EX2-SW4
2106195-09	EX2-EW1
2106195-10	EX2-EW5
2106195-11	EX2-NW1
2106195-12	EX2-NW3
2106195-13	DUP

Approved By:



Dale Robertson, BSc  
Laboratory Director

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31896

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	3-Feb-21	4-Feb-21
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	3-Feb-21	3-Feb-21
PHC F1	CWS Tier 1 - P&T GC-FID	3-Feb-21	4-Feb-21
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	4-Feb-21	4-Feb-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	3-Feb-21	4-Feb-21
Solids, %	Gravimetric, calculation	3-Feb-21	3-Feb-21
Texture - Coarse Med/Fine	Based on ASTM D2487	3-Feb-21	4-Feb-21

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31896

Project Description: PE4937

<b>Client ID:</b>	EX2-B1	EX2-B5	EX2-B6	EX2-B8
<b>Sample Date:</b>	01-Feb-21 09:00	01-Feb-21 09:00	01-Feb-21 09:00	01-Feb-21 09:00
<b>Sample ID:</b>	2106195-01	2106195-02	2106195-03	2106195-04
<b>MDL/Units</b>	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	62.0	65.2	63.2	78.6
>75 um	0.1 %	-	0.2	-	-
<75 um	0.1 %	-	99.8	-	-
Texture	0.1 %	-	Med/Fine	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	-	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Toluene-d8	Surrogate	105%	-	105%	104%

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	<8	15
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	<6	21

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31896

Project Description: PE4937

	Client ID:	EX2-B10	EX2-WW3	EX2-SW2	EX2-SW4
	Sample Date:	01-Feb-21 09:00	01-Feb-21 09:00	01-Feb-21 09:00	01-Feb-21 09:00
	Sample ID:	2106195-05	2106195-06	2106195-07	2106195-08
	MDL/Units	Soil	Soil	Soil	Soil
<b>Physical Characteristics</b>					
% Solids	0.1 % by Wt.	80.5	70.7	68.6	93.6
<b>General Inorganics</b>					
pH	0.05 pH Units	-	-	7.63	-
<b>Volatiles</b>					
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	104%	105%	105%	105%
<b>Hydrocarbons</b>					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	<6

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31896

Project Description: PE4937

<b>Client ID:</b>	EX2-EW1	EX2-EW5	EX2-NW1	EX2-NW3
<b>Sample Date:</b>	01-Feb-21 09:00	01-Feb-21 09:00	01-Feb-21 09:00	01-Feb-21 09:00
<b>Sample ID:</b>	2106195-09	2106195-10	2106195-11	2106195-12
<b>MDL/Units</b>	Soil	Soil	Soil	Soil

**Physical Characteristics**

% Solids	0.1 % by Wt.	79.6	65.1	91.9	91.0
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**General Inorganics**

pH	0.05 pH Units	7.13	-	-	-
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**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene-d8	Surrogate	105%	112%	110%	122%

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	80	<4
F3 PHCs (C16-C34)	8 ug/g dry	103	<8	1210	<8
F4 PHCs (C34-C50)	6 ug/g dry	91	<6	922 [1]	<6
F4G PHCs (gravimetric)	50 ug/g dry	-	-	1730	-

<b>Client ID:</b>	DUP	-	-	-
<b>Sample Date:</b>	01-Feb-21 09:00	-	-	-
<b>Sample ID:</b>	2106195-13	-	-	-
<b>MDL/Units</b>	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	61.1	-	-	-
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**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	121%	-	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31896

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.32		ug/g		104	50-140			

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31896

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>General Inorganics</b>									
pH	7.62	0.05	pH Units	7.61			0.1	2.3	
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	885	4	ug/g dry	836			5.7	30	
F3 PHCs (C16-C34)	698	8	ug/g dry	643			8.2	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Physical Characteristics</b>									
% Solids	91.9	0.1	% by Wt.	91.0			1.0	25	
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	10.4		ug/g dry		107	50-140			



Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31896

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	209	7	ug/g	ND	105	80-120			
F2 PHCs (C10-C16)	975	4	ug/g	836	156	60-140			QM-06
F3 PHCs (C16-C34)	974	8	ug/g	643	151	60-140			
F4 PHCs (C34-C50)	162	6	ug/g	ND	117	60-140			
F4G PHCs (gravimetric)	980	50	ug/g	ND	98.0	80-120			
<b>Volatiles</b>									
Benzene	3.52	0.02	ug/g	ND	88.0	60-130			
Ethylbenzene	4.54	0.05	ug/g	ND	113	60-130			
Toluene	4.40	0.05	ug/g	ND	110	60-130			
m,p-Xylenes	8.25	0.05	ug/g	ND	103	60-130			
o-Xylene	4.15	0.05	ug/g	ND	104	60-130			
Surrogate: Toluene-d8	7.99		ug/g		99.9	50-140			

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31896

Project Description: PE4937

**Qualifier Notes:**

*Sample Qualifiers :*

1 : GC-FID signal did not return to baseline by C50

*QC Qualifiers :*

QM-06 : Due to noted non-homogeneity of the QC sample matrix, the spike recoveries were out side the accepted range. Batch data accepted based on other QC.

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.





Parcel Order Number (Lab Use Only) <b>2106195</b>	Chain Of Custody (Lab Use Only) <b>No 128899</b>
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Client Name: <b>Paterson</b>	Project Ref: <b>PE4934</b>	Page <b>2</b> of <b>2</b>
Contact Name: <b>Mike Beaudin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input checked="" type="checkbox"/> 2 day <input type="checkbox"/> Regular
Address: <b>154 Colonnade Road</b>	PO #: <b>31896</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>jcamposarcone@patersongroup.ca</b> <b>mbeaudin@patersongroup.ca</b>	Date Required: _____

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis											
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA				Date	Time								
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm													
<input type="checkbox"/> Table _____		Mun: _____															
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Other: _____															
Sample ID/Location Name																	
1	EX2-NW1					29											
2	EX2-NW3					↓											
3	DUP					↓											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Comments:		Method of Delivery: <b>PACCEL COURIER</b>	
Relinquished By (Sign):	Received By Driver/Depot: <b>A. J. JONES</b>	Received at Lab: <b>Surrey, BC</b>	Verified By:
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: <b>02/02/21 2:50</b>	Date/Time: <b>Feb 02, 2021 03:30</b>	Date/Time: <b>27-21 15:18</b>
Date/Time: <b>2/2/2021</b>	Temperature: _____ °C <b>74</b>	Temperature: <b>13.7</b> °C	pH Verified: <input type="checkbox"/> By: _____

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31897  
Project: PE4937  
Custody: 128900

Report Date: 4-Feb-2021  
Order Date: 2-Feb-2021

**Order #: 2106217**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2106217-01	WW10

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31897

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	3-Feb-21	3-Feb-21
PHC F1	CWS Tier 1 - P&T GC-FID	3-Feb-21	3-Feb-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	2-Feb-21	3-Feb-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	3-Feb-21	4-Feb-21
Solids, %	Gravimetric, calculation	3-Feb-21	3-Feb-21

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31897

Project Description: PE4937

Client ID:	WW10	-	-	-
Sample Date:	02-Feb-21 09:00	-	-	-
Sample ID:	2106217-01	-	-	-
MDL/Units	Soil	-	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	82.8	-	-	-
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**Metals**

Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	2.0	-	-	-
Barium	1.0 ug/g dry	104	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	55.9	-	-	-
Cobalt	1.0 ug/g dry	11.8	-	-	-
Copper	5.0 ug/g dry	12.3	-	-	-
Lead	1.0 ug/g dry	4.3	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	25.9	-	-	-
Selenium	1.0 ug/g dry	2.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	47.5	-	-	-
Zinc	20.0 ug/g dry	51.1	-	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	105%	-	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-



Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31897

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.32		ug/g			104		50-140	



Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31897

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	10	8	ug/g dry	12			14.8	30	
F4 PHCs (C34-C50)	14	6	ug/g dry	12			12.3	30	
<b>Metals</b>									
Antimony	1.3	1.0	ug/g dry	1.9			36.2	30	
Arsenic	5.4	1.0	ug/g dry	5.4			1.5	30	
Barium	53.1	1.0	ug/g dry	51.3			3.5	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	5.7	5.0	ug/g dry	5.6			2.8	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	13.6	5.0	ug/g dry	13.4			1.9	30	
Cobalt	4.5	1.0	ug/g dry	4.5			1.1	30	
Copper	15.7	5.0	ug/g dry	15.1			3.6	30	
Lead	27.3	1.0	ug/g dry	25.4			6.9	30	
Molybdenum	1.2	1.0	ug/g dry	1.3			3.8	30	
Nickel	9.0	5.0	ug/g dry	8.9			0.6	30	
Selenium	1.7	1.0	ug/g dry	2.0			16.7	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	23.4	10.0	ug/g dry	23.0			1.9	30	
Zinc	69.0	20.0	ug/g dry	68.6			0.6	30	
<b>Physical Characteristics</b>									
% Solids	75.8	0.1	% by Wt.	77.3			2.0	25	
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	10.4		ug/g dry		107	50-140			

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31897

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	209	7	ug/g	ND	105	80-120			
F2 PHCs (C10-C16)	ND	4	ug/g	ND		60-140			
F3 PHCs (C16-C34)	296	8	ug/g	12	129	60-140			
F4 PHCs (C34-C50)	203	6	ug/g	12	137	60-140			
<b>Metals</b>									
Antimony	48.1	1.0	ug/g	ND	94.7	70-130			
Arsenic	56.6	1.0	ug/g	2.2	109	70-130			
Barium	79.1	1.0	ug/g	20.5	117	70-130			
Beryllium	53.6	0.5	ug/g	ND	107	70-130			
Boron	51.6	5.0	ug/g	ND	98.8	70-130			
Cadmium	54.3	0.5	ug/g	ND	108	70-130			
Chromium	62.2	5.0	ug/g	5.4	114	70-130			
Cobalt	56.7	1.0	ug/g	1.8	110	70-130			
Copper	59.4	5.0	ug/g	6.1	107	70-130			
Lead	62.8	1.0	ug/g	10.2	105	70-130			
Molybdenum	54.1	1.0	ug/g	ND	107	70-130			
Nickel	57.1	5.0	ug/g	ND	107	70-130			
Selenium	51.5	1.0	ug/g	ND	101	70-130			
Silver	44.3	0.3	ug/g	ND	88.4	70-130			
Thallium	51.7	1.0	ug/g	ND	103	70-130			
Uranium	52.8	1.0	ug/g	ND	105	70-130			
Vanadium	66.7	10.0	ug/g	ND	115	70-130			
Zinc	82.6	20.0	ug/g	27.4	110	70-130			
<b>Volatiles</b>									
Benzene	3.52	0.02	ug/g	ND	88.0	60-130			
Ethylbenzene	4.54	0.05	ug/g	ND	113	60-130			
Toluene	4.40	0.05	ug/g	ND	110	60-130			
m,p-Xylenes	8.25	0.05	ug/g	ND	103	60-130			
o-Xylene	4.15	0.05	ug/g	ND	104	60-130			
Surrogate: Toluene-d8	7.99		ug/g		99.9	50-140			

Certificate of Analysis

Report Date: 04-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 2-Feb-2021

Client PO: 31897

Project Description: PE4937

**Qualifier Notes:**

None

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Parcel Order Number (Lab Use Only) <i>2106217</i>	Chain Of Custody (Lab Use Only) <b>№ 128900</b>
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Client Name: <i>Paterson</i>	Project Ref: <i>PE4937</i>	Page <u>1</u> of <u>1</u>
Contact Name: <i>Mike Beaudin</i>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input checked="" type="checkbox"/> 2 day <input type="checkbox"/> Regular Date Required: _____
Address: <i>154 Colonnade Rd</i>	PO #: <i>31897</i>	
Telephone: <i>613-226-7381</i>	E-mail: <i>jcamposarcone@patersongroup.ca</i>	

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)			Required Analysis																		
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)									
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA																					
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm																					
For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mun: _____		Other: _____																					
Sample ID/Location Name			Date	Time																					
1	<i>WW10</i>			<i>2/2/2021</i>		<i>2</i>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>												
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Comments:		Method of Delivery: <i>Drop Box</i>	
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot:	Received at Lab: <i>June pvm Dekmai</i>	Verified By: <i>[Signature]</i>
Relinquished By (Print): <i>Jeremy Camposarcone</i>	Date/Time:	Date/Time: <i>FEB 02 2021 04:48</i>	Date/Time: <i>FEB 2 2021 8:55</i>
Date/Time: <i>2/2/2021</i>	Temperature: _____ °C	Temperature: <i>10.9</i> °C	pH Verified: <input type="checkbox"/> By: _____

## Certificate of Analysis

**Paterson Group Consulting Engineers**

154 Colonnade Road South  
Nepean, ON K2E 7J5  
Attn: Mike Beaudoin

Client PO: 31900  
Project: PE4937  
Custody: 128903

Report Date: 10-Feb-2021  
Order Date: 5-Feb-2021

**Order #: 2106559**

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2106559-01	EX1-NW1
2106559-02	EX1-NW2

Approved By:



Mark Foto, M.Sc.  
Lab Supervisor

Certificate of Analysis

Report Date: 10-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Feb-2021

Client PO: 31900

Project Description: PE4937

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	8-Feb-21	8-Feb-21
PHC F1	CWS Tier 1 - P&T GC-FID	8-Feb-21	8-Feb-21
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	10-Feb-21	10-Feb-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	6-Feb-21	9-Feb-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	10-Feb-21	10-Feb-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	6-Feb-21	10-Feb-21
Solids, %	Gravimetric, calculation	8-Feb-21	9-Feb-21

Certificate of Analysis

Report Date: 10-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Feb-2021

Client PO: 31900

Project Description: PE4937

<b>Client ID:</b>	EX1-NW1	EX1-NW2	-	-
<b>Sample Date:</b>	03-Feb-21 09:00	03-Feb-21 09:00	-	-
<b>Sample ID:</b>	2106559-01	2106559-02	-	-
<b>MDL/Units</b>	Soil	Soil	-	-

**Physical Characteristics**

% Solids	0.1 % by Wt.	83.4	92.4	-	-
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**Metals**

Antimony	1.0 ug/g dry	12.6	3.2	-	-
Arsenic	1.0 ug/g dry	12.3	6.1	-	-
Barium	1.0 ug/g dry	200	152	-	-
Beryllium	0.5 ug/g dry	0.7	0.5	-	-
Boron	5.0 ug/g dry	7.7	7.6	-	-
Cadmium	0.5 ug/g dry	0.8	<0.5	-	-
Chromium	5.0 ug/g dry	39.5	29.5	-	-
Cobalt	1.0 ug/g dry	10.9	10.5	-	-
Copper	5.0 ug/g dry	70.9	28.8	-	-
Lead	1.0 ug/g dry	190	33.9	-	-
Molybdenum	1.0 ug/g dry	2.9	10.1	-	-
Nickel	5.0 ug/g dry	33.5	23.0	-	-
Selenium	1.0 ug/g dry	1.5	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	1.1	<1.0	-	-
Vanadium	10.0 ug/g dry	40.1	32.8	-	-
Zinc	20.0 ug/g dry	197	74.0	-	-

**Volatiles**

Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	0.28	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene-d8	Surrogate	111%	107%	-	-

**Hydrocarbons**

F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	17	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	554	39	-	-
F4 PHCs (C34-C50)	6 ug/g dry	233 [1]	49	-	-
F4G PHCs (gravimetric)	50 ug/g dry	480	-	-	-

**Semi-Volatiles**

Certificate of Analysis

Report Date: 10-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Feb-2021

Client PO: 31900

Project Description: PE4937

	Client ID:	EX1-NW1	EX1-NW2	-	-
	Sample Date:	03-Feb-21 09:00	03-Feb-21 09:00	-	-
	Sample ID:	2106559-01	2106559-02	-	-
	MDL/Units	Soil	Soil	-	-
Acenaphthene	0.02 ug/g dry	0.33	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	0.21	<0.02	-	-
Anthracene	0.02 ug/g dry	1.67	0.03	-	-
Benzo [a] anthracene	0.02 ug/g dry	3.77	0.08	-	-
Benzo [a] pyrene	0.02 ug/g dry	3.68	0.10	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	3.70	0.11	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	1.73	0.06	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	2.26	0.07	-	-
Chrysene	0.02 ug/g dry	3.54	0.11	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.52	<0.02	-	-
Fluoranthene	0.02 ug/g dry	9.06	0.17	-	-
Fluorene	0.02 ug/g dry	0.52	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	1.60	0.05	-	-
1-Methylnaphthalene	0.02 ug/g dry	0.15	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	0.18	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	0.33	<0.04	-	-
Naphthalene	0.01 ug/g dry	0.26	0.01	-	-
Phenanthrene	0.02 ug/g dry	4.85	0.10	-	-
Pyrene	0.02 ug/g dry	7.38	0.14	-	-
2-Fluorobiphenyl	Surrogate	103%	90.0%	-	-
Terphenyl-d14	Surrogate	129%	93.0%	-	-



Certificate of Analysis

Report Date: 10-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Feb-2021

Client PO: 31900

Project Description: PE4937

**Method Quality Control: Blank**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
<b>Metals</b>									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	0.990		ug/g		74.3	50-140			
Surrogate: Terphenyl-d14	1.37		ug/g		103	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	8.52		ug/g		107	50-140			

Certificate of Analysis

Report Date: 10-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Feb-2021

Client PO: 31900

Project Description: PE4937

**Method Quality Control: Duplicate**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
<b>Metals</b>									
Antimony	1.6	1.0	ug/g dry	1.5			2.6	30	
Arsenic	2.8	1.0	ug/g dry	2.8			0.2	30	
Barium	72.2	1.0	ug/g dry	77.9			7.6	30	
Beryllium	0.6	0.5	ug/g dry	0.6			4.7	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	30.6	5.0	ug/g dry	31.2			1.8	30	
Cobalt	5.9	1.0	ug/g dry	5.9			0.2	30	
Copper	9.7	5.0	ug/g dry	9.5			1.8	30	
Lead	8.8	1.0	ug/g dry	8.8			0.0	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	16.6	5.0	ug/g dry	16.7			0.1	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	27.3	10.0	ug/g dry	27.9			2.3	30	
Zinc	41.1	20.0	ug/g dry	41.8			1.6	30	
<b>Physical Characteristics</b>									
% Solids	60.5	0.1	% by Wt.	61.6			1.8	25	
<b>Semi-Volatiles</b>									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.51		ug/g dry		103	50-140			
Surrogate: Terphenyl-d14	1.63		ug/g dry		111	50-140			
<b>Volatiles</b>									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	9.29		ug/g dry		107	50-140			

Certificate of Analysis

Report Date: 10-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Feb-2021

Client PO: 31900

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Hydrocarbons</b>									
F1 PHCs (C6-C10)	186	7	ug/g	ND	93.0	80-120			
F2 PHCs (C10-C16)	79	4	ug/g	ND	94.0	60-140			
F3 PHCs (C16-C34)	231	8	ug/g	ND	112	60-140			
F4 PHCs (C34-C50)	147	6	ug/g	ND	112	60-140			
F4G PHCs (gravimetric)	850	50	ug/g	ND	85.0	80-120			
<b>Metals</b>									
Antimony	47.4	1.0	ug/g	ND	93.6	70-130			
Arsenic	51.4	1.0	ug/g	1.1	101	70-130			
Barium	78.3	1.0	ug/g	31.2	94.2	70-130			
Beryllium	52.3	0.5	ug/g	ND	104	70-130			
Boron	48.4	5.0	ug/g	ND	93.8	70-130			
Cadmium	47.8	0.5	ug/g	ND	95.4	70-130			
Chromium	63.8	5.0	ug/g	12.5	103	70-130			
Cobalt	52.1	1.0	ug/g	2.3	99.6	70-130			
Copper	52.3	5.0	ug/g	ND	97.1	70-130			
Lead	48.9	1.0	ug/g	3.5	90.7	70-130			
Molybdenum	48.2	1.0	ug/g	ND	96.0	70-130			
Nickel	55.6	5.0	ug/g	6.7	97.8	70-130			
Selenium	48.6	1.0	ug/g	ND	96.8	70-130			
Silver	45.4	0.3	ug/g	ND	90.7	70-130			
Thallium	45.3	1.0	ug/g	ND	90.4	70-130			
Uranium	46.3	1.0	ug/g	ND	92.3	70-130			
Vanadium	61.9	10.0	ug/g	11.2	101	70-130			
Zinc	63.4	20.0	ug/g	ND	93.3	70-130			
<b>Semi-Volatiles</b>									
Acenaphthene	0.189	0.02	ug/g	ND	103	50-140			
Acenaphthylene	0.156	0.02	ug/g	ND	85.1	50-140			
Anthracene	0.182	0.02	ug/g	ND	99.1	50-140			
Benzo [a] anthracene	0.155	0.02	ug/g	ND	84.5	50-140			
Benzo [a] pyrene	0.153	0.02	ug/g	ND	83.6	50-140			
Benzo [b] fluoranthene	0.160	0.02	ug/g	ND	87.4	50-140			
Benzo [g,h,i] perylene	0.143	0.02	ug/g	ND	77.9	50-140			
Benzo [k] fluoranthene	0.166	0.02	ug/g	ND	90.4	50-140			
Chrysene	0.201	0.02	ug/g	ND	110	50-140			
Dibenzo [a,h] anthracene	0.142	0.02	ug/g	ND	77.7	50-140			
Fluoranthene	0.165	0.02	ug/g	ND	89.9	50-140			
Fluorene	0.195	0.02	ug/g	ND	106	50-140			
Indeno [1,2,3-cd] pyrene	0.136	0.02	ug/g	ND	74.2	50-140			
1-Methylnaphthalene	0.177	0.02	ug/g	ND	96.6	50-140			
2-Methylnaphthalene	0.204	0.02	ug/g	ND	111	50-140			
Naphthalene	0.213	0.01	ug/g	ND	116	50-140			
Phenanthrene	0.168	0.02	ug/g	ND	91.7	50-140			
Pyrene	0.166	0.02	ug/g	ND	90.4	50-140			
Surrogate: 2-Fluorobiphenyl	1.37		ug/g		93.6	50-140			
Surrogate: Terphenyl-d14	1.69		ug/g		115	50-140			
<b>Volatiles</b>									
Benzene	3.64	0.02	ug/g	ND	90.9	60-130			
Ethylbenzene	4.47	0.05	ug/g	ND	112	60-130			

Certificate of Analysis

Report Date: 10-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Feb-2021

Client PO: 31900

Project Description: PE4937

**Method Quality Control: Spike**

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Toluene	4.42	0.05	ug/g	ND	111	60-130			
m,p-Xylenes	8.91	0.05	ug/g	ND	111	60-130			
o-Xylene	4.46	0.05	ug/g	ND	112	60-130			
Surrogate: Toluene-d8	7.78		ug/g		97.2	50-140			

Certificate of Analysis

Report Date: 10-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Feb-2021

Client PO: 31900

Project Description: PE4937

**Qualifier Notes:**

*Sample Qualifiers :*

1 : GC-FID signal did not return to baseline by C50

**Sample Data Revisions**

None

**Work Order Revisions / Comments:**

None

**Other Report Notes:**

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

*CCME PHC additional information:*

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



2106559

No 128903

Client Name: <b>Paterson</b>	Project Ref: <b>PE4937</b>	Page <b>1</b> of <b>1</b>
Contact Name: <b>Mike Beaudoin</b>	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular
Address: <b>154 Colonnade Road</b>	PO #: <b>31900</b>	
Telephone: <b>613-226-7381</b>	E-mail: <b>mbeaudoin@patersongroup.ca</b> <b>jcamposarcone@patersongroup.ca</b>	
Date Required: _____		

Regulation 153/04		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis											
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Med/Fine	<input type="checkbox"/> REG 558	<input type="checkbox"/> PWQO	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	
<input checked="" type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> CCME	<input type="checkbox"/> MISA													
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other		<input type="checkbox"/> SU - Sani	<input type="checkbox"/> SU - Storm	Mun: _____												
<input type="checkbox"/> Table _____		For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Other: _____													
Sample ID/Location Name				Date	Time												
1	EX1-NW1			S	2	2/3/2021											
2	EX1-NW2			S	2	↓											
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Comments:		Method of Delivery: <b>PARCEL COURIER</b>	
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Depot: <b>M. BEAUBOIN</b>	Received at Lab: <b>Shreepam Dohma</b>	Verified By: <i>[Signature]</i>
Relinquished By (Print): <b>Jeremy Camposarcone</b>	Date/Time: <b>05/02/21 2:01</b>	Date/Time: <b>Feb 05, 2021 02.40</b>	Date/Time: <b>2-5-21 15/30</b>
Date/Time: <b>2/5/2021</b>	Temperature: _____ °C <b>PH</b>	Temperature: <b>10.4</b> °C	pH Verified: <input type="checkbox"/> By: _____



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074740</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 7:14 am	12/2/20 7:30 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	32900 kg	Scale In
TARE	15070 kg	Scale Out
NET	17830 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.83	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074741</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 7:17 am	12/2/20 7:33 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	33250 kg	Scale In
TARE	13830 kg	Scale Out
NET	19420 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.42	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074742</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 7:21 am	12/2/20 7:37 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	32710 kg	Scale In
TARE	13400 kg	Scale Out
NET	19310 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.31	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074747</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 7:39 am	12/2/20 7:52 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	36200 kg	Scale In
TARE	14960 kg	Scale Out
NET	21240 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.24	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074748</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 7:43 am	12/2/20 7:59 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	35490 kg	Scale In
TARE	13750 kg	Scale Out
NET	21740 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.74	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074750</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 7:47 am	12/2/20 8:03 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	35390 kg	Scale In
TARE	13390 kg	Scale Out
NET	22000 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.00	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074758</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:06 am	12/2/20 8:25 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	34650 kg	Scale In
TARE	13610 kg	Scale Out
NET	21040 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074759</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:07 am	12/2/20 8:26 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AMIE</b>			EAST END	

GROSS	34490 kg	Scale In
TARE	13360 kg	Scale Out
NET	21130 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.13	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074763</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:11 am	12/2/20 8:31 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	35060 kg	Scale In
TARE	13750 kg	Scale Out
NET	21310 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.31	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074761</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:13 am	12/2/20 8:29 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	36860 kg	Scale In
TARE	15010 kg	Scale Out
NET	21850 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.85	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074764</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:16 am	12/2/20 8:32 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS 35920 kg Scale In  
TARE 13850 kg Scale Out  
NET 22070 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.07	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074767</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:22 am	12/2/20 8:37 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS 35170 kg Scale In  
TARE 13280 kg Scale Out  
NET 21890 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.89	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074776</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:34 am	12/2/20 8:53 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS 36090 kg Scale In  
TARE 13640 kg Scale Out  
NET 22450 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.45	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074777</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:37 am	12/2/20 8:54 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AMIE</b>			EAST END	

GROSS 34550 kg Scale In  
TARE 13370 kg Scale Out  
NET 21180 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.18	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
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010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074778</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:40 am	12/2/20 8:55 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS 37460 kg Scale In  
TARE 14940 kg Scale Out  
NET 22520 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.52	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074779</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:44 am	12/2/20 9:00 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS 35120 kg Scale In  
TARE 13760 kg Scale Out  
NET 21360 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.36	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074780</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:45 am	12/2/20 9:01 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS	34940 kg	Scale In
TARE	13860 kg	Scale Out
NET	21080 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.08	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074782</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 8:50 am	12/2/20 9:05 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	34140 kg	Scale In
TARE	13270 kg	Scale Out
NET	20870 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.87	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074786</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:03 am	12/2/20 9:20 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS 35450 kg Scale In  
TARE 13660 kg Scale Out  
NET 21790 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.79	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074787</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:06 am	12/2/20 9:22 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AMIE</b>			EAST END	

GROSS 34120 kg Scale In  
TARE 13380 kg Scale Out  
NET 20740 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.74	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074790</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:08 am	12/2/20 9:25 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	35480 kg	Scale In
TARE	14950 kg	Scale Out
NET	20530 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.53	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074792</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:12 am	12/2/20 9:28 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	33920 kg	Scale In
TARE	13670 kg	Scale Out
NET	20250 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.25	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074793</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:15 am	12/2/20 9:29 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS	34940 kg	Scale In
TARE	13610 kg	Scale Out
NET	21330 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.33	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074795</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:20 am	12/2/20 9:36 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	36890 kg	Scale In
TARE	13280 kg	Scale Out
NET	23610 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
23.61	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074800</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:33 am	12/2/20 9:50 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	37480 kg	Scale In
TARE	13660 kg	Scale Out
NET	23820 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
23.82	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074801</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:36 am	12/2/20 9:51 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AMIE</b>			EAST END	

GROSS	34540 kg	Scale In
TARE	13390 kg	Scale Out
NET	21150 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.15	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074802</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:37 am	12/2/20 9:52 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS 35680 kg Scale In  
TARE 14860 kg Scale Out  
NET 20820 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.82	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074803</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:39 am	12/2/20 9:57 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS 31890 kg Scale In  
TARE 13760 kg Scale Out  
NET 18130 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.13	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074807</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:43 am	12/2/20 10:01 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS 36400 kg Scale In  
TARE 13610 kg Scale Out  
NET 22790 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.79	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074810</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:47 am	12/2/20 10:04 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS 35340 kg Scale In  
TARE 13400 kg Scale Out  
NET 21940 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.94	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074817</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 9:59 am	12/2/20 10:21 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	35610 kg	Scale In
TARE	13670 kg	Scale Out
NET	21940 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.94	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074818</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:03 am	12/2/20 10:22 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	32680 kg	Scale In
TARE	13310 kg	Scale Out
NET	19370 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.37	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074820</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:05 am	12/2/20 10:24 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS 38740 kg Scale In  
TARE 14870 kg Scale Out  
NET 23870 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
23.87	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074821</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:09 am	12/2/20 10:25 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10-RON</b>			EAST END	

GROSS 35580 kg Scale In  
TARE 13850 kg Scale Out  
NET 21730 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.73	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074823</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:11 am	12/2/20 10:31 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	34700 kg	Scale In
TARE	13590 kg	Scale Out
NET	21110 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.11	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074826</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:15 am	12/2/20 10:34 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	34210 kg	Scale In
TARE	13410 kg	Scale Out
NET	20800 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.80	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074834</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:32 am	12/2/20 10:49 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS 35670 kg Scale In  
TARE 13710 kg Scale Out  
NET 21960 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.96	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074835</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:34 am	12/2/20 10:51 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS 34080 kg Scale In  
TARE 13380 kg Scale Out  
NET 20700 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.70	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074840</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:41 am	12/2/20 10:55 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS 38640 kg Scale In  
TARE 14930 kg Scale Out  
NET 23710 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
23.71	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074842</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:41 am	12/2/20 10:59 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS 35100 kg Scale In  
TARE 13840 kg Scale Out  
NET 21260 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.26	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074844</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:45 am	12/2/20 11:01 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS 34700 kg Scale In  
TARE 13630 kg Scale Out  
NET 21070 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.07	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074845</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 10:48 am	12/2/20 11:04 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS 35210 kg Scale In  
TARE 13430 kg Scale Out  
NET 21780 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.78	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074853</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:01 am	12/2/20 11:18 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	35430 kg	Scale In
TARE	13720 kg	Scale Out
NET	21710 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.71	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074854</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:03 am	12/2/20 11:20 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AMIE</b>			EAST END	

GROSS	33940 kg	Scale In
TARE	13390 kg	Scale Out
NET	20550 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.55	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074856</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:08 am	12/2/20 11:24 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	38580 kg	Scale In
TARE	14960 kg	Scale Out
NET	23620 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
23.62	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074858</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:13 am	12/2/20 11:30 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	34900 kg	Scale In
TARE	13960 kg	Scale Out
NET	20940 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.94	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074859</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:17 am	12/2/20 11:32 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	34950 kg	Scale In
TARE	13440 kg	Scale Out
NET	21510 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.51	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074864</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:20 am	12/2/20 11:41 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS	34860 kg	Scale In
TARE	13660 kg	Scale Out
NET	21200 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.20	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074867</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:29 am	12/2/20 11:48 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	38150 kg	Scale In
TARE	13710 kg	Scale Out
NET	24440 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
24.44	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074869</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:32 am	12/2/20 11:51 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AIME</b>			EAST END	

GROSS	33810 kg	Scale In
TARE	13420 kg	Scale Out
NET	20390 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.39	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074871</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:38 am	12/2/20 11:54 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	38420 kg	Scale In
TARE	14990 kg	Scale Out
NET	23430 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
23.43	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074877</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:45 am	12/2/20 12:02 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	34240 kg	Scale In
TARE	13970 kg	Scale Out
NET	20270 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.27	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074878</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:47 am	12/2/20 12:03 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	34460 kg	Scale In
TARE	13440 kg	Scale Out
NET	21020 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.02	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074881</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:53 am	12/2/20 12:13 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS	37160 kg	Scale In
TARE	13670 kg	Scale Out
NET	23490 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
23.49	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074883</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 11:59 am	12/2/20 12:18 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	35900 kg	Scale In
TARE	13760 kg	Scale Out
NET	22140 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.14	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA LANDFILL**

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074886</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:02 pm	12/2/20 12:22 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AMIE</b>			EAST END	

GROSS	32700 kg	Scale In
TARE	13350 kg	Scale Out
NET	19350 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.35	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074888</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:05 pm	12/2/20 12:24 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS 36650 kg Scale In  
TARE 15010 kg Scale Out  
NET 21640 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.64	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074891</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:13 pm	12/2/20 12:31 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS 34460 kg Scale In  
TARE 13860 kg Scale Out  
NET 20600 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.60	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
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(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074892</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:17 pm	12/2/20 12:35 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS 31550 kg Scale In  
TARE 13360 kg Scale Out  
NET 18190 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.19	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074895</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:23 pm	12/2/20 12:39 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS 35000 kg Scale In  
TARE 13580 kg Scale Out  
NET 21420 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.42	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074899</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:32 pm	12/2/20 12:49 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	34650 kg	Scale In
TARE	13430 kg	Scale Out
NET	21220 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.22	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074901</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:35 pm	12/2/20 12:52 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	37980 kg	Scale In
TARE	15030 kg	Scale Out
NET	22950 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.95	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074903</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:39 pm	12/2/20 12:57 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	35880 kg	Scale In
TARE	13670 kg	Scale Out
NET	22210 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.21	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074905</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:43 pm	12/2/20 1:00 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10-RON</b>			EAST END	

GROSS	36010 kg	Scale In
TARE	13990 kg	Scale Out
NET	22020 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.02	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074907</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:48 pm	12/2/20 1:05 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	32660 kg	Scale In
TARE	13340 kg	Scale Out
NET	19320 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.32	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA LANDFILL**

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074909</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:50 pm	12/2/20 1:09 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	30560 kg	Scale In
TARE	13670 kg	Scale Out
NET	16890 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.89	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074912</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 12:58 pm	12/2/20 1:15 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	33210 kg	Scale In
TARE	13420 kg	Scale Out
NET	19790 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.79	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074913</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:02 pm	12/2/20 1:16 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>168-JOHN</b>			EAST END	

GROSS	36930 kg	Scale In
TARE	15030 kg	Scale Out
NET	21900 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.90	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074917</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:07 pm	12/2/20 1:25 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	35570 kg	Scale In
TARE	13650 kg	Scale Out
NET	21920 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.92	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074919</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:12 pm	12/2/20 1:29 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10-RON</b>			EAST END	

GROSS	34120 kg	Scale In
TARE	14010 kg	Scale Out
NET	20110 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.11	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074920</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:16 pm	12/2/20 1:32 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	35970 kg	Scale In
TARE	13440 kg	Scale Out
NET	22530 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.53	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074921</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:19 pm	12/2/20 1:34 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEPH</b>			EAST END	

GROSS	35600 kg	Scale In
TARE	13650 kg	Scale Out
NET	21950 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.95	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
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**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074924</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:25 pm	12/2/20 1:43 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	35970 kg	Scale In
TARE	13420 kg	Scale Out
NET	22550 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.55	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074925</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:28 pm	12/2/20 1:44 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>168-JOHN</b>			EAST END	

GROSS	40420 kg	Scale In
TARE	15040 kg	Scale Out
NET	25380 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
25.38	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074929</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:37 pm	12/2/20 1:55 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	36290 kg	Scale In
TARE	13670 kg	Scale Out
NET	22620 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.62	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074932</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:40 pm	12/2/20 2:00 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	34270 kg	Scale In
TARE	14010 kg	Scale Out
NET	20260 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.26	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074934</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:46 pm	12/2/20 2:03 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS 34590 kg Scale In  
TARE 13450 kg Scale Out  
NET 21140 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.14	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074936</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:51 pm	12/2/20 2:08 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS 33000 kg Scale In  
TARE 13680 kg Scale Out  
NET 19320 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.32	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074938</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 1:55 pm	12/2/20 2:13 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AIME</b>			EAST END	

GROSS	32500 kg	Scale In
TARE	13430 kg	Scale Out
NET	19070 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.07	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074940</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:00 pm	12/2/20 2:14 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	35990 kg	Scale In
TARE	15080 kg	Scale Out
NET	20910 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.91	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074947</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:09 pm	12/2/20 2:28 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	34010 kg	Scale In
TARE	13680 kg	Scale Out
NET	20330 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.33	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074949</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:12 pm	12/2/20 2:33 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	33050 kg	Scale In
TARE	14010 kg	Scale Out
NET	19040 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074950</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:15 pm	12/2/20 2:34 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS 32340 kg Scale In  
TARE 13450 kg Scale Out  
NET 18890 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.89	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074952</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:19 pm	12/2/20 2:37 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS 34900 kg Scale In  
TARE 13590 kg Scale Out  
NET 21310 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.31	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074954</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:26 pm	12/2/20 2:43 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AMIE</b>			EAST END	

GROSS 29930 kg Scale In  
TARE 13450 kg Scale Out  
NET 16480 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.48	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074956</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:29 pm	12/2/20 2:45 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS 35920 kg Scale In  
TARE 15080 kg Scale Out  
NET 20840 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.84	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074960</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:40 pm	12/2/20 2:58 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	34730 kg	Scale In
TARE	13690 kg	Scale Out
NET	21040 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074965</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:43 pm	12/2/20 3:06 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	32270 kg	Scale In
TARE	14030 kg	Scale Out
NET	18240 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.24	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074966</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:50 pm	12/2/20 3:08 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	33490 kg	Scale In
TARE	13490 kg	Scale Out
NET	20000 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.00	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074967</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:51 pm	12/2/20 3:12 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS	33610 kg	Scale In
TARE	13610 kg	Scale Out
NET	20000 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.00	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074970</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:56 pm	12/2/20 3:16 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AMIE</b>			EAST END	

GROSS	31630 kg	Scale In
TARE	13350 kg	Scale Out
NET	18280 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.28	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074972</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 2:59 pm	12/2/20 3:19 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	35700 kg	Scale In
TARE	15110 kg	Scale Out
NET	20590 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.59	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074977</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:09 pm	12/2/20 3:27 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS 32840 kg Scale In  
TARE 13710 kg Scale Out  
NET 19130 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.13	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074980</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:17 pm	12/2/20 3:35 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS 32360 kg Scale In  
TARE 13920 kg Scale Out  
NET 18440 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.44	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074982</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:22 pm	12/2/20 3:40 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	33580 kg	Scale In
TARE	13510 kg	Scale Out
NET	20070 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.07	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074985</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:25 pm	12/2/20 3:43 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS	34830 kg	Scale In
TARE	13730 kg	Scale Out
NET	21100 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.10	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074987</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:27 pm	12/2/20 3:47 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AIME</b>			EAST END	

GROSS	32380 kg	Scale In
TARE	13360 kg	Scale Out
NET	19020 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.02	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074988</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:30 pm	12/2/20 3:48 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS	37910 kg	Scale In
TARE	15140 kg	Scale Out
NET	22770 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.77	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1074994</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:39 pm	12/2/20 3:57 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	35250 kg	Scale In
TARE	13720 kg	Scale Out
NET	21530 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.53	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075000</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:47 pm	12/2/20 4:06 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	34240 kg	Scale In
TARE	14030 kg	Scale Out
NET	20210 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.21	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





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OTTAWA LANDFILL**

3354 NAVAN ROAD  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075001</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:53 pm	12/2/20 4:09 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	35270 kg	Manual In
TARE	13550 kg	Scale Out
NET	21720 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.72	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075004</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 3:57 pm	12/2/20 4:15 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS	35420 kg	Scale In
TARE	13750 kg	Scale Out
NET	21670 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.67	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075007</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 4:01 pm	12/2/20 4:20 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AIME</b>			EAST END	

GROSS 33470 kg Scale In  
TARE 13390 kg Scale Out  
NET 20080 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.08	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075011</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 4:05 pm	12/2/20 4:23 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>168 JOHN</b>			EAST END	

GROSS 39560 kg Scale In  
TARE 15300 kg Scale Out  
NET 24260 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
24.26	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075012</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 4:13 pm	12/2/20 4:31 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	35960 kg	Scale In
TARE	13770 kg	Scale Out
NET	22190 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.19	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075014</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 4:20 pm	12/2/20 4:38 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	31940 kg	Scale In
TARE	14050 kg	Scale Out
NET	17890 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.89	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075015</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
12/2/20 4:22 pm	12/2/20 4:40 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	33170 kg	Scale In
TARE	13540 kg	Scale Out
NET	19630 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.63	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075019</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 7:10 am	12/3/20 7:26 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	31620 kg	Scale In
TARE	13660 kg	Scale Out
NET	17960 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.96	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075022</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 7:17 am	12/3/20 7:33 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS 32150 kg Manual In  
TARE 13660 kg Scale Out  
NET 18490 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.49	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA LANDFILL**

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075020</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 7:25 am	12/3/20 7:28 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEPH</b>			EAST END	

GROSS 33180 kg Manual In  
TARE 13880 kg Scale Out  
NET 19300 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.30	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA LANDFILL**

3354 NAVAN ROAD  
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(613) 824-7289

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075025</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 7:38 am	12/3/20 7:56 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	34870 kg	Scale In
TARE	13660 kg	Scale Out
NET	21210 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.21	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075027</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 7:42 am	12/3/20 7:59 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEPH</b>			EAST END	

GROSS	35400 kg	Scale In
TARE	13830 kg	Scale Out
NET	21570 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.57	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075028</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 7:45 am	12/3/20 8:02 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	33190 kg	Scale In
TARE	13590 kg	Scale Out
NET	19600 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.60	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075043</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 8:12 am	12/3/20 8:30 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	33170 kg	Scale In
TARE	13560 kg	Scale Out
NET	19610 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.61	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075045</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 8:14 am	12/3/20 8:33 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	33550 kg	Scale In
TARE	13850 kg	Scale Out
NET	19700 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.70	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075048</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 8:21 am	12/3/20 8:37 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	33150 kg	Scale In
TARE	13560 kg	Scale Out
NET	19590 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.59	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075058</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 8:51 am	12/3/20 9:09 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	31120 kg	Scale In
TARE	13460 kg	Scale Out
NET	17660 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.66	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
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(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075081</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 9:42 am	12/3/20 9:59 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	35540 kg	Scale In
TARE	13640 kg	Scale Out
NET	21900 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.90	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075087</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/3/20 9:59 am	12/3/20 10:15 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	31210 kg	Scale In
TARE	13530 kg	Scale Out
NET	17680 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.68	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075894</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 7:12 am	12/9/20 7:31 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	29280 kg	Scale In
TARE	14460 kg	Scale Out
NET	14820 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
14.82	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075895</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 7:14 am	12/9/20 7:32 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS 28840 kg Scale In  
TARE 14080 kg Scale Out  
NET 14760 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
14.76	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075898</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 7:17 am	12/9/20 7:35 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS 30830 kg Scale In  
TARE 14020 kg Scale Out  
NET 16810 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.81	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075899</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 7:21 am	12/9/20 7:39 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	27620 kg	Scale In
TARE	14490 kg	Scale Out
NET	13130 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
13.13	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075901</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 7:27 am	12/9/20 7:47 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10-27-REGAN</b>			EAST END	

GROSS	31430 kg	Scale In
TARE	13350 kg	Scale Out
NET	18080 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.08	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075907</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 7:48 am	12/9/20 8:03 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	25930 kg	Scale In
TARE	14560 kg	Scale Out
NET	11370 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
11.37	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075909</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 7:49 am	12/9/20 8:06 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	29450 kg	Scale In
TARE	14180 kg	Scale Out
NET	15270 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.27	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075910</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 7:52 am	12/9/20 8:09 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	29990 kg	Scale In
TARE	14040 kg	Scale Out
NET	15950 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.95	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075912</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 7:55 am	12/9/20 8:15 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	30590 kg	Scale In
TARE	14640 kg	Scale Out
NET	15950 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.95	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075916</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 8:04 am	12/9/20 8:23 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>LACROIX-REGGAN</b>			EAST END	

GROSS	28820 kg	Scale In
TARE	13290 kg	Scale Out
NET	15530 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.53	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075919</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 8:14 am	12/9/20 8:35 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10-RON</b>			EAST END	

GROSS	30420 kg	Scale In
TARE	14570 kg	Scale Out
NET	15850 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.85	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075921</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 8:21 am	12/9/20 8:38 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	29830 kg	Scale In
TARE	14360 kg	Scale Out
NET	15470 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.47	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075925</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 8:27 am	12/9/20 8:45 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	29170 kg	Scale In
TARE	13790 kg	Scale Out
NET	15380 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.38	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075927</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 8:28 am	12/9/20 8:50 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612 ANDRE</b>			EAST END	

GROSS	29580 kg	Scale In
TARE	14040 kg	Scale Out
NET	15540 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.54	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075931</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 8:35 am	12/9/20 9:00 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	29920 kg	Scale In
TARE	14900 kg	Scale Out
NET	15020 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.02	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075937</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 8:45 am	12/9/20 9:10 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>LACROIX- REGAN</b>			EAST END	

GROSS	29330 kg	Scale In
TARE	13360 kg	Scale Out
NET	15970 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.97	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075939</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 8:55 am	12/9/20 9:13 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	30640 kg	Scale In
TARE	14570 kg	Scale Out
NET	16070 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.07	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075940</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 9:07 am	12/9/20 9:23 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	27520 kg	Scale In
TARE	14150 kg	Scale Out
NET	13370 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
13.37	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075945</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 9:13 am	12/9/20 9:35 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-andre</b>			EAST END	

GROSS	28770 kg	Scale In
TARE	14040 kg	Scale Out
NET	14730 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
14.73	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075946</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 9:16 am	12/9/20 9:36 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	29420 kg	Scale In
TARE	15620 kg	Scale Out
NET	13800 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
13.80	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075949</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 9:24 am	12/9/20 9:44 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>LACROIX-REGAN</b>			EAST END	

GROSS	31760 kg	Scale In
TARE	13260 kg	Scale Out
NET	18500 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.50	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075952</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 9:30 am	12/9/20 9:51 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	30400 kg	Scale In
TARE	14660 kg	Scale Out
NET	15740 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.74	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075954</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 9:38 am	12/9/20 9:55 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	27100 kg	Scale In
TARE	13930 kg	Scale Out
NET	13170 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
13.17	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075964</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 9:49 am	12/9/20 10:12 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	30030 kg	Scale In
TARE	13990 kg	Scale Out
NET	16040 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075965</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 9:53 am	12/9/20 10:13 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	29150 kg	Scale In
TARE	13980 kg	Scale Out
NET	15170 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.17	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075966</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 9:56 am	12/9/20 10:15 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS 27930 kg Scale In  
TARE 14130 kg Scale Out  
NET 13800 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
13.80	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075967</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:00 am	12/9/20 10:17 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>10-27 REGAN</b>			EAST END	

GROSS 31480 kg Scale In  
TARE 13330 kg Scale Out  
NET 18150 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.15	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075973</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:09 am	12/9/20 10:27 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	29190 kg	Scale In
TARE	14690 kg	Scale Out
NET	14500 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
14.50	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075976</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:14 am	12/9/20 10:31 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AIME</b>			EAST END	

GROSS	32130 kg	Scale In
TARE	14530 kg	Scale Out
NET	17600 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.60	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075981</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:27 am	12/9/20 10:40 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	32770 kg	Scale In
TARE	13980 kg	Scale Out
NET	18790 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.79	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075983</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:29 am	12/9/20 10:48 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	30100 kg	Scale In
TARE	13390 kg	Scale Out
NET	16710 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.71	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075986</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:32 am	12/9/20 10:52 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	33490 kg	Scale In
TARE	14950 kg	Scale Out
NET	18540 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.54	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075988</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:35 am	12/9/20 10:55 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>1027- REGAN</b>			EAST END	

GROSS	33260 kg	Scale In
TARE	13370 kg	Scale Out
NET	19890 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.89	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075993</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:43 am	12/9/20 11:00 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	34700 kg	Scale In
TARE	14950 kg	Scale Out
NET	19750 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.75	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075994</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:46 am	12/9/20 11:03 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	30630 kg	Scale In
TARE	14030 kg	Scale Out
NET	16600 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.60	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075995</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 10:56 am	12/9/20 11:12 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	35180 kg	Scale In
TARE	14050 kg	Scale Out
NET	21130 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.13	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1075999</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:03 am	12/9/20 11:23 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	33300 kg	Scale In
TARE	13500 kg	Scale Out
NET	19800 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.80	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076000</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:09 am	12/9/20 11:25 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS 36630 kg Scale In  
TARE 14280 kg Scale Out  
NET 22350 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.35	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076002</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:13 am	12/9/20 11:28 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>1027- REGAN</b>			EAST END	

GROSS 35720 kg Scale In  
TARE 13320 kg Scale Out  
NET 22400 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.40	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076004</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:17 am	12/9/20 11:33 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- larry</b>			EAST END	

GROSS	31700 kg	Scale In
TARE	14580 kg	Scale Out
NET	17120 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.12	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076005</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:20 am	12/9/20 11:37 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AIME</b>			EAST END	

GROSS	32320 kg	Scale In
TARE	14280 kg	Scale Out
NET	18040 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
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OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076013</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:28 am	12/9/20 11:47 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	33490 kg	Scale In
TARE	13960 kg	Scale Out
NET	19530 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.53	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076015</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:37 am	12/9/20 11:55 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	31390 kg	Scale In
TARE	13560 kg	Scale Out
NET	17830 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.83	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076016</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:41 am	12/9/20 11:58 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	33330 kg	Scale In
TARE	14120 kg	Scale Out
NET	19210 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.21	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076020</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:45 am	12/9/20 12:04 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10-27- REGAN</b>			EAST END	

GROSS	31060 kg	Scale In
TARE	13180 kg	Scale Out
NET	17880 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.88	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076021</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:49 am	12/9/20 12:05 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS 32310 kg Scale In  
TARE 14690 kg Scale Out  
NET 17620 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.62	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076022</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 11:52 am	12/9/20 12:10 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS 31070 kg Scale In  
TARE 14800 kg Scale Out  
NET 16270 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.27	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076027</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 12:04 pm	12/9/20 12:22 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	30870 kg	Scale In
TARE	14000 kg	Scale Out
NET	16870 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.87	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076032</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 12:11 pm	12/9/20 12:29 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	31370 kg	Manual In
TARE	13660 kg	Scale Out
NET	17710 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.71	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076037</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 12:21 pm	12/9/20 12:36 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10-27 REGAN</b>			EAST END	

GROSS	32490 kg	Scale In
TARE	13300 kg	Scale Out
NET	19190 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.19	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076040</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 12:24 pm	12/9/20 12:45 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	30980 kg	Scale In
TARE	14660 kg	Scale Out
NET	16320 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.32	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076035</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 12:25 pm	12/9/20 12:33 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	34330 kg	Manual In
TARE	14760 kg	Scale Out
NET	19570 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.57	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076043</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 12:32 pm	12/9/20 12:51 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	33160 kg	Scale In
TARE	14020 kg	Scale Out
NET	19140 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.14	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076046</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 12:39 pm	12/9/20 12:59 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	33330 kg	Scale In
TARE	14020 kg	Scale Out
NET	19310 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.31	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076048</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 12:46 pm	12/9/20 1:04 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	29560 kg	Scale In
TARE	13550 kg	Scale Out
NET	16010 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.01	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076049</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 12:49 pm	12/9/20 1:08 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	34390 kg	Scale In
TARE	14130 kg	Scale Out
NET	20260 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.26	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076056</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:03 pm	12/9/20 1:23 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- larry</b>			EAST END	

GROSS	30930 kg	Scale In
TARE	14550 kg	Scale Out
NET	16380 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.38	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076059</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:11 pm	12/9/20 1:31 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	31580 kg	Scale In
TARE	13950 kg	Scale Out
NET	17630 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.63	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076063</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:14 pm	12/9/20 1:35 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	32230 kg	Scale In
TARE	14020 kg	Scale Out
NET	18210 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.21	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076066</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:21 pm	12/9/20 1:38 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	29590 kg	Scale In
TARE	13380 kg	Scale Out
NET	16210 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.21	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076068</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:24 pm	12/9/20 1:42 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	32170 kg	Scale In
TARE	14280 kg	Scale Out
NET	17890 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.89	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076073</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:39 pm	12/9/20 1:57 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	30090 kg	Scale In
TARE	14440 kg	Scale Out
NET	15650 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.65	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076075</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:45 pm	12/9/20 2:01 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	30380 kg	Scale In
TARE	13850 kg	Scale Out
NET	16530 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.53	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076077</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:50 pm	12/9/20 2:08 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	32330 kg	Scale In
TARE	14570 kg	Scale Out
NET	17760 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.76	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076078</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:54 pm	12/9/20 2:10 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>1027- REGAN</b>			EAST END	

GROSS	32070 kg	Scale In
TARE	13290 kg	Scale Out
NET	18780 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.78	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076079</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 1:57 pm	12/9/20 2:16 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	31180 kg	Scale In
TARE	13380 kg	Scale Out
NET	17800 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.80	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076081</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:00 pm	12/9/20 2:20 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	32510 kg	Scale In
TARE	14040 kg	Scale Out
NET	18470 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.47	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076084</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:14 pm	12/9/20 2:30 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	32080 kg	Scale In
TARE	14400 kg	Scale Out
NET	17680 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.68	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076085</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:16 pm	12/9/20 2:34 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	30950 kg	Scale In
TARE	13700 kg	Scale Out
NET	17250 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.25	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076088</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:23 pm	12/9/20 2:43 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	32330 kg	Scale In
TARE	13990 kg	Scale Out
NET	18340 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.34	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076089</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:26 pm	12/9/20 2:45 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>1027- RAGAN</b>			EAST END	

GROSS	32310 kg	Scale In
TARE	13300 kg	Scale Out
NET	19010 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.01	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076092</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:33 pm	12/9/20 2:53 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS 30580 kg Scale In  
TARE 13650 kg Scale Out  
NET 16930 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.93	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076096</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:39 pm	12/9/20 2:59 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS 30810 kg Scale In  
TARE 13820 kg Scale Out  
NET 16990 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.99	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076098</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:46 pm	12/9/20 3:03 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	30780 kg	Scale In
TARE	14290 kg	Scale Out
NET	16490 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.49	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076102</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:49 pm	12/9/20 3:07 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	26720 kg	Scale In
TARE	13680 kg	Scale Out
NET	13040 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
13.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
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(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076105</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/9/20 2:59 pm	12/9/20 3:16 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	31700 kg	Scale In
TARE	14300 kg	Scale Out
NET	17400 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.40	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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(613) 824-7289

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076147</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 7:11 am	12/10/20 7:34 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	35710 kg	Manual In
TARE	13830 kg	Scale Out
NET	21880 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.88	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076150</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 7:15 am	12/10/20 7:37 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	38420 kg	Scale In
TARE	13740 kg	Scale Out
NET	24680 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
24.68	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076151</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 7:17 am	12/10/20 7:39 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	38320 kg	Scale In
TARE	13600 kg	Scale Out
NET	24720 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
24.72	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076153</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 7:22 am	12/10/20 7:42 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	38910 kg	Scale In
TARE	12850 kg	Scale Out
NET	26060 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
26.06	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076154</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 7:26 am	12/10/20 7:44 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	41730 kg	Scale In
TARE	14070 kg	Scale Out
NET	27660 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
27.66	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076161</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 7:47 am	12/10/20 8:05 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	36330 kg	Scale In
TARE	13680 kg	Scale Out
NET	22650 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.65	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076162</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 7:50 am	12/10/20 8:09 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-aime</b>			EAST END	

GROSS	34450 kg	Scale In
TARE	13810 kg	Scale Out
NET	20640 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.64	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076163</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 7:54 am	12/10/20 8:11 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-mike</b>			EAST END	

GROSS	32630 kg	Scale In
TARE	13760 kg	Scale Out
NET	18870 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.87	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076168</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 7:58 am	12/10/20 8:18 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	32820 kg	Scale In
TARE	13650 kg	Scale Out
NET	19170 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.17	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076171</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 8:08 am	12/10/20 8:24 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>0420GILBERT</b>			EAST END	

GROSS	33880 kg	Scale In
TARE	12840 kg	Scale Out
NET	21040 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076172</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 8:12 am	12/10/20 8:29 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	35610 kg	Scale In
TARE	13960 kg	Scale Out
NET	21650 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.65	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076176</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 8:23 am	12/10/20 8:38 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	32190 kg	Scale In
TARE	13660 kg	Scale Out
NET	18530 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.53	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076180</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 8:28 am	12/10/20 8:47 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	33690 kg	Scale In
TARE	13910 kg	Scale Out
NET	19780 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.78	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076183</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 8:29 am	12/10/20 8:50 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	32500 kg	Scale In
TARE	13760 kg	Scale Out
NET	18740 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.74	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076185</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 8:37 am	12/10/20 8:53 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	35130 kg	Scale In
TARE	13640 kg	Scale Out
NET	21490 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.49	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076188</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 8:40 am	12/10/20 8:59 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	31900 kg	Scale In
TARE	12840 kg	Scale Out
NET	19060 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.06	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076193</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 8:45 am	12/10/20 9:04 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	34960 kg	Scale In
TARE	14070 kg	Scale Out
NET	20890 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.89	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076196</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 8:53 am	12/10/20 9:12 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	32620 kg	Scale In
TARE	13580 kg	Scale Out
NET	19040 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076198</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:03 am	12/10/20 9:19 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	35210 kg	Scale In
TARE	14000 kg	Scale Out
NET	21210 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.21	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076201</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:15 am	12/10/20 9:32 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	34900 kg	Scale In
TARE	13800 kg	Scale Out
NET	21100 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.10	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076202</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:18 am	12/10/20 9:34 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	31720 kg	Scale In
TARE	13630 kg	Scale Out
NET	18090 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.09	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076206</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:19 am	12/10/20 9:38 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	32480 kg	Scale In
TARE	12870 kg	Scale Out
NET	19610 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.61	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076209</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:21 am	12/10/20 9:42 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	35640 kg	Scale In
TARE	14020 kg	Scale Out
NET	21620 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.62	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076212</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:27 am	12/10/20 9:45 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	34730 kg	Scale In
TARE	13660 kg	Scale Out
NET	21070 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.07	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076217</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:36 am	12/10/20 9:53 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	35230 kg	Scale In
TARE	14000 kg	Scale Out
NET	21230 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.23	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076220</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:50 am	12/10/20 10:06 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	33560 kg	Scale In
TARE	13800 kg	Scale Out
NET	19760 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.76	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076221</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:53 am	12/10/20 10:08 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	33700 kg	Scale In
TARE	13630 kg	Scale Out
NET	20070 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.07	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076225</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:56 am	12/10/20 10:17 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	31660 kg	Scale In
TARE	12780 kg	Scale Out
NET	18880 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.88	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076226</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 9:59 am	12/10/20 10:18 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	34330 kg	Scale In
TARE	14070 kg	Scale Out
NET	20260 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.26	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076229</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:03 am	12/10/20 10:22 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01- STEPHANE</b>			EAST END	

GROSS	34170 kg	Scale In
TARE	13660 kg	Scale Out
NET	20510 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.51	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076234</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:11 am	12/10/20 10:30 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	33160 kg	Scale In
TARE	14010 kg	Scale Out
NET	19150 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.15	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076239</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:22 am	12/10/20 10:39 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	35540 kg	Scale In
TARE	13800 kg	Scale Out
NET	21740 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.74	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076240</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:26 am	12/10/20 10:44 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	32240 kg	Scale In
TARE	13650 kg	Scale Out
NET	18590 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.59	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076242</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:32 am	12/10/20 10:48 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS 33580 kg Scale In  
TARE 12850 kg Scale Out  
NET 20730 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.73	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076245</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:35 am	12/10/20 10:56 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS 34280 kg Scale In  
TARE 14080 kg Scale Out  
NET 20200 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.20	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076246</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:40 am	12/10/20 10:57 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEPHAN</b>			EAST END	

GROSS	35000 kg	Scale In
TARE	13670 kg	Scale Out
NET	21330 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.33	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076250</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:44 am	12/10/20 11:01 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	34010 kg	Scale In
TARE	14030 kg	Scale Out
NET	19980 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.98	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076256</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:55 am	12/10/20 11:16 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	38520 kg	Scale In
TARE	13810 kg	Scale Out
NET	24710 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
24.71	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076260</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 10:59 am	12/10/20 11:21 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	35910 kg	Scale In
TARE	13630 kg	Scale Out
NET	22280 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.28	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076264</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:03 am	12/10/20 11:27 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042*- GILBERT</b>			EAST END	

GROSS 32070 kg Scale In  
TARE 12810 kg Scale Out  
NET 19260 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.26	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076266</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:11 am	12/10/20 11:29 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612 ANDRE</b>			EAST END	

GROSS 35950 kg Scale In  
TARE 14060 kg Scale Out  
NET 21890 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.89	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076267</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:18 am	12/10/20 11:34 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPHAN</b>			EAST END	

GROSS	32190 kg	Scale In
TARE	13650 kg	Scale Out
NET	18540 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.54	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076273</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:19 am	12/10/20 11:40 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	33920 kg	Scale In
TARE	14040 kg	Scale Out
NET	19880 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.88	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076277</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:33 am	12/10/20 11:49 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS 34590 kg Scale In  
TARE 13800 kg Scale Out  
NET 20790 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.79	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076278</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:38 am	12/10/20 11:54 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS 31770 kg Scale In  
TARE 13630 kg Scale Out  
NET 18140 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.14	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076279</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:43 am	12/10/20 11:59 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	32680 kg	Scale In
TARE	12840 kg	Scale Out
NET	19840 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.84	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076283</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:46 am	12/10/20 12:05 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	33590 kg	Scale In
TARE	13950 kg	Scale Out
NET	19640 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.64	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076286</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:49 am	12/10/20 12:09 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPHAN</b>			EAST END	

GROSS	33940 kg	Scale In
TARE	13680 kg	Scale Out
NET	20260 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.26	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076289</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 11:56 am	12/10/20 12:13 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	31340 kg	Scale In
TARE	14020 kg	Scale Out
NET	17320 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.32	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076293</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 12:06 pm	12/10/20 12:22 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	37540 kg	Scale In
TARE	13830 kg	Scale Out
NET	23710 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
23.71	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076295</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 12:09 pm	12/10/20 12:28 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	34160 kg	Scale In
TARE	13650 kg	Scale Out
NET	20510 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.51	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076297</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 12:17 pm	12/10/20 12:37 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	35160 kg	Scale In
TARE	12850 kg	Scale Out
NET	22310 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.31	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076301</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 12:20 pm	12/10/20 12:44 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	36330 kg	Scale In
TARE	14060 kg	Scale Out
NET	22270 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.27	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076303</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 12:27 pm	12/10/20 12:46 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01--STEPHAN</b>			EAST END	

GROSS	33920 kg	Scale In
TARE	13680 kg	Scale Out
NET	20240 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.24	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076305</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 12:31 pm	12/10/20 12:50 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	31340 kg	Scale In
TARE	14050 kg	Scale Out
NET	17290 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.29	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076309</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 12:43 pm	12/10/20 1:01 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	33070 kg	Scale In
TARE	13860 kg	Scale Out
NET	19210 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.21	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076330</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 1:36 pm	12/10/20 1:52 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	34950 kg	Scale In
TARE	13640 kg	Scale Out
NET	21310 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.31	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076339</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 1:49 pm	12/10/20 2:13 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	37430 kg	Scale In
TARE	12780 kg	Scale Out
NET	24650 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
24.65	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076341</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 1:53 pm	12/10/20 2:16 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	36880 kg	Scale In
TARE	14050 kg	Scale Out
NET	22830 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.83	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076349</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:09 pm	12/10/20 2:26 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01- STEPHAN</b>			EAST END	

GROSS	36050 kg	Scale In
TARE	13570 kg	Scale Out
NET	22480 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.48	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076350</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:10 pm	12/10/20 2:28 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	35220 kg	Scale In
TARE	13440 kg	Scale Out
NET	21780 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.78	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076353</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:13 pm	12/10/20 2:32 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	33740 kg	Scale In
TARE	13640 kg	Scale Out
NET	20100 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.10	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076359</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:23 pm	12/10/20 2:44 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	34790 kg	Scale In
TARE	13820 kg	Scale Out
NET	20970 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.97	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076364</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:28 pm	12/10/20 2:51 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	30310 kg	Scale In
TARE	12770 kg	Scale Out
NET	17540 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.54	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076367</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:31 pm	12/10/20 2:54 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	33240 kg	Scale In
TARE	14050 kg	Scale Out
NET	19190 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.19	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076369</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:42 pm	12/10/20 3:00 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>1 STEPHAN</b>			EAST END	

GROSS	35290 kg	Scale In
TARE	13660 kg	Scale Out
NET	21630 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.63	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076371</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:45 pm	12/10/20 3:05 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	33420 kg	Scale In
TARE	13360 kg	Scale Out
NET	20060 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.06	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
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010490 - CAIVAN (Renaud) INC  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076374</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:49 pm	12/10/20 3:09 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	33910 kg	Scale In
TARE	13640 kg	Scale Out
NET	20270 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.27	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076378</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 2:59 pm	12/10/20 3:19 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	34890 kg	Scale In
TARE	13810 kg	Scale Out
NET	21080 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.08	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076381</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 3:11 pm	12/10/20 3:30 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	34660 kg	Scale In
TARE	12860 kg	Scale Out
NET	21800 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.80	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076383</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 3:15 pm	12/10/20 3:33 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612 ANDRE</b>			EAST END	

GROSS	36140 kg	Scale In
TARE	14060 kg	Scale Out
NET	22080 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.08	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076385</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 3:23 pm	12/10/20 3:40 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>1- STEPHAN</b>			EAST END	

GROSS	34830 kg	Scale In
TARE	13680 kg	Scale Out
NET	21150 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.15	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076386</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 3:24 pm	12/10/20 3:43 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	32290 kg	Scale In
TARE	13430 kg	Scale Out
NET	18860 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.86	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076388</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 3:27 pm	12/10/20 3:49 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	34620 kg	Scale In
TARE	13630 kg	Scale Out
NET	20990 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.99	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076393</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 3:35 pm	12/10/20 3:54 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	32450 kg	Scale In
TARE	13840 kg	Scale Out
NET	18610 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.61	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076398</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 3:49 pm	12/10/20 4:03 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	33470 kg	Scale In
TARE	12870 kg	Scale Out
NET	20600 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.60	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076400</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 3:51 pm	12/10/20 4:07 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>612 ANDRE</b>			EAST END	

GROSS	36400 kg	Scale In
TARE	14070 kg	Scale Out
NET	22330 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.33	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076402</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 3:56 pm	12/10/20 4:10 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>01- STEPHAN</b>			EAST END	

GROSS	35800 kg	Scale In
TARE	13690 kg	Scale Out
NET	22110 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.11	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076405</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 4:00 pm	12/10/20 4:17 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	31370 kg	Scale In
TARE	13440 kg	Scale Out
NET	17930 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.93	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076409</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 4:05 pm	12/10/20 4:25 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	31520 kg	Scale In
TARE	13650 kg	Scale Out
NET	17870 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.87	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076412</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/10/20 4:12 pm	12/10/20 4:28 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	34210 kg	Scale In
TARE	13850 kg	Scale Out
NET	20360 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.36	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076422</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 7:13 am	12/11/20 7:32 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	33640 kg	Scale In
TARE	13700 kg	Scale Out
NET	19940 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.94	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076424</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 7:14 am	12/11/20 7:36 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	34070 kg	Scale In
TARE	13510 kg	Scale Out
NET	20560 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.56	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076425</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 7:16 am	12/11/20 7:37 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPHAN</b>			EAST END	

GROSS 36340 kg Scale In  
TARE 13710 kg Scale Out  
NET 22630 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.63	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076427</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 7:19 am	12/11/20 7:39 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS 36130 kg Scale In  
TARE 14090 kg Scale Out  
NET 22040 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076436</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 7:49 am	12/11/20 8:04 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS 33360 kg Scale In  
TARE 13700 kg Scale Out  
NET 19660 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.66	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076437</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 7:51 am	12/11/20 8:08 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS 32640 kg Scale In  
TARE 13500 kg Scale Out  
NET 19140 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.14	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076440</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 7:54 am	12/11/20 8:13 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPHAN</b>			EAST END	

GROSS	35590 kg	Scale In
TARE	13660 kg	Scale Out
NET	21930 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.93	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076441</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 7:57 am	12/11/20 8:16 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	35750 kg	Scale In
TARE	14100 kg	Scale Out
NET	21650 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.65	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076455</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 8:20 am	12/11/20 8:42 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	34470 kg	Scale In
TARE	13650 kg	Scale Out
NET	20820 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.82	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076457</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 8:24 am	12/11/20 8:45 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	33240 kg	Scale In
TARE	13500 kg	Scale Out
NET	19740 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.74	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076459</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 8:31 am	12/11/20 8:48 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPHAN</b>			EAST END	

GROSS	34950 kg	Scale In
TARE	13660 kg	Scale Out
NET	21290 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.29	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076461</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 8:33 am	12/11/20 8:52 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	34710 kg	Scale In
TARE	14090 kg	Scale Out
NET	20620 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.62	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076466</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 8:58 am	12/11/20 9:13 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	33030 kg	Scale In
TARE	13680 kg	Scale Out
NET	19350 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.35	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076468</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 9:00 am	12/11/20 9:17 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	34560 kg	Scale In
TARE	13500 kg	Scale Out
NET	21060 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.06	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076470</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 9:03 am	12/11/20 9:23 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPHAN</b>			EAST END	

GROSS	32920 kg	Scale In
TARE	13730 kg	Scale Out
NET	19190 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.19	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076471</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 9:05 am	12/11/20 9:26 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	33910 kg	Scale In
TARE	13640 kg	Scale Out
NET	20270 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.27	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076472</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 9:10 am	12/11/20 9:29 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	34330 kg	Scale In
TARE	14110 kg	Scale Out
NET	20220 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.22	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076478</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 9:31 am	12/11/20 9:49 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9-LARRY</b>			EAST END	

GROSS	31030 kg	Scale In
TARE	13690 kg	Scale Out
NET	17340 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.34	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

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Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076479</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 9:34 am	12/11/20 9:52 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	32100 kg	Scale In
TARE	13440 kg	Scale Out
NET	18660 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.66	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076483</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 9:38 am	12/11/20 9:56 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01-STEPH</b>			EAST END	

GROSS	32480 kg	Scale In
TARE	13740 kg	Scale Out
NET	18740 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.74	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076485</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 9:43 am	12/11/20 10:00 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11-MIKE</b>			EAST END	

GROSS	32620 kg	Scale In
TARE	13630 kg	Scale Out
NET	18990 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.99	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076490</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 9:47 am	12/11/20 10:07 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612-ANDRE</b>			EAST END	

GROSS	34950 kg	Scale In
TARE	14120 kg	Scale Out
NET	20830 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.83	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076496</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:07 am	12/11/20 10:23 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	31190 kg	Scale In
TARE	13720 kg	Scale Out
NET	17470 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.47	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076498</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:09 am	12/11/20 10:27 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	31180 kg	Scale In
TARE	13580 kg	Scale Out
NET	17600 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.60	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076502</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:12 am	12/11/20 10:35 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>1-STEPHAN</b>			EAST END	

GROSS 33230 kg Scale In  
TARE 13770 kg Scale Out  
NET 19460 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.46	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076503</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:16 am	12/11/20 10:36 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS 32140 kg Scale In  
TARE 13700 kg Scale Out  
NET 18440 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.44	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076506</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:23 am	12/11/20 10:43 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	32670 kg	Scale In
TARE	14140 kg	Scale Out
NET	18530 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.53	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076509</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:38 am	12/11/20 10:59 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	33540 kg	Scale In
TARE	13760 kg	Scale Out
NET	19780 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.78	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076510</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:42 am	12/11/20 11:00 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	27140 kg	Scale In
TARE	13740 kg	Scale Out
NET	13400 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
13.40	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076513</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:51 am	12/11/20 11:09 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEPHAN</b>			EAST END	

GROSS	32450 kg	Scale In
TARE	13780 kg	Scale Out
NET	18670 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.67	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
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3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076515</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:54 am	12/11/20 11:11 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	32020 kg	Scale In
TARE	13770 kg	Scale Out
NET	18250 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.25	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

**REPRINT**

SITE	TICKET #		OPERATOR	
05	<b>1076518</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
12/11/20 10:59 am	12/11/20 11:17 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>612- ANDRE</b>			EAST END	

GROSS	33870 kg	Scale In
TARE	14150 kg	Scale Out
NET	19720 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.72	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073720</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 7:54 am	11/26/20 8:11 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01- STEPHAN</b>			EAST END	

GROSS	34280 kg	Scale In
TARE	13660 kg	Scale Out
NET	20620 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.62	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073726</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 8:02 am	11/26/20 8:19 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	30570 kg	Scale In
TARE	13130 kg	Scale Out
NET	17440 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.44	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073727</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 8:07 am	11/26/20 8:22 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS 32150 kg Scale In  
TARE 14070 kg Scale Out  
NET 18080 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.08	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073732</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 8:13 am	11/26/20 8:27 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS 27710 kg Scale In  
TARE 13380 kg Scale Out  
NET 14330 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
14.33	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073742</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 8:29 am	11/26/20 8:43 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01- STEPHAN</b>			EAST END	

GROSS	28300 kg	Scale In
TARE	13680 kg	Scale Out
NET	14620 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
14.62	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073746</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 8:34 am	11/26/20 8:49 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	29980 kg	Scale In
TARE	13140 kg	Scale Out
NET	16840 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.84	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073748</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 8:40 am	11/26/20 8:55 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS	31020 kg	Scale In
TARE	13970 kg	Scale Out
NET	17050 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.05	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073752</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 8:42 am	11/26/20 9:00 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	29700 kg	Scale In
TARE	13460 kg	Scale Out
NET	16240 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.24	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073762</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 8:58 am	11/26/20 9:10 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01- STEPHAN</b>			EAST END	

GROSS	31340 kg	Scale In
TARE	13660 kg	Scale Out
NET	17680 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.68	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073768</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 9:03 am	11/26/20 9:19 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	27860 kg	Scale In
TARE	13050 kg	Scale Out
NET	14810 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
14.81	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073770</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 9:08 am	11/26/20 9:21 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS	29740 kg	Scale In
TARE	13970 kg	Scale Out
NET	15770 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
15.77	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073776</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 9:17 am	11/26/20 9:30 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	31300 kg	Scale In
TARE	13470 kg	Scale Out
NET	17830 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.83	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073780</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 9:28 am	11/26/20 9:41 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>01 STEF</b>			EAST END	

GROSS	31980 kg	Scale In
TARE	13680 kg	Scale Out
NET	18300 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.30	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073785</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 9:34 am	11/26/20 9:49 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042 GILBERT</b>			EAST END	

GROSS	30220 kg	Scale In
TARE	13130 kg	Scale Out
NET	17090 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.09	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073889</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 2:01 pm	11/26/20 2:17 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	25500 kg	Scale In
TARE	13000 kg	Scale Out
NET	12500 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
12.50	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073891</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 2:08 pm	11/26/20 2:24 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>90 TERRY</b>			EAST END	

GROSS	31290 kg	Scale In
TARE	14200 kg	Scale Out
NET	17090 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.09	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073894</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 2:19 pm	11/26/20 2:34 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	28310 kg	Scale In
TARE	13460 kg	Scale Out
NET	14850 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
14.85	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073901</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 2:32 pm	11/26/20 2:48 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>10 RON</b>			EAST END	

GROSS	27940 kg	Scale In
TARE	13010 kg	Scale Out
NET	14930 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
14.93	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073903</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 2:38 pm	11/26/20 2:53 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>90 TERRY</b>			EAST END	

GROSS	32200 kg	Scale In
TARE	14210 kg	Scale Out
NET	17990 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.99	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1073907</b>		jcheckowy	
IN	OUT	TRUCK	CONT.	LICENCE
11/26/20 2:49 pm	11/26/20 3:06 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	30210 kg	Scale In
TARE	13500 kg	Scale Out
NET	16710 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
16.71	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074273</b>		EGIBSON	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 7:53 am	11/30/20 8:12 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS 34640 kg Scale In  
TARE 13280 kg Scale Out  
NET 21360 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.36	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074275</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 7:59 am	11/30/20 8:16 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS 35580 kg Scale In  
TARE 13960 kg Scale Out  
NET 21620 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.62	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074277</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:02 am	11/30/20 8:20 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	32910 kg	Scale In
TARE	13280 kg	Scale Out
NET	19630 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.63	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074278</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:04 am	11/30/20 8:21 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	32190 kg	Scale In
TARE	13810 kg	Scale Out
NET	18380 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.38	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074280</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:09 am	11/30/20 8:25 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>04- ROD</b>			EAST END	

GROSS	33110 kg	Scale In
TARE	13300 kg	Scale Out
NET	19810 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.81	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074286</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:12 am	11/30/20 8:32 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	33380 kg	Scale In
TARE	13750 kg	Scale Out
NET	19630 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.63	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074290</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:23 am	11/30/20 8:42 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	30930 kg	Scale In
TARE	13370 kg	Scale Out
NET	17560 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.56	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074294</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:28 am	11/30/20 8:46 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS	33750 kg	Scale In
TARE	14090 kg	Scale Out
NET	19660 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.66	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074295</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:32 am	11/30/20 8:49 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	33870 kg	Scale In
TARE	13400 kg	Scale Out
NET	20470 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.47	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074296</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:36 am	11/30/20 8:52 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8-AIME</b>			EAST END	

GROSS	32410 kg	Scale In
TARE	13840 kg	Scale Out
NET	18570 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.57	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074301</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:40 am	11/30/20 8:57 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>04- ROD</b>			EAST END	

GROSS	31910 kg	Scale In
TARE	13250 kg	Scale Out
NET	18660 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.66	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074304</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:46 am	11/30/20 9:01 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	32890 kg	Scale In
TARE	13690 kg	Scale Out
NET	19200 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.20	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074311</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:55 am	11/30/20 9:11 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042 GILBERT</b>			EAST END	

GROSS	31550 kg	Scale In
TARE	13380 kg	Scale Out
NET	18170 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.17	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074312</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 8:58 am	11/30/20 9:13 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS	33340 kg	Scale In
TARE	14000 kg	Scale Out
NET	19340 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.34	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074313</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:00 am	11/30/20 9:16 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	31770 kg	Scale In
TARE	13410 kg	Scale Out
NET	18360 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.36	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074315</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:04 am	11/30/20 9:21 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	33170 kg	Scale In
TARE	13910 kg	Scale Out
NET	19260 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.26	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074316</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:09 am	11/30/20 9:23 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>04- ROD</b>			EAST END	

GROSS	33550 kg	Scale In
TARE	13330 kg	Scale Out
NET	20220 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.22	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074322</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:13 am	11/30/20 9:32 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	32980 kg	Scale In
TARE	13760 kg	Scale Out
NET	19220 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.22	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074328</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:22 am	11/30/20 9:40 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	35040 kg	Scale In
TARE	13400 kg	Scale Out
NET	21640 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.64	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074329</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:24 am	11/30/20 9:41 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS	34360 kg	Scale In
TARE	14100 kg	Scale Out
NET	20260 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.26	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074331</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:32 am	11/30/20 9:47 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS	32440 kg	Scale In
TARE	13430 kg	Scale Out
NET	19010 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.01	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074334</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:36 am	11/30/20 9:52 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8 AMIE</b>			EAST END	

GROSS	34040 kg	Scale In
TARE	13900 kg	Scale Out
NET	20140 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.14	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074336</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:40 am	11/30/20 9:55 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>04- ROD</b>			EAST END	

GROSS	32250 kg	Scale In
TARE	13330 kg	Scale Out
NET	18920 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.92	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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OTTAWA, ON K4B 1H9  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074339</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:45 am	11/30/20 10:01 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	33020 kg	Scale In
TARE	13770 kg	Scale Out
NET	19250 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.25	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074349</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:54 am	11/30/20 10:12 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	33480 kg	Scale In
TARE	13440 kg	Scale Out
NET	20040 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.04	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074353</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 9:59 am	11/30/20 10:15 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS	33850 kg	Scale In
TARE	14100 kg	Scale Out
NET	19750 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.75	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074360</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:03 am	11/30/20 10:25 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS 34150 kg Scale In  
TARE 13440 kg Scale Out  
NET 20710 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.71	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074363</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:05 am	11/30/20 10:27 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS 33020 kg Scale In  
TARE 13900 kg Scale Out  
NET 19120 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.12	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_





**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074365</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:07 am	11/30/20 10:30 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>04- ROD</b>			EAST END	

GROSS	34810 kg	Scale In
TARE	13340 kg	Scale Out
NET	21470 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.47	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074367</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:12 am	11/30/20 10:32 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	34320 kg	Scale In
TARE	13770 kg	Scale Out
NET	20550 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.55	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074373</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:24 am	11/30/20 10:41 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042-GILBERT</b>			EAST END	

GROSS	33840 kg	Scale In
TARE	13440 kg	Scale Out
NET	20400 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.40	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
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010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074374</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:26 am	11/30/20 10:43 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS	34030 kg	Scale In
TARE	14010 kg	Scale Out
NET	20020 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.02	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

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2934 BASELINE ROAD, SUITE 302  
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INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074379</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:36 am	11/30/20 10:51 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9 LARRY</b>			EAST END	

GROSS 32040 kg Scale In  
TARE 13450 kg Scale Out  
NET 18590 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
18.59	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
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010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074381</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:39 am	11/30/20 10:54 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS 33640 kg Scale In  
TARE 13530 kg Scale Out  
NET 20110 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.11	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074384</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:42 am	11/30/20 11:00 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>04- ROD</b>			EAST END	

GROSS	34290 kg	Scale In
TARE	13350 kg	Scale Out
NET	20940 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.94	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074387</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:46 am	11/30/20 11:04 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	34080 kg	Scale In
TARE	13780 kg	Scale Out
NET	20300 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.30	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074388</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:53 am	11/30/20 11:11 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS 33670 kg Scale In  
TARE 13490 kg Scale Out  
NET 20180 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.18	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074389</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 10:55 am	11/30/20 11:12 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS 34060 kg Scale In  
TARE 14110 kg Scale Out  
NET 19950 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.95	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074394</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:01 am	11/30/20 11:18 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS	34370 kg	Scale In
TARE	13460 kg	Scale Out
NET	20910 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.91	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_



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OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074396</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:06 am	11/30/20 11:25 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS	33740 kg	Scale In
TARE	13560 kg	Scale Out
NET	20180 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.18	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074400</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:11 am	11/30/20 11:29 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>04- ROD</b>			EAST END	

GROSS	36350 kg	Scale In
TARE	13370 kg	Scale Out
NET	22980 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
22.98	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074407</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:18 am	11/30/20 11:35 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>11- MIKE</b>			EAST END	

GROSS	33740 kg	Scale In
TARE	13780 kg	Scale Out
NET	19960 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
19.96	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074410</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:25 am	11/30/20 11:42 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>042- GILBERT</b>			EAST END	

GROSS	34450 kg	Scale In
TARE	13440 kg	Scale Out
NET	21010 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.01	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074417</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:31 am	11/30/20 11:49 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>90- TERRY</b>			EAST END	

GROSS	35280 kg	Scale In
TARE	14120 kg	Scale Out
NET	21160 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.16	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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**WASTE CONNECTIONS OF CANADA  
OTTAWA LANDFILL**

3354 NAVAN ROAD  
OTTAWA, ON K4B 1H9  
(613) 824-7289

010490 - CAIVAN (Renaud) INC  
2934 BASELINE ROAD, SUITE 302  
OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074420</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:34 am	11/30/20 11:53 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>9- LARRY</b>			EAST END	

GROSS 34210 kg Scale In  
TARE 13360 kg Scale Out  
NET 20850 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.85	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
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010490 - CAIVAN (Renaud) INC  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074424</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:40 am	11/30/20 11:58 am	<b>276</b>		
REFERENCE			ORIGIN	
<b>8- AIME</b>			EAST END	

GROSS 33820 kg Scale In  
TARE 13550 kg Scale Out  
NET 20270 kg

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
20.27	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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OTTAWA LANDFILL**

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OTTAWA, ON K4B 1H9  
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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074429</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:45 am	11/30/20 12:05 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>04- ROD</b>			EAST END	

GROSS	34810 kg	Scale In
TARE	13360 kg	Scale Out
NET	21450 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.45	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

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OTTAWA, ON K2H 1B2

INVOICE

Contract: VC276 -PO 5108 - 6101 RENAUD ROAD - CAIVAN INBOUND

SITE	TICKET #		OPERATOR	
05	<b>1074430</b>		kmasson	
IN	OUT	TRUCK	CONT.	LICENCE
11/30/20 11:46 am	11/30/20 12:06 pm	<b>276</b>		
REFERENCE			ORIGIN	
<b>11 MIKE</b>			EAST END	

GROSS	35400 kg	Scale In
TARE	13790 kg	Scale Out
NET	21610 kg	

COMMENTS: I-15

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.61	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
1.00		Environmental Surcharge				
HST# 866808298RT0004						

SIGNATURE: \_\_\_\_\_