



ECO METAL RECYCLING INC.
35 PINELANDS AVENUE,
STONEY CREEK, ONTARIO
L8E 3A6

DECEMBER 7, 2023

**RE: INVESTIGATION AND VERIFICATION SOIL SAMPLING FOLLOWING AN
UNDERGROUND STORAGE TANK REMOVAL – ██████████
██████████ ONTARIO**

1.0 INTRODUCTION

Specialized Onsite Services Inc. (SOS) was retained by Eco Metal Recycling Inc. (Eco Metal) on behalf of ██████████ (the “Client”) to perform verification soil sampling within an excavation following exhumation of an underground fuel storage tank (UFST) at a property located at ██████████ ██████████ Ontario (the “Site”).

The purpose of this report is to provide a summary of the assessment activities completed by SOS at the subject site following exhumation of the UFST.

2.0 APPLICABLE SITE CONDITION STANDARDS

Assessment standards for use at the Site were selected from the Ministry of Environment, Conservation and Parks (MECP) document “*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*” [April 2011].

The following site-specific information was used to select the applicable numerical standards for the Site:

- The Site is not an environmentally sensitive area as defined by Section 41 of O. Reg. 153/04 given that;
 - The Site does not include, and is not adjacent to or part of, an area of natural significance;
 - The Site is not a shallow soil property as more than two-thirds of the Site has greater than 2 m of overburden material;
 - The Site is not located within 30 m of a water body.
- The water supply system for the area is supplied by City of Hamilton;
- Land use at the Site is residential;
- Soils encountered in the excavation area included dark brown soil and clay. A grain size analysis was not performed.

Based on the above information, the applicable site condition standards for use at this Site was determined to be the residential property use values (coarse textured soil) found in Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Groundwater Condition (MECP; April 15, 2011). In this report these standards will be referred to as the “Table 3 SCS”.

3.0 SITE DETAILS

The subject site is a residential property located in ██████████, Ontario. Occupying the property is a single storey white brick dwelling. The UFST is located running parallel with front exterior wall of the dwelling and against the concrete front step on the site. Bordering the site to the north are residential properties, south is ██████████ ██████████ are more residential properties. Refer to Figure 1 for an aerial view of the site.

4.0 EXCAVATION AND SAMPLING DETAIL

On ██████████ SOS attended the subject site to provide environmental consultation and sampling services at the request of Ecco Metal, who had been contracted by the Client to conduct the exhumation of a UFST.

The UFST was exposed by Danosh using a rubber tracked excavator. The tank was found to be of steel construction and typically for interior use. Upon discovery, the tank was buried along the south exterior wall of the dwelling and found to be empty. The tank was approximately four inches below the surface and the base of the tank resting directly on bedrock. (Ref. Figure 1).

Following the removal of the tank, a visual inspection conducted and identified no noticeable damage. The capacity of the UFST was approximately 900 L. An inspection conducted of the former tank bed identified no areas of concern through visual and olfactory observations of possible petroleum hydrocarbon contamination (PHC).

Soil samples were collected from the base and sidewalls of the tank nest. Each soil sample collected was placed into a sealable bag for field screening purposes. The headspace of each bagged sample was field screened using a photo-ionization detector (PID) measuring for volatile organic compound (VOC's) concentrations. Confirmatory samples were chosen to reflect the worst-case scenario. Each sample was placed within a laboratory supplied amber jar and clear vial containing a preservative, and hand delivered to the lab under a proper chain of custody.

Groundwater was not encountered during the exhumation process.

Based on the field screening results and observations made of the soils encountered within the excavation, verification soil samples were obtained by SOS from the former UST tank bed. The number of soil samples to be submitted for laboratory analysis was determined based on Table 3: Minimum Confirmation Sampling Requirements for Excavation referenced in Ontario Regulation (O. Reg.) 153/04 as amended. Given the floor size of the excavation (<25 m²), a minimum of two (2) sidewall samples (S-1 and S-2) and two (2) floor samples (B-1 and B-2) were collected from the tank excavation area (Ref. Figure 2).

The samples were submitted to Caduceon Environmental Laboratories (Caduceon) for chemical analysis of petroleum hydrocarbon (PHC) fractions F1 to F4, as well as benzene, toluene, ethylbenzene and xylene (BTEX) parameters. Caduceon is accredited by the Standards Council of Canada (SCS) and follows the analytical protocols outlined in O. Reg. 153/04, as amended.

4.1 ANALYTICAL FINDINGS

The laboratory Certificate of Analysis (Caduceon Report #23-033501) for the confirmatory soil samples collected by SOS on August 23, 2023 is enclosed herein. Results for the PHC (F1-F4) and BTEX analyses are summarized in Table 1 to provide comparative analysis against the applicable MECP Table 3 SCS. Analytical results in bold text are above laboratory detection limits and results underlined and in bold text are at or above the applicable site condition standards.

As can be seen below, all samples are within the applicable MECP Table 3 SCS.

TABLE 1: Verification Soil Analysis

SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (M)	PHCF1 (C6-C10)	PHCF2 (C10-C16)	PHCF3 (C16-C34)	PHCF4 (C34-C50)	B	T	E	X
MDL			10	5	10	10	0.02	0.2	0.05	0.03
MECP TABLE 3 STANDARDS SOIL [RESIDENTIAL]			55	98	300	2800	0.21	2.3	2	3.1
S-1	28-NOV-23	0.46	<10	<5	26	<10	<0.02	<0.2	<0.05	<0.03
S-2	28-NOV-23	0.41	<10	<5	27	11	<0.02	<0.2	<0.05	<0.03
B-1	28-NOV-23	0.74	<10	<5	13	<10	<0.02	<0.2	<0.05	<0.03
B-2	28-NOV-23	0.74	<10	<5	11	<10	<0.02	<0.2	<0.05	<0.03

MDL – LABORATORY METHOD DETECTION LIMIT
 BTEX – BENZENE, TOLUENE, ETHYL BENZENE AND XYLENES (M-, P-, O-)
 1- FAG REQUIRED

PHC – PETROLEUM HYDROCARBONS
 UNITS - ALL UNITS ARE REPORTED IN µg/g for soil samples

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on site investigations performed to date and analytical testing of soils obtained from the tank beds of the former underground fuel storage tanks located at [REDACTED] Ontario, the remaining soils are in compliance with Table 3: Generic Site Condition Standards for Use in a Non-Potable Groundwater Condition provided in the MECP document *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (April 15, 2011).

There are no further remedial activities recommended at this time.

6.0 DISCLAIMER

The statements made in this report are based solely on the information obtained to date as part of the above referenced investigation. SOS has used its professional judgement in assessing this information and formulating its conclusions and/or recommendations. New information may result in a change of this conclusion. It is SOS' intention to perform tasks with respect to the due diligence of the profession. No other warranty, or representation, expressed or implied, as to the accuracy of the information or recommendations is included or intended in this report. The results of this investigation should in no way be construed as a warranty that the subject property is free from any and all other contamination.

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from the use of any information or conclusions contained in this report. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the sole responsibility of the third party.

Respectfully submitted by,

SPECIALIZED ONSITE SERVICES INC.



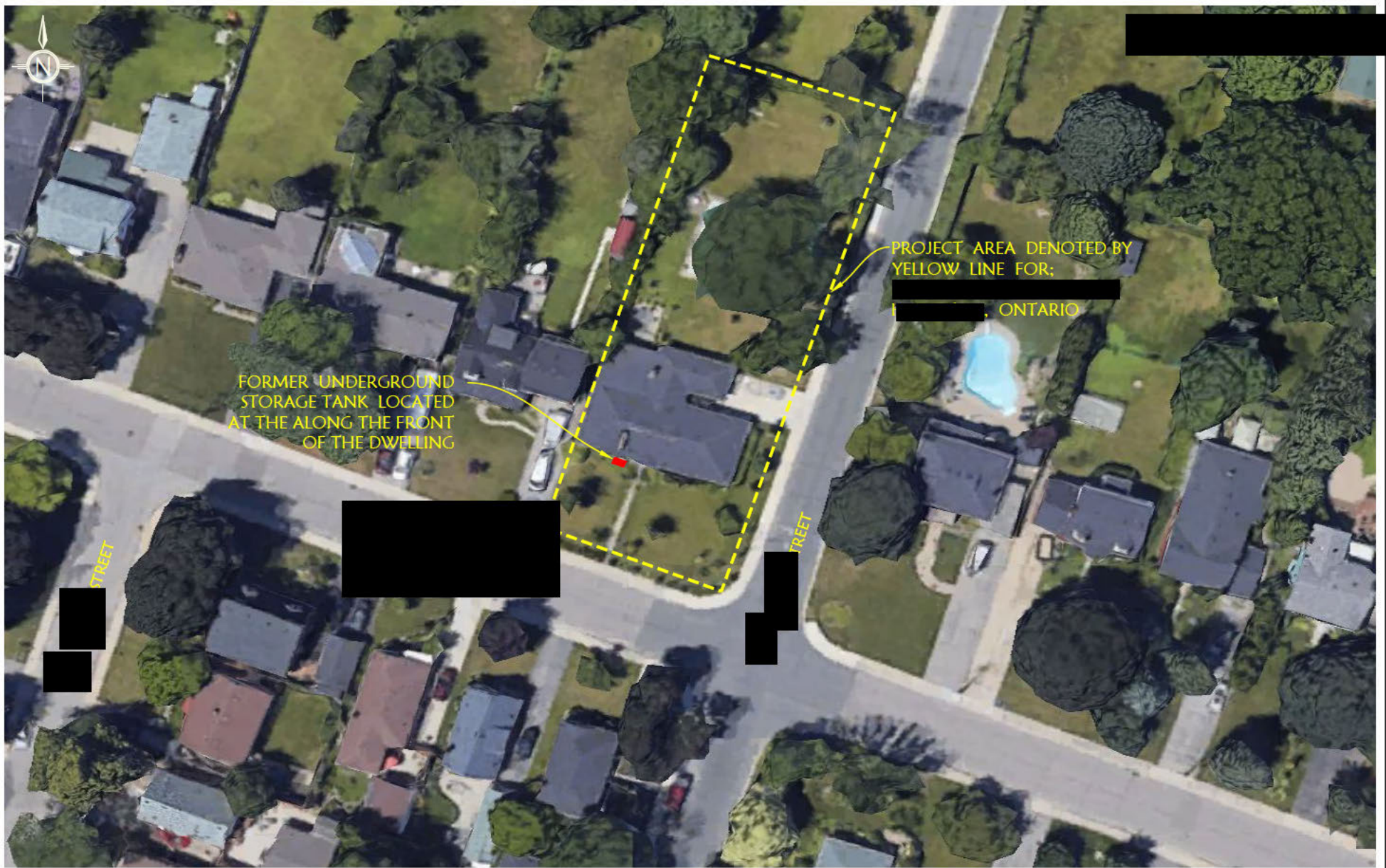
Cam Monk
President

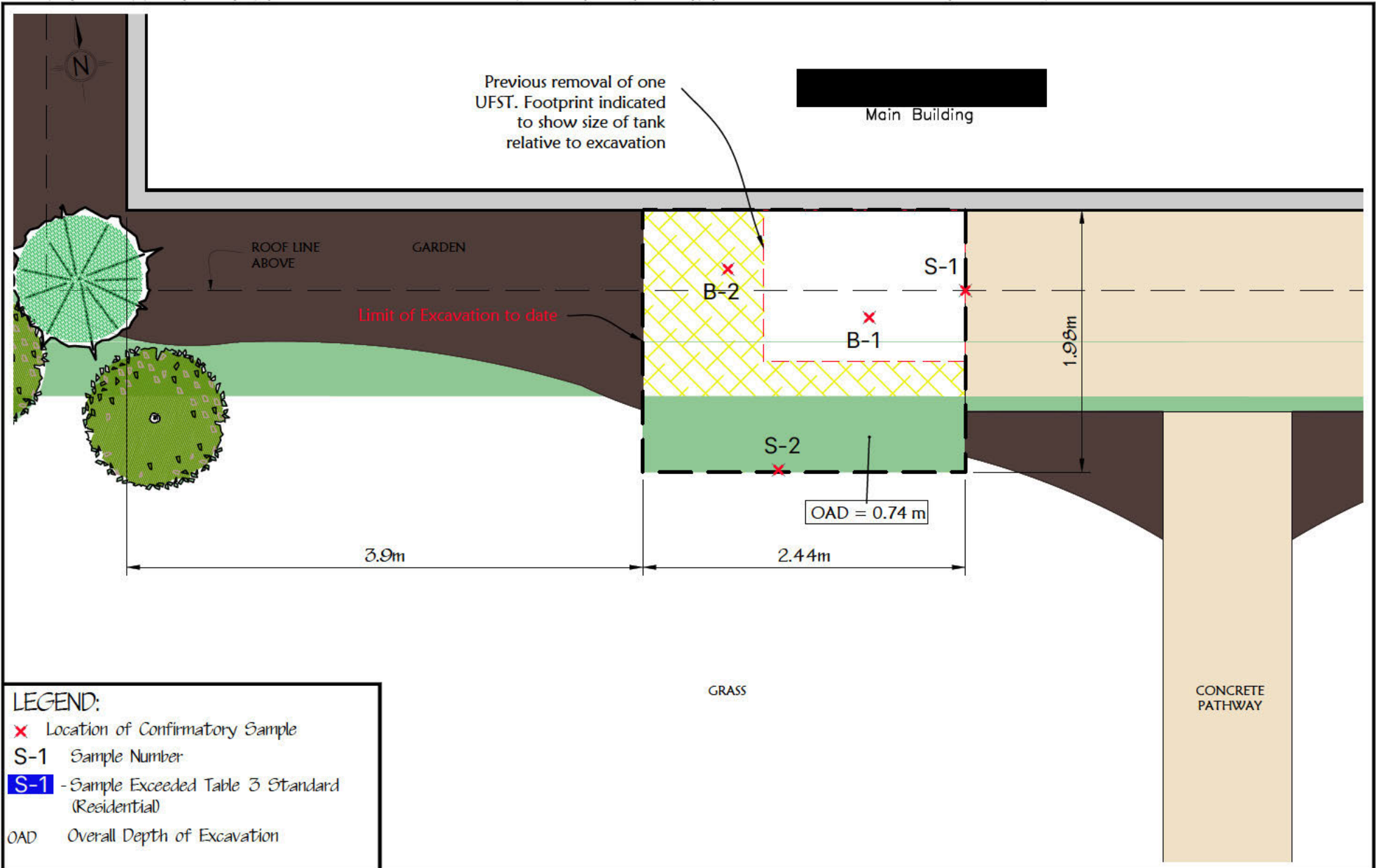


Derek Maat, M.A.Sc., P. Eng., QP
Environmental Engineer

*Enclosures: Figures
Laboratory Certificates of Analysis
Site Photos*

FIGURES





LEGEND:

- ✗ Location of Confirmatory Sample
- S-1 Sample Number
- S-1** - Sample Exceeded Table 3 Standard (Residential)
- OAD Overall Depth of Excavation

SOS
SPECIALIZED ONSITE SERVICES INC.
 ONE RESOURCE, MULTIPLE SERVICES
 info@soservices.ca

Project No: [REDACTED]
 Scale: 1:40
 Drawn By: L.J.F.
 Date: December 7, 2023

Project: [REDACTED] Ontario
 Title: Tank Pull Confirmatory Soil Sample Location Plan - November 28, 2023

Figure No.: 2

LABORATORY CERTIFICATES OF ANALYSIS

C.O.C.: G101447

REPORT No: 23-033501 - Rev. 0

Report To:
 S.O.S. Inc
 357 Beechwood Rd
 Napanee, ON K7R 3L1

CADUCEON Environmental Laboratories
 285 Dalton Ave
 Kingston, ON K7K 6Z1

Attention: Levi Foster

DATE RECEIVED: 2023-Nov-28
DATE REPORTED: 2023-Dec-04
SAMPLE MATRIX: Soil

CUSTOMER PROJECT: [REDACTED]
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Moisture	4	KINGSTON	AAUCOIN	2023-Nov-30	% Moisture	SM 2540
PHC F1 (Solid)	4	RICHMOND_HILL	JEVANS	2023-Nov-30	C-VPHS-01	CWS Tier 1
PHC F2-4 (Solid)	4	KINGSTON	STHOMPSON	2023-Dec-01	PHC-S-001	CWS Tier 1
VOC-Volatiles (Solid)	4	RICHMOND_HILL	JEVANS	2023-Nov-30	C-VOC-02	EPA 8260

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg

F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
 F2 C10-C16 hydrocarbons in µg/g, (F2-naph if requested)
 F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
 F4 C34-C50 hydrocarbons in µg/g

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

Any deviations from the method are noted and reported for any particular sample.

nC6 and nC10 response factor is within 30% of response factor for toluene:

nC10, nC16 and nC34 response factors within 10% of each other:

C50 response factors within 70% of nC10+nC16+nC34 average:

Linearity is within 15%:

All results expressed on a dry weight basis.

Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an *

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met. If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC QC will be made available upon request.



Michelle Dubien
Data Specialist

CADUCEON Environmental Laboratories Certificate of Analysis

Final Report

REPORT No: 23-033501 - Rev. 0

Parameter	Units	R.L.	Limits	Client I.D. Sample I.D. Date Collected Reg 153/406	S-1	S-2	B-1	B-2
					23-033501-1	23-033501-2	23-033501-3	23-033501-4
					2023-Nov-28	2023-Nov-28	2023-Nov-28	2023-Nov-28
					-	-	-	-
Benzene	µg/g	0.02	0.21	T3RPI	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	µg/g	0.05	2	T3RPI	<0.05	<0.05	<0.05	<0.05
Toluene	µg/g	0.2	2.3	T3RPI	<0.2	<0.2	<0.2	<0.2
Xylene, m,p-	µg/g	0.03			<0.03	<0.03	<0.03	<0.03
Xylene, m,p,o-	µg/g	0.03	3.1	T3RPI	<0.04	<0.03	<0.03	<0.03
Xylene, o-	µg/g	0.03			<0.03	<0.03	<0.03	<0.03
PHC F1 (C6-C10)	µg/g	10	55	T3RPI	<10	<10	<10	<10
PHC F2 (>C10-C16)	µg/g	5	98	T3RPI	<5	<5	<5	<5
PHC F3 (>C16-C34)	µg/g	10	300	T3RPI	26	27	13	11
PHC F4 (>C34-C50)	µg/g	10	2800	T3RPI	<10	11	<10	<10
Moisture	%	-			18.8	19.5	19.4	19.4

Reg 153/406: Reg 153/406
T3RPI: R153 Tbl. 3 - RPI Soil



**Michelle Dubien
Data Specialist**

The analytical results reported herein refer to the samples as received and relate only to the items tested. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

SITE PHOTOS



PHOTO 1 – NORTHWEST FACING VIEW OF THE TANK NEST PRIOR TO TANK REMOVAL.



PHOTO 2 – NORTH FACING VIEW DURING EXCAVATING.



PHOTO 3 – VIEW OF THE REMOVED STEEL TANK.



PHOTO 4 – NORTHEAST VIEW EXCAVATION AFTER TANK REMOVAL.