

DRAFT

FILL MATERIAL SAMPLING REPORT

14131 TACOMA STREET
DETROIT, WAYNE COUNTY, MICHIGAN 48205



OCTOBER 28, 2025
REVISED DECEMBER 11, 2025

PREPARED FOR:
THE CITY OF DETROIT DEMOLITION DEPARTMENT
1301 THIRD STREET, SUITE 606
DETROIT, MICHIGAN 48226



FILL MATERIAL SAMPLING REPORT

14131 TACOMA STREET
DETROIT, WAYNE COUNTY, MICHIGAN 48205

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EXECUTIVE SUMMARY

The Mannik & Smith Group, Inc. (MSG) was retained by the City of Detroit (COD) to perform sampling and analysis of fill materials at the property commonly addressed as 14131 Tacoma Street, Detroit, Wayne County, Michigan (hereinafter, the "Site"). The Site location, as referenced to nearby roads and major geographic features, is shown on Figure 1, *Site Location Map*. Figure 2, *Site Layout*, depicts the current layout of the Site.

This Executive Summary is provided to summarize the results of the work performed at the Site. The Executive Summary is general in nature and should not be used to replace or be considered apart from the entirety of this report.

The purpose of the work was to assist the COD's blight remediation efforts with the sampling and analysis of fill material at the Site through soil sample collection from pre-determined depths, as described in the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025. Sample analyses associated with this work included volatile organic compounds (VOCs); semivolatile organic compounds (SVOCs); polychlorinated biphenyls (PCBs); arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc (10 Michigan metals); chloride; herbicides; and pesticides. Analytical results were compared to the current generic residential cleanup criteria (GRCC) promulgated under Part 201 of the *Natural Resources and Environmental Protection Act* (NREPA), 1994 P.A. 451, as amended (Part 201).

Pursuant to a request by the COD, MSG has completed sampling and analysis of fill material at the Site, as described in the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025. Results of this work, which are subject to the limitations presented in *Appendix A, Limitations*, incorporated by reference herewith, revealed the following:

- The stratigraphy encountered during soil boring advancement of 14131 SB01, 14131 SB02, and 14131 SB03 generally consisted of four to six feet of brown and gray sandy clay with lenses of brown sand to six feet below ground surface (bgs), the maximum depth explored for this investigation. Field photoionization detector (PID) readings of the recovered soil cores ranged from 0.0 to 0.6 parts per million (ppm). There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities; however, concrete debris was observed in 14131 SB03.
- Concentrations of arsenic, chromium (Total), tetrachloroethylene, and trichloroethylene were detected in soil samples 14131 SB01 (1-2'), SB02 (3-4'), and/or 14131 SB03 (5-6') in excess of its respective Part 201 drinking water protection criteria (DWPC), groundwater surface water interface protection criteria (GSIPC), and/or direct contact criteria (DCC).
- Concentrations of 1,1,2-trichloroethane, 4,4'-DDE, and barium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chloride, chrysene, copper, fluoranthene, indeno(1,2,3-cd)pyrene, lead, mercury, phenanthrene, pyrene, and zinc were detected in the soil samples 14131 SB01 (1-2'), 14131 SB02 (3-4'), and/or 14131 SB03 (5-6') at concentrations above laboratory method detection limits; however, detected concentrations were below their respective Part 201 GRCC and/or Statewide Default Background Levels.
- Toxicity Characteristic Leaching Procedure (TCLP) laboratory analytical results revealed that concentrations of arsenic, chromium, and VOCs were not in excess of 40 C.F.R. § 261.24 Title 40 - Protection of Environment, Chapter I - Environmental Protection Agency, Subchapter I - Solid Wastes, Part 261- Identification and Listing of Hazardous Waste, Subpart C - Characteristics of Hazardous Waste.
- PCBs were not detected above laboratory method detection reporting limits.
- Groundwater was not encountered during soil boring activities completed as part of this investigation. Groundwater is not utilized as drinking water at or near the Site, as municipal water is supplied via the COD, and the general geology of the Site and surrounding area consists of fill materials underlain by clay overlying bedrock. Therefore, the drinking water (DW) exposure pathway can be considered not applicable.

Additionally, groundwater was not encountered during this investigation to transport contaminants to either storm sewers or surface water and the clay layer also inhibits migration, therefore, the groundwater surface water exposure pathway can be considered not applicable. Since the building on site has been razed, the recommended interim action screening level (RIASL), soil volatilization to indoor air pathway (SVIAP), and/or the soil volatilization to indoor air inhalation pathways (SVIIC) are not currently complete, however, consideration may need to be given to these pathways if future construction is planned. Given that the site is residential, exceedances of direct contact criteria may merit further consideration.

MSG has evaluated the analytical results of the fill material. Based upon the analytical results, we have determined that the material is contaminated above the state's Part 201 GRCC, as applicable.

MSG warrants that no substantive information or documentation was deleted, omitted, or changed that would otherwise cause the MSG to reach a different conclusion. Furthermore, MSG understands that the COD and its agencies and authorities may rely upon the overall completeness, accuracy, and conclusions in this report and hereby provides reliance on the contents presented herein.

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1.0 INTRODUCTION

The Mannik & Smith Group, Inc. (MSG) was retained by the City of Detroit (COD) to conduct sampling and analysis of fill materials at the property commonly addressed as 14131 Tacoma Street, Detroit, Wayne County, Michigan (hereinafter, the "Site"). The Site location as referenced to nearby roads and major geographic features is presented as *Figure 1, Site Location Map*. *Figure 2, Site Layout*, depicts the current layout of the Site.

The purpose of this work was to assist the COD's blight remediation efforts with the sampling and analysis of fill material at the Site through soil sample collection from pre-determined depths. The scope of work for this investigation was performed in general accordance with the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025. This report presents the findings of this investigation. Soil samples were collected by MSG on August 8, 2025. The findings of this report are valid as of the report date, subject to the limitations presented in *Appendix A, Limitations*.

At the time of this investigation, the Site was vacant and formerly occupied by residential structures. Former Site building(s) had been demolished as part of the Blight Removal Program prior to commencement of this work.

2.0 PURPOSE AND SCOPE OF WORK

The purpose of the work was to assist the COD's blight remediation efforts with the sampling and analysis of fill material at the Site through soil sample collection from pre-determined depths, as described in the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025, and modified in the field (when necessary) based on encountered conditions and professional judgment of the MSG field geologist.

MSG performed the following scope of work in general accordance with the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025:

- Advanced three (3) onsite soil borings to a maximum depth of six feet below ground surface (bgs) utilizing a direct push drill rig at the locations depicted on *Figure 2*.
- Collected one (1) discrete soil sample for laboratory analysis from each soil boring at a depth of 1-2 feet bgs, 3-4 feet bgs, or 5-6 feet bgs, depending on the soil boring.
- Submitted soil samples to an independent analytical laboratory for chemical analysis.
- Prepared this report summarizing the activities and results of this work.

Per the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025, sample analyses included volatile organic compounds (VOCs); semivolatile organic compounds (SVOCs); polychlorinated biphenyls (PCBs); arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc (10 Michigan metals); chloride; herbicides; and pesticides. Soil sample analytical results were compared to the current generic residential cleanup criteria (GRCC) promulgated under Part 201 of the *Natural Resources and Environmental Protection Act* (NREPA), 1994 P.A. 451, as amended (Part 201).

3.0 SITE ASSESSMENT METHODOLOGY

The following subsections describe the methodologies employed by MSG at the Site during sampling activities that were conducted on August 8, 2025 and October 14, 2025. Daily field activity reports prepared by MSG are presented in *Appendix B, Daily Field Reports*.

3.1 Preliminary Site Work Activities

Prior to conducting subsurface soil sampling activities, MSG contacted the MISSDIG utility locating system to identify and physically mark underground utilities. If necessary, proposed soil boring locations were modified based on the results of the utility markings. Additionally, MSG reviewed readily available Site building records

or documents to ensure that this scope of work was conducted on the correct property and in the areas of the former Site structure.

3.2 Soil Sample Collection

The sampling plan for the Site was based on the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025, and modified in the field (if necessary) based on encountered conditions and professional judgment of MSG's field personnel. MSG advanced three (3) soil borings, designated 14131 SB01, 14131 SB02, and 14131 SB03, using a direct push drill rig at the locations depicted on Figure 2. Photographs collected during completion of this work are provided in *Appendix C, Investigation Photographs*.

Soils were continuously profiled at each soil boring location from the ground surface to the termination depth of six feet bgs using a 5-foot long, closed-piston Macro-Core® sampling device. A new disposable high-density polyethylene (HDPE) liner was placed within the sampler between each 5-foot sample interval. The recovered soil samples were examined and logged in the field by the MSG field geologist. The soils were classified by MSG's field geologist in general accordance with *ASTM D 2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*. Soil descriptions were based on visual examination and interpretation by the field geologist.

Soil samples were examined for visual and olfactory indications of impact in accordance with the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025, and were continuously screened upon retrieval of each sample interval with a MiniRAE 10.6 electron volt (eV) photoionization detector (PID) calibrated with isobutylene span gas. The PID measures the concentration of airborne ionizable gasses and vapors and automatically displays any detected concentrations in parts per million (ppm). The PID measures total concentrations of VOC vapors present and cannot distinguish between individual VOC constituents. PID readings for each sample interval were recorded on the individual soil boring logs, which are included in *Appendix D, Soil Boring Logs*.

Soil samples were collected in general accordance with the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025. The soil samples were placed into appropriate pre-preserved and unpreserved laboratory-supplied sample containers, as appropriate for the associated laboratory analyses. Soil samples collected for VOC analysis were placed in laboratory supplied pre-tared 40-milliliter (ml) vials with septum sealed threaded caps that were pre-preserved with methanol provided by the analytical laboratory. Groundwater was not encountered during the investigation.

3.3 Toxicity Characteristic Leaching Procedure (TCLP) Soil Sample Collection

On October 14, 2025, MSG mobilized to the Site to collect an additional soil sample based on request from the COD. Sample location and analyte(s) were based on the laboratory results of the initial soil investigation. MSG personnel advanced one soil boring in the immediate vicinity of the soil boring location that exhibited the highest laboratory result(s) in excess of Part 201 GRCC. Soils were continuously profiled from the ground surface to the termination depth of six feet bgs using a direct push drill rig. These soils were homogenized in a stainless-steel bowl (or equivalent) to produce a single, composite soil sample. The composite soil sample was placed into unpreserved laboratory-supplied sample containers, as appropriate for the associated laboratory analyses.

The composite soil sample was collected to create a single, representative sample to provide a laboratory result that includes the overlying and/or underlying soils in the area of concern to comprehensively represent the backfill soils that may be removed.

3.4 Decontamination

Before initiation of sampling and drilling activities and between each sampling/soil boring, equipment was cleaned to avoid the potential for cross-contamination during field activities. Pertinent equipment and tooling

were thoroughly cleaned using a phosphate-free soap to remove chemical residue and caked-on soils. After sample collection was completed, each soil boring location was abandoned with the soil cuttings generated at each soil boring location and finished to match the original surface.

3.5 Analytical Methods

A total of three (3) soil samples, designated 14131 SB01 (1-2'), 14131 SB02 (3-4'), and 14131 SB03 (5-6'), and one (1) composite soil sample designated 14131 Tacoma SB01,3 TCLP were collected as part of this investigation. These soil samples were submitted to ALS Environmental Laboratory (ALS) in Holland, Michigan for laboratory analysis of the following parameters per the requested parameters as described in the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025, and individual TCLP analysis:

- VOCs by United States Environmental Protection Agency (USEPA) Method SW8260D;
- SVOCs by USEPA Method SW8270E;
- PCBs by USEPA Method SW8082A;
- 10 Michigan metals by USEPA Method SW6020B and SW7471B;
- Chloride by USEPA Method SW9056A;
- Herbicides by USEPA Method SW8151A; and
- Pesticides by USEPA Method SW8081B.

3.6 Quality Assurance/Quality Control

Quality assurance and quality control (QA/QC) was achieved in the field by using MSG's standard operating procedures (SOPs) for sample collection, sample screening, sample preservation, and chain-of-custody protocols to ensure sample integrity. Per the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025, duplicate soil samples and field blanks were not collected.

Laboratory QC was achieved by using standard analytical methods, the analyses of spiked and laboratory quality control samples, and the use of internal laboratory quality assurance protocols. Review of the laboratory's QC data indicated the validity of the data and that it is able to be used for assessing soil samples collected during this work.

4.0 SUMMARY OF RESULTS

The following subsections include a discussion of the soil samples that were collected from the Site on August 8, 2025 and October 14, 2025.

4.1 Site Geology and Hydrogeology

The stratigraphy encountered during soil boring advancement of 14131 SB01, 14131 SB02, and 14131 SB03 generally consisted of four to six feet of brown and gray sandy clay with lenses of brown sand to six feet below ground surface, the maximum depth explored for this investigation. Field PID readings of the recovered soil cores ranged from 0.0 to 0.6 ppm. There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities, however, concrete debris was observed in 14131 SB03.

Groundwater was not encountered during soil boring activities completed as part of this investigation.

4.2 Soil Sample Analytical Results

Three (3) soil samples, designated 14131 SB01 (1-2'), 14131 SB02 (3-4'), and 14131 SB03 (5-6'), were collected from the Site and submitted to ALS for laboratory analysis of VOCs, SVOCs, PCBs, Michigan 10 Metals, chloride, herbicides, and pesticides.

The analytical results and comparisons to applicable Part 201 GRCC are summarized in *Table 1, Soil Sample Analytical Detection Summary*. Copies of the laboratory analytical data reports and chain of custody forms are included in *Appendix E, Laboratory Analytical Reports and Chain of Custody Forms*.

A summary of the soil sample analytical detections in excess of Part 201 GRCC is provided below:

Chemical	CAS Number	Soil Sample (feet bgs)	Part 201 GRCC Exceeded / Concentration (µg/kg ¹)	Maximum Detected Concentration (µg/kg)
Tetrachloroethylene	127-18-4	14131 SB01 (1-2')	DWPC ² / 100 GSIPC ³ / 1,200	7,610
Trichloroethylene	79-01-6	14131 SB01 (1-2')	DWPC / 100	1,020
Arsenic	7440-38-2	14131 SB01 (1-2') 14131 SB02 (3-4') 14131 SB03 (5-6')	DWPC / 4,600 GSIPC / 4,600 DCC ⁶ / 7,600	11,600
Chromium (Total)	7440-47-3	14131 SB02 (3-4') 14131 SB03 (5-6')	GSIPC / 3,300	25,600

¹µg/kg – micrograms per kilogram;

²DWPC – Drinking Water Protection Criteria

³GSIPC – Groundwater Surface Water Interface Protection Criteria

⁶DCC – Direct Contact Criteria

4.3 TCLP Analytical Results

Arsenic, chromium, and VOCs were analyzed following leach testing using USEPA method EPA 6020 B. Laboratory results are summarized and compared to 40 C.F.R. § 261.24 Title 40 - Protection of Environment, Chapter I - Environmental Protection Agency, Subchapter I - Solid Wastes, Part 261 - Identification and Listing of Hazardous Waste, Subpart C - Characteristics of Hazardous Waste in *Table 2, TCLP Analytical Detection Summary Table*. Upon comparison, the laboratory analytical results following TCLP testing were below laboratory method detection limits.

Copies of the laboratory analytical data report and chain of custody forms are included in Appendix E.

4.4 Exposure Evaluation

MSG has completed a preliminary evaluation for the Site and associated exposure pathways. Cleanup criteria are applicable if it is reasonable and relevant for the corresponding exposure pathway to be or become complete.

Groundwater was not encountered during soil boring activities completed as part of this investigation. Groundwater is not utilized as drinking water at or near the Site, as municipal water is supplied via the COD, and the general geology of the Site and surrounding area consists of fill materials underlain by clay overlying bedrock. Therefore, the drinking water (DW) exposure pathway can be considered not applicable. Additionally, groundwater was not encountered during this investigation to transport contaminants to either storm sewers or surface water and the clay layer also inhibits migration, therefore, the groundwater surface water exposure pathway can be considered not applicable. Since the building on site has been razed, the recommended interim action screening level (RIASL), soil volatilization to indoor air pathway (SVIAP), and/or the soil volatilization to indoor air inhalation pathways (SVIIC) are not currently complete, however, consideration may need to be given to these pathways if future construction is planned. Given that the site is residential, exceedances of direct contact criteria may merit further consideration.

5.0 FINDINGS

MSG has evaluated the analytical results of the fill material samples collected at the Site in general accordance with the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025. The findings of this investigation are presented below:

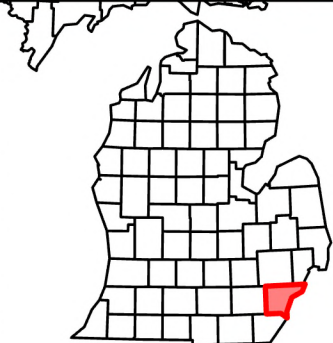
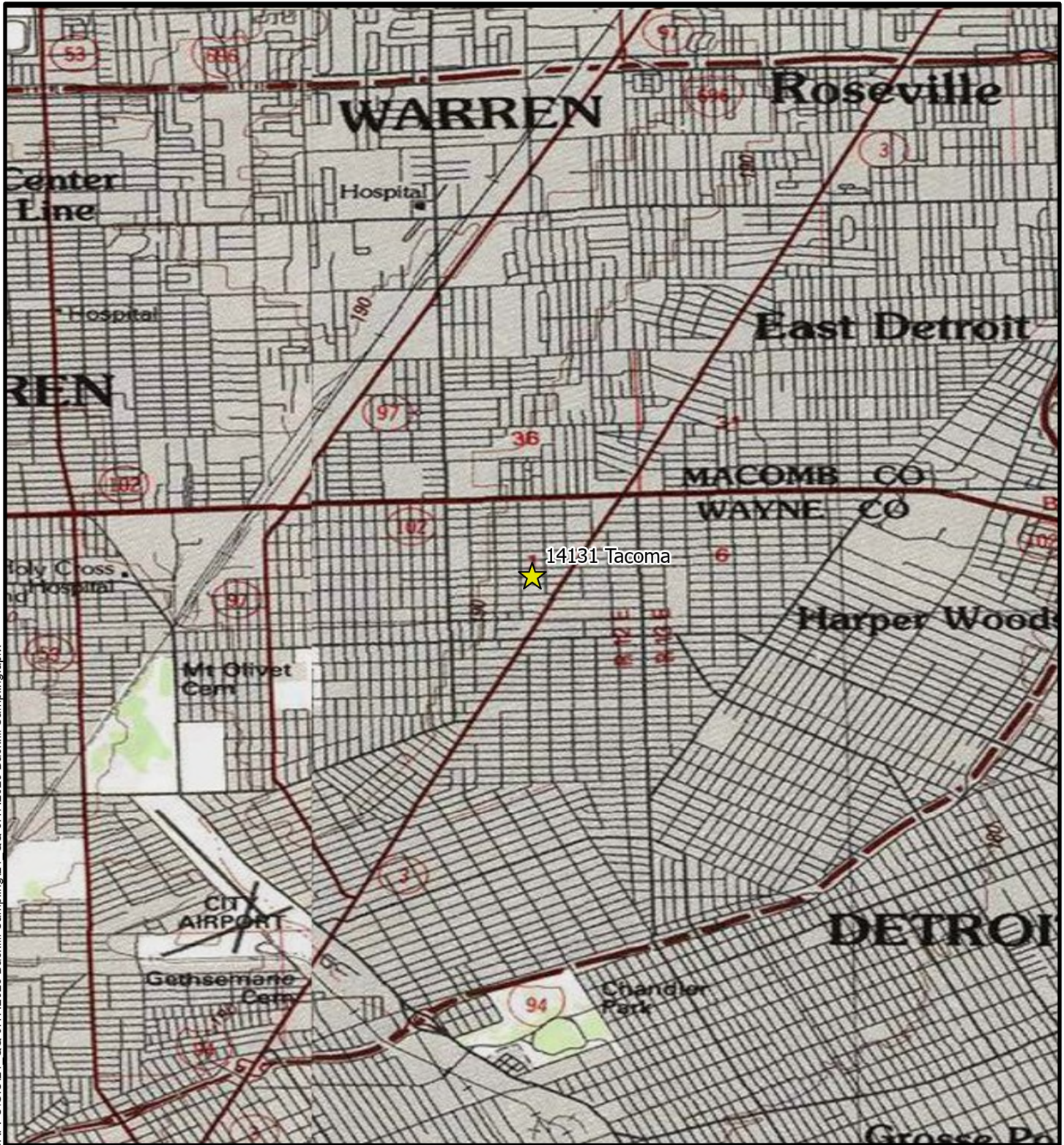
- The stratigraphy encountered during soil boring advancement of 14131 SB01, 14131 SB02, and 14131 SB03 generally consisted of four to six feet of brown and gray sandy clay with lenses of brown sand to six feet bgs, the maximum depth explored for this investigation. PID readings of the recovered soil cores ranged from 0.0 to 0.6 ppm. There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities; however, concrete debris was observed in 14131 SB03.
- Concentrations of arsenic, tetrachloroethylene, total chromium, and trichloroethylene were detected in soil samples 14131 SB01 (1-2'), SB02 (3-4'), and/or 14131 SB03 (5-6') in excess of its respective Part 201 drinking water protection criteria (DWPC), groundwater surface water interface protection criteria (GSIPC), and/or direct contact criteria (DCC).
- Concentrations of 1,1,2-trichloroethane, 4,4'-DDE, and barium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chloride, chrysene, copper, fluoranthene, indeno(1,2,3-cd)pyrene, lead, mercury, phenanthrene, pyrene, and zinc were detected in the soil samples 14131 SB01 (1-2'), 14131 SB02 (3-4'), and/or 14131 SB03 (5-6') at concentrations above laboratory method detection limits; however, detected concentrations were below their respective Part 201 GRCC and/or Statewide Default Background Levels.
- TCLP laboratory analytical results revealed that concentrations of arsenic, chromium, and VOCs were not in excess of 40 C.F.R. § 261.24 Title 40 - *Protection of Environment, Chapter I - Environmental Protection Agency, Subchapter I - Solid Wastes, Part 261- Identification and Listing of Hazardous Waste, Subpart C - Characteristics of Hazardous Waste*.
- PCBs were not detected above laboratory method detection reporting limits.
- Groundwater was not encountered during soil boring activities completed as part of this investigation. Groundwater is not utilized as drinking water at or near the Site, as municipal water is supplied via the COD, and the general geology of the Site and surrounding area consists of fill materials underlain by clay overlying bedrock. Therefore, the drinking water (DW) exposure pathway can be considered not applicable. Additionally, groundwater was not encountered during this investigation to transport contaminants to either storm sewers or surface water and the clay layer also inhibits migration, therefore, the groundwater surface water exposure pathway can be considered not applicable. Since the building on site has been razed, the recommended interim action screening level (RIASL), soil volatilization to indoor air pathway (SVIAP), and/or the soil volatilization to indoor air inhalation pathways (SVIIC) are not currently complete, however, consideration may need to be given to these pathways if future construction is planned. Given that the site is residential, exceedances of direct contact criteria may merit further consideration.

MSG has evaluated the analytical results of the fill material. Based upon the analytical results, we have determined that the material is contaminated above the state's Part 201 GRCC, as applicable.

MSG warrants that no substantive information or documentation was deleted, omitted, or changed that would otherwise cause the MSG to reach a different conclusion. Furthermore, MSG understands that the COD and its agencies and authorities may rely upon the overall completeness, accuracy, and conclusions in this report and hereby provides reliance on the contents presented herein.

FIGURES





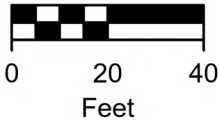
★ Site Location



FIGURE 1
SITE LOCATION

14131 Tacoma, Detroit, MI

DATE 9/23/2025	DRAWN BY JWW	DESIGNED BY JWW	PROJECT NO. DETR0060
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- Sample Locations
- Parcels (Current)
- Subject Property

Notes
• Parcel boundaries are approximate
• Basemap Credits: Wayne - 2020 - 6in - 4-band:



FIGURE 2
Site Layout

14131 Tacoma, Detroit, MI

DATE 9/22/2025	DRAWN BY JWW	DESIGNED BY KRB	PROJECT NO. DETR0060
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TABLES



Table 1
Soil Sample Analytical Detection Summary

Detroit Backfill Sampling
14131 Tacoma, Detroit, Michigan

SOIL: Part 201/213 Generic Residential Cleanup Criteria Revised October 12, 2023 Units: µg/kg	Volatile Organic Compounds (VOCs)			Semivolatile Organic Compounds (SVOCs)											
	Tetrachloroethylene	1,1,2-Trichloroethane	Trichloroethylene	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Benzo(a)pyrene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene		
CAS Number	127-18-4	79-00-5	79-01-6	56-55-3	205-99-2	207-08-9	191-24-2	50-32-8	218-01-9	206-44-0	193-39-5	85-01-8	129-00-0		
Statewide Default Background Levels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Drinking Water Protection Criteria (DWPC)	100	100	100	NLL	NLL	NLL	NLL	NLL	NLL	7.3E+05	NLL	56,000	4.8E+05		
Groundwater Surface Water Interface Protection Criteria (GSIPC)	1,200 (X)	6,600 (X)	4,000 (X)	NLL	NLL	NLL	NLL	NLL	NLL	5,500	NLL	2,100	ID		
Soil Volatilization to Indoor Air Inhalation (SVIIC)	11,000	4,600	1,000	NLV	ID	NLV	NLV	NLV	ID	1.0E+09 (D)	NLV	2.8E+06	1.0E+09 (D)		
Soil Volatilization to Indoor Air Pathway (SVIAP)	6.2 (M) (EE)	0.37 (M)	0.33 (M) (DD)	1.6E+05 (MM)	NA	NA	NA	NA	NA	NA	NA	1,700	2.5E+07		
Infinite Source Volatile Soil Inhalation Criteria (VSIC)	1.7E+05	17,000	11,000	NLV	ID	NLV	NLV	NLV	ID	7.4E+08	NLV	1.6E+05	6.5E+08		
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	4.8E+05	21,000	25,000	NLV	ID	NLV	NLV	NLV	ID	7.4E+08	NLV	1.6E+05	6.5E+08		
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	1.1E+06	44,000	57,000	NLV	ID	NLV	NLV	NLV	ID	7.4E+08	NLV	1.6E+05	6.5E+08		
Particulate Soil Inhalation Criteria (PSIC)	2.7E+09	1.9E+08	1.3E+08	ID	ID	ID	8.0E+08	1.5E+06	ID	9.3E+09	ID	6.7E+06	6.7E+09		
Direct Contact Criteria (DCC)	2.0E+05 (C)	1.8E+05	1.1E+5 (DD)	20,000	20,000	2.0E+05	2.5E+06	2,000	2.0E+06	4.6E+07	20,000	1.6E+06	2.9E+07		
Soil Saturation Concentration Screening Levels (C _{sat})	88,000	9.2E+05	5.0E+05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Recommended Interim Action Screening Level (RIASL)	6.2 (M)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SAMPLE ID	DEPTH	SAMPLE DATE													
14131 SB01	1-2	8/8/2025	7,610	53.9	1,020	87.7	142	65.8	76.8	87.7	95	234	73.1	102	205
14131 SB02	3-4	8/8/2025	<39.4	<39.4	<39.4	<38.1	<38.1	<38.1	<38.1	<38.1	<38.1	57.2	<38.1	<38.1	38.1
14131 SB03	5-6	8/8/2025	<42.2	<42.2	<42.2	<18.8	<18.8	<18.8	<18.8	<18.8	<18.8	<18.8	<18.8	<18.8	<18.8

Notes:
Bold indicates concentration above laboratory reporting limits.
Exceeds DWPC
Exceeds GSIPC
Exceeds Applicable Soil Vapor Inhalation screening level
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation screening levels
Exceeds PSIC, DCC, and/or Csat, likely exceeds others
ND = Not Detected above laboratory reporting limits
NS = Not Sampled or Not Analyzed
NR = Not Reported (Data missing from provided report)
Notes in parentheses and standard abbreviations from Part 201 Rules 299.1 through 299.50, updated October 12, 2023

Table 1
Soil Sample Analytical Detection Summary

Detroit Backfill Sampling
14131 Tacoma, Detroit, Michigan

SOIL: Part 201/213 Generic Residential Cleanup Criteria Revised October 12, 2023 Units: µg/kg			Michigan 10 Metals										Pesticides/ Herbicides	Polychlorinated Biphenyls (PCBs)	Inorganic Anions/Ions
			Arsenic	Barium (B)	Cadmium (B)	Chromium (Total)	Copper (B)	Lead (B)	Mercury (B,Z)	Selenium (B)	Silver (B)	Zinc (B)	4,4'-DDE		Chloride
CAS Number			7440-38-2	7440-39-3	7440-43-9	7440-47-3	7440-50-8	7439-92-1	7439-97-6	7782-49-2	7440-22-4	7440-66-6	72-55-9		16887006
Statewide Default Background Levels			5,800	75,000	1,200	18,000	32,000	21,000	130	410	1,000	47,000	NA		NA
Drinking Water Protection Criteria (DWPC)			4,600	1.3E+06	6,000	30,000	5.8E+06	7.0E+05	1,700	4,000	4,500	2.4E+06	NLL		5.00E+06
Groundwater Surface Water Interface Protection Criteria (GSIPC)			4,600	(G)	(G,X)	3,300	(G)	(G,X)	50 (M); 1.2	400	100 (M); 27	(G)	NLL		(X)
Soil Volatilization to Indoor Air Inhalation (SVIIC)			NLV	NLV	NLV	NLV	NLV	NLV	48,000	NLV	NLV	NLV	NLV		NLV
Soil Volatilization to Indoor Air Pathway (SVIAP)			NA	NA	NA	--	NA	NA	22 (M)	NA	NA	NA	NLV		--
Infinite Source Volatile Soil Inhalation Criteria (VSIC)			NLV	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NLV	NLV	NLV		NLV
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)			NLV	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NLV	NLV	NLV		NLV
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)			NLV	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NLV	NLV	NLV		NLV
Particulate Soil Inhalation Criteria (PSIC)			7.2E+05	3.3E+08	1.7E+06	2.6E+05	1.3E+08	1.0E+08	2.0E+07	1.3E+08	6.7E+06	ID	3.2E+07		ID
Direct Contact Criteria (DCC)			7,600	3.7E+07	5.5E+05	2.5E+06	2.0E+07	4.0E+05	1.6E+05	2.6E+06	2.5E+06	1.7E+08	95,000		5.0E+5 (F)
Soil Saturation Concentration Screening Levels (C _{sat})			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA
Recommended Interim Action Screening Level (RIASL)			NA	NA	NA	NA	NA	NA	2.7E-02	NA	NA	NA	NA		--
SAMPLE ID	DEPTH	SAMPLE DATE													
14131 SB01	1-2	8/8/2025	6,200	26,000	<110	11,000	11,700	9,640	26.7	<275	<275	38,300	39	ND	79,900
14131 SB02	3-4	8/8/2025	7,850	66,200	<129	20,600	16,700	10,900	<20	<324	<324	56,400	<16.7	ND	66,000
14131 SB03	5-6	8/8/2025	11,600	73,800	<129	25,600	20,300	9,710	<20	<322	<322	70,000	<28.0	ND	<12,100

Notes:
Bold indicates concentration above laboratory reporting limits.
Exceeds DWPC
Exceeds GSIPC
Exceeds Applicable Soil Vapor Inhalation screening level
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation screening levels
Exceeds PSIC, DCC, and/or Csat, likely exceeds others
ND = Not Detected above laboratory reporting limits
NS = Not Sampled or Not Analyzed
NR = Not Reported (Data missing from provided report)
Notes in parentheses and standard abbreviations from Part 201 Rules 299.1 through 299.50, updated October 12, 2023

Table 2
TCLP Analytical Detection Summary

Detroit Backfill Sampling
14131 Tacoma, Detroit, Michigan

40 C.F.R. § 261.24 Code of Federal Regulations Title 40 - Protection of Environment Chapter I - Environmental Protection Agency Subchapter I - Solid Wastes Part 261- Identification and Listing of Hazardous Waste Subpart C - Characteristics of Hazardous Waste <i>Units: mg/l</i>		TCLP Metals		TCLP Volatile Organic Compounds (VOCs)											
		Arsenic	Chromium	1,1-Dichloroethylene	1,2-Dichloroethane	2-Butanone	Benzene	Carbon tetrachloride	Chlorobenzene	Chloroform	Tetrachloroethylene	Trichloroethene	Vinyl chloride		
Maximum Concentration of Contaminants for the Toxicity Characteristic		5.00	5.00	0.7	0.5	200.0	0.5	0.5	100	6.0	0.7	0.5	0.2		
SAMPLE ID		SAMPLE DATE													
14131 Tacoma SB01,3 TCLP		10/14/2025		<0.00190	<0.00610	<0.00800	<0.00880	<0.0486	<0.00920	<0.00800	<0.00800	<0.00920	<0.00780	<0.00860	<0.0106

Notes:
Bold indicates concentration above method detection limits.
Exceeds Maximum Concentration of Contaminates for the Toxicity Characteristic

APPENDIX A

LIMITATIONS



LIMITATIONS

This investigation and related documentation are site-specific, which means they pertain to the environmental conditions of the Site only.

The Mannik & Smith Group, Inc. (MSG) performed its services associated with the investigation in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. In preparing this report, MSG may have relied on information obtained from or provided by others. MSG makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant after MSG has completed the scope of work for this project. Furthermore, because the facts stated in these reports are subject to professional interpretation, differing conclusions could be reached by other environmental professionals.

Contaminants may be hidden in subsurface material, covered by pavement, vegetation, or other substances. Additionally, contamination may not be present in predictable locations. MSG has prepared a logical investigation program to reduce the client's risk of discovering unknown contamination. This risk may be reduced by more extensive exploration on the Site. Even with additional exploration, it is not possible to completely eliminate the risk of discovering contamination on the Site. It can not be assumed that samples collected and conditions observed are representative of an area that has not been sampled and/or tested.

Some environmental assessments are undertaken to satisfy "due diligence", "all appropriate inquiry," or other regulatory requirements provided in federal, state, or local law. Although MSG strives to investigate a site in accordance with the scope of work as defined by written agreement with a client, it cannot warrant that the work undertaken for this report will satisfy "due diligence", "all appropriate inquiry," or any other similar standard under any federal, state, or local law.

Due to changing environmental regulatory conditions and potential on-site activities after the completion of investigation, the client may rely upon the conditions within this investigation report for a period of six months from the report's issuance date.

APPENDIX B

DAILY FIELD REPORTS





DAILY FIELD REPORT

Client: City of Detroit Demolition Department
Project: Sampling and Analysis of Fill Material

Report No.: 1
Job No.: DETR0060

Date: <u>08/08/2025</u>	Day: <u>Friday</u>	Temp: <u>80° F</u> (AM) <u>N/A</u> (PM)
MSG Personnel: <u>SRK, BJ, BM</u>	Cloud Cover: <u>0%</u> (AM) <u>N/A</u> (PM)	Precip.: <u>N/A</u> (AM) <u>N/A</u> (PM)
Personnel: <u>MSG</u>		
MSG Hours On-Site: <u>~ 1 hours</u>		

Contractors Information		
Contractor: <u>MSG</u>	No. Men and Type: <u>3; Operator/Helper/Geologist</u>	Equipment Type: <u>Geoprobe 7822DT</u>

Summary of Work Performed:
- Advanced three (3) onsite soil borings to a maximum depth of 6 feet below ground surface (bgs) - Collected soil samples from each soil boring (from the interval with the greatest potential to be impacted based on field indicators).

Field Notes:
1110 – SRK, BJ, and BM onsite (14131 Tacoma Street) 1112 – Unloaded equipment and marked out boring locations 1126 – Began drilling SB01 1128 – Finished drilling SB01 1130 – Began drilling SB02 1132 – Finished drilling SB02 1134 – Sampled 14131 SB01 (1-2') 1135 – Began drilling SB03 1137 – Finished drilling SB03 1144 – Sampled 14131 SB02 (3-4') 1154 – Sampled 14131 SB03 (5-6') 1158 – MSG off site

Supporting Documentation					
Photograph Taken	Yes ☒	No ☐	Samples Collected	Yes ☒	No ☐
Photo Log Attached	Yes ☒	No ☐	COC Attached	Yes ☒	No ☐
				Boring/MW Logs	Yes ☒ No ☐
				Field Note Book Taken	Yes ☒ No ☐
Problem Identification and Corrective Measures					
N/A					
Resolved? Yes ☐ No ☐					

**DAILY FIELD REPORT****Client:** City of Detroit Demolition Department**Project:** Sampling and Analysis of Fill Material**Report No.:** 1**Job No.:** DETR0060

Date: 10/14/2025	Day: Tuesday	Temp: 50 ° F	(AM)	N/A	(PM)
MSG Personnel: SRK, JF		Cloud Cover: 0%	(AM)	N/A	(PM)
		Precip.: N/A	(AM)	N/A	(PM)
Personnel: MSG					
MSG Hours On-Site: ~ 0.5 hours					
Contractors Information					
Contractor: MSG		No. Men and Type: 2; Operator/Geologist		Equipment Type: Geoprobe 7822DT	
Summary of Work Performed:					
- Advanced two (2) onsite soil borings to a maximum depth of 6 feet below ground surface (bgs) - Collected TCLP of fill material from each soil boring (composite sample of each boring from zero to 6 feet bgs).					
Field Notes:					
1007 – MSG (SRK, JF) onsite (14131 Tacoma) 1009 – Attempted to locate previous boring locations. Marked out new boring locations. 1014 – Began drilling SB01 TCLP 1016 – Finished drilling SB01 TCLP 1018 – Began drilling SB03 TCLP 1020 – Finished drilling SB03 TCLP 1032 – Sampled 14131 Tacoma SB01, 3 TCLP 1045 – Collected GPS points 1058 – Packed up equipment 1100 – MSG off site					

Supporting Documentation					
Photograph Taken	Yes ☒	No ☐	Samples Collected	Yes ☒	No ☐
Photo Log Attached	Yes ☒	No ☐	COC Attached	Yes ☒	No ☐
				Boring/MW Logs	Yes ☒
				Field Note Book Taken	Yes ☒
Problem Identification and Corrective Measures					
N/A					
Resolved? Yes ☐ No ☐					

APPENDIX C

INVESTIGATION PHOTOGRAPHS





Photo 1: Viewing site pre-drilling at the time of initial soil boring activities, facing north.

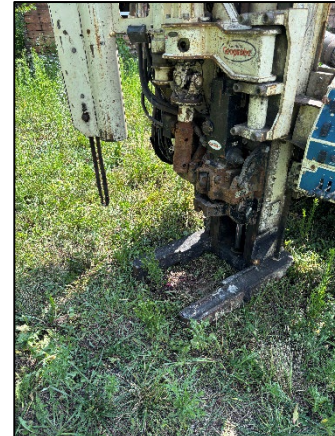


Photo 2: Viewing 14131 SB01 drilling, facing east.



Photo 3: Viewing 14131 SB01 soils, facing north.



Photo 4: Viewing 14131 SB02 drilling, facing east.



Photo 5: Viewing 14131 SB02 soils, facing north.

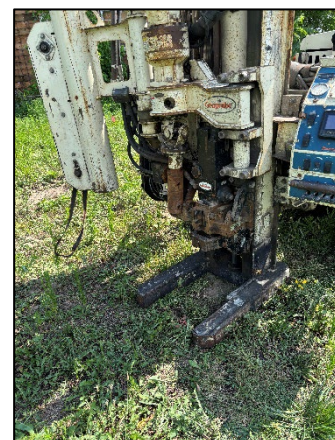


Photo 6: Viewing 14131 SB03 drilling, facing east.



Photo 7: Viewing 14131 SB03 soils, facing north.



Photo 8: Viewing Site post-drilling, facing north.



Photo 9: View of Site at the time of TCLP soil boring activities.



Photo 10: View of soil recovery at the time of TCLP sampling.



Photo 11: View of TCLP soil boring location.

APPENDIX D

SOIL BORING LOGS





The Mannik & Smith Group, Inc.
2365 Haggerty Rd South Canton, MI 48188
ph: 734-397-3100 fax: 734-397-3131
www.manniksmithgroup.com

BORING ID: SB01

PAGE 1 OF 1

CLIENT	City of Detroit	PROJECT NAME	14131 Tacoma
PROJECT NUMBER	DETR0060	PROJECT LOCATION	14131 Tacoma St, Detroit, Michigan
DATE STARTED	8/8/25	COMPLETED	8/8/25
DRILLING CONTRACTOR	MSG	BORING DIAMETER:	3.25 inches
DRILLING METHOD	Direct Push	SURVEY COORDINATES:	N/A
LOGGED BY	SRK	CHECKED BY	PDH
NOTES	GROUND WATER ENCOUNTERED DURING DRILLING: Not Encountered		
		WATER LEVEL AFTER DRILLING: N/A	

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 8/25/25 13:48 - W:\PROJECTS\PROJECTS A-EDETR0060\ADMIN\23_QQ 7.25.2025 BACKFILL SAMPLING (48 SITES)\14131 TACOMABORING LOGS\DETR0060_14131.GPJ

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
					Brown and Gray Sandy CLAY, some gravel, dry	0.0		
						0.6		Collected soil sample 14131 SB01 (1-2) at 11:34
						0.0		
						0.0		
5					Becomes moist at 4.5 feet bgs	0.0		
						0.0		
				6.0	Bottom of borehole at 6.0 feet.	0.0		



The Mannik & Smith Group, Inc.
2365 Haggerty Rd South Canton, MI 48188
ph: 734-397-3100 fax: 734-397-3131
www.manniksmithgroup.com

CLIENT City of Detroit **PROJECT NAME** 14131 Tacoma
PROJECT NUMBER DETR0060 **PROJECT LOCATION** 14131 Tacoma St, Detroit, Michigan
DATE STARTED 8/8/25 **COMPLETED** 8/8/25 **BORING DIAMETER:** 3.25 inches
DRILLING CONTRACTOR MSG **SURVEY COORDINATES:** N/A
DRILLING METHOD Direct Push **GROUND SURFACE ELEV.:** N/A
LOGGED BY SRK **CHECKED BY** PDH **GROUND WATER ENCOUNTERED DURING DRILLING:** Not Encountered
NOTES ▼ WATER LEVEL AFTER DRILLING: N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 8/25/25 13:48 - W:\PROJECTS\PROJECTS A-EDETR0060\ADMIN\23_QQ 7.25.2025 BACKFILL SAMPLING (48 SITES)\14131 TACOMA\BORING LOGS\DETR0060_14131.GPJ

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
				0.5	Brown SAND, some gravel, dry			
					Brown and Gray Sandy CLAY, some gravel, dry	0.0		
						0.0		
						0.0		
						0.0		
				4.3				
				4.5	Brown SAND, some gravel, dry			
					Brown and Gray Sandy CLAY, some gravel, dry	0.0		
					Becomes moist at 5 feet bgs	0.0		
5				6.0		0.0		
					Bottom of borehole at 6.0 feet.	0.0		

MC
1

3.5

Collected soil sample 14131 SB02 (3-4) at 11:44



The Mannik & Smith Group, Inc.
2365 Haggerty Rd South Canton, MI 48188
ph: 734-397-3100 fax: 734-397-3131
www.manniksmithgroup.com

BORING ID: SB03

PAGE 1 OF 1

CLIENT	City of Detroit	PROJECT NAME	14131 Tacoma
PROJECT NUMBER	DETR0060	PROJECT LOCATION	14131 Tacoma St, Detroit, Michigan
DATE STARTED	8/8/25	COMPLETED	8/8/25
DRILLING CONTRACTOR	MSG	BORING DIAMETER:	3.25 inches
DRILLING METHOD	Direct Push	SURVEY COORDINATES:	N/A
LOGGED BY	SRK	CHECKED BY	PDH
NOTES	GROUND WATER ENCOUNTERED DURING DRILLING: Not Encountered		
		WATER LEVEL AFTER DRILLING: N/A	

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 8/25/25 13:48 - W:\PROJECTS\PROJECTS A-EDETR0060\ADMIN\23_QQ 7.25.2025 BACKFILL SAMPLING (48 SITES)\14131 TACOMA\BORING LOGS\DETR0060_14131.GPJ

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
				0.5	Brown SAND, some gravel			
					Brown Sandy CLAY, some gravel	0.0		
					Some concrete debris at 1 foot bgs	0.0		
						0.0		
					Some concrete debris at 3.75 feet bgs	0.0		
5						0.0		
				5.5				
				5.8	Brown SILT			
				6.0	Brown and Gray Sandy CLAY, some gravel	0.0		
					Bottom of borehole at 6.0 feet.			

APPENDIX E
LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY FORMS





right solutions.
right partner.

CERTIFICATE OF ANALYSIS

Work Order

HN2511183

Client

The Mannik & Smith Group, Inc.

Project

14131_Tacoma

Project Date

August 09, 2025

Reporting Contact

Ryan Montri



right solutions.
right partner.

August 26, 2025

Ryan Montri
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Work Order: **HN2511183**

Re: **14131_Tacoma**

Dear Ryan,

Enclosed are the results of the sample(s) submitted to our laboratory.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Bill Carey

/S/ **BILL CAREY**

Project Manager



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma

Work Order: HN2511183
Date Received: 09-Aug-2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt

3 soil/solid samples were received for analysis at ALS Environmental on 09-Aug-2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Organics

EPA 8260D-FULL HN-5035A-10mL-S

Run ID: 3411029

The LCS recovery was below the lower control limit. Instrument sensitivity was verified as sufficient through the analysis of a low-level standard. The following non-detects are reported without qualification: methyl acetate

The Continuing Calibration Verification did not meet acceptance criteria with low bias. Instrument sensitivity was verified as sufficient through the analysis of a low-level standard. The following non-detects are reported without qualification: trichlorofluoromethane

The following analytes failed calibration refit conditions. All samples in this batch were non-detect. No qualification is necessary for these analytes: chloroethane

Run ID: 3403043

The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: bromomethane

Metals

EPA 6020B-3050B-S

Run ID: 3400802

The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al Ba Ca Sr batch 2159429

The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al Ba Ca Sr batch 2159429

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: 14131 SB01 (1-2)	Lab ID: HN2511183-001
------------------------------------	------------------------------

Analyte	Results	Flag	MRL	Units	Method
1,1,2-Trichloroethane	53.9		36.3	µg/kg	EPA 8260D
4,4'-DDE	39.0		10.9	µg/kg	EPA 8081B
Arsenic	6.20		2.75	mg/kg	EPA 6020B
Barium	26.0		0.275	mg/kg	EPA 6020B
Benzo(a)anthracene	87.7		36.6	µg/kg	EPA 8270E
Benzo(a)pyrene	87.7		36.6	µg/kg	EPA 8270E
Benzo(b)fluoranthene	142		36.6	µg/kg	EPA 8270E
Benzo(g,h,i)perylene	76.8		36.6	µg/kg	EPA 8270E
Benzo(k)fluoranthene	65.8		36.6	µg/kg	EPA 8270E
Chloride	79.9		10.6	mg/kg	EPA 9056A
Chromium	11.0		2.75	mg/kg	EPA 6020B
Chrysene	95.0		36.6	µg/kg	EPA 8270E
Copper	11.7		2.75	mg/kg	EPA 6020B
Fluoranthene	234		36.6	µg/kg	EPA 8270E
Indeno(1,2,3-cd) pyrene	73.1		36.6	µg/kg	EPA 8270E
Lead	9.64		0.275	mg/kg	EPA 6020B
Mercury	0.0267		0.0200	mg/kg	EPA 7471B
Percent Moisture	8.8		0.1	%	EPA 3550C
Phenanthrene	102		36.6	µg/kg	EPA 8270E
Pyrene	205		36.6	µg/kg	EPA 8270E
Tetrachloroethylene (Perchloroethylene)	7610		363	µg/kg	EPA 8260D
Trichloroethene (Trichloroethylene)	1020		36.3	µg/kg	EPA 8260D
Zinc	38.3		5.50	mg/kg	EPA 6020B

CLIENT ID: 14131 SB02 (3-4)	Lab ID: HN2511183-002
------------------------------------	------------------------------

Analyte	Results	Flag	MRL	Units	Method
Arsenic	7.85		3.24	mg/kg	EPA 6020B
Barium	66.2		0.324	mg/kg	EPA 6020B
Chloride	66.0		11.6	mg/kg	EPA 9056A
Chromium	20.6		3.24	mg/kg	EPA 6020B
Copper	16.7		3.24	mg/kg	EPA 6020B
Fluoranthene	57.2		38.1	µg/kg	EPA 8270E
Lead	10.9		0.324	mg/kg	EPA 6020B
Percent Moisture	12.7		0.1	%	EPA 3550C
Pyrene	38.1		38.1	µg/kg	EPA 8270E
Zinc	56.4		6.47	mg/kg	EPA 6020B

CLIENT ID: 14131 SB03 (5-6)	Lab ID: HN2511183-003
------------------------------------	------------------------------

Analyte	Results	Flag	MRL	Units	Method
Arsenic	11.6		3.22	mg/kg	EPA 6020B
Barium	73.8		0.322	mg/kg	EPA 6020B

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: 14131 SB03 (5-6)

Lab ID: HN2511183-003

Analyte	Results	Flag	MRL	Units	Method
Chromium	25.6		3.22	mg/kg	EPA 6020B
Copper	20.3		3.22	mg/kg	EPA 6020B
Lead	9.71		0.322	mg/kg	EPA 6020B
Percent Moisture	16.3		0.1	%	EPA 3550C
Zinc	70.0		6.45	mg/kg	EPA 6020B

SAMPLE SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Workorder: HN2511183

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2511183-001	14131 SB01 (1-2)	SOIL/SOLID	08/08/25 11:34	08/09/25 08:00
HN2511183-002	14131 SB02 (3-4)	SOIL/SOLID	08/08/25 11:44	08/09/25 08:00
HN2511183-003	14131 SB03 (5-6)	SOIL/SOLID	08/08/25 11:54	08/09/25 08:00



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1

Customer Information		Project Information		Parameter/Method Request for Analysis													
Purchase Order		Project Name	14131_Tacoma	A VOCs (U.S. EPA Method 8260C (or Method 8260))													
Work Order		Project Number	DETR0060	B SVOCs (U.S. EPA Method 8270D (or Method 8270))													
Company Name	The Mannik and Smith Group	Billed To Company	The Mannik and Smith Group	C PCBs (U.S. EPA Method 8082)													
Send Report To	Ryan Montri	Invoice Attn.		D Mi 10 Metals (U.S. EPA 6000/7000 Series Methods)													
Address	2365 Haggerty Rd South Suite 100	Address	2365 Haggerty Rd South Suite 100	E Chlorides (U.S. EPA Method 9056A)													
City/State/Zip	Canton, MI 48188	City/State/Zip	Canton, MI 48188	F Pesticides (U.S. EPA Method 8081B (or Method 8081))													
Phone	734-397-3100	Phone	734-397-3100	G Herbicides (U.S. EPA Method 8151A (or Method 8151))													
Fax		Fax		H													
e-Mail Address	RMontri@manniksmithgroup.com	e-Mail Address		I													
				J													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	14131 SB01 (1-2)	8/8/25	11:34	Soil	7	3	↑	↑	↑	↑	↑	↑	↑				
2	14131 SB02 (3-4)	↓	11:44	Soil	7	3	↓	↓	↓	↓	↓	↓	↓				
3	14131 SB03 (5-6)	↓	11:54	Soil	7	3	↓	↓	↓	↓	↓	↓	↓				
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign Shannon Kaczmarek		Shipment Method:		Required Turnaround Time: ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour				Results Due Date:		
Relinquished by: Shannon Kaczmarek	Date: 8/8/25	Time: 1515	Received by: [Signature]	Notes: Quote# HN-061825-M&S-MA						
Relinquished by: [Signature]	Date: 8/8/25	Time: 1700	Received by (Laboratory): [Signature]	Cooler Temp. 4.7°C	QC Package: (Check Box Below)					
Logged by (Laboratory): BC				Date: 8/11/25	Time: 1400	Checked by (Laboratory): IR6				
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035										Other: _____

Environmental Division
Holland

Work Order Reference

HN2511183



Telephone : +1 616 399 6070

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

Signature denotes acceptance of ALS Group USA, Corp. Terms and Conditions - Please click the link below for detailed Terms & Conditions:

<https://www.alsglobal.com/ALSGroupUSACorpTC>

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ALS Holland Sample Receiving Checklist

Received by:

BC

Date/Time:

8/11/25 08:50

Carrier Name:

QS

Shipping container/cooler in good condition?

☒ Yes / No / Not Present

Custody seals intact on shipping container/cooler?

☒ Yes / No / Not Present

Custody seals intact on sample bottles?

Yes / No / ☒ Not Present

Chain of Custody present?

☒ Yes / No

COC signed when relinquished and received?

☒ Yes / No

COC agrees with sample labels?

☒ Yes / No

Samples in proper container/bottle?

☒ Yes / No

Sample containers intact?

☒ Yes / No

Sufficient sample volume for indicated test?

☒ Yes / No

All samples received within holding time?

☒ Yes / No

Container/Temp Blank temperature in compliance?

☒ Yes / No

Temperature(s) (°C):

4.7°C

Thermometer(s):

IR6

Sample(s) received on ice?

☒ Yes / No

Matrix/Matrices:

Soil

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

8/11/25 09:30

Water – VOA vials have zero headspace?

Yes / No / No Vials

Water – pH acceptable upon receipt?

Yes / No / N/A

pH strip lot #: _____ < 2 _____ > 12 _____ Other _____

pH adjusted (note adjustments below)?

Yes / No / N/A

pH adjusted by:

Login Notes:

REPORT QUALIFIERS AND DEFINITIONS

*	Value exceeds Regulatory Limit (if MCL displayed)
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
NC	Not Calculated
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
V	The Continuing Calibration Verification was outside of control criteria
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Holland Laboratory Certifications¹

Agency	Type	ID	Issued	Expires
Alabama	Drinking Water (Secondary)	42500	12/17/2024	12/31/2025
Colorado	UST		07/01/2025	06/30/2026
Connecticut	Drinking Water (Secondary)	PH-0155	12/10/2024	12/31/2026
Florida	NELAP (Primary)	E871106	07/01/2025	06/30/2026
Illinois	NELAP (Secondary)	200076	11/14/2024	12/31/2025
Indiana	Drinking Water (Secondary)	C-MI-08	12/31/2024	09/04/2026
Iowa	State Specific	403	09/18/2023	09/01/2025
Kansas	NELAP (Secondary)	E-10411	07/09/2024	07/31/2025
Kentucky	Waste Water	KY98004	12/20/2024	12/31/2025
Kentucky	UST	120474	06/24/2024	06/30/2025
Michigan	Drinking Water (Primary)	0022	12/19/2023	09/04/2026
Minnesota	NELAP (Secondary)	026-999-449	12/17/2024	12/31/2025
Missouri	Drinking Water (Secondary)	01262	11/14/2024	12/30/2027
New Jersey	NELAP (Secondary)	MI015	07/01/2024	6/30/2025
New York	NELAP (Secondary)	12128	04/01/2025	04/01/2026
North Dakota	State Specific	R-192	11/18/2024	06/30/2025
Ohio	Drinking Water (Secondary)	87783	06/26/2025	6/30/2026
Pennsylvania	NELAP (Secondary)	68-03827	06/14/2024	07/31/2025
Texas	NELAP (Secondary)	T104704494	02/12/2025	01/31/2026
USDA	Domestic CA	Soil-MI-007	02/06/2025	08/07/2026
USDA	Soil Import	525-23-62-77572	03/03/2023	03/03/2026
West Virginia	State Specific	355	06/07/2025	08/31/2026
Wisconsin	State Specific	399084510	08/15/2024	08/31/2025

¹ - Scope available upon request

ANALYST SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma

Work Order: HN2511183

Sample Name: 14131 SB01 (1-2)
Laboratory Code: HN2511183-001
Sample Matrix: SOIL/SOLID

Date Collected: 08/08/25
Date Received: 08/09/25

Analysis Method	Container ID	Preparation	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	001-AC	2157175		3395408	Nicole Maleski
EPA 6020B	001-AC	2159429	Denise Coffey	3400802	Denise Coffey
EPA 6020B	001-AC	2159429	Denise Coffey	3405196	Hunter Johnson
EPA 7471B	001-AC	2157132	Maxx Richey	3399126	Maxx Richey
EPA 8081B	001-AC	2167835	Sam Bruzan	3432577	Madison VandenBer
EPA 8082A	001-AC	2167839	Sam Bruzan	3421877	Nathaniel Dietlin
EPA 8151A	001-AC	2170067	Sam Bruzan	3418607	Kathy Malmyga
EPA 8260D	001-AA	2153857	Jonathan Vazquez	3403043	Nathan Jenkins
EPA 8260D	001-AA	2153857	Jonathan Vazquez	3404799	Sean Bradfield
EPA 8260D	001-AA	2166541	Jonathan Vazquez	3411029	Ali Cook
EPA 8260D	001-AA	2166541	Jonathan Vazquez	3416455	Caroline Cox
EPA 8270E	001-AC	2164302	Sam Bruzan	3411641	Erin Wall
EPA 9056A	001-AC	2155953	Sage Hansen	3393605	Quoc Nguyen

Sample Name: 14131 SB02 (3-4)
Laboratory Code: HN2511183-002
Sample Matrix: SOIL/SOLID

Date Collected: 08/08/25
Date Received: 08/09/25

Analysis Method	Container ID	Preparation	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	002-AC	2157175		3395408	Nicole Maleski
EPA 6020B	002-AC	2159429	Denise Coffey	3400802	Denise Coffey
EPA 6020B	002-AC	2159429	Denise Coffey	3405196	Hunter Johnson
EPA 7471B	002-AC	2157132	Maxx Richey	3399126	Maxx Richey
EPA 8081B	002-AC	2167835	Sam Bruzan	3432577	Madison VandenBer
EPA 8082A	002-AC	2167839	Sam Bruzan	3421877	Nathaniel Dietlin
EPA 8151A	002-AC	2170067	Sam Bruzan	3418607	Kathy Malmyga
EPA 8260D	002-AA	2153857	Jonathan Vazquez	3403043	John Garvale
EPA 8260D	002-AA	2153857	Jonathan Vazquez	3409777	Sean Bradfield
EPA 8270E	002-AC	2164302	Sam Bruzan	3411641	Erin Wall
EPA 9056A	002-AC	2155953	Sage Hansen	3393605	Quoc Nguyen

ANALYST SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma

Work Order: HN2511183

Sample Name: 14131 SB03 (5-6)
Laboratory Code: HN2511183-003
Sample Matrix: SOIL/SOLID

Date Collected: 08/08/25
Date Received: 08/09/25

Analysis Method	Container ID	Preparation	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	003-AC	2157175		3395408	Nicole Maleski
EPA 6020B	003-AC	2159429	Denise Coffey	3400802	Denise Coffey
EPA 6020B	003-AC	2159429	Denise Coffey	3405196	Hunter Johnson
EPA 7471B	003-AC	2157132	Maxx Richey	3399126	Maxx Richey
EPA 8081B	003-AC	2167835	Sam Bruzan	3432577	Madison VandenBer
EPA 8082A	003-AC	2167839	Sam Bruzan	3421877	Nathaniel Dietlin
EPA 8151A	003-AC	2170067	Sam Bruzan	3418607	Kathy Malmyga
EPA 8260D	003-AA	2153857	Jonathan Vazquez	3403043	John Garvale
EPA 8260D	003-AA	2153857	Jonathan Vazquez	3409777	Sean Bradfield
EPA 8270E	003-AC	2164302	Sam Bruzan	3411641	Erin Wall
EPA 9056A	003-AC	2155953	Sage Hansen	3393605	Quoc Nguyen

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:34
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB01 (1-2) **Lab ID: HN2511183-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters								
Percent Moisture	EPA 3550C	8.8		%	0.1	1	08/13/25 12:47	NA
Chloride	EPA 9056A	79.9		mg/kg	10.6	1	08/12/25 20:48	08/12/25 15:50
Metals								
Arsenic	EPA 6020B	6.20		mg/kg	2.75	10	08/15/25 16:51	08/14/25 07:51
Barium	EPA 6020B	26.0		mg/kg	0.275	1	08/15/25 03:02	08/14/25 07:51
Cadmium	EPA 6020B	ND		mg/kg	0.110	1	08/15/25 03:02	08/14/25 07:51
Chromium	EPA 6020B	11.0		mg/kg	2.75	10	08/15/25 16:51	08/14/25 07:51
Copper	EPA 6020B	11.7		mg/kg	2.75	10	08/15/25 16:51	08/14/25 07:51
Lead	EPA 6020B	9.64		mg/kg	0.275	1	08/15/25 03:02	08/14/25 07:51
Selenium	EPA 6020B	ND		mg/kg	0.275	1	08/15/25 03:02	08/14/25 07:51
Silver	EPA 6020B	ND		mg/kg	0.275	1	08/15/25 03:02	08/14/25 07:51
Zinc	EPA 6020B	38.3		mg/kg	5.50	10	08/15/25 16:51	08/14/25 07:51
Mercury	EPA 7471B	0.0267		mg/kg	0.0200	1	08/14/25 10:06	08/14/25 07:45
Organochlorine Pesticides by GC/ECD								
4,4'-DDD	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
4,4'-DDE	EPA 8081B	39.0		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
4,4'-DDT	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Aldrin	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
alpha-BHC	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
beta-BHC	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Chlordane, Technical	EPA 8081B	ND		µg/kg	27.3	1	08/23/25 02:59	08/19/25 10:41
cis-Chlordane	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
delta-BHC	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Dieldrin	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Endosulfan I	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Endosulfan II	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Endosulfan sulfate	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Endrin	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Endrin aldehyde	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Endrin ketone	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
gamma-BHC (Lindane)	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:34
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB01 (1-2) **Lab ID: HN2511183-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Heptachlor	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Heptachlor epoxide	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Methoxychlor	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
Toxaphene	EPA 8081B	ND		µg/kg	65.6	1	08/23/25 02:59	08/19/25 10:41
trans-Chlordane	EPA 8081B	ND		µg/kg	10.9	1	08/23/25 02:59	08/19/25 10:41
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	91.6		%REC	53-151	1	08/23/25 02:59	08/19/25 10:41
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	95.9		%REC	67-127	1	08/23/25 02:59	08/19/25 10:41

Semivolatile Organic Compounds by GC

Aroclor 1016	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
Aroclor 1221	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
Aroclor 1232	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
Aroclor 1242	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
Aroclor 1248	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
Aroclor 1254	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
Aroclor 1260	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
Aroclor 1262	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
Aroclor 1268	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
Total PCB	EPA 8082A	ND		µg/kg	72.9	1	08/20/25 19:14	08/19/25 12:11
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	112		%REC	54-146	1	08/20/25 19:14	08/19/25 12:11
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	93.6		%REC	58-140	1	08/20/25 19:14	08/19/25 12:11
2,4,5-T	EPA 8151A	ND		µg/kg	5.45	1	08/21/25 20:12	08/20/25 07:35
2,4,5-TP (Silvex)	EPA 8151A	ND		µg/kg	5.45	1	08/21/25 20:12	08/20/25 07:35
2,4-D	EPA 8151A	ND		µg/kg	10.9	1	08/21/25 20:12	08/20/25 07:35
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	58.0		%REC	10-116	1	08/21/25 20:12	08/20/25 07:35

Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
1,2,4,5-Tetrachlorobenzene	EPA 8270E	ND		µg/kg	1820	5	08/19/25 00:44	08/16/25 09:11
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	ND		µg/kg	914	5	08/19/25 00:44	08/16/25 09:11
1-Methylnaphthalene	EPA 8270E	ND		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl) ether	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:34
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB01 (1-2) **Lab ID: HN2511183-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
2,3,4,6-Tetrachlorophenol	EPA 8270E	ND		µg/kg	366	5	08/19/25 00:44	08/16/25 09:11
2,4,5-Trichlorophenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2,4,6-Trichlorophenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2,4-Dichlorophenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2,4-Dimethylphenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2,4-Dinitrophenol	EPA 8270E	ND		µg/kg	1820	5	08/19/25 00:44	08/16/25 09:11
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2-Chloronaphthalene	EPA 8270E	ND		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
2-Chlorophenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2-Methylnaphthalene	EPA 8270E	ND		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
2-Methylphenol (o-Cresol)	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2-Nitroaniline	EPA 8270E	ND	S	µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
2-Nitrophenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
3&4-Methylphenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
3,3'-Dichlorobenzidine	EPA 8270E	ND		µg/kg	914	5	08/19/25 00:44	08/16/25 09:11
3-Nitroaniline	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
4-Chloro-3-methylphenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
4-Chloroaniline	EPA 8270E	ND		µg/kg	366	5	08/19/25 00:44	08/16/25 09:11
4-Chlorophenyl phenylether	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
4-Nitroaniline	EPA 8270E	ND		µg/kg	914	5	08/19/25 00:44	08/16/25 09:11
4-Nitrophenol	EPA 8270E	ND		µg/kg	1820	5	08/19/25 00:44	08/16/25 09:11
Acenaphthene	EPA 8270E	ND		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Acenaphthylene	EPA 8270E	ND		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Acetophenone	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Anthracene	EPA 8270E	ND		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Atrazine	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Benzaldehyde	EPA 8270E	ND		µg/kg	366	5	08/19/25 00:44	08/16/25 09:11

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:34
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB01 (1-2)	Lab ID: HN2511183-001
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Benzo(a)anthracene	EPA 8270E	87.7		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Benzo(a)pyrene	EPA 8270E	87.7		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Benzo(b)fluoranthene	EPA 8270E	142		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Benzo(g,h,i)perylene	EPA 8270E	76.8		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Benzo(k)fluoranthene	EPA 8270E	65.8		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
bis(2-Chloroethoxy) methane	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
bis(2-Chloroethyl) ether	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Butyl benzyl phthalate	EPA 8270E	ND		µg/kg	366	5	08/19/25 00:44	08/16/25 09:11
Caprolactam	EPA 8270E	ND		µg/kg	366	5	08/19/25 00:44	08/16/25 09:11
Carbazole	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Chrysene	EPA 8270E	95.0		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Dibenz(a,h) anthracene	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Dibenzofuran	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Diethyl phthalate	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Dimethyl phthalate	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Di-n-butyl phthalate	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Di-n-octyl phthalate	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Fluoranthene	EPA 8270E	234		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Fluorene	EPA 8270E	ND		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Hexachlorobenzene	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Hexachlorobutadiene	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Hexachlorocyclopentadiene	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Hexachloroethane	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Indeno(1,2,3-cd) pyrene	EPA 8270E	73.1		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Isophorone	EPA 8270E	ND		µg/kg	914	5	08/19/25 00:44	08/16/25 09:11
Methylphenol, Total	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Naphthalene	EPA 8270E	ND		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Nitrobenzene	EPA 8270E	ND		µg/kg	914	5	08/19/25 00:44	08/16/25 09:11
n-Nitrosodi-n-propylamine	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
N-Nitrosodiphenylamine	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:34
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB01 (1-2)	Lab ID: HN2511183-001
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Pentachlorophenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Phenanthrene	EPA 8270E	102		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Phenol	EPA 8270E	ND		µg/kg	181	5	08/19/25 00:44	08/16/25 09:11
Pyrene	EPA 8270E	205		µg/kg	36.6	5	08/19/25 00:44	08/16/25 09:11
Pyridine	EPA 8270E	ND		µg/kg	914	5	08/19/25 00:44	08/16/25 09:11
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<i>76.6</i>		<i>%REC</i>	<i>48-94</i>	<i>5</i>	<i>08/19/25 00:44</i>	<i>08/16/25 09:11</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<i>74.8</i>		<i>%REC</i>	<i>50-103</i>	<i>5</i>	<i>08/19/25 00:44</i>	<i>08/16/25 09:11</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<i>75.8</i>		<i>%REC</i>	<i>43-105</i>	<i>5</i>	<i>08/19/25 00:44</i>	<i>08/16/25 09:11</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	<i>90.8</i>		<i>%REC</i>	<i>55-111</i>	<i>5</i>	<i>08/19/25 00:44</i>	<i>08/16/25 09:11</i>
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	<i>80.1</i>		<i>%REC</i>	<i>47-100</i>	<i>5</i>	<i>08/19/25 00:44</i>	<i>08/16/25 09:11</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<i>77.3</i>		<i>%REC</i>	<i>49-110</i>	<i>5</i>	<i>08/19/25 00:44</i>	<i>08/16/25 09:11</i>

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,1,2,2-Tetrachloroethane	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,1,2-Trichloroethane	EPA 8260D	53.9		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,1-Dichloroethane	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,1-Dichloroethylene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,2,3-Trichlorobenzene	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
1,2,3-Trichloropropane	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,2,4-Trichlorobenzene	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
1,2,4-Trimethylbenzene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
1,2-Dichloropropane	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,3,5-Trimethylbenzene	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
1,3-Dichloropropene	EPA 8260D	ND		µg/kg	72.6	1	08/19/25 21:25	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:34
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB01 (1-2) **Lab ID: HN2511183-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	ND		µg/kg	242	1	08/19/25 21:25	08/18/25 14:26
2-Hexanone	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
4-Methyl-2-pentanone (MIBK)	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Acetone	EPA 8260D	ND		µg/kg	121	1	08/14/25 13:44	08/11/25 17:04
Benzene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Bromochloromethane	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Bromodichloromethane	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Bromoform	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Carbon disulfide	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Carbon tetrachloride	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Chlorobenzene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Chlorodibromomethane	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Chloroethane (Ethyl chloride)	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
Chloroform	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
cis & trans-1,2-Dichloroethene	EPA 8260D	ND		µg/kg	72.6	1	08/19/25 21:25	08/18/25 14:26
cis-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	36.3	1	08/14/25 13:44	08/11/25 17:04
cis-1,3-Dichloropropene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Cyclohexane	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
Dichlorodifluoromethane (Freon-12)	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
Ethylbenzene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Isopropylbenzene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
m+p-Xylene	EPA 8260D	ND		µg/kg	72.6	1	08/19/25 21:25	08/18/25 14:26
Methyl acetate	EPA 8260D	ND		µg/kg	303	1	08/19/25 21:25	08/18/25 14:26
Methyl bromide (Bromomethane)	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
Methyl chloride (Chloromethane)	EPA 8260D	ND		µg/kg	121	1	08/19/25 21:25	08/18/25 14:26
Methyl tert-butyl ether (MTBE)	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Methylcyclohexane	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Methylene chloride (Dichloromethane)	EPA 8260D	ND		µg/kg	303	1	08/19/25 21:25	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:34
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB01 (1-2) **Lab ID: HN2511183-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
o-Xylene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Styrene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	7610		µg/kg	363	10	08/18/25 16:27	08/18/25 14:26
Toluene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Total Xylene	EPA 8260D	ND		µg/kg	109	1	08/19/25 21:25	08/18/25 14:26
trans-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
trans-1,3-Dichloropropylene	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Trichloroethene (Trichloroethylene)	EPA 8260D	1020		µg/kg	36.3	1	08/14/25 13:44	08/11/25 17:04
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
Vinyl chloride (Chloroethene)	EPA 8260D	ND		µg/kg	36.3	1	08/19/25 21:25	08/18/25 14:26
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	102		%REC	80-120	1	08/14/25 13:44	08/11/25 17:04
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	103		%REC	80-120	1	08/14/25 13:44	08/11/25 17:04
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	98.2		%REC	80-120	1	08/14/25 13:44	08/11/25 17:04
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	101		%REC	80-120	1	08/19/25 21:25	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:44
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB02 (3-4) **Lab ID: HN2511183-002**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters								
Percent Moisture	EPA 3550C	12.7		%	0.1	1	08/13/25 12:47	NA
Chloride	EPA 9056A	66.0		mg/kg	11.6	1	08/12/25 20:58	08/12/25 15:50
Metals								
Arsenic	EPA 6020B	7.85		mg/kg	3.24	10	08/15/25 16:53	08/14/25 07:51
Barium	EPA 6020B	66.2		mg/kg	0.324	1	08/15/25 03:04	08/14/25 07:51
Cadmium	EPA 6020B	ND		mg/kg	0.129	1	08/15/25 03:04	08/14/25 07:51
Chromium	EPA 6020B	20.6		mg/kg	3.24	10	08/15/25 16:53	08/14/25 07:51
Copper	EPA 6020B	16.7		mg/kg	3.24	10	08/15/25 16:53	08/14/25 07:51
Lead	EPA 6020B	10.9		mg/kg	0.324	1	08/15/25 03:04	08/14/25 07:51
Selenium	EPA 6020B	ND		mg/kg	0.324	1	08/15/25 03:04	08/14/25 07:51
Silver	EPA 6020B	ND		mg/kg	0.324	1	08/15/25 03:04	08/14/25 07:51
Zinc	EPA 6020B	56.4		mg/kg	6.47	10	08/15/25 16:53	08/14/25 07:51
Mercury	EPA 7471B	ND		mg/kg	0.0200	1	08/14/25 10:08	08/14/25 07:45
Organochlorine Pesticides by GC/ECD								
4,4'-DDD	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
4,4'-DDE	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
4,4'-DDT	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Aldrin	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
alpha-BHC	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
beta-BHC	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Chlordane, Technical	EPA 8081B	ND		µg/kg	41.6	1	08/23/25 03:13	08/19/25 10:41
cis-Chlordane	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
delta-BHC	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Dieldrin	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Endosulfan I	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Endosulfan II	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Endosulfan sulfate	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Endrin	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Endrin aldehyde	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Endrin ketone	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
gamma-BHC (Lindane)	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:44
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB02 (3-4) **Lab ID: HN2511183-002**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Heptachlor	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Heptachlor epoxide	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Methoxychlor	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
Toxaphene	EPA 8081B	ND		µg/kg	100.0	1	08/23/25 03:13	08/19/25 10:41
trans-Chlordane	EPA 8081B	ND		µg/kg	16.7	1	08/23/25 03:13	08/19/25 10:41
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	85.8		%REC	53-151	1	08/23/25 03:13	08/19/25 10:41
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	102		%REC	67-127	1	08/23/25 03:13	08/19/25 10:41

Semivolatile Organic Compounds by GC								
Aroclor 1016	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
Aroclor 1221	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
Aroclor 1232	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
Aroclor 1242	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
Aroclor 1248	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
Aroclor 1254	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
Aroclor 1260	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
Aroclor 1262	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
Aroclor 1268	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
Total PCB	EPA 8082A	ND		µg/kg	111	1	08/20/25 19:25	08/19/25 12:11
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	110		%REC	54-146	1	08/20/25 19:25	08/19/25 12:11
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	101		%REC	58-140	1	08/20/25 19:25	08/19/25 12:11
2,4,5-T	EPA 8151A	ND		µg/kg	5.56	1	08/21/25 19:59	08/20/25 07:35
2,4,5-TP (Silvex)	EPA 8151A	ND		µg/kg	5.56	1	08/21/25 19:59	08/20/25 07:35
2,4-D	EPA 8151A	ND		µg/kg	11.1	1	08/21/25 19:59	08/20/25 07:35
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	66.0		%REC	10-116	1	08/21/25 19:59	08/20/25 07:35

Semivolatile Organic Compounds by GC-MS								
1,1'-Biphenyl (BZ-0)	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
1,2,4,5-Tetrachlorobenzene	EPA 8270E	ND		µg/kg	1900	5	08/19/25 01:06	08/16/25 09:11
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	ND		µg/kg	954	5	08/19/25 01:06	08/16/25 09:11
1-Methylnaphthalene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl) ether	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:44
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB02 (3-4)	Lab ID: HN2511183-002
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
2,3,4,6-Tetrachlorophenol	EPA 8270E	ND		µg/kg	381	5	08/19/25 01:06	08/16/25 09:11
2,4,5-Trichlorophenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2,4,6-Trichlorophenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2,4-Dichlorophenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2,4-Dimethylphenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2,4-Dinitrophenol	EPA 8270E	ND		µg/kg	1900	5	08/19/25 01:06	08/16/25 09:11
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2-Chloronaphthalene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
2-Chlorophenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2-Methylnaphthalene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
2-Methylphenol (o-Cresol)	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2-Nitroaniline	EPA 8270E	ND	S	µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
2-Nitrophenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
3&4-Methylphenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
3,3'-Dichlorobenzidine	EPA 8270E	ND		µg/kg	954	5	08/19/25 01:06	08/16/25 09:11
3-Nitroaniline	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
4-Chloro-3-methylphenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
4-Chloroaniline	EPA 8270E	ND		µg/kg	381	5	08/19/25 01:06	08/16/25 09:11
4-Chlorophenyl phenylether	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
4-Nitroaniline	EPA 8270E	ND		µg/kg	954	5	08/19/25 01:06	08/16/25 09:11
4-Nitrophenol	EPA 8270E	ND		µg/kg	1900	5	08/19/25 01:06	08/16/25 09:11
Acenaphthene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Acenaphthylene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Acetophenone	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Anthracene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Atrazine	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Benzaldehyde	EPA 8270E	ND		µg/kg	381	5	08/19/25 01:06	08/16/25 09:11

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:44
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB02 (3-4)	Lab ID: HN2511183-002
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Benzo(a)anthracene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Benzo(a)pyrene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Benzo(b)fluoranthene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Benzo(g,h,i)perylene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Benzo(k)fluoranthene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
bis(2-Chloroethoxy) methane	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
bis(2-Chloroethyl) ether	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Butyl benzyl phthalate	EPA 8270E	ND		µg/kg	381	5	08/19/25 01:06	08/16/25 09:11
Caprolactam	EPA 8270E	ND		µg/kg	381	5	08/19/25 01:06	08/16/25 09:11
Carbazole	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Chrysene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Dibenz(a,h) anthracene	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Dibenzofuran	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Diethyl phthalate	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Dimethyl phthalate	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Di-n-butyl phthalate	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Di-n-octyl phthalate	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Fluoranthene	EPA 8270E	57.2		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Fluorene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Hexachlorobenzene	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Hexachlorobutadiene	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Hexachlorocyclopentadiene	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Hexachloroethane	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Indeno(1,2,3-cd) pyrene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Isophorone	EPA 8270E	ND		µg/kg	954	5	08/19/25 01:06	08/16/25 09:11
Methylphenol, Total	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Naphthalene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Nitrobenzene	EPA 8270E	ND		µg/kg	954	5	08/19/25 01:06	08/16/25 09:11
n-Nitrosodi-n-propylamine	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
N-Nitrosodiphenylamine	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:44
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB02 (3-4)	Lab ID: HN2511183-002
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Pentachlorophenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Phenanthrene	EPA 8270E	ND		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Phenol	EPA 8270E	ND		µg/kg	189	5	08/19/25 01:06	08/16/25 09:11
Pyrene	EPA 8270E	38.1		µg/kg	38.1	5	08/19/25 01:06	08/16/25 09:11
Pyridine	EPA 8270E	ND		µg/kg	954	5	08/19/25 01:06	08/16/25 09:11
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<i>63.9</i>		<i>%REC</i>	<i>48-94</i>	<i>5</i>	<i>08/19/25 01:06</i>	<i>08/16/25 09:11</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<i>68.1</i>		<i>%REC</i>	<i>50-103</i>	<i>5</i>	<i>08/19/25 01:06</i>	<i>08/16/25 09:11</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<i>67.3</i>		<i>%REC</i>	<i>43-105</i>	<i>5</i>	<i>08/19/25 01:06</i>	<i>08/16/25 09:11</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	<i>79.5</i>		<i>%REC</i>	<i>55-111</i>	<i>5</i>	<i>08/19/25 01:06</i>	<i>08/16/25 09:11</i>
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	<i>73.7</i>		<i>%REC</i>	<i>47-100</i>	<i>5</i>	<i>08/19/25 01:06</i>	<i>08/16/25 09:11</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<i>68.9</i>		<i>%REC</i>	<i>49-110</i>	<i>5</i>	<i>08/19/25 01:06</i>	<i>08/16/25 09:11</i>

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,1,2,2-Tetrachloroethane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,1,2-Trichloroethane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,1-Dichloroethane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,1-Dichloroethylene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,2,3-Trichlorobenzene	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
1,2,3-Trichloropropane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,2,4-Trichlorobenzene	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
1,2,4-Trimethylbenzene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
1,2-Dichloropropane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,3,5-Trimethylbenzene	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
1,3-Dichloropropene	EPA 8260D	ND		µg/kg	78.8	1	08/14/25 14:20	08/11/25 17:04

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:44
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB02 (3-4)	Lab ID: HN2511183-002
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	ND		µg/kg	263	1	08/14/25 14:20	08/11/25 17:04
2-Hexanone	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
4-Methyl-2-pentanone (MIBK)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Acetone	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
Benzene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Bromochloromethane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Bromodichloromethane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Bromoform	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Carbon disulfide	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Carbon tetrachloride	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Chlorobenzene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Chlorodibromomethane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Chloroethane (Ethyl chloride)	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
Chloroform	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
cis & trans-1,2-Dichloroethene	EPA 8260D	ND		µg/kg	78.8	1	08/14/25 14:20	08/11/25 17:04
cis-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
cis-1,3-Dichloropropene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Cyclohexane	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
Dichlorodifluoromethane (Freon-12)	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
Ethylbenzene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Isopropylbenzene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
m+p-Xylene	EPA 8260D	ND		µg/kg	78.8	1	08/14/25 14:20	08/11/25 17:04
Methyl acetate	EPA 8260D	ND		µg/kg	328	1	08/14/25 14:20	08/11/25 17:04
Methyl bromide (Bromomethane)	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
Methyl chloride (Chloromethane)	EPA 8260D	ND		µg/kg	131	1	08/14/25 14:20	08/11/25 17:04
Methyl tert-butyl ether (MTBE)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Methylcyclohexane	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Methylene chloride (Dichloromethane)	EPA 8260D	ND		µg/kg	328	1	08/14/25 14:20	08/11/25 17:04

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:44
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB02 (3-4)

Lab ID: HN2511183-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
o-Xylene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Styrene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Toluene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Total Xylene	EPA 8260D	ND		µg/kg	118	1	08/14/25 14:20	08/11/25 17:04
trans-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
trans-1,3-Dichloropropylene	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Trichloroethene (Trichloroethylene)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
Vinyl chloride (Chloroethene)	EPA 8260D	ND		µg/kg	39.4	1	08/14/25 14:20	08/11/25 17:04
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	96.4		%REC	80-120	1	08/14/25 14:20	08/11/25 17:04
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	101		%REC	80-120	1	08/14/25 14:20	08/11/25 17:04
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	96.5		%REC	80-120	1	08/14/25 14:20	08/11/25 17:04
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	103		%REC	80-120	1	08/14/25 14:20	08/11/25 17:04

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:54
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB03 (5-6)

Lab ID: HN2511183-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters								
Percent Moisture	EPA 3550C	16.3		%	0.1	1	08/13/25 12:47	NA
Chloride	EPA 9056A	ND		mg/kg	12.1	1	08/12/25 21:08	08/12/25 15:50
Metals								
Arsenic	EPA 6020B	11.6		mg/kg	3.22	10	08/15/25 16:55	08/14/25 07:51
Barium	EPA 6020B	73.8		mg/kg	0.322	1	08/15/25 03:07	08/14/25 07:51
Cadmium	EPA 6020B	ND		mg/kg	0.129	1	08/15/25 03:07	08/14/25 07:51
Chromium	EPA 6020B	25.6		mg/kg	3.22	10	08/15/25 16:55	08/14/25 07:51
Copper	EPA 6020B	20.3		mg/kg	3.22	10	08/15/25 16:55	08/14/25 07:51
Lead	EPA 6020B	9.71		mg/kg	0.322	1	08/15/25 03:07	08/14/25 07:51
Selenium	EPA 6020B	ND		mg/kg	0.322	1	08/15/25 03:07	08/14/25 07:51
Silver	EPA 6020B	ND		mg/kg	0.322	1	08/15/25 03:07	08/14/25 07:51
Zinc	EPA 6020B	70.0		mg/kg	6.45	10	08/15/25 16:55	08/14/25 07:51
Mercury	EPA 7471B	ND		mg/kg	0.0200	1	08/14/25 10:10	08/14/25 07:45
Organochlorine Pesticides by GC/ECD								
4,4'-DDD	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
4,4'-DDE	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
4,4'-DDT	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Aldrin	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
alpha-BHC	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
beta-BHC	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Chlordane, Technical	EPA 8081B	ND		µg/kg	70.1	1	08/23/25 04:12	08/19/25 10:41
cis-Chlordane	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
delta-BHC	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Dieldrin	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Endosulfan I	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Endosulfan II	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Endosulfan sulfate	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Endrin	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Endrin aldehyde	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Endrin ketone	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
gamma-BHC (Lindane)	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:54
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB03 (5-6) **Lab ID: HN2511183-003**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Heptachlor	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Heptachlor epoxide	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Methoxychlor	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
Toxaphene	EPA 8081B	ND		µg/kg	168	1	08/23/25 04:12	08/19/25 10:41
trans-Chlordane	EPA 8081B	ND		µg/kg	28.0	1	08/23/25 04:12	08/19/25 10:41
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	96.3		%REC	53-151	1	08/23/25 04:12	08/19/25 10:41
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	108		%REC	67-127	1	08/23/25 04:12	08/19/25 10:41

Semivolatile Organic Compounds by GC

Aroclor 1016	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
Aroclor 1221	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
Aroclor 1232	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
Aroclor 1242	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
Aroclor 1248	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
Aroclor 1254	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
Aroclor 1260	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
Aroclor 1262	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
Aroclor 1268	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
Total PCB	EPA 8082A	ND		µg/kg	187	1	08/20/25 19:49	08/19/25 12:11
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	110		%REC	54-146	1	08/20/25 19:49	08/19/25 12:11
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	102		%REC	58-140	1	08/20/25 19:49	08/19/25 12:11
2,4,5-T	EPA 8151A	ND		µg/kg	5.78	1	08/21/25 19:46	08/20/25 07:35
2,4,5-TP (Silvex)	EPA 8151A	ND		µg/kg	5.78	1	08/21/25 19:46	08/20/25 07:35
2,4-D	EPA 8151A	ND		µg/kg	11.6	1	08/21/25 19:46	08/20/25 07:35
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	58.0		%REC	10-116	1	08/21/25 19:46	08/20/25 07:35

Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
1,2,4,5-Tetrachlorobenzene	EPA 8270E	ND		µg/kg	939	1	08/19/25 00:01	08/16/25 09:11
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	ND		µg/kg	470	1	08/19/25 00:01	08/16/25 09:11
1-Methylnaphthalene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl) ether	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:54
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB03 (5-6)	Lab ID: HN2511183-003
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
2,3,4,6-Tetrachlorophenol	EPA 8270E	ND		µg/kg	188	1	08/19/25 00:01	08/16/25 09:11
2,4,5-Trichlorophenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2,4,6-Trichlorophenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2,4-Dichlorophenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2,4-Dimethylphenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2,4-Dinitrophenol	EPA 8270E	ND		µg/kg	939	1	08/19/25 00:01	08/16/25 09:11
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2-Chloronaphthalene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
2-Chlorophenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2-Methylnaphthalene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
2-Methylphenol (o-Cresol)	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2-Nitroaniline	EPA 8270E	ND	S	µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
2-Nitrophenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
3&4-Methylphenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
3,3'-Dichlorobenzidine	EPA 8270E	ND		µg/kg	470	1	08/19/25 00:01	08/16/25 09:11
3-Nitroaniline	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
4-Chloro-3-methylphenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
4-Chloroaniline	EPA 8270E	ND		µg/kg	188	1	08/19/25 00:01	08/16/25 09:11
4-Chlorophenyl phenylether	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
4-Nitroaniline	EPA 8270E	ND		µg/kg	470	1	08/19/25 00:01	08/16/25 09:11
4-Nitrophenol	EPA 8270E	ND		µg/kg	939	1	08/19/25 00:01	08/16/25 09:11
Acenaphthene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Acenaphthylene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Acetophenone	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Anthracene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Atrazine	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Benzaldehyde	EPA 8270E	ND		µg/kg	188	1	08/19/25 00:01	08/16/25 09:11

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:54
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB03 (5-6)	Lab ID: HN2511183-003
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Benzo(a)anthracene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Benzo(a)pyrene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Benzo(b)fluoranthene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Benzo(g,h,i)perylene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Benzo(k)fluoranthene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
bis(2-Chloroethoxy) methane	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
bis(2-Chloroethyl) ether	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Butyl benzyl phthalate	EPA 8270E	ND		µg/kg	188	1	08/19/25 00:01	08/16/25 09:11
Caprolactam	EPA 8270E	ND		µg/kg	188	1	08/19/25 00:01	08/16/25 09:11
Carbazole	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Chrysene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Dibenz(a,h) anthracene	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Dibenzofuran	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Diethyl phthalate	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Dimethyl phthalate	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Di-n-butyl phthalate	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Di-n-octyl phthalate	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Fluoranthene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Fluorene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Hexachlorobenzene	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Hexachlorobutadiene	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Hexachlorocyclopentadiene	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Hexachloroethane	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Indeno(1,2,3-cd) pyrene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Isophorone	EPA 8270E	ND		µg/kg	470	1	08/19/25 00:01	08/16/25 09:11
Methylphenol, Total	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Naphthalene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Nitrobenzene	EPA 8270E	ND		µg/kg	470	1	08/19/25 00:01	08/16/25 09:11
n-Nitrosodi-n-propylamine	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
N-Nitrosodiphenylamine	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:54
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB03 (5-6) **Lab ID: HN2511183-003**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Pentachlorophenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Phenanthrene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Phenol	EPA 8270E	ND		µg/kg	93.1	1	08/19/25 00:01	08/16/25 09:11
Pyrene	EPA 8270E	ND		µg/kg	18.8	1	08/19/25 00:01	08/16/25 09:11
Pyridine	EPA 8270E	ND		µg/kg	470	1	08/19/25 00:01	08/16/25 09:11
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<i>75.5</i>		<i>%REC</i>	<i>48-94</i>	<i>1</i>	<i>08/19/25 00:01</i>	<i>08/16/25 09:11</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<i>72.5</i>		<i>%REC</i>	<i>50-103</i>	<i>1</i>	<i>08/19/25 00:01</i>	<i>08/16/25 09:11</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<i>74.4</i>		<i>%REC</i>	<i>43-105</i>	<i>1</i>	<i>08/19/25 00:01</i>	<i>08/16/25 09:11</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	<i>88.9</i>		<i>%REC</i>	<i>55-111</i>	<i>1</i>	<i>08/19/25 00:01</i>	<i>08/16/25 09:11</i>
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	<i>78.5</i>		<i>%REC</i>	<i>47-100</i>	<i>1</i>	<i>08/19/25 00:01</i>	<i>08/16/25 09:11</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<i>80.3</i>		<i>%REC</i>	<i>49-110</i>	<i>1</i>	<i>08/19/25 00:01</i>	<i>08/16/25 09:11</i>

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,1,2,2-Tetrachloroethane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,1,2-Trichloroethane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,1-Dichloroethane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,1-Dichloroethylene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,2,3-Trichlorobenzene	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
1,2,3-Trichloropropane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,2,4-Trichlorobenzene	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
1,2,4-Trimethylbenzene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
1,2-Dichloropropane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,3,5-Trimethylbenzene	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
1,3-Dichloropropene	EPA 8260D	ND		µg/kg	84.4	1	08/14/25 14:39	08/11/25 17:04

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:54
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB03 (5-6)	Lab ID: HN2511183-003
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	ND		µg/kg	281	1	08/14/25 14:39	08/11/25 17:04
2-Hexanone	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
4-Methyl-2-pentanone (MIBK)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Acetone	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
Benzene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Bromochloromethane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Bromodichloromethane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Bromoform	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Carbon disulfide	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Carbon tetrachloride	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Chlorobenzene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Chlorodibromomethane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Chloroethane (Ethyl chloride)	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
Chloroform	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
cis & trans-1,2-Dichloroethene	EPA 8260D	ND		µg/kg	84.4	1	08/14/25 14:39	08/11/25 17:04
cis-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
cis-1,3-Dichloropropene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Cyclohexane	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
Dichlorodifluoromethane (Freon-12)	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
Ethylbenzene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Isopropylbenzene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
m+p-Xylene	EPA 8260D	ND		µg/kg	84.4	1	08/14/25 14:39	08/11/25 17:04
Methyl acetate	EPA 8260D	ND		µg/kg	352	1	08/14/25 14:39	08/11/25 17:04
Methyl bromide (Bromomethane)	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
Methyl chloride (Chloromethane)	EPA 8260D	ND		µg/kg	141	1	08/14/25 14:39	08/11/25 17:04
Methyl tert-butyl ether (MTBE)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Methylcyclohexane	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Methylene chloride (Dichloromethane)	EPA 8260D	ND		µg/kg	352	1	08/14/25 14:39	08/11/25 17:04

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID

Work Order: HN2511183
Date Collected: 08/08/25 11:54
Date Received: 08/09/25 08:00

CLIENT ID: 14131 SB03 (5-6)

Lab ID: HN2511183-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
o-Xylene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Styrene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Toluene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Total Xylene	EPA 8260D	ND		µg/kg	126	1	08/14/25 14:39	08/11/25 17:04
trans-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
trans-1,3-Dichloropropylene	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Trichloroethene (Trichloroethylene)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
Vinyl chloride (Chloroethene)	EPA 8260D	ND		µg/kg	42.2	1	08/14/25 14:39	08/11/25 17:04
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	99.6		%REC	80-120	1	08/14/25 14:39	08/11/25 17:04
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	101		%REC	80-120	1	08/14/25 14:39	08/11/25 17:04
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	97.4		%REC	80-120	1	08/14/25 14:39	08/11/25 17:04
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	105		%REC	80-120	1	08/14/25 14:39	08/11/25 17:04



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2155953

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3393605

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2155953-001
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Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 08/12/25 18:52
Prep Date: 08/12/25 15:51

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	ND	mg/kg	10.0							

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2155953-002
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Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 08/12/25 19:01
Prep Date: 08/12/25 15:51

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	95.7	mg/kg	10.0	100		95.7	87-110			

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2157175

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3395408

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2157175-001
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Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 08/13/25 12:47
Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	ND	%	0.1							

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2157175-002
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Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 08/13/25 12:47
Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	100	%	0.1	100		100.0	98-102			

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2157132

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3399126

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2157132-001
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Method: EPA 7471B **Dilution:** 1 **Analysis Date:** 08/14/25 09:40
Prep Date: 08/14/25 07:46

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	ND	mg/kg	0.0200							

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2157132-002
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Method: EPA 7471B **Dilution:** 1 **Analysis Date:** 08/14/25 09:42
Prep Date: 08/14/25 07:46

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.163	mg/kg	0.0200	0.1665		98.1	80-120			

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2159429

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3400802

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2159429-001
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Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 08/15/25 02:40
Prep Date: 08/14/25 07:52

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Barium	ND	mg/kg	0.250							
Cadmium	ND	mg/kg	0.100							
Lead	ND	mg/kg	0.250							
Selenium	ND	mg/kg	0.250							
Silver	ND	mg/kg	0.250							

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2159429-002
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Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 08/15/25 02:42
Prep Date: 08/14/25 07:52

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Barium	5.22	mg/kg	0.250	5		104	80-120			
Cadmium	4.91	mg/kg	0.100	5		98.1	80-120			
Lead	4.84	mg/kg	0.250	5		96.8	80-120			
Selenium	4.58	mg/kg	0.250	5		91.6	80-120			
Silver	4.59	mg/kg	0.250	5		91.7	80-120			

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2159429

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3405196

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2159429-001
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Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 08/15/25 16:27
Prep Date: 08/14/25 07:52

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	ND	mg/kg	0.250							
Chromium	ND	mg/kg	0.250							
Copper	ND	mg/kg	0.250							
Zinc	ND	mg/kg	0.500							

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2159429-002
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Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 08/15/25 16:29
Prep Date: 08/14/25 07:52

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	4.64	mg/kg	0.250	5		92.9	80-120			
Chromium	4.75	mg/kg	0.250	5		95.1	80-120			
Copper	4.72	mg/kg	0.250	5		94.4	80-120			
Zinc	4.75	mg/kg	0.500	5		94.9	80-120			

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2167835

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3432577

Organochlorine Pesticides by GC/ECD

MB	CLIENT ID: Method Blank	Lab ID: QC-2167835-001
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Method: EPA 8081B**Dilution:** 1**Analysis Date:** 08/22/25 22:34**Prep Date:** 08/19/25 10:42

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	ND	µg/kg	10.0							
4,4'-DDE	ND	µg/kg	10.0							
4,4'-DDT	ND	µg/kg	10.0							
Aldrin	ND	µg/kg	10.0							
alpha-BHC	ND	µg/kg	10.0							
beta-BHC	ND	µg/kg	10.0							
Chlordane, Technical	ND	µg/kg	25.0							
cis-Chlordane	ND	µg/kg	10.0							
delta-BHC	ND	µg/kg	10.0							
Dieldrin	ND	µg/kg	10.0							
Endosulfan I	ND	µg/kg	10.0							
Endosulfan II	ND	µg/kg	10.0							
Endosulfan sulfate	ND	µg/kg	10.0							
Endrin	ND	µg/kg	10.0							
Endrin aldehyde	ND	µg/kg	10.0							
Endrin ketone	ND	µg/kg	10.0							
gamma-BHC (Lindane)	ND	µg/kg	10.0							
Heptachlor	ND	µg/kg	10.0							
Heptachlor epoxide	ND	µg/kg	10.0							
Methoxychlor	ND	µg/kg	10.0							
Toxaphene	ND	µg/kg	60.0							
trans-Chlordane	ND	µg/kg	10.0							
Surr: Decachlorobiphenyl	41.1	µg/kg		33.33		123	53-151			
Surr: Tetrachloro-m-xylene	33.7	µg/kg		33.33		101	67-127			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2167835-002
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Method: EPA 8081B**Dilution:** 1**Analysis Date:** 08/22/25 23:03**Prep Date:** 08/19/25 10:42

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	36.4	µg/kg	10.0	33.33		109	55-141			
4,4'-DDE	35.1	µg/kg	10.0	33.33		105	55-143			
4,4'-DDT	39.1	µg/kg	10.0	33.33		117	50-144			
Aldrin	34.8	µg/kg	10.0	33.33		104	57-141			
alpha-BHC	34.8	µg/kg	10.0	33.33		104	58-144			
beta-BHC	35.4	µg/kg	10.0	33.33		106	55-147			
cis-Chlordane	34.8	µg/kg	10.0	33.33		104	58-142			
delta-BHC	35.3	µg/kg	10.0	33.33		106	59-142			
Dieldrin	34.8	µg/kg	10.0	33.33		104	59-142			
Endosulfan I	35.5	µg/kg	10.0	33.33		106	57-145			
Endosulfan II	36.8	µg/kg	10.0	33.33		110	58-138			
Endosulfan sulfate	35.8	µg/kg	10.0	33.33		108	54-136			
Endrin	36.6	µg/kg	10.0	33.33		110	45-150			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2167835

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3432577

LCS		CLIENT ID: Laboratory Control Sample				Lab ID: QC-2167835-002			
Method: EPA 8081B		Dilution: 1		Analysis Date: 08/22/25 23:03		Prep Date: 08/19/25 10:42			
Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit Qual
Endrin aldehyde	41.9	µg/kg	10.0	33.33		126	41-147		
Endrin ketone	36.8	µg/kg	10.0	33.33		110	54-146		
gamma-BHC (Lindane)	35.3	µg/kg	10.0	33.33		106	58-145		
Heptachlor	36.2	µg/kg	10.0	33.33		109	51-145		
Heptachlor epoxide	35.0	µg/kg	10.0	33.33		105	59-143		
Methoxychlor	37.6	µg/kg	10.0	33.33		113	43-144		
trans-Chlordane	35.2	µg/kg	10.0	33.33		106	56-145		
Surr: Decachlorobiphenyl	41.0	µg/kg		33.33		123	51-151		
Surr: Tetrachloro-m-xylene	32.4	µg/kg		33.33		97.2	67-127		

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2167839

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3421877

Semivolatile Organic Compounds by GC

MB	CLIENT ID: Method Blank	Lab ID: QC-2167839-001
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Method: EPA 8082A

Dilution: 1

Analysis Date: 08/20/25 23:44

Prep Date: 08/19/25 12:12

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	ND	µg/kg	66.7							
Aroclor 1221	ND	µg/kg	66.7							
Aroclor 1232	ND	µg/kg	66.7							
Aroclor 1242	ND	µg/kg	66.7							
Aroclor 1248	ND	µg/kg	66.7							
Aroclor 1254	ND	µg/kg	66.7							
Aroclor 1260	ND	µg/kg	66.7							
Aroclor 1262	ND	µg/kg	66.7							
Aroclor 1268	ND	µg/kg	66.7							
Total PCB	ND	µg/kg	66.7							
Surr: Decachlorobiphenyl	41.6	µg/kg		33.3		125	54-146			
Surr: Tetrachloro-m-xylene	35.5	µg/kg		33.3		106	58-140			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2167839-002
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Method: EPA 8082A

Dilution: 1

Analysis Date: 08/20/25 23:56

Prep Date: 08/19/25 12:12

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	863	µg/kg	66.7	833		104	71-135			
Aroclor 1260	925	µg/kg	66.7	833		111	67-135			
Surr: Decachlorobiphenyl	42.5	µg/kg		33.3		128	54-146			
Surr: Tetrachloro-m-xylene	35.2	µg/kg		33.3		106	58-140			

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2170067

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3418607

Semivolatile Organic Compounds by GC

MB	CLIENT ID: Method Blank	Lab ID: QC-2170067-001
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Method: EPA 8151A

Dilution: 1

Analysis Date: 08/21/25 17:49

Prep Date: 08/20/25 07:36

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	ND	µg/kg	5.00							
2,4,5-TP (Silvex)	ND	µg/kg	5.00							
2,4-D	ND	µg/kg	10.0							
Surr: DCAA	28.0	µg/kg		50		56.0	10-116			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2170067-002
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Method: EPA 8151A

Dilution: 1

Analysis Date: 08/21/25 17:00

Prep Date: 08/20/25 07:36

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	34.0	µg/kg	5.00	50		68.0	10-119			
2,4,5-TP (Silvex)	34.0	µg/kg	5.00	50		68.0	10-101			
2,4-D	36.0	µg/kg	10.0	50		72.0	10-128			
Surr: DCAA	35.0	µg/kg		50		70.0	10-116			

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2164302

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3411641

Semivolatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2164302-001
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Method: EPA 8270E**Dilution:** 1**Analysis Date:** 08/18/25 16:44**Prep Date:** 08/16/25 09:12

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	ND	µg/kg	33.0							
1,2,4,5-Tetrachlorobenzene	ND	µg/kg	333							
1,4-Dioxane (1,4- Diethyleneoxide)	ND	µg/kg	167							
1-Methylnaphthalene	ND	µg/kg	6.67							
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND	µg/kg	33.0							
2,3,4,6-Tetrachlorophenol	ND	µg/kg	67.0							
2,4,5-Trichlorophenol	ND	µg/kg	33.0							
2,4,6-Trichlorophenol	ND	µg/kg	33.0							
2,4-Dichlorophenol	ND	µg/kg	33.0							
2,4-Dimethylphenol	ND	µg/kg	33.0							
2,4-Dinitrophenol	ND	µg/kg	333							
2,4-Dinitrotoluene (2,4-DNT)	ND	µg/kg	33.0							
2,6-Dinitrotoluene (2,6-DNT)	ND	µg/kg	33.0							
2-Chloronaphthalene	ND	µg/kg	6.67							
2-Chlorophenol	ND	µg/kg	33.0							
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND	µg/kg	33.0							
2-Methylnaphthalene	ND	µg/kg	6.67							
2-Methylphenol (o-Cresol)	ND	µg/kg	33.0							
2-Nitroaniline	ND	µg/kg	33.0							
2-Nitrophenol	ND	µg/kg	33.0							
3&4-Methylphenol	ND	µg/kg	33.0							
3,3'-Dichlorobenzidine	ND	µg/kg	167							
3-Nitroaniline	ND	µg/kg	33.0							
4-Bromophenyl phenyl ether (BDE-3)	ND	µg/kg	33.0							
4-Chloro-3-methylphenol	ND	µg/kg	33.0							
4-Chloroaniline	ND	µg/kg	67.0							
4-Chlorophenyl phenylether	ND	µg/kg	33.0							
4-Nitroaniline	ND	µg/kg	167							
4-Nitrophenol	ND	µg/kg	333							
Acenaphthene	ND	µg/kg	6.67							
Acenaphthylene	ND	µg/kg	6.67							
Acetophenone	ND	µg/kg	33.0							
Anthracene	ND	µg/kg	6.67							
Atrazine	ND	µg/kg	33.0							
Benzaldehyde	ND	µg/kg	67.0							
Benzo(a)anthracene	ND	µg/kg	6.67							
Benzo(a)pyrene	ND	µg/kg	6.67							
Benzo(b)fluoranthene	ND	µg/kg	6.67							
Benzo(g,h,i)perylene	ND	µg/kg	6.67							
Benzo(k)fluoranthene	ND	µg/kg	6.67							
bis(2-Chloroethoxy)methane	ND	µg/kg	33.0							
bis(2-Chloroethyl) ether	ND	µg/kg	33.0							

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2164302

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3411641

MB	CLIENT ID: Method Blank	Lab ID: QC-2164302-001
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Method: EPA 8270E

Dilution: 1

Analysis Date: 08/18/25 16:44

Prep Date: 08/16/25 09:12

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Butyl benzyl phthalate	ND	µg/kg	67.0							
Caprolactam	ND	µg/kg	66.7							
Carbazole	ND	µg/kg	33.0							
Chrysene	ND	µg/kg	6.67							
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND	µg/kg	33.0							
Dibenz(a,h) anthracene	ND	µg/kg	33.0							
Dibenzofuran	ND	µg/kg	33.0							
Diethyl phthalate	ND	µg/kg	33.0							
Dimethyl phthalate	ND	µg/kg	33.0							
Di-n-butyl phthalate	ND	µg/kg	33.0							
Di-n-octyl phthalate	ND	µg/kg	33.0							
Fluoranthene	ND	µg/kg	6.67							
Fluorene	ND	µg/kg	6.67							
Hexachlorobenzene	ND	µg/kg	33.0							
Hexachlorobutadiene	ND	µg/kg	33.0							
Hexachlorocyclopentadiene	ND	µg/kg	33.0							
Hexachloroethane	ND	µg/kg	33.0							
Indeno(1,2,3-cd) pyrene	ND	µg/kg	6.67							
Isophorone	ND	µg/kg	167							
Methylphenol, Total	ND	µg/kg	67.0							
Naphthalene	ND	µg/kg	6.67							
Nitrobenzene	ND	µg/kg	167							
n-Nitrosodi-n-propylamine	ND	µg/kg	33.0							
N-Nitrosodiphenylamine	ND	µg/kg	33.0							
Pentachlorophenol	ND	µg/kg	33.0							
Phenanthrene	ND	µg/kg	6.67							
Phenol	ND	µg/kg	33.0							
Pyrene	ND	µg/kg	6.67							
Pyridine	ND	µg/kg	167							
Surr: 2,4,6-Tribromophenol	2690	µg/kg		3333		80.8	48-94			
Surr: 2-Fluorobiphenyl	2670	µg/kg		3333		80.1	50-103			
Surr: 2-Fluorophenol	2740	µg/kg		3333		82.2	43-105			
Surr: 4-Terphenyl-d14	3030	µg/kg		3333		91.0	55-111			
Surr: Nitrobenzene-d5	2640	µg/kg		3333		79.3	47-100			
Surr: Phenol-d6	2830	µg/kg		3333		84.9	49-110			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2164302-002
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Method: EPA 8270E

Dilution: 1

Analysis Date: 08/18/25 17:06

Prep Date: 08/16/25 09:12

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	1130	µg/kg	33.0	1333		84.9	57-101			
1,2,4,5-Tetrachlorobenzene	1150	µg/kg	33.0	1333		86.1	54-98			
1-Methylnaphthalene	1180	µg/kg	6.67	1333		88.5	56-100			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2164302

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3411641

LCS		CLIENT ID: Laboratory Control Sample				Lab ID: QC-2164302-002			
Method: EPA 8270E		Dilution: 1		Analysis Date: 08/18/25 17:06		Prep Date: 08/16/25 09:12			
Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit Qual
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	1260	µg/kg	33.0	1333		94.7	50-101		
2,3,4,6-Tetrachlorophenol	1290	µg/kg	67.0	1333		96.9	48-103		
2,4,5-Trichlorophenol	1140	µg/kg	33.0	1333		85.3	54-98		
2,4,6-Trichlorophenol	1100	µg/kg	33.0	1333		82.7	56-97		
2,4-Dichlorophenol	1100	µg/kg	33.0	1333		82.2	54-99		
2,4-Dimethylphenol	1140	µg/kg	33.0	1333		85.2	47-102		
2,4-Dinitrophenol	939	µg/kg	333	1333		70.4	10-100		
2,4-Dinitrotoluene (2,4-DNT)	1300	µg/kg	33.0	1333		97.7	62-105		
2,6-Dinitrotoluene (2,6-DNT)	1260	µg/kg	33.0	1333		94.5	62-103		
2-Chloronaphthalene	1100	µg/kg	6.67	1333		82.9	57-101		
2-Chlorophenol	1130	µg/kg	33.0	1333		84.9	52-102		
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	1310	µg/kg	33.0	1333		98.6	42-104		
2-Methylnaphthalene	1120	µg/kg	6.67	1333		84.4	55-102		
2-Methylphenol (o-Cresol)	1150	µg/kg	33.0	1333		86.1	54-103		
2-Nitroaniline	1400	µg/kg	33.0	1333		105	57-103		S
2-Nitrophenol	1320	µg/kg	33.0	1333		99.2	52-102		
3&4-Methylphenol	1190	µg/kg	33.0	1333		89.4	56-103		
3,3'-Dichlorobenzidine	920	µg/kg	167	1333		69.0	41-91		
3-Nitroaniline	1110	µg/kg	33.0	1333		83.6	35-107		
4-Bromophenyl phenyl ether (BDE-3)	1150	µg/kg	33.0	1333		86.0	63-104		
4-Chloro-3-methylphenol	1180	µg/kg	33.0	1333		88.3	57-103		
4-Chloroaniline	1150	µg/kg	67.0	1333		86.3	32-99		
4-Chlorophenyl phenylether	1160	µg/kg	33.0	1333		86.9	62-100		
4-Nitroaniline	1090	µg/kg	167	1333		81.7	19-124		
4-Nitrophenol	1280	µg/kg	333	1333		96.2	44-106		
Acenaphthene	1140	µg/kg	6.67	1333		85.5	60-101		
Acenaphthylene	1130	µg/kg	6.67	1333		84.7	59-101		
Acetophenone	1170	µg/kg	33.0	1333		87.7	54-102		
Anthracene	1190	µg/kg	6.67	1333		89.3	63-96		
Atrazine	1310	µg/kg	33.0	1333		98.5	60-110		
Benzaldehyde	785	µg/kg	67.0	1333		58.9	10-143		
Benzo(a)anthracene	1160	µg/kg	6.67	1333		87.3	66-102		
Benzo(a)pyrene	1190	µg/kg	6.67	1333		89.3	66-105		
Benzo(b)fluoranthene	1160	µg/kg	6.67	1333		87.3	67-105		
Benzo(g,h,i)perylene	1180	µg/kg	6.67	1333		88.7	59-110		
Benzo(k)fluoranthene	1270	µg/kg	6.67	1333		95.4	68-106		
bis(2-Chloroethoxy)methane	1260	µg/kg	33.0	1333		94.7	54-102		
bis(2-Chloroethyl) ether	1260	µg/kg	33.0	1333		94.8	51-101		
Butyl benzyl phthalate	1190	µg/kg	67.0	1333		89.1	59-107		
Caprolactam	1250	µg/kg	66.7	1333		93.6	49-103		
Carbazole	1160	µg/kg	33.0	1333		87.4	63-103		
Chrysene	1130	µg/kg	6.67	1333		84.6	66-105		
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1200	µg/kg	33.0	1333		90.3	63-101		

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2164302

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3411641

LCS		CLIENT ID: Laboratory Control Sample				Lab ID: QC-2164302-002			
Method: EPA 8270E		Dilution: 1		Analysis Date: 08/18/25 17:06		Prep Date: 08/16/25 09:12			
Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit Qual
Dibenz(a,h) anthracene	1080	µg/kg	33.0	1333		81.4	61-109		
Dibenzofuran	1150	µg/kg	33.0	1333		86.6	61-101		
Diethyl phthalate	1210	µg/kg	33.0	1333		91.1	63-105		
Dimethyl phthalate	1170	µg/kg	33.0	1333		87.6	64-104		
Di-n-butyl phthalate	1190	µg/kg	33.0	1333		89.6	66-108		
Di-n-octyl phthalate	1240	µg/kg	33.0	1333		92.7	53-126		
Fluoranthene	1140	µg/kg	6.67	1333		85.8	66-105		
Fluorene	1170	µg/kg	6.67	1333		88.1	62-101		
Hexachlorobenzene	1200	µg/kg	33.0	1333		90.4	61-104		
Hexachlorobutadiene	1110	µg/kg	33.0	1333		83.1	52-99		
Hexachlorocyclopentadiene	1080	µg/kg	33.0	1333		81.3	39-106		
Hexachloroethane	1140	µg/kg	33.0	1333		85.3	59-99		
Indeno(1,2,3-cd) pyrene	1120	µg/kg	6.67	1333		84.3	57-114		
Isophorone	1180	µg/kg	167	1333		88.4	55-101		
Methylphenol, Total	2340	µg/kg	67.0	2667		87.7	54-103		
Naphthalene	1080	µg/kg	6.67	1333		80.9	54-99		
Nitrobenzene	1140	µg/kg	167	1333		85.8	53-100		
n-Nitrosodi-n-propylamine	1320	µg/kg	33.0	1333		99.0	52-104		
N-Nitrosodiphenylamine	1150	µg/kg	33.0	1333		86.3	61-104		
Pentachlorophenol	1040	µg/kg	33.0	1333		78.3	35-100		
Phenanthrene	1130	µg/kg	6.67	1333		84.5	64-101		
Phenol	1150	µg/kg	33.0	1333		86.2	51-107		
Pyrene	1230	µg/kg	6.67	1333		92.6	62-114		
Pyridine	799	µg/kg	167	1333		59.9	40-84		
Surr: 2,4,6-Tribromophenol	ND	µg/kg		3333		0.00	48-94		S
Surr: 2-Fluorobiphenyl	ND	µg/kg		3333		0.00	50-103		S
Surr: 2-Fluorophenol	ND	µg/kg		3333		0.00	43-105		S
Surr: 4-Terphenyl-d14	ND	µg/kg		3333		0.00	55-111		S
Surr: Nitrobenzene-d5	ND	µg/kg		3333		0.00	47-100		S
Surr: Phenol-d6	ND	µg/kg		3333		0.00	49-110		S

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2153857

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3399174

Volatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2153857-001
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Method: EPA 8260D

Dilution: 1

Analysis Date: 08/13/25 22:00

Prep Date: 08/11/25 17:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	µg/kg	30.0							
1,1,2,2-Tetrachloroethane	ND	µg/kg	30.0							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	µg/kg	30.0							
1,1,2-Trichloroethane	ND	µg/kg	30.0							
1,1-Dichloroethane	ND	µg/kg	30.0							
1,1-Dichloroethylene	ND	µg/kg	30.0							
1,2,3-Trichlorobenzene	ND	µg/kg	100							
1,2,3-Trichloropropane	ND	µg/kg	30.0							
1,2,4-Trichlorobenzene	ND	µg/kg	100							
1,2,4-Trimethylbenzene	ND	µg/kg	30.0							
1,2-Dibromo-3-chloropropane (DBCP)	ND	µg/kg	100							
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND	µg/kg	30.0							
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND	µg/kg	30.0							
1,2-Dichloroethane (Ethylene dichloride)	ND	µg/kg	100							
1,2-Dichloropropane	ND	µg/kg	30.0							
1,3,5-Trimethylbenzene	ND	µg/kg	100							
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND	µg/kg	30.0							
1,3-Dichloropropene	ND	µg/kg	60.0							
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND	µg/kg	30.0							
2-Butanone (Methyl ethyl ketone, MEK)	ND	µg/kg	200							
2-Hexanone	ND	µg/kg	30.0							
4-Methyl-2-pentanone (MIBK)	ND	µg/kg	30.0							
Acetone	ND	µg/kg	100							
Benzene	ND	µg/kg	30.0							
Bromochloromethane	ND	µg/kg	30.0							
Bromodichloromethane	ND	µg/kg	30.0							
Bromoform	ND	µg/kg	30.0							
Carbon disulfide	ND	µg/kg	30.0							
Carbon tetrachloride	ND	µg/kg	30.0							
Chlorobenzene	ND	µg/kg	30.0							
Chlorodibromomethane	ND	µg/kg	30.0							
Chloroethane (Ethyl chloride)	ND	µg/kg	100							
Chloroform	ND	µg/kg	30.0							
cis & trans-1,2-Dichloroethene	ND	µg/kg	60.0							
cis-1,2-Dichloroethylene	ND	µg/kg	30.0							
cis-1,3-Dichloropropene	ND	µg/kg	30.0							
Cyclohexane	ND	µg/kg	100							
Dichlorodifluoromethane (Freon-12)	ND	µg/kg	100							

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2153857

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3399174

MB	CLIENT ID: Method Blank	Lab ID: QC-2153857-001
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Method: EPA 8260D **Dilution:** 1 **Analysis Date:** 08/13/25 22:00
Prep Date: 08/11/25 17:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Ethylbenzene	ND	µg/kg	30.0							
Isopropylbenzene	ND	µg/kg	30.0							
m+p-Xylene	ND	µg/kg	60.0							
Methyl acetate	ND	µg/kg	250							
Methyl bromide (Bromomethane)	ND	µg/kg	100							
Methyl chloride (Chloromethane)	ND	µg/kg	100							
Methyl tert-butyl ether (MTBE)	ND	µg/kg	30.0							
Methylcyclohexane	ND	µg/kg	30.0							
Methylene chloride (Dichloromethane)	ND	µg/kg	250							
o-Xylene	ND	µg/kg	30.0							
Styrene	ND	µg/kg	30.0							
Tetrachloroethylene (Perchloroethylene)	ND	µg/kg	30.0							
Toluene	ND	µg/kg	30.0							
Total Xylene	ND	µg/kg	90.0							
trans-1,2-Dichloroethylene	ND	µg/kg	30.0							
trans-1,3-Dichloropropylene	ND	µg/kg	30.0							
Trichloroethene (Trichloroethylene)	ND	µg/kg	30.0							
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	ND	µg/kg	30.0							
Vinyl chloride (Chloroethene)	ND	µg/kg	30.0							
Surr: 1,2-Dichloroethane-d4	996	µg/kg		1000		99.6	80-120			
Surr: 4-Bromofluorobenzene	973	µg/kg		1000		97.3	80-120			
Surr: Dibromofluoromethane	952	µg/kg		1000		95.2	80-120			
Surr: Toluene-d8	1010	µg/kg		1000		101	80-120			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2153857-002
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Method: EPA 8260D **Dilution:** 1 **Analysis Date:** 08/13/25 21:27
Prep Date: 08/11/25 17:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	876	µg/kg	30.0	1000		87.6	75-121			
1,1,2,2-Tetrachloroethane	908	µg/kg	30.0	1000		90.8	79-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	836	µg/kg	30.0	1000		83.6	62-129			
1,1,2-Trichloroethane	862	µg/kg	30.0	1000		86.2	80-123			
1,1-Dichloroethane	880	µg/kg	30.0	1000		88.0	74-124			
1,1-Dichloroethylene	870	µg/kg	30.0	1000		87.0	68-131			
1,2,3-Trichlorobenzene	826	µg/kg	100	1000		82.6	60-135			
1,2,3-Trichloropropane	861	µg/kg	30.0	1000		86.1	77-121			
1,2,4-Trichlorobenzene	830	µg/kg	100	1000		83.0	63-130			
1,2,4-Trimethylbenzene	886	µg/kg	30.0	1000		88.6	64-126			
1,2-Dibromo-3-chloropropane (DBCP)	870	µg/kg	100	1000		87.0	55-135			
1,2-Dibromoethane (EDB, Ethylene dibromide)	934	µg/kg	30.0	1000		93.4	63-155			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2153857

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3399174

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2153857-002
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Method: EPA 8260D

Dilution: 1

Analysis Date: 08/13/25 21:27

Prep Date: 08/11/25 17:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,2-Dichlorobenzene (o-Dichlorobenzene)	906	µg/kg	30.0	1000		90.6	77-122			
1,2-Dichloroethane (Ethylene dichloride)	882	µg/kg	100	1000		88.2	70-130			
1,2-Dichloropropane	891	µg/kg	30.0	1000		89.1	71-130			
1,3,5-Trimethylbenzene	887	µg/kg	100	1000		88.7	66-130			
1,3-Dichlorobenzene (m-Dichlorobenzene)	901	µg/kg	30.0	1000		90.1	78-121			
1,3-Dichloropropene	1820	µg/kg	60.0	2000		91.0	62-124			
1,4-Dichlorobenzene (p-Dichlorobenzene)	920	µg/kg	30.0	1000		92.0	78-122			
2-Butanone (Methyl ethyl ketone, MEK)	970	µg/kg	200	1000		97.0	47-164			
2-Hexanone	958	µg/kg	30.0	1000		95.8	70-137			
4-Methyl-2-pentanone (MIBK)	1520	µg/kg	30.0	1000		152	57-200			
Acetone	1040	µg/kg	100	1000		104	52-190			
Benzene	944	µg/kg	30.0	1000		94.4	78-122			
Bromochloromethane	868	µg/kg	30.0	1000		86.8	68-130			
Bromodichloromethane	954	µg/kg	30.0	1000		95.4	75-125			
Bromoform	809	µg/kg	30.0	1000		80.9	59-120			
Carbon disulfide	1010	µg/kg	30.0	1000		101	60-163			
Carbon tetrachloride	1050	µg/kg	30.0	1000		105	69-123			
Chlorobenzene	886	µg/kg	30.0	1000		88.6	79-120			
Chlorodibromomethane	822	µg/kg	30.0	1000		82.2	57-123			
Chloroethane (Ethyl chloride)	920	µg/kg	100	1000		92.0	38-132			
Chloroform	846	µg/kg	30.0	1000		84.6	72-122			
cis & trans-1,2-Dichloroethene	1690	µg/kg	60.0	2000		84.4	72-127			
cis-1,2-Dichloroethylene	850	µg/kg	30.0	1000		85.0	74-125			
cis-1,3-Dichloropropene	1010	µg/kg	30.0	1000		101	62-124			
Dichlorodifluoromethane (Freon-12)	884	µg/kg	100	1000		88.4	28-137			
Ethylbenzene	872	µg/kg	30.0	1000		87.2	75-121			
Isopropylbenzene	914	µg/kg	30.0	1000		91.4	74-121			
m+p-Xylene	1840	µg/kg	60.0	2000		91.9	67-129			
Methyl acetate	676	µg/kg	250	1000		67.6	61-125			
Methyl bromide (Bromomethane)	892	µg/kg	100	1000		89.2	31-169			
Methyl chloride (Chloromethane)	904	µg/kg	100	1000		90.4	24-119			
Methyl tert-butyl ether (MTBE)	1020	µg/kg	30.0	1000		102	79-139			
Methylene chloride (Dichloromethane)	853	µg/kg	250	1000		85.3	62-135			
o-Xylene	923	µg/kg	30.0	1000		92.3	75-120			
Styrene	903	µg/kg	30.0	1000		90.3	74-126			
Tetrachloroethylene (Perchloroethylene)	866	µg/kg	30.0	1000		86.6	76-128			
Toluene	919	µg/kg	30.0	1000		91.9	76-120			
Total Xylene	2760	µg/kg	90.0	3000		92.0	67-129			
trans-1,2-Dichloroethylene	839	µg/kg	30.0	1000		83.9	72-127			
trans-1,3-Dichloropropylene	812	µg/kg	30.0	1000		81.2	66-120			
Trichloroethene (Trichloroethylene)	900	µg/kg	30.0	1000		90.0	75-122			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: 14131_Tacoma
Matrix: SOIL/SOLID
QC Lot: 2153857

Work Order: HN2511183
Date Collected: NA
Date Received: NA
Run ID: 3399174

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2153857-002
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Method: EPA 8260D

Dilution: 1

Analysis Date: 08/13/25 21:27

Prep Date: 08/11/25 17:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	702	µg/kg	30.0	1000		70.2	51-115			
Vinyl chloride (Chloroethene)	1030	µg/kg	30.0	1000		103	43-128			
<i>Surr: 1,2-Dichloroethane-d4</i>	987	<i>µg/kg</i>		1000		98.7	80-120			
<i>Surr: 4-Bromofluorobenzene</i>	1020	<i>µg/kg</i>		1000		102	80-120			
<i>Surr: Dibromofluoromethane</i>	1070	<i>µg/kg</i>		1000		107	80-120			
<i>Surr: Toluene-d8</i>	973	<i>µg/kg</i>		1000		97.3	80-120			

The following samples were analyzed in this batch: HN2511183-001, HN2511183-002, HN2511183-003



right solutions.
right partner.

October 23, 2025

Ryan Montri
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: **DETR0060**

Date Received: **10/15/2025**

Work Order: **HN2515365**

Dear Ryan,

Enclosed are the results of the sample(s) submitted to our laboratory.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Dale Schipper

/S/ DALE SCHIPPER

Project Manager



Client: The Mannik & Smith Group, Inc.
Project: DETR0060

Work Order: HN2515365
Date Received: 15-Oct-2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt

1 soil/solid sample was received for analysis at ALS Environmental on 15-Oct-2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Organics

EPA 8260D

Run ID: 3608015

Analyte concentration in the Method Blank was above the method reporting limit. Sample results in the batch were non-detect, therefore no qualification is necessary: Chloroform

LCS recovery exceeded the upper control limit. Sample results in the batch were non-detect, therefore no qualification is necessary: Carbon tetrachloride, Chloroform

MS/MSD recoveries exceeded the upper control limit. Sample results in the batch were non-detect, therefore no qualification is necessary: Carbon tetrachloride

SAMPLE SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Workorder: HN2515365

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2515365-001	14131 Tacoma SB01,3 TCLP	SOIL/SOLID	10/14/25 10:32	10/15/25 08:00

REPORT QUALIFIERS AND DEFINITIONS

*	Value exceeds Regulatory Limit (if MCL displayed)
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
NC	Not Calculated
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
V	The Continuing Calibration Verification was outside of control criteria
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Holland Laboratory Certifications¹

Agency	Type	ID	Issued	Expires
Alabama	Drinking Water (Secondary)	42500	12/17/2024	12/31/2025
Colorado	UST		07/01/2025	06/30/2026
Connecticut	Drinking Water (Secondary)	PH-0155	12/10/2024	12/31/2026
Florida	NELAP (Primary)	E871106	07/01/2025	06/30/2026
Illinois	NELAP (Secondary)	200076	11/14/2024	12/31/2025
Indiana	Drinking Water (Secondary)	C-MI-08	12/31/2024	09/04/2026
Iowa	State Specific	403	09/18/2023	09/01/2025
Kansas	NELAP (Secondary)	E-10411	07/09/2024	07/31/2025
Kentucky	Waste Water	KY98004	12/20/2024	12/31/2025
Kentucky	UST	120474	06/24/2024	06/30/2025
Michigan	Drinking Water (Primary)	0022	12/19/2023	09/04/2026
Minnesota	NELAP (Secondary)	026-999-449	12/17/2024	12/31/2025
Missouri	Drinking Water (Secondary)	01262	11/14/2024	12/30/2027
New Jersey	NELAP (Secondary)	MI015	07/01/2024	6/30/2025
New York	NELAP (Secondary)	12128	04/01/2025	04/01/2026
North Dakota	State Specific	R-192	11/18/2024	06/30/2025
Ohio	Drinking Water (Secondary)	87783	06/26/2025	6/30/2026
Pennsylvania	NELAP (Secondary)	68-03827	06/14/2024	07/31/2025
Texas	NELAP (Secondary)	T104704494	02/12/2025	01/31/2026
USDA	Domestic CA	Soil-MI-007	02/06/2025	08/07/2026
USDA	Soil Import	525-23-62-77572	03/03/2023	03/03/2026
West Virginia	State Specific	355	06/07/2025	08/31/2026
Wisconsin	State Specific	399084510	08/15/2024	08/31/2025

¹ - Scope available upon request

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID

Work Order: HN2515365
Date Collected: 10/14/25 10:32
Date Received: 10/15/25 08:00

CLIENT ID: 14131 Tacoma SB01,3 TCLP

Lab ID: HN2515365-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
TCLP Metals								
Arsenic	EPA 6020B	<0.00190	U	mg/L	0.0499	1	10/21/25 02:42	10/19/25 13:55
Chromium	EPA 6020B	<0.00610	U	mg/L	0.0499	1	10/21/25 02:42	10/19/25 13:55
TCLP Volatile Organic Compounds by GC-MS								
1,1-Dichloroethylene	EPA 8260D	<8.00	U	µg/L	20.0	1	10/21/25 03:42	10/20/25 13:44
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<8.80	U	µg/L	20.0	1	10/21/25 03:42	10/20/25 13:44
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<48.6	U	µg/L	100	1	10/21/25 03:42	10/20/25 13:44
Benzene	EPA 8260D	<9.20	U	µg/L	20.0	1	10/21/25 03:42	10/20/25 13:44
Carbon tetrachloride	EPA 8260D	<8.00	SU	µg/L	20.0	1	10/21/25 03:42	10/20/25 13:44
Chlorobenzene	EPA 8260D	<8.00	U	µg/L	20.0	1	10/21/25 03:42	10/20/25 13:44
Chloroform	EPA 8260D	<9.20	BSU	µg/L	20.0	1	10/21/25 03:42	10/20/25 13:44
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<7.80	U	µg/L	20.0	1	10/21/25 03:42	10/20/25 13:44
Trichloroethene (Trichloroethylene)	EPA 8260D	<8.60	U	µg/L	20.0	1	10/21/25 03:42	10/20/25 13:44
Vinyl chloride (Chloroethene)	EPA 8260D	<10.6	U	µg/L	20.0	1	10/21/25 03:42	10/20/25 13:44
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	20.27		%REC	80-120	1	10/21/25 03:42	10/20/25 13:44
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	20.07		%REC	80-120	1	10/21/25 03:42	10/20/25 13:44
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	19.29		%REC	80-120	1	10/21/25 03:42	10/20/25 13:44
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	19.86		%REC	80-120	1	10/21/25 03:42	10/20/25 13:44



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2284413

Work Order: HN2515365
Date Collected: NA
Date Received: NA
Run ID: 3605054

TCLP Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2284413-001
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Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 10/21/25 02:31
Prep Date: 10/19/25 13:56

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	<0.00190	mg/L	0.0499							U
Chromium	<0.00610	mg/L	0.0499							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2284413-002
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Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 10/21/25 02:33
Prep Date: 10/19/25 13:56

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	1.02	mg/L	0.0499	1		102	80-120			
Chromium	0.974	mg/L	0.0499	1		97.4	80-120			

The following samples were analyzed in this batch: HN2515365-001



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2286665

Work Order: HN2515365
Date Collected: NA
Date Received: NA
Run ID: 3608015

TCLP Volatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2286665-001
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/20/25 22:33

Prep Date: 10/20/25 13:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1-Dichloroethylene	<8.00	µg/L	20.0							U
1,2-Dichloroethane (Ethylene dichloride)	<8.80	µg/L	20.0							U
2-Butanone (Methyl ethyl ketone, MEK)	<48.6	µg/L	100							U
Benzene	<9.20	µg/L	20.0							U
Carbon tetrachloride	<8.00	µg/L	20.0							U
Chlorobenzene	<8.00	µg/L	20.0							U
Chloroform	229	µg/L	20.0							B
Tetrachloroethylene (Perchloroethylene)	<7.80	µg/L	20.0							U
Trichloroethene (Trichloroethylene)	<8.60	µg/L	20.0							U
Vinyl chloride (Chloroethene)	<10.6	µg/L	20.0							U
Surr: 1,2-Dichloroethane-d4	19.86	µg/L		400		19.86	80-120			
Surr: 4-Bromofluorobenzene	19.58	µg/L		400		19.58	80-120			
Surr: Dibromofluoromethane	20.05	µg/L		400		20.05	80-120			
Surr: Toluene-d8	19.8	µg/L		400		19.8	80-120			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2286665-002
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/20/25 21:44

Prep Date: 10/20/25 13:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1-Dichloroethylene	466	µg/L	20.0	400		117	66-131			
1,2-Dichloroethane (Ethylene dichloride)	403	µg/L	20.0	400		101	78-121			
2-Butanone (Methyl ethyl ketone, MEK)	454	µg/L	100	400		114	69-147			
Benzene	429	µg/L	20.0	400		107	78-120			
Carbon tetrachloride	562	µg/L	20.0	400		140	69-124			S
Chlorobenzene	413	µg/L	20.0	400		103	80-118			
Chloroform	691	µg/L	20.0	400		173	75-119			S
Tetrachloroethylene (Perchloroethylene)	439	µg/L	20.0	400		110	80-124			
Trichloroethene (Trichloroethylene)	432	µg/L	20.0	400		108	75-122			
Vinyl chloride (Chloroethene)	434	µg/L	20.0	400		109	49-122			
Surr: 1,2-Dichloroethane-d4	20.03	µg/L		400		20.03	80-120			
Surr: 4-Bromofluorobenzene	20.32	µg/L		400		20.32	80-120			
Surr: Dibromofluoromethane	21.79	µg/L		400		21.79	80-120			
Surr: Toluene-d8	19.77	µg/L		400		19.77	80-120			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2286665

Work Order: HN2515365
Date Collected: NA
Date Received: NA
Run ID: 3608015

MS	CLIENT ID: 14131 Tacoma SB01,3 TCLP	Lab ID: QC-2286665-005
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Method: EPA 8260D**Dilution:** 1**Analysis Date:** 10/21/25 04:46**Prep Date:** 10/20/25 13:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1-Dichloroethylene	411	µg/L	20.0	400	<8.00	103	66-131			
1,2-Dichloroethane (Ethylene dichloride)	393	µg/L	20.0	400	<8.80	98.2	78-121			
2-Butanone (Methyl ethyl ketone, MEK)	409	µg/L	100	400	<48.6	102	69-147			
Benzene	410	µg/L	20.0	400	<9.20	103	78-120			
Carbon tetrachloride	540	µg/L	20.0	400	<8.00	135	69-124			S
Chlorobenzene	391	µg/L	20.0	400	<8.00	97.6	80-118			
Chloroform	402	µg/L	20.0	400	<9.20	100	75-119			
Tetrachloroethylene (Perchloroethylene)	437	µg/L	20.0	400	<7.80	109	80-124			
Trichloroethene (Trichloroethylene)	409	µg/L	20.0	400	<8.60	102	75-122			
Vinyl chloride (Chloroethene)	394	µg/L	20.0	400	<10.6	98.4	49-122			

MSD	CLIENT ID: 14131 Tacoma SB01,3 TCLP	Lab ID: QC-2286665-006
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Method: EPA 8260D**Dilution:** 1**Analysis Date:** 10/21/25 05:03**Prep Date:** 10/20/25 13:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1-Dichloroethylene	446	µg/L	20.0	400	<8.00	112	66-131	8.12	30	
1,2-Dichloroethane (Ethylene dichloride)	421	µg/L	20.0	400	<8.80	105	78-121	6.89	30	
2-Butanone (Methyl ethyl ketone, MEK)	412	µg/L	100	400	<48.6	103	69-147	0.682	30	
Benzene	429	µg/L	20.0	400	<9.20	107	78-120	4.43	30	
Carbon tetrachloride	567	µg/L	20.0	400	<8.00	142	69-124	4.88	30	S
Chlorobenzene	404	µg/L	20.0	400	<8.00	101	80-118	3.32	30	
Chloroform	411	µg/L	20.0	400	<9.20	103	75-119	2.17	30	
Tetrachloroethylene (Perchloroethylene)	455	µg/L	20.0	400	<7.80	114	80-124	3.90	30	
Trichloroethene (Trichloroethylene)	410	µg/L	20.0	400	<8.60	102	75-122	0.0977	30	
Vinyl chloride (Chloroethene)	420	µg/L	20.0	400	<10.6	105	49-122	6.34	30	

The following samples were analyzed in this batch: HN2515365-001

ANALYST SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: DETR0060

Work Order: HN2515365

Sample Name: 14131 Tacoma SB01,3 TCLP
Laboratory Code: HN2515365-001
Sample Matrix: SOIL/SOLID

Date Collected: 10/14/25
Date Received: 10/15/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 6020B	EPA 3015A	001-AD	2284413	Nicolee Allen	3605054	Stephanie Pierson
EPA 8260D	EPA 5030B	001-AF	2286665	Caroline Cox	3608015	Nathan Jenkins



ALS Environmental

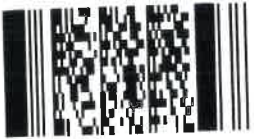
Laboratory location:

Chain of Custody Form

Page 1 of 1

Customer Information				Project Information				Parameter/Method Request for Analysis			
Purchase Order		Project Name	14131 Tacoma	A	TCLP Arsenic						
Work Order	Quote ID - 11631	Project Number	DETRO060	B	TCLP Chromium						
Company Name	The Mannik and Smith Group	Bill To Company	The Mannik and Smith Group	C	TCLP VOCs						
Send Report To	Ryan Montri	Invoice Attn.		D							
Address	2365 Haggerty Rd South Suite 100	Address	2365 Haggerty Rd South Suite 100	E							
City/State/Zip	Canton, MI 48188	City/State/Zip	Canton, MI 48188	F							
Phone	734-397-3100	Phone	734-397-3100	G							
Fax		Fax		H							
e-Mail Address	RMontri@manksmithgroup.com	e-Mail Address		I							
				J							
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	Hold
1	14131 Tacoma SB01,3 TCLP	10/14/25	1032	Soil		2	X	X	X		
2				Soil							
3				Soil							
4											
5											
6											
7											
8											
9											
10											

Environmental Division
Holland
Work Order Reference
HN2515365



Telephone : +1 616 399 6070

Sampler(s): Please Print & Sign <i>Shannon Kaczmarek</i>		Shipment Method:		Required Turnaround Time: ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour		Results Due Date:	
Relinquished by: <i>Shannon Kaczmarek</i>		Date: 10/14/25	Time: 15:40	Received by: <i>[Signature]</i>		Notes: Quote# HN-061825-M&S-MA	
Relinquished by: <i>[Signature]</i>		Date: 10/14/25	Time: 1700	Received by (Laboratory): <i>[Signature]</i>		Cooler Temp. 2.4C 1K6	
Logged by (Laboratory): <i>AB</i>		Date: 10/15/25	Time: 1445	Checked by (Laboratory):		QC Package: (Check Box Below)	
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035						☐ Level II: Standard QC ☐ TRRP-Checklist	
						☐ Level III: Std QC + Raw Data ☐ TRRP Level IV	
						☐ Level IV: SW846 CLP-Like	
						Other:	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

Signature denotes acceptance of ALS Group USA, Corp. Terms and Conditions - Please click the link below for detailed Terms & Conditions:

<https://www.alsglobal.com/ALSGroupUSACorpTC>

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ALS Holland Sample Receiving Checklist

Received by:

Clayson B

Date/Time:

10/15/25 0800

Carrier Name:

QS

Shipping container/cooler in good condition?

Yes / No / Not Present

Custody seals intact on shipping container/cooler?

Yes / No / Not Present

Custody seals intact on sample bottles?

Yes / No / Not Present

Chain of Custody present?

Yes / No

COC signed when relinquished and received?

Yes / No

COC agrees with sample labels?

Yes / No

Samples in proper container/bottle?

Yes / No

Sample containers intact?

Yes / No

Sufficient sample volume for indicated test?

Yes / No

All samples received within holding time?

Yes / No

Container/Temp Blank temperature in compliance?

Yes / No

Temperature(s) (°C):

2.4c / 2.4c

Thermometer(s):

1126

Sample(s) received on ice?

Yes / No

Matrix/Matrices:

Soil

Cooler(s)/Kit(s):

—

Date/Time sample(s) sent to storage:

10/15/25 1445

Water – VOA vials have zero headspace?

Yes / No / No Vials

Water – pH acceptable upon receipt?

Yes / No / N/ApH strip lot #: —< 2 —> 12 —Other —

pH adjusted (note adjustments below)?

Yes / No / N/A

pH adjusted by:

—

Login Notes: