



PATERSON GROUP

October 16, 2024
File: PE5996-LET.02

Whelan Truck Repair Inc.
c/o Pri-Tec Construction Ltd.
112 John Cavanaugh Dr,
Carp, Ontario
K0A 1L0

Attention: Mr. Alden Rattew

Subject: Soil Remediation Summary
Whelan Truck Repair Inc.
158 Cardevco Road
Ottawa, Ontario

Consulting Engineers

9 Auriga Drive
Ottawa, Ontario
K2E 7T9
Tel: (613) 226-7381

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Materials Testing
Building Science
Rural Development Design
Temporary Shoring Design
Retaining Wall Design
Noise and Vibration Studies

patersongroup.ca

Dear Sir,

Further to your request and authorization, Paterson Group (Paterson) monitored a soil remediation excavation at the above-noted site. The remediation was initiated due to the identification of Polycyclic Aromatic Hydrocarbon (PAH) impacted fill material identified during a Phase II Environmental Site Assessment (ESA), dated November 16, 2023, conducted by Paterson.

Background

Paterson was commissioned to delineate the extent of PAH impacted fill material identified in BH4-23 during the 2023 Phase II ESA and to monitor the subsequent remediation excavation. Refer to the attached Drawing PE5996-6 Remediation Plan for the location of BH4-23 and the subsequent remediation area.

The following remediation summary should be read in conjunction with the previously completed Phase II ESA by Paterson.



Delineation

Paterson monitored the excavation of 4 test pits by backhoe on August 12, 2024, to a depth of 1.5m. One (1) test pit (TP1-24) was located in the immediate vicinity of BH4-23 and a sample was obtained for Toxicity Characteristic Leaching Procedure (TCLP) analysis on the impacted material prior to disposal at Waste Management of Ottawa.

The 3 remaining test pits were excavated 3m to the northwest, southeast, and northeast of BH4-23 (TP2-24 to TP4-24 respectively) for the purpose of delineating the extent of the impacted fill material. It should be noted a test pit could not be completed to the southwest of BH4-23 due to the presence of the building. A total of 10 samples were obtained from TP2-23 to TP4-24.

All soil samples collected were subjected to a preliminary screening procedure, which included visual screening for colour and evidence of deleterious materials, as well as soil vapour screening with a PID. No odours or staining were noted.

Analytical Test Results

Three (3) samples from TP2-24 to TP4-24 taken at a depth of 1.3m to 1.4m were submitted to Paracel Labs for analytical testing of PAH parameters.

The PAH parameters in the sample from TP4-24 were non-detect and therefore in compliance with the selected MECP Table 7 standards. Concentrations of various PAH parameters were identified in the samples from TP2-24 and TP3-24, however, all were in compliance with the selected MECP Table 7 standards.

Based on the analytical test results, it was concluded that the PAH impacted fill material was not present beyond 3m from BH4-23.

The sample from TP1-24 was submitted to Paracel Labs for TCLP analysis. All parameters were in compliance with MECP Schedule 4 for the disposal of contaminated soil in landfills.

Remediation

Paterson monitored the remediation excavation on September 30, 2024. Ken White Construction served as the excavation contractor and coordinated the licensed hauling contractors to dispose of the impacted material at Waste Management of Ottawa.

An area extending 3m out from BH4-23 in all directions was excavated to a depth of 1.3m, except to the southwest where the excavation was extended as close to the building foundation as safely possible (approximately 0.5m). The total area of the excavation was approximately 30m².



Based on the provided weigh scale tickets, a total of approximately 126 mts of impacted material was removed from the subject site.

Conclusion

Paterson monitored the excavation of 4 test pits on August 12, 2024, for the purposes of delineating impacted material identified in BH4-23 as part of a prior Phase II ESA dated November 16, 2023, and for TCLP analysis required for the disposal of impacted material by Waste Management of Ottawa.

Based on the analytical test results, it was concluded that PAH impacted fill material was not present beyond 3m from BH4-23.

Paterson monitored a remediation excavation on September 30, 2024, extending 3m out from BH4-23 in all directions to a depth of 1.3m, except to the southwest where the excavation was extended to approximately 0.5m away from the building foundation.

The total area of the remediation excavation was approximately 30m² and an approximate volume of 126 mts of impacted material was removed from site and hauled to Waste Management of Ottawa. Based on our observation and the analytical testing program, it is our opinion that the remediation was effective in removing the previously identified PAH impacted fill. No further work is recommended.

Statement of Limitations

Should any conditions at the site be encountered which differ from those at the test locations, we request that we be notified immediately in order to permit reassessment of our recommendations/conclusions.

The present report applies only to the project described in this document. Use of this report for purposes other than those described herein or by person(s) other than Whelan Truck Repairs Inc., or their agents, without review by this firm for the applicability of our recommendations to the altered use of the report, is prohibited.

Regards,



Paterson Group Inc.

G Pat

Grant Paterson, Technologist

Mark D'Arcy, P.Eng. QP_{esa}

Attachments

- ☐ Waste Transfer Tickets
- ☐ Laboratory Results Compared to MECP Table 7 Commercial
- ☐ Laboratory Results Compared to MECP Schedule 4
- ☐ Certificates of Analysis
- ☐ Drawing No. PE5996-6- Remediation Plan





Ottawa Transfer Station
2301 Carp rd
Carp, ON, K0A1L0

Reprint
Ticket# 232688

Ph: (613) 831-3563

Customer Name KEN WHITE CONSTRUCTION 107162 Carrier KEN WHITE
Ticket Date 10/01/2024 Vehicle# 18
Payment Type Credit Account Container
Manual Ticket# Driver
Route Check#
Hauling Ticket# Billing# 0000363
Destination Grid
PO# 158 CARDEVCO

Volume

In	10/01/2024 08:58:47	Scale 1	Operator mmurph14	Inbound	Gross	39600 kg
Out	10/01/2024 08:58:47		mmurph14		Tare	14580 kg
					Net	25020 kg
					Tons	25.02 t

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Special Misc RDW-Metric	100	25.02	t				

Total HST
Total Ticket

I/WE CERTIFY THAT THE WASTE DELIVERED FOR DISPOSAL IS SOLID NON HAZARDOUS WASTE MATERIALS OR PRECLEARED SPECIAL WASTE AS EACH OF THESE IS DEFINED BELOW:

"Solid Non-Hazardous Waste" means commercial solid waste (including trash, refuse, and garbage) and construction and demolition waste that has the characteristics of Solid Non-Hazardous Waste normally produced by apartments, stores, offices, other commercial buildings and schools, provided that under no circumstances shall Solid Non-Hazardous Waste include water or other material (a) which is in whole or part, asbestos, liquid, radioactive, polychlorinated biphenyl, reactive, ignitable, flammable, corrosive, pathological, or otherwise defined as hazardous or dangerous by federal, provincial or local laws or regulations, (b) requires special handling, or (c) which may present an occupational health hazard to employees, representatives or agents of Waste Management of Canada Corporation; and "Precleared Special Waste" means waste or other materials which is Asbestos or otherwise requires special handling, but only if its composition has been completely disclosed in writing to, and accepted in advance in writing by, Waste Management of Canada Corporation.

Driver`s Signature



Ottawa Transfer Station
2301 Carp rd
Carp, ON, K0A1L0

Reprint
Ticket# 232696

Ph: (613) 831-3563

Customer Name KEN WHITE CONSTRUCTION 107162 Carrier KEN WHITE
Ticket Date 10/01/2024 Vehicle# 18
Payment Type Credit Account Container
Manual Ticket# Driver
Route Check#
Hauling Ticket# Billing# 0000363
Destination Grid
PO# 158 CARDEVCO

Volume

	Time	Scale	Operator	Inbound	Gross	39350 kg
In	10/01/2024 09:30:07	Scale 1	mmurph14		Tare	14580 kg
Out	10/01/2024 09:30:07		mmurph14		Net	24770 kg
					Tons	24.77 t

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Special Misc RDW-Metric	100	24.77	t				

Total HST
Total Ticket

I/WE CERTIFY THAT THE WASTE DELIVERED FOR DISPOSAL IS SOLID NON HAZARDOUS WASTE MATERIALS OR PRECLEARED SPECIAL WASTE AS EACH OF THESE IS DEFINED BELOW:

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Driver`s Signature



Ottawa Transfer Station
2301 Carp rd
Carp, ON, K0A1L0

Reprint
Ticket# 232707

Ph: (613) 831-3563

Customer Name KEN WHITE CONSTRUCTION 107162 Carrier KEN WHITE
Ticket Date 10/01/2024 Vehicle# 18
Payment Type Credit Account Container
Manual Ticket# Driver
Route Check#
Hauling Ticket# Billing# 0000363
Destination Grid
PO# 158 CARDEVCO

Volume

	Time	Scale	Operator	Inbound	Gross	41290 kg
In	10/01/2024 09:59:17	Scale 1	mmurph14		Tare	14580 kg
Out	10/01/2024 09:59:17		mmurph14		Net	26710 kg
					Tons	26.71 t

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Special Misc RDW-Metric	100	26.71	t				

Total HST
Total Ticket

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Driver`s Signature



Ottawa Transfer Station
2301 Carp rd
Carp, ON, K0A1L0

Reprint
Ticket# 232677

Ph: (613) 831-3563

Customer Name KEN WHITE CONSTRUCTION 107162 Carrier KEN WHITE
Ticket Date 10/01/2024 Vehicle# 18
Payment Type Credit Account Container
Manual Ticket# Driver
Route Check#
Hauling Ticket# Billing# 0000363
Destination Grid
PO# 158 CARDEVCO

Volume

	Time	Scale	Operator	Inbound	Gross	39510 kg
In	10/01/2024 08:23:21	Scale 1	mmurph14		Tare	14580 kg
Out	10/01/2024 08:42:02	Scale 1	mmurph14		Net	24930 kg
					Tons	24.93 t

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Special Misc RDW-Metric	100	24.93	t				

Total HST
Total Ticket

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Driver`s Signature



Ottawa Transfer Station
2301 Carp rd
Carp, ON, K0A1L0

Reprint
Ticket# 232726

Ph: (613) 831-3563

Customer Name KEN WHITE CONSTRUCTION 107162 Carrier KEN WHITE
Ticket Date 10/01/2024 Vehicle# 18
Payment Type Credit Account Container
Manual Ticket# Driver
Route Check#
Hauling Ticket# Billing# 0000363
Destination Grid
PO# 158 CARDEVCO

Volume

	Time	Scale	Operator	Inbound	Gross	39250 kg
In	10/01/2024 10:36:59	Scale 1	mmurph14		Tare	14580 kg
Out	10/01/2024 10:36:59		mmurph14		Net	24670 kg
					Tons	24.67 t

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Special Misc RDW-Metric	100	24.67	t				

Total HST
Total Ticket

I/WE CERTIFY THAT THE WASTE DELIVERED FOR DISPOSAL IS SOLID NON HAZARDOUS WASTE MATERIALS OR PRECLEARED SPECIAL WASTE AS EACH OF THESE IS DEFINED BELOW:

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Driver`s Signature

TABLE 1		CLIENT: Paterson Group Consulting Engineers (Ottawa)				
PARACEL LABORATORIES LTD.		ATTENTION: Mark D'Arcy				
WORKORDER: 2433150		PROJECT: PE5996				
REPORT DATE: 08/20/2024		REFERENCE: #24-017 Standing Offer 2024				
Parameter	Units	MDL	Regulation	Sample		
				TP2-24-G3 2433150-01	TP3-24-G3 2433150-02	TP4-24-G3 2433150-03
Sample Date (m/d/y)			Reg 153/04 -T7 Ind/Com, coarse	08/12/2024 09:00 AM	08/12/2024 09:00 AM	08/12/2024 09:00 AM
Physical Characteristics						
% Solids	% by Wt.	0.1		89.2	90.3	93.4
Semi-Volatiles						
Acenaphthene	ug/g dry	0.02	96 ug/g dry	ND (0.02)	0.02	ND (0.02)
Acenaphthylene	ug/g dry	0.02	0.15 ug/g dry	ND (0.02)	0.09	ND (0.02)
Anthracene	ug/g dry	0.02	0.67 ug/g dry	ND (0.02)	0.14	ND (0.02)
Benzo[a]anthracene	ug/g dry	0.02	0.96 ug/g dry	ND (0.02)	0.21	ND (0.02)
Benzo[a]pyrene	ug/g dry	0.02	0.3 ug/g dry	ND (0.02)	0.18	ND (0.02)
Benzo[b]fluoranthene	ug/g dry	0.02	0.96 ug/g dry	ND (0.02)	0.17	ND (0.02)
Benzo[g,h,i]perylene	ug/g dry	0.02	9.6 ug/g dry	ND (0.02)	0.12	ND (0.02)
Benzo[k]fluoranthene	ug/g dry	0.02	0.96 ug/g dry	ND (0.02)	0.09	ND (0.02)
Chrysene	ug/g dry	0.02	9.6 ug/g dry	ND (0.02)	0.20	ND (0.02)
Dibenzo[a,h]anthracene	ug/g dry	0.02	0.1 ug/g dry	ND (0.02)	0.03	ND (0.02)
Fluoranthene	ug/g dry	0.02	9.6 ug/g dry	0.04	0.60	ND (0.02)
Fluorene	ug/g dry	0.02	62 ug/g dry	ND (0.02)	0.04	ND (0.02)
Indeno [1,2,3-cd] pyrene	ug/g dry	0.02	0.76 ug/g dry	ND (0.02)	0.10	ND (0.02)
1-Methylnaphthalene	ug/g dry	0.02	76 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)
2-Methylnaphthalene	ug/g dry	0.02	76 ug/g dry	ND (0.02)	ND (0.02)	ND (0.02)
Methylnaphthalene (1&2)	ug/g dry	0.04	76 ug/g dry	ND (0.04)	ND (0.04)	ND (0.04)
Naphthalene	ug/g dry	0.01	9.6 ug/g dry	ND (0.01)	ND (0.01)	ND (0.01)
Phenanthrene	ug/g dry	0.02	12 ug/g dry	0.03	0.40	ND (0.02)
Pyrene	ug/g dry	0.02	96 ug/g dry	0.03	0.49	ND (0.02)

TABLE 1		CLIENT: Paterson Group Consulting Engineers (Ottawa)	
PARACEL LABORATORIES LTD.		ATTENTION: Mark D'Arcy	
WORKORDER: 2433154		PROJECT: PE5996	
REPORT DATE: 08/19/2024		REFERENCE: #24-017 Standing Offer 2024	
Parameter	Units	MDL	Regulation
			Sample
			TCLP 2433154-01
Sample Date (m/d/y)			Reg 558 Schedule 4
Sample Date (m/d/y)			08/12/2024 09:00 AM
Physical Characteristics			
Flashpoint	°C		>70
% Solids	% by Wt.	0.1	89.0
EPA 1311 - TCLP Leachate Inorganics			
Fluoride	mg/L	0.05	150 mg/L
Nitrate as N	mg/L	1	1000 mg/L
Nitrite as N	mg/L	1	1000 mg/L
Nitrate + Nitrite as N	mg/L	2	1000 mg/L
Cyanide, free	mg/L	0.02	20 mg/L
EPA 1311 - TCLP Leachate Metals			
Arsenic	mg/L	0.05	2.5 mg/L
Barium	mg/L	0.05	100 mg/L
Boron	mg/L	0.10	500 mg/L
Cadmium	mg/L	0.01	0.5 mg/L
Chromium	mg/L	0.05	5 mg/L
Lead	mg/L	0.05	5 mg/L
Mercury	mg/L	0.005	0.1 mg/L
Selenium	mg/L	0.05	1 mg/L
Silver	mg/L	0.05	5 mg/L
Uranium	mg/L	0.05	10 mg/L
EPA 1311 - TCLP Leachate Volatiles			
Benzene	mg/L	0.005	0.5 mg/L
Carbon Tetrachloride	mg/L	0.005	0.5 mg/L
Chlorobenzene	mg/L	0.004	8 mg/L
Chloroform	mg/L	0.006	10 mg/L
1,2-Dichlorobenzene	mg/L	0.004	20 mg/L
1,4-Dichlorobenzene	mg/L	0.004	0.5 mg/L
1,2-Dichloroethane	mg/L	0.005	0.5 mg/L
1,1-Dichloroethylene	mg/L	0.006	1.4 mg/L
Methyl Ethyl Ketone (2-Butanone)	mg/L	0.30	200 mg/L
Methylene Chloride	mg/L	0.04	5 mg/L
Tetrachloroethylene	mg/L	0.005	3 mg/L
Trichloroethylene	mg/L	0.004	5 mg/L
Vinyl Chloride	mg/L	0.005	0.2 mg/L
EPA 1311 - TCLP Leachate Organics			
Benzo[a]pyrene	mg/L	0.0001	0.001 mg/L
General Inorganics			
pH	pH Units	0.05	7.05
Volatiles			
Benzene	ug/g dry	0.02	ND (0.02)
Ethylbenzene	ug/g dry	0.05	ND (0.05)
Toluene	ug/g dry	0.05	ND (0.05)
m/p-Xylene	ug/g dry	0.05	ND (0.05)
o-Xylene	ug/g dry	0.05	ND (0.05)
Xylenes, total	ug/g dry	0.05	ND (0.05)
Hydrocarbons			
F1 PHCs (C6-C10)	ug/g dry	7	ND (7)
F2 PHCs (C10-C16)	ug/g dry	4	ND (4)
F3 PHCs (C16-C34)	ug/g dry	8	ND (8)
F4 PHCs (C34-C50)	ug/g dry	6	ND (6)

Certificate of Analysis

Paterson Group Consulting Engineers (Ottawa)

9 Auriga Drive
Ottawa, ON K2E 7T9
Attn: Mark D'Arcy

Client PO: 60983
Project: PE5996
Custody:

Report Date: 20-Aug-2024
Order Date: 12-Aug-2024

Order #: 2433150

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

Paracel ID	Client ID
2433150-01	TP2-24-G3
2433150-02	TP3-24-G3
2433150-03	TP4-24-G3

Approved By:



Mark Foto, M.Sc.

Lab Supervisor

Certificate of Analysis

Report Date: 20-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	17-Aug-24	19-Aug-24
Solids, %	CWS Tier 1 - Gravimetric	15-Aug-24	16-Aug-24

Certificate of Analysis

Report Date: 20-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Client ID:	TP2-24-G3	TP3-24-G3	TP4-24-G3	-	-
Sample Date:	12-Aug-24 09:00	12-Aug-24 09:00	12-Aug-24 09:00	-	-
Sample ID:	2433150-01	2433150-02	2433150-03	-	-
Matrix:	Soil	Soil	Soil	-	-
MDL/Units					

Physical Characteristics

% Solids	0.1 % by Wt.	89.2	90.3	93.4	-	-	-
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Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	0.02	<0.02	-	-	-
Acenaphthylene	0.02 ug/g	<0.02	0.09	<0.02	-	-	-
Anthracene	0.02 ug/g	<0.02	0.14	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g	<0.02	0.21	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g	<0.02	0.18	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	0.17	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	0.12	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	0.09	<0.02	-	-	-
Chrysene	0.02 ug/g	<0.02	0.20	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	0.03	<0.02	-	-	-
Fluoranthene	0.02 ug/g	0.04	0.60	<0.02	-	-	-
Fluorene	0.02 ug/g	<0.02	0.04	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	0.10	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	<0.04	<0.04	-	-	-
Naphthalene	0.01 ug/g	<0.01	<0.01	<0.01	-	-	-
Phenanthrene	0.02 ug/g	0.03	0.40	<0.02	-	-	-
Pyrene	0.02 ug/g	0.03	0.49	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	68.1%	62.9%	60.5%	-	-	-
Terphenyl-d14	Surrogate	96.8%	94.4%	85.4%	-	-	-

Certificate of Analysis

Report Date: 20-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Semi-Volatiles								
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	0.772		%	57.9	50-140			
Surrogate: Terphenyl-d14	1.09		%	81.4	50-140			

Certificate of Analysis

Report Date: 20-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Physical Characteristics									
% Solids	93.5	0.1	% by Wt.	93.4			0.1	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Chrysene	ND	0.02	ug/g	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	ND	0.02	ug/g	ND			NC	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	ND	0.01	ug/g	ND			NC	40	
Phenanthrene	ND	0.02	ug/g	ND			NC	40	
Pyrene	ND	0.02	ug/g	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	1.09		%		70.2	50-140			
Surrogate: Terphenyl-d14	1.73		%		111	50-140			

Certificate of Analysis

Report Date: 20-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Semi-Volatiles									
Acenaphthene	0.138	0.02	ug/g	ND	70.9	50-140			
Acenaphthylene	0.146	0.02	ug/g	ND	75.0	50-140			
Anthracene	0.133	0.02	ug/g	ND	68.2	50-140			
Benzo [a] anthracene	0.116	0.02	ug/g	ND	59.4	50-140			
Benzo [a] pyrene	0.117	0.02	ug/g	ND	59.9	50-140			
Benzo [b] fluoranthene	0.105	0.02	ug/g	ND	54.1	50-140			
Benzo [g,h,i] perylene	0.109	0.02	ug/g	ND	56.1	50-140			
Benzo [k] fluoranthene	0.108	0.02	ug/g	ND	55.4	50-140			
Chrysene	0.122	0.02	ug/g	ND	62.4	50-140			
Dibenzo [a,h] anthracene	0.104	0.02	ug/g	ND	53.2	50-140			
Fluoranthene	0.144	0.02	ug/g	ND	74.0	50-140			
Fluorene	0.128	0.02	ug/g	ND	65.7	50-140			
Indeno [1,2,3-cd] pyrene	0.098	0.02	ug/g	ND	50.4	50-140			
1-Methylnaphthalene	0.141	0.02	ug/g	ND	72.5	50-140			
2-Methylnaphthalene	0.146	0.02	ug/g	ND	74.9	50-140			
Naphthalene	0.144	0.01	ug/g	ND	74.0	50-140			
Phenanthrene	0.145	0.02	ug/g	ND	74.6	50-140			
Pyrene	0.149	0.02	ug/g	ND	76.2	50-140			
Surrogate: 2-Fluorobiphenyl	1.04		%		66.4	50-140			
Surrogate: Terphenyl-d14	1.28		%		82.2	50-140			

Certificate of Analysis

Client: Paterson Group Consulting Engineers (Ottawa)

Client PO: 60983

Report Date: 20-Aug-2024

Order Date: 12-Aug-2024

Project Description: PE5996

Qualifier Notes:**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 unless otherwise noted.

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

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Client Name: Paterson group	Project Ref: PG 5996	Page <u> </u> of <u> </u>
Contact Name: Mark D'Arcy	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: 9 Auriga dr	PO #: 60983	
Telephone: 613-226-7381	E-mail: M.darcy@patersongroup.ca gpater@patersongroup.ca	
Date Required: <u> </u>		

☐ REG 153/04 ☒ REG 406/19		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														
☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table <u> </u> For RSC: ☐ Yes ☐ No	☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: <u> </u> ☐ Other: <u> </u>	Matrix	Air Volume	# of Containers	Sample Taken	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)								
Sample ID/Location Name					Date	Time														
1 TP2-24-G3		S		1	August 12 2024															
2 TP2-24-G3 TP3-24-G3		S		1	August 12 2024															
3 TP2-24-G3 TP4-24-G3		S		1	August 12 2024															
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Comments: 2nd day may be absent on jans			Method of Delivery: Parcel Courier	
Relinquished By (Sign): G-Pat	Received at Depot:	Received at Lab: SS	Verified By: SO	
Relinquished By (Print): Grant Paterson	Date/Time:	Date/Time: 12 Aug 24 1644	Date/Time: Aug 12 2024 4:47	
Date/Time: AUG 12 2024	Temperature: <u> </u> °C	Temperature: 14.2	pH Verified: ☐ By: <u> </u>	

Certificate of Analysis

Paterson Group Consulting Engineers (Ottawa)

9 Auriga Drive
Ottawa, ON K2E 7T9
Attn: Mark D'Arcy

Client PO: 60983
Project: PE5996
Custody:

Report Date: 19-Aug-2024
Order Date: 12-Aug-2024

Order #: 2433154

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

Paracel ID	Client ID
2433154-01	TCLP

Mark Foto

Mark Foto, M.Sc.

Lab Supervisor

Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	14-Aug-24	14-Aug-24
Flashpoint	ASTM D93 - Pensky-Martens Closed Cup	14-Aug-24	14-Aug-24
Metals, ICP-MS	TCLP EPA 6020 - Digestion - ICP-MS	16-Aug-24	16-Aug-24
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	16-Aug-24	16-Aug-24
PHC F1	CWS Tier 1 - P&T GC-FID	14-Aug-24	14-Aug-24
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	16-Aug-24	17-Aug-24
REG 558 - Cyanide	TCLP MOE E3015- Auto Colour	16-Aug-24	16-Aug-24
REG 558 - Fluoride	TCLP EPA 340.2 - ISE	16-Aug-24	16-Aug-24
REG 558 - Mercury by CVAA	TCLP EPA 7470A, CVAA	16-Aug-24	16-Aug-24
REG 558 - NO3/NO2	TCLP EPA 300.1 - IC	16-Aug-24	16-Aug-24
REG 558 - PAHs	TCLP EPA 625 - GC-MS	16-Aug-24	16-Aug-24
REG 558 - VOCs	TCLP ZHE EPA 624 - P&T GC-MS	19-Aug-24	19-Aug-24
Solids, %	CWS Tier 1 - Gravimetric	15-Aug-24	16-Aug-24

Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Client ID:	TCLP	-	-	-	-
Sample Date:	12-Aug-24 09:00	-	-	-	-
Sample ID:	2433154-01	-	-	-	-
Matrix:	Soil	-	-	-	-
MDL/Units					

Physical Characteristics

% Solids	0.1 % by Wt.	89.0	-	-	-	-
Flashpoint	°C	>70	-	-	-	-

EPA 1311 - TCLP Leachate Inorganics

Fluoride	0.05 mg/L	0.17	-	-	-	-
Nitrate as N	1 mg/L	<1	-	-	-	-
Nitrite as N	1 mg/L	<1	-	-	-	-
Nitrate + Nitrite as N	2 mg/L	<2	-	-	-	-
Cyanide, free	0.02 mg/L	<0.02	-	-	-	-

EPA 1311 - TCLP Leachate Metals

Arsenic	0.05 mg/L	<0.05	-	-	-	-
Barium	0.05 mg/L	0.56	-	-	-	-
Boron	0.10 mg/L	<0.10	-	-	-	-
Cadmium	0.01 mg/L	<0.01	-	-	-	-
Chromium	0.05 mg/L	<0.05	-	-	-	-
Lead	0.05 mg/L	<0.05	-	-	-	-
Mercury	0.005 mg/L	<0.005	-	-	-	-
Selenium	0.05 mg/L	<0.05	-	-	-	-
Silver	0.05 mg/L	<0.05	-	-	-	-
Uranium	0.05 mg/L	<0.05	-	-	-	-

EPA 1311 - TCLP Leachate Volatiles

Benzene	0.005 mg/L	<0.005	-	-	-	-
Carbon Tetrachloride	0.005 mg/L	<0.005	-	-	-	-
Chlorobenzene	0.004 mg/L	<0.004	-	-	-	-
Chloroform	0.006 mg/L	<0.006	-	-	-	-
1,2-Dichlorobenzene	0.004 mg/L	<0.004	-	-	-	-

Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Client ID:	TCLP	-	-	-	-
Sample Date:	12-Aug-24 09:00	-	-	-	-
Sample ID:	2433154-01	-	-	-	-
Matrix:	Soil	-	-	-	-
MDL/Units					

EPA 1311 - TCLP Leachate Volatiles

1,4-Dichlorobenzene	0.004 mg/L	<0.004	-	-	-	-
1,2-Dichloroethane	0.005 mg/L	<0.005	-	-	-	-
1,1-Dichloroethylene	0.006 mg/L	<0.006	-	-	-	-
Methyl Ethyl Ketone (2-Butanone)	0.30 mg/L	<0.30	-	-	-	-
Methylene Chloride	0.04 mg/L	<0.04	-	-	-	-
Tetrachloroethylene	0.005 mg/L	<0.005	-	-	-	-
Trichloroethylene	0.004 mg/L	<0.004	-	-	-	-
Vinyl chloride	0.005 mg/L	<0.005	-	-	-	-
Dibromofluoromethane	Surrogate	102%	-	-	-	-
4-Bromofluorobenzene	Surrogate	104%	-	-	-	-
Toluene-d8	Surrogate	104%	-	-	-	-

EPA 1311 - TCLP Leachate Organics

Benzo [a] pyrene	0.0001 mg/L	<0.0001	-	-	-	-
Terphenyl-d14	Surrogate	92.3%	-	-	-	-

General Inorganics

pH	0.05 pH Units	7.05	-	-	-	-
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Volatiles

Benzene	0.02 ug/g	<0.02	-	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	-	-	-	-
Toluene	0.05 ug/g	<0.05	-	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	-	-	-	-
Toluene-d8	Surrogate	111%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	-	-	-	-
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Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Client ID:	TCLP	-	-	-	
Sample Date:	12-Aug-24 09:00	-	-	-	-
Sample ID:	2433154-01	-	-	-	
Matrix:	Soil	-	-	-	
MDL/Units					

Hydrocarbons

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

Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics								
Fluoride	ND	0.05	mg/L					
Nitrate as N	ND	1	mg/L					
Nitrite as N	ND	1	mg/L					
Nitrate + Nitrite as N	ND	2	mg/L					
Cyanide, free	ND	0.02	mg/L					
EPA 1311 - TCLP Leachate Metals								
Arsenic	ND	0.05	mg/L					
Barium	ND	0.05	mg/L					
Boron	ND	0.10	mg/L					
Cadmium	ND	0.01	mg/L					
Chromium	ND	0.05	mg/L					
Lead	ND	0.05	mg/L					
Mercury	ND	0.005	mg/L					
Selenium	ND	0.05	mg/L					
Silver	ND	0.05	mg/L					
Uranium	ND	0.05	mg/L					
EPA 1311 - TCLP Leachate Organics								
Benzo [a] pyrene	ND	0.0001	mg/L					
Surrogate: Terphenyl-d14	0.19		%	95.1	37-156			
EPA 1311 - TCLP Leachate Volatiles								
Benzene	ND	0.005	mg/L					
Carbon Tetrachloride	ND	0.005	mg/L					
Chlorobenzene	ND	0.004	mg/L					
Chloroform	ND	0.006	mg/L					
1,2-Dichlorobenzene	ND	0.004	mg/L					
1,4-Dichlorobenzene	ND	0.004	mg/L					
1,2-Dichloroethane	ND	0.005	mg/L					
1,1-Dichloroethylene	ND	0.006	mg/L					
Methyl Ethyl Ketone (2-Butanone)	ND	0.30	mg/L					
Methylene Chloride	ND	0.04	mg/L					
Tetrachloroethylene	ND	0.005	mg/L					
Trichloroethylene	ND	0.004	mg/L					

Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Vinyl chloride	ND	0.005	mg/L					
Surrogate: 4-Bromofluorobenzene	0.0836		%	104	83-134			
Surrogate: Dibromofluoromethane	0.0820		%	102	78-124			
Surrogate: Toluene-d8	0.0841		%	105	76-118			
Hydrocarbons								
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					
Volatiles								
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	7.92		%	99.0	50-140			

Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics									
Fluoride	0.13	0.05	mg/L	0.13			0.4	20	
Nitrate as N	ND	1	mg/L	ND			NC	20	
Nitrite as N	ND	1	mg/L	ND			NC	20	
Cyanide, free	ND	0.02	mg/L	ND			NC	20	
EPA 1311 - TCLP Leachate Metals									
Arsenic	ND	0.05	mg/L	ND			NC	29	
Barium	0.907	0.05	mg/L	0.773			15.9	34	
Boron	ND	0.10	mg/L	ND			NC	33	
Cadmium	ND	0.01	mg/L	ND			NC	33	
Chromium	ND	0.05	mg/L	ND			NC	32	
Lead	ND	0.05	mg/L	ND			NC	32	
Mercury	ND	0.005	mg/L	ND			NC	30	
Selenium	ND	0.05	mg/L	ND			NC	28	
Silver	ND	0.05	mg/L	ND			NC	28	
Uranium	ND	0.05	mg/L	ND			NC	27	
EPA 1311 - TCLP Leachate Volatiles									
Benzene	ND	0.005	mg/L	ND			NC	25	
Carbon Tetrachloride	ND	0.005	mg/L	ND			NC	25	
Chlorobenzene	ND	0.004	mg/L	ND			NC	25	
Chloroform	ND	0.006	mg/L	ND			NC	25	
1,2-Dichlorobenzene	ND	0.004	mg/L	ND			NC	25	
1,4-Dichlorobenzene	ND	0.004	mg/L	ND			NC	25	
1,2-Dichloroethane	ND	0.005	mg/L	ND			NC	25	
1,1-Dichloroethylene	ND	0.006	mg/L	ND			NC	25	
Methyl Ethyl Ketone (2-Butanone)	ND	0.30	mg/L	ND			NC	25	
Methylene Chloride	ND	0.04	mg/L	ND			NC	25	
Tetrachloroethylene	ND	0.005	mg/L	ND			NC	25	
Trichloroethylene	ND	0.004	mg/L	ND			NC	25	
Vinyl chloride	ND	0.005	mg/L	ND			NC	25	
Surrogate: 4-Bromofluorobenzene	0.0853		%		107	83-134			

Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	0.0799		%		99.9	78-124			
Surrogate: Toluene-d8	0.0845		%		106	76-118			
General Inorganics									
pH	6.40	0.05	pH Units	6.36			0.6	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	36	8	ug/g	35			4.0	30	
F4 PHCs (C34-C50)	90	6	ug/g	84			6.7	30	
Physical Characteristics									
% Solids	93.5	0.1	% by Wt.	93.4			0.1	25	
Volatiles									
Benzene	ND	0.02	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: Toluene-d8	11.9		%		115	50-140			

Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics									
Fluoride	0.62	0.05	mg/L	0.13	97.7	70-130			
Nitrate as N	9	1	mg/L	ND	91.8	81-112			
Nitrite as N	9	1	mg/L	ND	90.5	76-107			
Cyanide, free	0.038	0.02	mg/L	ND	76.7	52-148			
EPA 1311 - TCLP Leachate Metals									
Arsenic	50.6	0.05	mg/L	0.114	101	83-119			QM-07
Barium	147	0.05	mg/L	77.3	140	80-120			
Boron	50.2	0.10	mg/L	2.45	95.6	71-128			
Cadmium	52.7	0.01	mg/L	0.010	105	78-119			
Chromium	61.3	0.05	mg/L	0.178	122	80-124			
Lead	52.4	0.05	mg/L	0.063	105	77-126			
Mercury	0.0291	0.005	mg/L	ND	97.0	70-130			
Selenium	44.9	0.05	mg/L	0.332	89.2	75-125			
Silver	54.0	0.05	mg/L	ND	108	70-128			
Uranium	48.6	0.05	mg/L	0.138	97.0	70-131			
EPA 1311 - TCLP Leachate Organics									
Benzo [a] pyrene	0.0366	0.0001	mg/L	ND	73.1	39-123			
Surrogate: Terphenyl-d14	0.20		%		98.0	37-156			
EPA 1311 - TCLP Leachate Volatiles									
Benzene	0.044	0.005	mg/L	ND	111	55-141			
Carbon Tetrachloride	0.040	0.005	mg/L	ND	100	49-149			
Chlorobenzene	0.045	0.004	mg/L	ND	113	64-137			
Chloroform	0.043	0.006	mg/L	ND	108	58-138			
1,2-Dichlorobenzene	0.040	0.004	mg/L	ND	99.6	60-150			
1,4-Dichlorobenzene	0.041	0.004	mg/L	ND	102	63-132			
1,2-Dichloroethane	0.046	0.005	mg/L	ND	114	50-140			
1,1-Dichloroethylene	0.041	0.006	mg/L	ND	102	43-153			
Methyl Ethyl Ketone (2-Butanone)	0.111	0.30	mg/L	ND	111	26-153			
Methylene Chloride	0.047	0.04	mg/L	ND	117	58-149			
Tetrachloroethylene	0.038	0.005	mg/L	ND	94.7	51-145			

Certificate of Analysis

Report Date: 19-Aug-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 12-Aug-2024

Client PO: 60983

Project Description: PE5996

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Trichloroethylene	0.038	0.004	mg/L	ND	94.5	52-135			
Vinyl chloride	0.035	0.005	mg/L	ND	88.0	31-159			
Surrogate: 4-Bromofluorobenzene	0.0924		%		115	83-134			
Surrogate: Dibromofluoromethane	0.0818		%		102	78-124			
Surrogate: Toluene-d8	0.0794		%		99.3	76-118			
Hydrocarbons									
F1 PHCs (C6-C10)	187	7	ug/g	ND	93.4	85-115			
F2 PHCs (C10-C16)	102	4	ug/g	ND	88.0	60-140			
F3 PHCs (C16-C34)	297	8	ug/g	35	92.2	60-140			
F4 PHCs (C34-C50)	212	6	ug/g	84	70.8	60-140			
Volatiles									
Benzene	3.65	0.02	ug/g	ND	91.3	60-130			
Ethylbenzene	3.59	0.05	ug/g	ND	89.9	60-130			
Toluene	3.41	0.05	ug/g	ND	85.2	60-130			
m,p-Xylenes	7.16	0.05	ug/g	ND	89.5	60-130			
o-Xylene	3.63	0.05	ug/g	ND	90.7	60-130			
Surrogate: Toluene-d8	7.84		%		98.0	50-140			

Certificate of Analysis

Client: Paterson Group Consulting Engineers (Ottawa)

Client PO: 60983

Report Date: 19-Aug-2024

Order Date: 12-Aug-2024

Project Description: PE5996

Qualifier Notes:**Sample Qualifiers :****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 unless otherwise noted.

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.

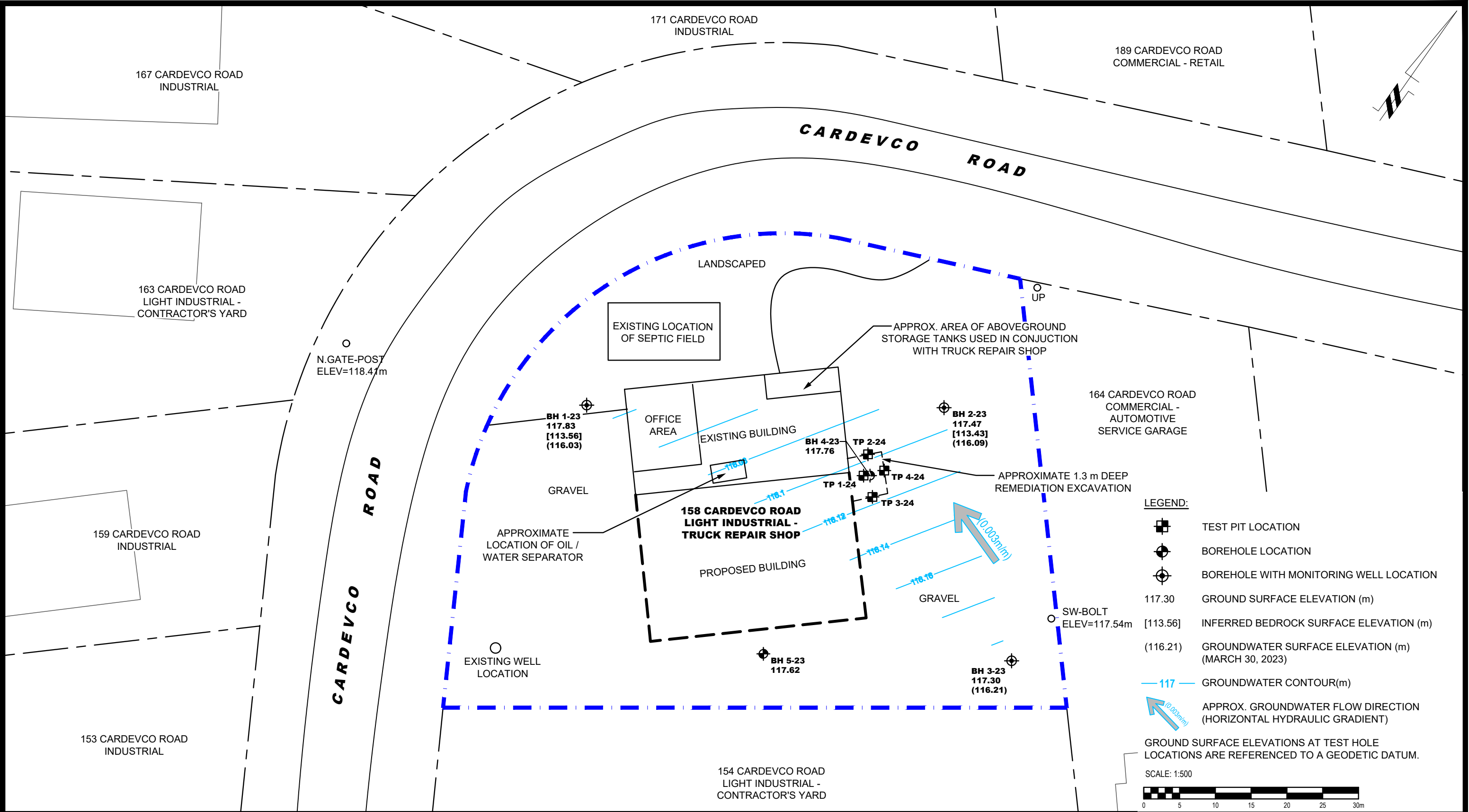
Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Client Name: Paterson	Project Ref: PE 5996	Page <u> </u> of <u> </u>
Contact Name: Mark D'Arcy	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular Date Required: <u> </u>
Address: 9 Auriga	PQ #: 60983	
Telephone: 613 226 7381	E-mail: mdarcy@patersongroup.ca G-Paterson@Patersongroup.ca	

☒ REG 153/04 ☐ REG 406/19 Other Regulation ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☒ REG 558 ☐ PWQO ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ CCME ☐ MISA ☐ Table 3 ☐ Agri/Other ☐ SU - Sani ☐ SU - Storm ☐ Table <u> </u> ☐ Other: <u> </u> For RSC: ☐ Yes ☐ No		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		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	Flash Point	PAH Leach	Metals + inorganics Leach	pH	VOCs Leach
1	TCLP	S		4	Aug 12		X							X	X	X	X	X
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Comments:			Method of Delivery: Paracel Courier		
Relinquished By (Sign): G-Pat	Received By Driver/Depot:	Received at Lab: SS	Verified By: SS		
Relinquished By (Print): Grant Paterson	Date/Time:	Date/Time: 12 Aug 24 1642	Date/Time: 12 Aug 24 1643		
Date/Time: Aug 12 2024	Temperature: °C	Temperature: 14.2	pH Verified: ☐ By:		



LEGEND:

- TEST PIT LOCATION
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION
- 117.30 GROUND SURFACE ELEVATION (m)
- [113.56] INFERRED BEDROCK SURFACE ELEVATION (m)
- (116.21) GROUNDWATER SURFACE ELEVATION (m) (MARCH 30, 2023)
- 117 GROUNDWATER CONTOUR(m)
- APPROX. GROUNDWATER FLOW DIRECTION (HORIZONTAL HYDRAULIC GRADIENT)

GROUND SURFACE ELEVATIONS AT TEST HOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:500

 9 AURIGA DRIVE OTTAWA, ON K2E 7T9 TEL: (613) 226-7381					PRITEC CONSTRUCTION LTD. SOIL REMEDIATION 158 CARDEVCO ROAD OTTAWA, Title: REMEDIATION PLAN ONTARIO	Scale:	1:500	Date:	10/2024
						Drawn by:	YA	Report No.:	PE5996-LET.02
						Checked by:	GP	Dwg. No.: PE5996-6	
						Approved by:	MSD		Revision No.:
	NO.	REVISIONS	DATE	INITIAL					