

DRAFT

FILL MATERIAL SAMPLING REPORT

**10034 PETOSKEY AVENUE
DETROIT, WAYNE COUNTY, MICHIGAN 48204**



**OCTOBER 30, 2025
REVISED DECEMBER 12, 2025**

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



FILL MATERIAL SAMPLING REPORT

**10034 PETOSKEY AVENUE
DETROIT, WAYNE COUNTY, MICHIGAN 48204**

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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 10034 Petoskey Avenue, 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); semi-volatile 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 10034 Petoskey SB-1, 10034 Petoskey SB-2, and 10034 Petoskey SB-3 generally consisted of one foot of brown gravelly sand underlain by brown gravelly clay 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 2.9 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, miscellaneous building debris was observed in each soil boring.
- Concentrations of 3&4-methylphenol were detected in soil sample 10034 Petoskey SB-1 (3'-4') in excess of its respective Part 201 groundwater surface water interface protection criteria (GSIPC).
- Concentrations of 1,2,4-trimethylbenzene, 2-butanone (MEK), 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, acenaphthene, acetone, anthracene, arsenic, barium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, bis(2-ethylhexyl) phthalate, chloride, chromium (Total), chrysene, copper, fluoranthene, fluorene, indeno(1,2,3-cd) pyrene, lead, mercury, methylcyclohexane, phenanthrene, pyrene, silver, zinc were detected in the soil samples 10034 Petoskey SB-1 (3'-4'), 10034 Petoskey SB-2 (1'-2'), and/or 10034 Petoskey SB-3 (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.
- 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 groundwater surface water exposure pathway can be considered not applicable.

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 10034 Petoskey Avenue, 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 7, 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 hand auger 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); semi-volatile 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 October 15, 2025. A daily field activity report prepared by MSG is presented in *Appendix B, Daily Field Report*.

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 10034 Petoskey SB-1, 10034 Petoskey SB-2, and 10034 Petoskey SB-3, 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 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.

3.4 Analytical Methods

A total of three (3) soil samples designated 10034 Petoskey SB-1 (3'-4'), 10034 Petoskey SB-2 (1'-2'), and 10034 Petoskey SB-3 (5'-6'), 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:

- 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.

3.5 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 October 15, 2025.

4.1 Site Geology and Hydrogeology

The stratigraphy encountered during soil boring advancement of 10034 Petoskey SB-1, 10034 Petoskey SB-2, and 10034 generally consisted of one foot of brown gravelly sand underlain by brown gravelly clay to six feet bgs, the maximum depth explored for this investigation. Field PID readings of the recovered soil cores ranged from 0.0 to 2.9 ppm. There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities.

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 10034 Petoskey SB-1 (3'-4'), 10034 Petoskey SB-2 (1'-2'), and 10034 Petoskey SB-3 (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)
3&4-Methylphenol	1319-77-3	10034 Petoskey SB-1 (3-4)	GSIPC ² / 1,000 (M); 600	1,400

¹µg/kg – micrograms per kilogram;

²GSIPC – Groundwater Surface Water Interface Protection Criteria

4.3 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 groundwater surface water exposure pathway can be considered not applicable.

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 10034 Petoskey SB-1, 10034 Petoskey SB-2, and 10034 Petoskey SB-3 generally consisted of one foot of brown gravelly sand underlain by brown gravelly clay to six feet bgs, the maximum depth explored for this investigation. Field PID readings of the recovered soil cores ranged from 0.0 to 2.9 ppm. There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities; however, miscellaneous building debris was observed in each soil boring.
- Concentrations of 3&4-methylphenol were detected in soil sample 10034 Petoskey SB-1 (3'-4') in excess of its respective Part 201 GSIPC.
- Concentrations of 1,2,4-trimethylbenzene, 2-butanone (MEK), 4,4'-DDD, 4,4'-DDE, 4,4-DDT, acenaphthene, acetone, anthracene, arsenic, barium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, bis(2-ethylhexyl) phthalate, chloride, chromium (Total), chrysene, copper, fluoranthene, fluorene, indeno(1,2,3-cd) pyrene, lead, mercury, methylcyclohexane, phenanthrene, pyrene, silver, zinc were detected in the soil samples 10034 Petoskey SB-1 (3'-4'), 10034 Petoskey SB-2 (1'-2'), and/or 10034 Petoskey SB-3 (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.
- PCBs were not detected above laboratory method detection reporting limits.
- Groundwater was not encountered during soil boring activities completed as part of this investigation.

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





Date Saved: 9/22/2025 8:38 PM Coordinate System: GCS WGS 1984
Path: W:\Projects\Projects A-E\DET0060\ENG\APPS\GIS\21_QQ 6.17.2025 Backfill Sampling\21_QQ 6.17.2025 Backfill Sampling.aprx

Basemap Source: ESRI USA_Topo_Maps Web Service



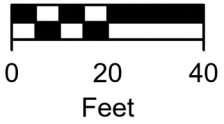
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FIGURE 1
SITE LOCATION

10034 Petoskey, Detroit, MI

DATE 9/23/2025	DRAWN BY JWW	DESIGNED BY JWW	PROJECT NO. DET0060
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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

10034 Petoskey, Detroit, MI

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



Table 1
Soil Sample Analytical Detection Summary
10034 Petoskey
Detroit, Michigan

SOIL: Part 201/213 Generic Residential Cleanup Criteria Revised October 12, 2023 and Volatilization to Indoor Air Pathway Screening Levels Revised February 26, 2024 Units: µg/kg			Inorganic Anions/Ions	Metals							Pesticides/Herbicides													
			Chloride	Arsenic (B)	Barium (B)	Chromium, Total (B)	Copper (B)	Lead (B)	Mercury (B)	Silver (B)	Zinc (B)	4,4-DDT	4,4'-DDD	4,4'-DDE	Acenaphthene	Anthracene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Bis(2-ethylhexyl) phthalate	Chrysene	
CAS Number			16887-00-6	7440-38-2	7440-39-3	7440-47-3	7440-50-8	7439-92-1	7439-97-6	7440-22-4	7440-66-6	50-29-3	72-54-8	72-55-9	83-32-9	120-12-7	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	117-81-7	218-01-9	
Statewide Default Background Levels			NC	5,800	75,000	18,000	32,000	21,000	130	1,000	47,000	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
Drinking Water Protection Criteria (DWPC)			5.00E+06	4,600	1.30E+06	30,000	5.80E+06	7.00E+05	1,700	4,500	2.40E+06	NLL	NLL	NLL	3.00E+05	41,000	NLL	NLL	NLL	NLL	NLL	NLL	NLL	
Groundwater Surface Water Interface Protection Criteria (GSIPC)			NC	4,600	4.40E+05 ^(G)	3,300	75,000 ^(G)	6.00E+06 ^(G)	50 ^(M,1,2)	100 ^(M,27)	1.60E+05	NLL	NLL	NLL	8,700	ID	NLL	NLL	NLL	NLL	NLL	NLL	NLL	
Soil Volatilization to Indoor Air Inhalation (SVIIC)			NC	NLV	NLV	NLV	NLV	NLV	48,000	NLV	NC	NLV	NLV	NLV	1.90E+08	1.00E+09	NLV	NLV	ID	NLV	NLV	NLV	ID	
Soil Volatilization to Indoor Air Pathway (SVIAP)			NC	NC	NC	NC	NC	NC	22 ^(M)	NC	NC	NC	NC	39,000	2.00E+05	1.30E+07	1.60E+05 ^(M)	NC	NC	NC	NC	NC	NC	
Infinite Source Volatile Soil Inhalation Criteria (VSIC)			NC	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NC	NLV	NLV	NLV	8.10E+07	1.40E+09	NLV	NLV	ID	NLV	NLV	NLV	ID	
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)			NC	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NC	NLV	NLV	NLV	8.10E+07	1.40E+09	NLV	NLV	ID	NLV	NLV	NLV	ID	
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)			NC	NLV	NLV	NC	NLV	NLV	52,000	NLV	NC	NLV	NLV	NLV	8.10E+07	1.40E+09	NLV	NLV	ID	NLV	NLV	NLV	ID	
Particulate Soil Inhalation Criteria (PSIC)			NC	7.20E+05	3.30E+08	2.60E+05	1.30E+08	1.00E+08	2.00E+07	6.70E+06	NC	3.20E+07	4.40E+07	3.20E+07	1.40E+10	6.70E+10	ID	1.50E+06	ID	8.00E+08	ID	7.00E+08	ID	
Direct Contact Criteria (DCC)			5.00E+05	7,600	3.70E+07	2.50E+06	2.00E+07	4.00E+05	1.60E+05	2.50E+06	1.70E+08	57,000	95,000	45,000	4.10E+07	2.30E+08	20,000	2,000	20,000	2.50E+06	2.00E+05	2.80E+06	2.00E+06	
Soil Saturation Concentration Screening Levels (Csat)			NC	NA	NA	NA	NA	NA	NA	NA	NC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.00E+07	NA	
Sample ID		Sample Depth (ft)	Sample Date																					
10034 Petoskey SB-1		3-4	10/15/2025	78,600	5,160	40,400	12,900	18,800	22,500	35.3	< 136	49,500	< 7.36	15.3	< 73	< 105	218	349	393	510	335	175	< 602	247
10034 Petoskey SB-2		1-2	10/15/2025	73,800	5,390	60,700	13,500	57,200	46,800	40	400	113,000	< 7.03	< 6.75	17.2	38	214	442	449	652	425	207	< 143	438
10034 Petoskey SB-3		5-6	10/15/2025	19,100	5,780	46,700	17,000	53,200	30,600	< 13.6	< 153	84,500	47.2	< 17.9	64	< 13.9	55.9	129	141	191	125	73.3	135	118

Notes
Only parameters with one or more detections are shown.
µg/kg = Micrograms per Kilogram.
Exceeds Generic Drinking Water Protection Criteria.
Exceeds Groundwater Surface Water Interface Protection Criteria.
Exceeds Applicable Soil Vapor Inhalation Criteria/Screening Levels.
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation Criteria/Screening Levels.
Exceeds PSIC, DCC, and/or Csat, likely exceeds others.
Bold indicates concentration above laboratory reporting limits.
ND= Not Detected above laboratory reporting limits
NC = No Criteria; NLV = Not Likely to Volatize; NLL = Not Likely to Leach.
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
10034 Petoskey
Detroit, Michigan

SOIL: Part 201/213 Generic Residential Cleanup Criteria Revised October 12, 2023 and Volatilization to Indoor Air Pathway Screening Levels Revised February 26, 2024 Units: µg/kg									Volatile Organic Compounds (VOCs)				Polychlorinated Biphenyls (PCBs)		
			3&4-Methylphenol	Fluoranthene	Fluorene	Indeno(1,2,3-cd) Pyrene	Phenanthrene	Pyrene	1,2,4-Trimethylbenzene	2-Butanone (MEK)	Acetone	Methylcyclohexane			
CAS Number			1319-77-3	206-44-0	86-73-7	193-39-5	85-01-8	129-00-0	95-63-6	78-93-3	67-64-1	108-87-2			
Statewide Default Background Levels			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC			
Drinking Water Protection Criteria (DWPC)			7,400	7.30E+05	3.90E+05	NLL	56,000	4.80E+05	2,100	2.60E+05	15,000	NC			
Groundwater Surface Water Interface Protection Criteria (GSIPC)			1,000 ^(M,600)	5,500	5,300	NLL	2,100	ID	570	44,000	34,000	NC			
Soil Volatilization to Indoor Air Inhalation (SVIIC)			NLV	1.00E+09	5.80E+08	NLV	2.80E+06	1.00E+09	4.30E+06	5.40E+07	2.90E+08	NC			
Soil Volatilization to Indoor Air Pathway (SVIAP)			NC	NC	4.70E+05	NC	1,700	2.50E+07	150	31,000	2.60E+05	NC			
Infinite Source Volatile Soil Inhalation Criteria (VSIC)			NLV	7.40E+08	1.30E+08	NLV	1.60E+05	6.50E+08	2.10E+07	2.90E+07	1.30E+08	NC			
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)			NLV	7.40E+08	1.30E+08	NLV	1.60E+05	6.50E+08	5.00E+08	2.90E+07	1.30E+08	NC			
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)			NLV	7.40E+08	1.30E+08	NLV	1.60E+05	6.50E+08	5.00E+08	3.50E+07	1.90E+08	NC			
Particulate Soil Inhalation Criteria (PSIC)			6.70E+09	9.30E+09	9.30E+09	ID	6.70E+06	6.70E+09	8.20E+10	6.70E+10	3.90E+11	NC			
Direct Contact Criteria (DCC)			1.10E+07	4.60E+07	2.70E+07	20,000	1.60E+06	2.90E+07	3.20E+07	1.20E+08	2.30E+07	NC			
Soil Saturation Concentration Screening Levels (Csat)			NA	NA	NA	NA	NA	NA	1.10E+05	2.70E+07	1.10E+08	NC			
Sample ID		Sample Depth (ft)	Sample Date												
10034 Petoskey SB-1		3-4	10/15/2025		1,400	713	< 106	393	451	641	35.7	727	2,510	36.8	ND
10034 Petoskey SB-2		1-2	10/15/2025		< 46.7	1,220	51.8	404	756	1,040	< 26.1	< 84.8	< 106	< 13.6	ND
10034 Petoskey SB-3		5-6	10/15/2025		314	262	< 14	133	139	235	< 28.4	< 92.1	< 115	< 14.8	ND

Notes
Only parameters with one or more detections are shown.
µg/kg = Micrograms per Kilogram.
Exceeds Generic Drinking Water Protection Criteria.
Exceeds Groundwater Surface Water Interface Protection Criteria.
Exceeds Applicable Soil Vapor Inhalation Criteria/Screening Levels.
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation Criteria/Screening Levels.
Exceeds PSIC, DCC, and/or Csat, likely exceeds others.
Bold indicates concentration above laboratory reporting limits.
ND= Not Detected above laboratory reporting limits
NC = No Criteria; NLV = Not Likely to Volatize; NLL = Not Likely to Leach.
Notes in parentheses and standard abbreviations from Part 201 Rules 299.1 through 299.50, updated October 12, 2023.

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 REPORT



**DAILY FIELD REPORT**

Client: City of Detroit Demolition Department
Project: Sampling and Analysis of Fill Material – 10034 Petoskey

Report No.: 1
Job No.: DETR0060

Date: 10/15/2025	Day: Wednesday	Temp: 53° F (AM) ° F (PM)
MSG Personnel: EMB, BSM	Cloud Cover: 100% (AM) -% (PM)	Precip.: None (AM) - (PM)
Personnel: MSG	Wind: 7 mph NNW (AM) - (PM)	
MSG Hours On-Site: ~2.75 hours		

Contractors Information		
Contractor: MSG	No. Men and Type: 2; Helper/Geologist/Driller	Equipment Type: Geoprobe 7822DT
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 borings (from the interval with the greatest potential to be impacted based on field indicators) and a composite of all three (3) borings.		
Field Notes:		
0810 – MSG onsite (10034 Petoskey). 0905 – Collected 10034 Petoskey SB-1 (3'-4'). 0910 - Collected 10034 Petoskey SB-2 (1'-2'). 0915 - Collected 10034 Petoskey SB-3 (5'-6'). 0920 - Collected 10034 Petoskey (0'-6') Comp. - MSG GPS'd each SB location. 0950 – MSG off site.		

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

APPENDIX C

INVESTIGATION PHOTOGRAPHS





Photo 1: View of the Site



Photo 2: Viewing advancement of 10034 Petoskey SB-1



Photo 3: Viewing advancement of 10034 Petoskey SB-2



Photo 4: Viewing advancement of 10034 Petoskey SB-3



Photo 5: Viewing soil recovery from 10034 Petoskey SB-1, SB-2, and SB-3

APPENDIX D

SOIL BORING LOGS



ENV BORING LOG (PID) - GINT STD US LAB.GDT - 11/3/25 16:29 - W:\PROJECTS\PROJECTS A-E\DETR0060\ADMIN\22_QQ 7.25.2025 BACKFILL SAMPLING (72 SITES)\04_QQ 7.25.2025 BACKFILL SAMPLING (11 SITES)\10034 PETOSKEY\BORING LOGS\DETR0060



The Mannik & Smith Group, Inc.
2365 Haggerty Rd South Canton, MI 48188
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www.manniksmithgroup.com

BORING ID: SB-1

PAGE 1 OF 1

CLIENT <u>City of Detroit</u>	PROJECT NAME <u>10034 Petoskey</u>
PROJECT NUMBER <u>DETR0060</u>	PROJECT LOCATION <u>10034 Petoskey Ave, Detroit, Michigan</u>
DATE STARTED <u>10/15/25</u> COMPLETED <u>10/15/25</u>	BORING DIAMETER: <u>3.25 inches</u>
DRILLING CONTRACTOR <u>MSG</u>	SURVEY COORDINATES: <u>N/A</u>
DRILLING METHOD <u>Direct Push</u>	GROUND SURFACE ELEV.: <u>N/A</u>
LOGGED BY <u>EMB</u> CHECKED BY <u>PDH</u>	GROUND WATER ENCOUNTERED DURING DRILLING: <u>Not Encountered</u>
NOTES	WATER LEVEL AFTER DRILLING: <u>N/A</u>

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
				1.0	Brown Gravelly SAND, trace clay, debris (concrete, organics, plastic), dry	0.0		
					Brown Gravelly CLAY, trace sand, debris (concrete, organics, plastic), moist	0.0		
	MC 1	3.5				0.9		Entire core has an animal manure-like odor
						0.8		Collected soil sample 10034 Petoskey SB-1 (3-4') at 9:05
5				6.0		1.1		
					Bottom of borehole at 6.0 feet.	0.0		

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 11/3/25 16:26 - W:\PROJECTS\PROJECTS A-E\DETR0060\ADMIN\22_QQ 7.25.2025 BACKFILL SAMPLING (72 SITES)\04_QQ 7.25.2025 BACKFILL SAMPLING (11 SITES)\10034 PETOSKEY\BORING LOGS\DETR0060



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BORING ID: SB-2

PAGE 1 OF 1

CLIENT <u>City of Detroit</u>	PROJECT NAME <u>10034 Petoskey</u>
PROJECT NUMBER <u>DETR0060</u>	PROJECT LOCATION <u>10034 Petoskey Ave, Detroit, Michigan</u>
DATE STARTED <u>10/15/25</u> COMPLETED <u>10/15/25</u>	BORING DIAMETER: <u>3.25 inches</u>
DRILLING CONTRACTOR <u>MSG</u>	SURVEY COORDINATES: <u>N/A</u>
DRILLING METHOD <u>Direct Push</u>	GROUND SURFACE ELEV.: <u>N/A</u>
LOGGED BY <u>EMB</u> CHECKED BY <u>PDH</u>	GROUND WATER ENCOUNTERED DURING DRILLING: <u>Not Encountered</u>
NOTES	WATER LEVEL AFTER DRILLING: <u>N/A</u>

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
				1.0	Brown Gravelly SAND, trace clay, debris (concrete, asphalt), dry	0.0		Collected soil sample 10034 Petoskey SB-2 (1-2') at 9:10
					Brown Gravelly CLAY, trace sand, debris (concrete, asphalt), moist	0.0		
		3.5				0.5		Entire core has an animal manure-like odor
						0.9		
5	MC 1			6.0		0.9		
					Bottom of borehole at 6.0 feet.	0.0		

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 11/3/25 16:26 - W:\PROJECTS\PROJECTS A-E\DETR0060\ADMIN\22_QQ 7.25.2025 BACKFILL SAMPLING (72 SITES)\04_QQ 7.25.2025 BACKFILL SAMPLING (11 SITES)\10034 PETOSKEY\BORING LOGS\DETR0060



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BORING ID: SB-3

PAGE 1 OF 1

CLIENT <u>City of Detroit</u>	PROJECT NAME <u>10034 Petoskey</u>
PROJECT NUMBER <u>DETR0060</u>	PROJECT LOCATION <u>10034 Petoskey Ave, Detroit, Michigan</u>
DATE STARTED <u>10/15/25</u> COMPLETED <u>10/15/25</u>	BORING DIAMETER: <u>3.25 inches</u>
DRILLING CONTRACTOR <u>MSG</u>	SURVEY COORDINATES: <u>N/A</u>
DRILLING METHOD <u>Direct Push</u>	GROUND SURFACE ELEV.: <u>N/A</u>
LOGGED BY <u>EMB</u> CHECKED BY <u>PDH</u>	GROUND WATER ENCOUNTERED DURING DRILLING: <u>Not Encountered</u>
NOTES	WATER LEVEL AFTER DRILLING: <u>N/A</u>

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
					Brown Gravelly CLAY, trace sand, debris (brick, concrete, aphalt, organics), moist	0.0		
						0.0		
						0.0		Entire core has an animal manure-like odor
						0.0		
5						2.8		
						2.9		
					Bottom of borehole at 6.0 feet.			

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 11/3/25 16:28 - W:\PROJECTS\PROJECTS A-E\DETR0060\ADMIN\22_QQ 7.25.2025 BACKFILL SAMPLING (72 SITES)\04_QQ 7.25.2025 BACKFILL SAMPLING (11 SITES)\10034 PETOSKEY\BORING LOGS\DETR0060



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BORING ID: SB-1

PAGE 1 OF 1

CLIENT <u>City of Detroit</u>	PROJECT NAME <u>10034 Petoskey</u>
PROJECT NUMBER <u>DETR0060</u>	PROJECT LOCATION <u>10034 Petoskey Ave, Detroit, Michigan</u>
DATE STARTED <u>10/15/25</u> COMPLETED <u>10/15/25</u>	BORING DIAMETER: <u>3.25 inches</u>
DRILLING CONTRACTOR <u>MSG</u>	SURVEY COORDINATES: <u>N/A</u>
DRILLING METHOD <u>Direct Push</u>	GROUND SURFACE ELEV.: <u>N/A</u>
LOGGED BY <u>EMB</u> CHECKED BY <u>PDH</u>	GROUND WATER ENCOUNTERED DURING DRILLING: <u>Not Encountered</u>
NOTES	WATER LEVEL AFTER DRILLING: <u>N/A</u>

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
				1.0	Brown Gravelly SAND, trace clay, debris (concrete, organics, plastic), dry	0.0		
					Brown Gravelly CLAY, trace sand, debris (concrete, organics, plastic), moist	0.0		
	MC 1	3.5				0.9		Entire core has an animal manure-like odor
						0.8		Collected soil sample 10034 Petoskey SB-1 (3-4') at 9:05
5				6.0		1.1		
					Bottom of borehole at 6.0 feet.	0.0		

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 11/3/25 16:28 - W:\PROJECTS\PROJECTS A-E\DETR0060\ADMIN\22_QQ 7.25.2025 BACKFILL SAMPLING (72 SITES)\04_QQ 7.25.2025 BACKFILL SAMPLING (11 SITES)\10034 PETOSKEY\BORING LOGS\DETR0060



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BORING ID: SB-2

PAGE 1 OF 1

CLIENT <u>City of Detroit</u>	PROJECT NAME <u>10034 Petoskey</u>
PROJECT NUMBER <u>DETR0060</u>	PROJECT LOCATION <u>10034 Petoskey Ave, Detroit, Michigan</u>
DATE STARTED <u>10/15/25</u> COMPLETED <u>10/15/25</u>	BORING DIAMETER: <u>3.25 inches</u>
DRILLING CONTRACTOR <u>MSG</u>	SURVEY COORDINATES: <u>N/A</u>
DRILLING METHOD <u>Direct Push</u>	GROUND SURFACE ELEV.: <u>N/A</u>
LOGGED BY <u>EMB</u> CHECKED BY <u>PDH</u>	GROUND WATER ENCOUNTERED DURING DRILLING: <u>Not Encountered</u>
NOTES	WATER LEVEL AFTER DRILLING: <u>N/A</u>

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
				1.0	Brown Gravelly SAND, trace clay, debris (concrete, asphalt), dry	0.0		Collected soil sample 10034 Petoskey SB-2 (1-2') at 9:10
					Brown Gravelly CLAY, trace sand, debris (concrete, asphalt), moist	0.0		
		3.5				0.5		
	MC 1					0.9		
5						0.9		
				6.0	Bottom of borehole at 6.0 feet.	0.0		Entire core has an animal manure-like odor

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 11/3/25 16:28 - W:\PROJECTS\PROJECTS A-E\DETR0060\ADMIN\22_QQ 7.25.2025 BACKFILL SAMPLING (72 SITES)\04_QQ 7.25.2025 BACKFILL SAMPLING (11 SITES)\10034 PETOSKEY\BORING LOGS\DETR0060



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BORING ID: SB-3

PAGE 1 OF 1

CLIENT <u>City of Detroit</u>	PROJECT NAME <u>10034 Petoskey</u>
PROJECT NUMBER <u>DETR0060</u>	PROJECT LOCATION <u>10034 Petoskey Ave, Detroit, Michigan</u>
DATE STARTED <u>10/15/25</u> COMPLETED <u>10/15/25</u>	BORING DIAMETER: <u>3.25 inches</u>
DRILLING CONTRACTOR <u>MSG</u>	SURVEY COORDINATES: <u>N/A</u>
DRILLING METHOD <u>Direct Push</u>	GROUND SURFACE ELEV.: <u>N/A</u>
LOGGED BY <u>EMB</u> CHECKED BY <u>PDH</u>	GROUND WATER ENCOUNTERED DURING DRILLING: <u>Not Encountered</u>
NOTES	WATER LEVEL AFTER DRILLING: <u>N/A</u>

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
					Brown Gravelly CLAY, trace sand, debris (brick, concrete, aphalt, organics), moist	0.0		
						0.0		
						0.0		Entire core has an animal manure-like odor
						0.0		
5						2.8		
						2.9		
					Bottom of borehole at 6.0 feet.			

APPENDIX E
LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY FORMS





right solutions.
right partner.

October 29, 2025

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

Re: **DETR0060**

Date Received: **10/16/2025**

Work Order: **HN2515421**

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/ JODI BLOUW on behalf of PM listed above

Project Manager



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

Work Order: HN2515421
Date Received: 16-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

3 soil/solid samples were received for analysis at ALS Environmental on 16-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 8082A-3546-S (High)

Run ID: 3614644

One or more surrogate recoveries in QC-2288188-001 were above the upper control limits. The samples were non-detect, therefore, no qualification is needed.

Run ID: 3605132

HN2515421-002: One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.

EPA 8081B-3546-S (High)

Run ID: 3621549

Matrix spike duplicate value was outside upper limit of calibration. Processed at equivalent dilution level as the parent.
Matrix spike value was outside upper limit of calibration. Processed at equivalent dilution level as the parent.
The MS recovery was above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: trans-Chlordane
The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See QC
The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: See QC
The MSD recovery was above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: trans-Chlordane
The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for the following analyte(s): See QC
HN2515421-001: One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.
HN2515421-002: One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.

EPA 8270E-FULL HN-3546-S

Run ID: 3612730

The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: Atrazine. The recovery of Atrazine in the LCS exceeds the calculable calibration range.
HN2515421-001: The reporting limit is elevated due to dilution needed to eliminate matrix-related interference.

HN2515421-002: The reporting limit is elevated due to dilution needed to eliminate matrix-related interference.

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

Run ID: 3621984

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: dichlorodifluoromethane, chloromethane

Run ID: 3616792

The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: Carbon tetrachloride, Trichlorofluoromethane

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

Run ID: 3593211

HN2515421-003: <sample reduced due to clay>

Run ID: 3608261

HN2515421-003: <sample reduced due to clay>

Run ID: 3593173

HN2515421-003: <sample reduced due to clay>

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: 10034 Petoskey SB-1 (3-4)	Lab ID: HN2515421-001
---	------------------------------

Analyte	Results	Flag	MRL	Units	Method
1,2,4-Trimethylbenzene	35.7	S	35.1	µg/kg	EPA 8260D
2-Butanone (Methyl ethyl ketone, MEK)	727		234	µg/kg	EPA 8260D
3&4-Methylphenol	1400		721	µg/kg	EPA 8270E
4,4'-DDD	15.3		11.1	µg/kg	EPA 8081B
Acetone	2510		117	µg/kg	EPA 8260D
Anthracene	218		146	µg/kg	EPA 8270E
Arsenic	5.16		0.283	mg/kg	EPA 6010D
Barium	40.4		0.567	mg/kg	EPA 6010D
Benzo(a)anthracene	349		146	µg/kg	EPA 8270E
Benzo(a)pyrene	393		146	µg/kg	EPA 8270E
Benzo(b)fluoranthene	510		146	µg/kg	EPA 8270E
Benzo(g,h,i)perylene	335		146	µg/kg	EPA 8270E
Benzo(k)fluoranthene	175		146	µg/kg	EPA 8270E
Chloride	78.6		11.3	mg/kg	EPA 9056A
Chromium	12.9		0.283	mg/kg	EPA 6010D
Chrysene	247		146	µg/kg	EPA 8270E
Copper	18.8		0.567	mg/kg	EPA 6010D
Fluoranthene	713		146	µg/kg	EPA 8270E
Indeno(1,2,3-cd) pyrene	393		146	µg/kg	EPA 8270E
Lead	22.5		0.283	mg/kg	EPA 6010D
Mercury	0.0353		0.0200	mg/kg	EPA 7471B
Methylcyclohexane	36.8		35.1	µg/kg	EPA 8260D
Methylphenol, Total	1400		721	µg/kg	EPA 8270E
Percent Moisture	11.2		0.1	%	EPA 3550C
Phenanthrene	451		146	µg/kg	EPA 8270E
Pyrene	641		146	µg/kg	EPA 8270E
Zinc	49.5		0.567	mg/kg	EPA 6010D

CLIENT ID: 10034 Petoskey SB-2 (1-2)	Lab ID: HN2515421-002
---	------------------------------

Analyte	Results	Flag	MRL	Units	Method
4,4'-DDE	17.2		10.6	µg/kg	EPA 8081B
Acenaphthene	38.0		34.5	µg/kg	EPA 8270E
Anthracene	214		34.5	µg/kg	EPA 8270E
Arsenic	5.39		0.281	mg/kg	EPA 6010D
Barium	60.7		0.562	mg/kg	EPA 6010D
Benzo(a)anthracene	442		34.5	µg/kg	EPA 8270E
Benzo(a)pyrene	449		34.5	µg/kg	EPA 8270E
Benzo(b)fluoranthene	652		34.5	µg/kg	EPA 8270E
Benzo(g,h,i)perylene	425		34.5	µg/kg	EPA 8270E
Benzo(k)fluoranthene	207		34.5	µg/kg	EPA 8270E
Chloride	73.8		10.6	mg/kg	EPA 9056A

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: 10034 Petoskey SB-2 (1-2)	Lab ID: HN2515421-002
---	------------------------------

Analyte	Results	Flag	MRL	Units	Method
Chromium	13.5		0.281	mg/kg	EPA 6010D
Chrysene	438		34.5	µg/kg	EPA 8270E
Copper	57.2		0.562	mg/kg	EPA 6010D
Fluoranthene	1220		34.5	µg/kg	EPA 8270E
Fluorene	51.8		34.5	µg/kg	EPA 8270E
Indeno(1,2,3-cd) pyrene	404		34.5	µg/kg	EPA 8270E
Lead	46.8		0.281	mg/kg	EPA 6010D
Mercury	0.0396		0.0200	mg/kg	EPA 7471B
Percent Moisture	6.0		0.1	%	EPA 3550C
Phenanthrene	756		34.5	µg/kg	EPA 8270E
Pyrene	1040		34.5	µg/kg	EPA 8270E
Silver	0.40		0.281	mg/kg	EPA 6010D
Zinc	113		0.562	mg/kg	EPA 6010D

CLIENT ID: 10034 Petoskey SB-3 (5-6)	Lab ID: HN2515421-003
---	------------------------------

Analyte	Results	Flag	MRL	Units	Method
3&4-Methylphenol	314		95.5	µg/kg	EPA 8270E
4,4'-DDE	64.0		28.0	µg/kg	EPA 8081B
4,4'-DDT	47.2		28.0	µg/kg	EPA 8081B
Anthracene	55.9		19.3	µg/kg	EPA 8270E
Arsenic	5.78		0.319	mg/kg	EPA 6010D
Barium	46.7		0.638	mg/kg	EPA 6010D
Benzo(a)anthracene	129		19.3	µg/kg	EPA 8270E
Benzo(a)pyrene	141		19.3	µg/kg	EPA 8270E
Benzo(b)fluoranthene	191		19.3	µg/kg	EPA 8270E
Benzo(g,h,i)perylene	125		19.3	µg/kg	EPA 8270E
Benzo(k)fluoranthene	73.3		19.3	µg/kg	EPA 8270E
Chloride	19.1		11.7	mg/kg	EPA 9056A
Chromium	17.0		0.319	mg/kg	EPA 6010D
Chrysene	118		19.3	µg/kg	EPA 8270E
Copper	53.2		0.638	mg/kg	EPA 6010D
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	135		95.5	µg/kg	EPA 8270E
Fluoranthene	262		19.3	µg/kg	EPA 8270E
Indeno(1,2,3-cd) pyrene	133		19.3	µg/kg	EPA 8270E
Lead	30.6		0.319	mg/kg	EPA 6010D
Methylphenol, Total	314		95.5	µg/kg	EPA 8270E
Percent Moisture	13.6		0.1	%	EPA 3550C
Phenanthrene	139		19.3	µg/kg	EPA 8270E
Pyrene	235		19.3	µg/kg	EPA 8270E
Zinc	84.5		0.638	mg/kg	EPA 6010D

SAMPLE SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Workorder: HN2515421

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2515421-001	10034 Petoskey SB-1 (3-4)	SOIL/SOLID	10/15/25 09:05	10/16/25 08:00
HN2515421-002	10034 Petoskey SB-2 (1-2)	SOIL/SOLID	10/15/25 09:10	10/16/25 08:00
HN2515421-003	10034 Petoskey SB-3 (5-6)	SOIL/SOLID	10/15/25 09:15	10/16/25 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	10034 Petoskey				A VOCs (U.S. EPA Method 8260C (or Method 8260))												
Work Order	Quote ID - 11631	Project Number	DETR0060				B SVOCs (U.S. EPA Method 8270D (or Method 8270))												
Company Name	The Mannik and Smith Group	Bill 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)												
							F Pesticides (U.S. EPA Method 8081B (or Method 8081))												
City/State/Zip	Canton, MI 48188	City/State/Zip	Canton, MI 48188				G Herbicides (U.S. EPA Method 8151A (or Method 8151))												
Phone	734-397-3100	Phone	734-397-3100				H Place on Hold Pending Data												
Fax		Fax					I												
e-Mail Address	RMontri@manna-smithgroup.com	e-Mail Address					J												
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	10034 Petoskey SB-1 (3'-4')	10-15-25	0905	Soil	7	4	X												
2	10034 Petoskey SB-2 (1'-2')		0910	Soil	7	4	X												
3	10034 Petoskey SB-3 (5'-6')		0915	Soil	7	4	X												
4	10034 Petoskey (0'-6') Comp		0920	Soil	-	2								X			X		
5																			
6																			
7																			
8																			
9																			
10																			
Sampler(s): Please Print & Sign Eddie Bosw / Edmund Bosw			Shipment Method:		Required Turnaround Time:		☐ Other _____ ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour												
Relinquished by: Edmund Bosw		Date: 10-15-25	Time: 1407	Received by: [Signature]		Notes: Quote# HN-061825-M&S-M													
Relinquished by: [Signature]		Date: 10/15	Time: 1700	Received by (Laboratory): QS		Cooler Temp. 5.7C 1126		QC Package: (Check Box Be) ☐ Level II: Standard QC ☐ Level III: Std QC + Raw Data ☐ Level IV: SW846 CLP-Like ☐ Other: _____											
Logged by (Laboratory): [Signature]		Date: 10/15/25	Time: 0942	Checked by (Laboratory):		TRRP Level IV													
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035																			

Environmental Division
Holland
Work Order Reference
HN2515421

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:

Quynh B

Date/Time:

10/16/25 1800

Carrier Name:

OS

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):

5.7c / 5.7c

Thermometer(s):

1KG

Sample(s) received on ice?

☒ Yes / No

Matrix/Matrices:

Soil

Cooler(s)/Kit(s):

—

Date/Time sample(s) sent to storage:

10/16/25 0942

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:

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: DETR0060

Work Order: HN2515421

Sample Name: 10034 Petoskey SB-1 (3-4)
Laboratory Code: HN2515421-001
Sample Matrix: SOIL/SOLID

Date Collected: 10/15/25
Date Received: 10/16/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		001-AB	2280520		3595774	Riley Miller
EPA 6010D	EPA 3050B	001-AA	2293152	Weston Kotecki	3621340	Denise Coffey
EPA 7471B	Method	001-AA	2288570	Maxx Richey	3616433	Maxx Richey
EPA 8081B	EPA 3546	001-AA	2293802	Willow Julien	3621549	Madison VandenBer
EPA 8081B	EPA 3546	001-AA	2293802	Willow Julien	3623055	Madison VandenBer
EPA 8082A	EPA 3546	001-AA	2288188	Rachel Plantinga	3614644	Nathaniel Dietlin
EPA 8151A	Method	001-AA	2290565	Willow Julien	3623700	Kathy Malmyga
EPA 8260D	EPA 5035A	001-AC	2280030	Jonathan Vazquez	3621984	Nathan Jenkins
EPA 8270E	EPA 3546	001-AA	2279011	Rachel Plantinga	3612730	Sam Bruzan
EPA 9056A	EPA 9056A	001-AB	2286473	Quoc Nguyen	3606696	Sage Hansen

Sample Name: 10034 Petoskey SB-2 (1-2)
Laboratory Code: HN2515421-002
Sample Matrix: SOIL/SOLID

Date Collected: 10/15/25
Date Received: 10/16/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		002-AB	2280520		3595774	Riley Miller
EPA 6010D	EPA 3050B	002-AA	2293152	Weston Kotecki	3621340	Denise Coffey
EPA 7471B	Method	002-AA	2288570	Maxx Richey	3616433	Maxx Richey
EPA 8081B	EPA 3546	002-AA	2293802	Willow Julien	3621549	Madison VandenBer
EPA 8082A	EPA 3546	002-AA	2279041	Willow Julien	3605132	Nathaniel Dietlin
EPA 8151A	Method	002-AA	2290565	Willow Julien	3623700	Kathy Malmyga
EPA 8260D	EPA 5035A	002-AC	2280030	Jonathan Vazquez	3616792	Caroline Cox
EPA 8270E	EPA 3546	002-AA	2279011	Rachel Plantinga	3612730	Sam Bruzan
EPA 9056A	EPA 9056A	002-AB	2286473	Quoc Nguyen	3606696	Sage Hansen

ANALYST SUMMARY



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

Work Order: HN2515421

Sample Name: 10034 Petoskey SB-3 (5-6)
Laboratory Code: HN2515421-003
Sample Matrix: SOIL/SOLID

Date Collected: 10/15/25
Date Received: 10/16/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		003-AB	2280520		3595774	Riley Miller
EPA 6010D	EPA 3050B	003-AA	2293152	Weston Kotecki	3621340	Denise Coffey
EPA 7471B	Method	003-AA	2288570	Maxx Richey	3616433	Maxx Richey
EPA 8081B	EPA 3546	003-AA	2288434	Mya Harmer	3614355	Madison VandenBer
EPA 8081B	EPA 3546	003-AA	2288434	Mya Harmer	3621710	Madison VandenBer
EPA 8082A	EPA 3546	003-AA	2279041	Willow Julien	3605132	Nathaniel Dietlin
EPA 8151A	Method	003-AA	2290565	Willow Julien	3623700	Kathy Malmyga
EPA 8260D	EPA 5035A	003-AC	2280030	Jonathan Vazquez	3616792	Caroline Cox
EPA 8270E	EPA 3546	003-AA	2279011	Rachel Plantinga	3612730	Sam Bruzan
EPA 9056A	EPA 9056A	003-AB	2286473	Quoc Nguyen	3606696	Sage Hansen

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:05
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-1 (3-4) **Lab ID: HN2515421-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Chlorinated Herbicides by GC/ECD								
2,4,5-T	EPA 8151A	<2.53	U	µg/kg	13.8	1	10/24/25 21:35	10/22/25 09:07
2,4,5-TP (Silvex)	EPA 8151A	<4.52	U	µg/kg	13.8	1	10/24/25 21:35	10/22/25 09:07
2,4-D	EPA 8151A	<7.35	U	µg/kg	27.5	1	10/24/25 21:35	10/22/25 09:07
Surr: DCAA	EPA 8151A	44.0		%REC	10-116	1	10/24/25 21:35	10/22/25 09:07
General Chemistry Parameters								
Percent Moisture	EPA 3550C	11.2		%	0.1	1	10/16/25 20:46	NA
Chloride	EPA 9056A	78.6		mg/kg	11.3	1	10/21/25 00:32	10/20/25 15:35
Metals								
Arsenic	EPA 6010D	5.16		mg/kg	0.283	1	10/24/25 13:12	10/23/25 10:32
Barium	EPA 6010D	40.4		mg/kg	0.567	1	10/24/25 13:12	10/23/25 10:32
Cadmium	EPA 6010D	<0.0465	U	mg/kg	0.567	1	10/24/25 13:12	10/23/25 10:32
Chromium	EPA 6010D	12.9		mg/kg	0.283	1	10/24/25 13:12	10/23/25 10:32
Copper	EPA 6010D	18.8		mg/kg	0.567	1	10/24/25 13:12	10/23/25 10:32
Lead	EPA 6010D	22.5		mg/kg	0.283	1	10/24/25 13:12	10/23/25 10:32
Selenium	EPA 6010D	<0.159	U	mg/kg	0.567	1	10/24/25 13:12	10/23/25 10:32
Silver	EPA 6010D	<0.136	U	mg/kg	0.283	1	10/24/25 13:12	10/23/25 10:32
Zinc	EPA 6010D	49.5		mg/kg	0.567	1	10/24/25 13:12	10/23/25 10:32
Mercury	EPA 7471B	0.0353		mg/kg	0.0200	1	10/23/25 11:48	10/23/25 09:31
Organochlorine Pesticides by GC/ECD								
4,4'-DDD	EPA 8081B	15.3	S	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
4,4'-DDE	EPA 8081B	<73.0	U	µg/kg	11.1	10	10/24/25 14:34	10/23/25 14:39
4,4'-DDT	EPA 8081B	<7.36	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Aldrin	EPA 8081B	<7.20	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
alpha-BHC	EPA 8081B	<7.29	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
beta-BHC	EPA 8081B	<7.27	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Chlordane, Technical	EPA 8081B	<11.0	U	µg/kg	27.7	1	10/23/25 20:32	10/23/25 14:39
cis-Chlordane	EPA 8081B	<7.40	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
delta-BHC	EPA 8081B	<7.25	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Dieldrin	EPA 8081B	<7.75	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Endosulfan I	EPA 8081B	<7.44	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Endosulfan II	EPA 8081B	<7.33	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:05
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-1 (3-4)	Lab ID: HN2515421-001
---	------------------------------

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan sulfate	EPA 8081B	<6.81	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Endrin	EPA 8081B	<8.96	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Endrin aldehyde	EPA 8081B	<7.02	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Endrin ketone	EPA 8081B	<6.74	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
gamma-BHC (Lindane)	EPA 8081B	<7.27	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Heptachlor	EPA 8081B	<7.15	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Heptachlor epoxide	EPA 8081B	<7.33	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Methoxychlor	EPA 8081B	<7.40	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
Toxaphene	EPA 8081B	<12.0	U	µg/kg	66.4	1	10/23/25 20:32	10/23/25 14:39
trans-Chlordane	EPA 8081B	<7.36	SU	µg/kg	11.1	1	10/23/25 20:32	10/23/25 14:39
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	103		%REC	53-151	1	10/23/25 20:32	10/23/25 14:39
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	60.6	S	%REC	67-127	1	10/23/25 20:32	10/23/25 14:39

Polychlorinated Biphenyls (PCBs) by GC/ECD

Aroclor 1016	EPA 8082A	<25.3	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
Aroclor 1221	EPA 8082A	<25.3	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
Aroclor 1232	EPA 8082A	<25.3	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
Aroclor 1242	EPA 8082A	<25.3	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
Aroclor 1248	EPA 8082A	<25.3	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
Aroclor 1254	EPA 8082A	<20.6	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
Aroclor 1260	EPA 8082A	<20.6	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
Aroclor 1262	EPA 8082A	<20.6	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
Aroclor 1268	EPA 8082A	<20.6	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
Total PCB	EPA 8082A	<20.6	U	µg/kg	73.7	1	10/22/25 11:33	10/21/25 10:06
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	129		%REC	54-146	1	10/22/25 11:33	10/21/25 10:06
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	91.8		%REC	58-140	1	10/22/25 11:33	10/21/25 10:06

Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<118	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<168	U	µg/kg	7270	20	10/21/25 23:29	10/16/25 12:13
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<522	U	µg/kg	3640	20	10/21/25 23:29	10/16/25 12:13
1-Methylnaphthalene	EPA 8270E	<105	U	µg/kg	146	20	10/21/25 23:29	10/16/25 12:13

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:05
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-1 (3-4) **Lab ID: HN2515421-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl) ether	EPA 8270E	<171	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2,3,4,6-Tetrachlorophenol	EPA 8270E	<533	U	µg/kg	1460	20	10/21/25 23:29	10/16/25 12:13
2,4,5-Trichlorophenol	EPA 8270E	<431	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2,4,6-Trichlorophenol	EPA 8270E	<194	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2,4-Dichlorophenol	EPA 8270E	<392	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2,4-Dimethylphenol	EPA 8270E	<374	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2,4-Dinitrophenol	EPA 8270E	<5320	U	µg/kg	7270	20	10/21/25 23:29	10/16/25 12:13
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<473	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<186	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2-Chloronaphthalene	EPA 8270E	<102	U	µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
2-Chlorophenol	EPA 8270E	<476	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<608	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2-Methylphenol (o-Cresol)	EPA 8270E	<197	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2-Nitroaniline	EPA 8270E	<404	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
2-Nitrophenol	EPA 8270E	<207	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
3&4-Methylphenol	EPA 8270E	1400		µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
3,3'-Dichlorobenzidine	EPA 8270E	<340	U	µg/kg	3640	20	10/21/25 23:29	10/16/25 12:13
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<399	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
4-Chloro-3-methylphenol	EPA 8270E	<207	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
4-Chloroaniline	EPA 8270E	<370	U	µg/kg	1460	20	10/21/25 23:29	10/16/25 12:13
4-Chlorophenyl phenylether	EPA 8270E	<201	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
4-Nitroaniline	EPA 8270E	<1130	U	µg/kg	3640	20	10/21/25 23:29	10/16/25 12:13
4-Nitrophenol	EPA 8270E	<1700	U	µg/kg	7270	20	10/21/25 23:29	10/16/25 12:13
Acenaphthene	EPA 8270E	<105	U	µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Acenaphthylene	EPA 8270E	<126	U	µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Acetophenone	EPA 8270E	<114	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Anthracene	EPA 8270E	218		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Atrazine	EPA 8270E	<426	SU	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Benzaldehyde	EPA 8270E	<1120	U	µg/kg	1460	20	10/21/25 23:29	10/16/25 12:13

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:05
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-1 (3-4)	Lab ID: HN2515421-001
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Benzo(a)anthracene	EPA 8270E	349		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Benzo(a)pyrene	EPA 8270E	393		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Benzo(b)fluoranthene	EPA 8270E	510		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Benzo(g,h,i)perylene	EPA 8270E	335		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Benzo(k)fluoranthene	EPA 8270E	175		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
bis(2-Chloroethoxy) methane	EPA 8270E	<461	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
bis(2-Chloroethyl) ether	EPA 8270E	<206	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Butyl benzyl phthalate	EPA 8270E	<911	U	µg/kg	1460	20	10/21/25 23:29	10/16/25 12:13
Caprolactam	EPA 8270E	<657	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Carbazole	EPA 8270E	<215	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Chrysene	EPA 8270E	247		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	EPA 8270E	<602	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Dibenz(a,h) anthracene	EPA 8270E	<78.6	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Dibenzofuran	EPA 8270E	<107	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Diethyl phthalate	EPA 8270E	<248	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Dimethyl phthalate	EPA 8270E	<142	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Fluoranthene	EPA 8270E	713		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Fluorene	EPA 8270E	<106	U	µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Hexachlorobenzene	EPA 8270E	<212	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Hexachlorobutadiene	EPA 8270E	<171	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Hexachlorocyclopentadiene	EPA 8270E	<690	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Hexachloroethane	EPA 8270E	<301	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Indeno(1,2,3-cd) pyrene	EPA 8270E	393		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Isophorone	EPA 8270E	<142	U	µg/kg	3640	20	10/21/25 23:29	10/16/25 12:13
Methylphenol, Total	EPA 8270E	1400		µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Naphthalene	EPA 8270E	<93.0	U	µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Nitrobenzene	EPA 8270E	<245	U	µg/kg	3640	20	10/21/25 23:29	10/16/25 12:13
n-Nitrosodi-n-propylamine	EPA 8270E	<120	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
N-Nitrosodiphenylamine	EPA 8270E	<421	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Pentachlorophenol	EPA 8270E	<578	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Phenanthrene	EPA 8270E	451		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:05
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-1 (3-4) **Lab ID: HN2515421-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Phenol	EPA 8270E	<366	U	µg/kg	721	20	10/21/25 23:29	10/16/25 12:13
Pyrene	EPA 8270E	641		µg/kg	146	20	10/21/25 23:29	10/16/25 12:13
Pyridine	EPA 8270E	<1430	U	µg/kg	3640	20	10/21/25 23:29	10/16/25 12:13

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<15.9	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,1,2,2-Tetrachloroethane	EPA 8260D	<15.5	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<22.2	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,1,2-Trichloroethane	EPA 8260D	<14.9	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,1-Dichloroethane	EPA 8260D	<12.8	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,1-Dichloroethylene	EPA 8260D	<11.4	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,2,3-Trichlorobenzene	EPA 8260D	<42.1	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
1,2,3-Trichloropropane	EPA 8260D	<14.7	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,2,4-Trichlorobenzene	EPA 8260D	<39.8	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
1,2,4-Trimethylbenzene	EPA 8260D	35.7		µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<32.3	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<20.6	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<13.3	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<20.6	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
1,2-Dichloropropane	EPA 8260D	<25.9	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,3,5-Trimethylbenzene	EPA 8260D	<24.8	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<24.2	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
1,3-Dichloropropene	EPA 8260D	<19.6	U	µg/kg	70.2	1	10/24/25 09:03	10/16/25 15:29
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<28.5	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	727		µg/kg	234	1	10/24/25 09:03	10/16/25 15:29
2-Hexanone	EPA 8260D	<17.4	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<32.7	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Acetone	EPA 8260D	2510		µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
Benzene	EPA 8260D	<17.0	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Bromochloromethane	EPA 8260D	<17.9	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:05
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-1 (3-4)	Lab ID: HN2515421-001
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Bromodichloromethane	EPA 8260D	<19.7	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Bromoform	EPA 8260D	<14.8	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Carbon disulfide	EPA 8260D	<18.2	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Carbon tetrachloride	EPA 8260D	<13.7	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Chlorobenzene	EPA 8260D	<11.7	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Chlorodibromomethane	EPA 8260D	<19.7	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Chloroethane (Ethyl chloride)	EPA 8260D	<98.3	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
Chloroform	EPA 8260D	<12.9	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
cis-1,2-Dichloroethylene	EPA 8260D	<22.6	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
cis-1,3-Dichloropropene	EPA 8260D	<26.4	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Cyclohexane	EPA 8260D	<26.9	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<42.5	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
Ethylbenzene	EPA 8260D	<24.9	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Isopropylbenzene	EPA 8260D	<22.2	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
m+p-Xylene	EPA 8260D	<46.8	U	µg/kg	70.2	1	10/24/25 09:03	10/16/25 15:29
Methyl bromide (Bromomethane)	EPA 8260D	<67.1	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
Methyl chloride (Chloromethane)	EPA 8260D	<95.9	U	µg/kg	117	1	10/24/25 09:03	10/16/25 15:29
Methyl tert-butyl ether (MTBE)	EPA 8260D	<25.6	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Methylcyclohexane	EPA 8260D	36.8		µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Methylene chloride (Dichloromethane)	EPA 8260D	<93.1	U	µg/kg	292	1	10/24/25 09:03	10/16/25 15:29
o-Xylene	EPA 8260D	<13.6	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Styrene	EPA 8260D	<13.9	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<21.1	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Toluene	EPA 8260D	<28.9	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Total Xylene	EPA 8260D	<13.6	U	µg/kg	105	1	10/24/25 09:03	10/16/25 15:29
trans-1,2-Dichloroethylene	EPA 8260D	<29.0	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
trans-1,3-Dichloropropylene	EPA 8260D	<19.6	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Trichloroethene (Trichloroethylene)	EPA 8260D	<15.7	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:05
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-1 (3-4)

Lab ID: HN2515421-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<17.9	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29
Vinyl chloride (Chloroethene)	EPA 8260D	<23.3	U	µg/kg	35.1	1	10/24/25 09:03	10/16/25 15:29

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:10
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-2 (1-2) **Lab ID:** HN2515421-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Chlorinated Herbicides by GC/ECD								
2,4,5-T	EPA 8151A	<0.979	U	µg/kg	5.32	1	10/24/25 21:49	10/22/25 09:07
2,4,5-TP (Silvex)	EPA 8151A	<1.74	U	µg/kg	5.32	1	10/24/25 21:49	10/22/25 09:07
2,4-D	EPA 8151A	<2.84	U	µg/kg	10.6	1	10/24/25 21:49	10/22/25 09:07
Surr: DCAA	EPA 8151A	112		%REC	10-116	1	10/24/25 21:49	10/22/25 09:07
General Chemistry Parameters								
Percent Moisture	EPA 3550C	6.0		%	0.1	1	10/16/25 20:46	NA
Chloride	EPA 9056A	73.8		mg/kg	10.6	1	10/21/25 00:42	10/20/25 15:35
Metals								
Arsenic	EPA 6010D	5.39		mg/kg	0.281	1	10/24/25 13:18	10/23/25 10:32
Barium	EPA 6010D	60.7		mg/kg	0.562	1	10/24/25 13:18	10/23/25 10:32
Cadmium	EPA 6010D	<0.0461	U	mg/kg	0.562	1	10/24/25 13:18	10/23/25 10:32
Chromium	EPA 6010D	13.5		mg/kg	0.281	1	10/24/25 13:18	10/23/25 10:32
Copper	EPA 6010D	57.2		mg/kg	0.562	1	10/24/25 13:18	10/23/25 10:32
Lead	EPA 6010D	46.8		mg/kg	0.281	1	10/24/25 13:18	10/23/25 10:32
Selenium	EPA 6010D	<0.157	U	mg/kg	0.562	1	10/24/25 13:18	10/23/25 10:32
Silver	EPA 6010D	0.40		mg/kg	0.281	1	10/24/25 13:18	10/23/25 10:32
Zinc	EPA 6010D	113		mg/kg	0.562	1	10/24/25 13:18	10/23/25 10:32
Mercury	EPA 7471B	0.0396		mg/kg	0.0200	1	10/23/25 11:50	10/23/25 09:31
Organochlorine Pesticides by GC/ECD								
4,4'-DDD	EPA 8081B	<6.75	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
4,4'-DDE	EPA 8081B	17.2		µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
4,4'-DDT	EPA 8081B	<7.03	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Aldrin	EPA 8081B	<6.87	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
alpha-BHC	EPA 8081B	<6.95	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
beta-BHC	EPA 8081B	<6.94	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Chlordane, Technical	EPA 8081B	<10.5	U	µg/kg	26.4	1	10/23/25 20:43	10/23/25 14:39
cis-Chlordane	EPA 8081B	<7.06	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
delta-BHC	EPA 8081B	<6.92	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Dieldrin	EPA 8081B	<7.39	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Endosulfan I	EPA 8081B	<7.10	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Endosulfan II	EPA 8081B	<7.00	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:10
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-2 (1-2)

Lab ID: HN2515421-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan sulfate	EPA 8081B	<6.50	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Endrin	EPA 8081B	<8.55	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Endrin aldehyde	EPA 8081B	<6.70	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Endrin ketone	EPA 8081B	<6.43	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
gamma-BHC (Lindane)	EPA 8081B	<6.93	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Heptachlor	EPA 8081B	<6.82	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Heptachlor epoxide	EPA 8081B	<6.99	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Methoxychlor	EPA 8081B	<7.06	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
Toxaphene	EPA 8081B	<11.4	U	µg/kg	63.4	1	10/23/25 20:43	10/23/25 14:39
trans-Chlordane	EPA 8081B	<7.02	U	µg/kg	10.6	1	10/23/25 20:43	10/23/25 14:39
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	65.4		%REC	53-151	1	10/23/25 20:43	10/23/25 14:39
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	42.6	S	%REC	67-127	1	10/23/25 20:43	10/23/25 14:39

Polychlorinated Biphenyls (PCBs) by GC/ECD

Aroclor 1016	EPA 8082A	<24.2	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
Aroclor 1221	EPA 8082A	<24.2	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
Aroclor 1232	EPA 8082A	<24.2	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
Aroclor 1242	EPA 8082A	<24.2	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
Aroclor 1248	EPA 8082A	<24.2	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
Aroclor 1254	EPA 8082A	<19.7	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
Aroclor 1260	EPA 8082A	<19.7	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
Aroclor 1262	EPA 8082A	<19.7	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
Aroclor 1268	EPA 8082A	<19.7	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
Total PCB	EPA 8082A	<19.7	U	µg/kg	70.7	1	10/18/25 17:55	10/16/25 13:05
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	67.9		%REC	54-146	1	10/18/25 17:55	10/16/25 13:05
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	51.8	S	%REC	58-140	1	10/18/25 17:55	10/16/25 13:05

Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<28.0	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<39.8	U	µg/kg	1720	5	10/21/25 23:50	10/16/25 12:13
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<124	U	µg/kg	863	5	10/21/25 23:50	10/16/25 12:13
1-Methylnaphthalene	EPA 8270E	<24.9	U	µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:10
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-2 (1-2)	Lab ID: HN2515421-002
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl) ether	EPA 8270E	<40.4	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2,3,4,6-Tetrachlorophenol	EPA 8270E	<126	U	µg/kg	345	5	10/21/25 23:50	10/16/25 12:13
2,4,5-Trichlorophenol	EPA 8270E	<102	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2,4,6-Trichlorophenol	EPA 8270E	<45.9	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2,4-Dichlorophenol	EPA 8270E	<92.9	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2,4-Dimethylphenol	EPA 8270E	<88.8	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2,4-Dinitrophenol	EPA 8270E	<1260	U	µg/kg	1720	5	10/21/25 23:50	10/16/25 12:13
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<112	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<44.1	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2-Chloronaphthalene	EPA 8270E	<24.1	U	µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
2-Chlorophenol	EPA 8270E	<113	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<144	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2-Methylphenol (o-Cresol)	EPA 8270E	<46.7	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2-Nitroaniline	EPA 8270E	<95.8	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
2-Nitrophenol	EPA 8270E	<49.2	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
3&4-Methylphenol	EPA 8270E	<94.1	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
3,3'-Dichlorobenzidine	EPA 8270E	<80.6	U	µg/kg	863	5	10/21/25 23:50	10/16/25 12:13
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<94.6	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
4-Chloro-3-methylphenol	EPA 8270E	<49.2	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
4-Chloroaniline	EPA 8270E	<87.7	U	µg/kg	345	5	10/21/25 23:50	10/16/25 12:13
4-Chlorophenyl phenylether	EPA 8270E	<47.7	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
4-Nitroaniline	EPA 8270E	<268	U	µg/kg	863	5	10/21/25 23:50	10/16/25 12:13
4-Nitrophenol	EPA 8270E	<404	U	µg/kg	1720	5	10/21/25 23:50	10/16/25 12:13
Acenaphthene	EPA 8270E	38.0		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Acenaphthylene	EPA 8270E	<29.9	U	µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Acetophenone	EPA 8270E	<27.0	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Anthracene	EPA 8270E	214		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Atrazine	EPA 8270E	<101	SU	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Benzaldehyde	EPA 8270E	<265	U	µg/kg	345	5	10/21/25 23:50	10/16/25 12:13

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:10
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-2 (1-2)	Lab ID: HN2515421-002
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Benzo(a)anthracene	EPA 8270E	442		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Benzo(a)pyrene	EPA 8270E	449		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Benzo(b)fluoranthene	EPA 8270E	652		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Benzo(g,h,i)perylene	EPA 8270E	425		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Benzo(k)fluoranthene	EPA 8270E	207		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
bis(2-Chloroethoxy) methane	EPA 8270E	<109	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
bis(2-Chloroethyl) ether	EPA 8270E	<48.9	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Butyl benzyl phthalate	EPA 8270E	<216	U	µg/kg	345	5	10/21/25 23:50	10/16/25 12:13
Caprolactam	EPA 8270E	<156	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Carbazole	EPA 8270E	<50.9	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Chrysene	EPA 8270E	438		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	EPA 8270E	<143	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Dibenz(a,h) anthracene	EPA 8270E	<18.6	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Dibenzofuran	EPA 8270E	<25.4	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Diethyl phthalate	EPA 8270E	<58.7	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Dimethyl phthalate	EPA 8270E	<33.7	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Fluoranthene	EPA 8270E	1220		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Fluorene	EPA 8270E	51.8		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Hexachlorobenzene	EPA 8270E	<50.2	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Hexachlorobutadiene	EPA 8270E	<40.7	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Hexachlorocyclopentadiene	EPA 8270E	<164	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Hexachloroethane	EPA 8270E	<71.5	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Indeno(1,2,3-cd) pyrene	EPA 8270E	404		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Isophorone	EPA 8270E	<33.7	U	µg/kg	863	5	10/21/25 23:50	10/16/25 12:13
Methylphenol, Total	EPA 8270E	<46.7	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Naphthalene	EPA 8270E	<22.1	U	µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Nitrobenzene	EPA 8270E	<58.0	U	µg/kg	863	5	10/21/25 23:50	10/16/25 12:13
n-Nitrosodi-n-propylamine	EPA 8270E	<28.5	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
N-Nitrosodiphenylamine	EPA 8270E	<99.9	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Pentachlorophenol	EPA 8270E	<137	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Phenanthrene	EPA 8270E	756		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:10
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-2 (1-2)	Lab ID: HN2515421-002
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Phenol	EPA 8270E	<86.7	U	µg/kg	171	5	10/21/25 23:50	10/16/25 12:13
Pyrene	EPA 8270E	1040		µg/kg	34.5	5	10/21/25 23:50	10/16/25 12:13
Pyridine	EPA 8270E	<340	U	µg/kg	863	5	10/21/25 23:50	10/16/25 12:13

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<16.2	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,1,2,2-Tetrachloroethane	EPA 8260D	<15.7	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<22.6	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,1,2-Trichloroethane	EPA 8260D	<15.1	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,1-Dichloroethane	EPA 8260D	<13.0	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,1-Dichloroethylene	EPA 8260D	<11.5	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,2,3-Trichlorobenzene	EPA 8260D	<42.8	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
1,2,3-Trichloropropane	EPA 8260D	<14.9	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,2,4-Trichlorobenzene	EPA 8260D	<40.4	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
1,2,4-Trimethylbenzene	EPA 8260D	<26.1	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<32.8	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<21.0	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<13.5	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<21.0	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
1,2-Dichloropropane	EPA 8260D	<26.3	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,3,5-Trimethylbenzene	EPA 8260D	<25.2	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<24.6	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
1,3-Dichloropropene	EPA 8260D	<19.9	U	µg/kg	71.3	1	10/23/25 07:31	10/16/25 15:29
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<29.0	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<84.8	U	µg/kg	238	1	10/23/25 07:31	10/16/25 15:29
2-Hexanone	EPA 8260D	<17.7	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<33.2	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Acetone	EPA 8260D	<106	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
Benzene	EPA 8260D	<17.3	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Bromochloromethane	EPA 8260D	<18.1	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:10
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-2 (1-2) **Lab ID: HN2515421-002**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Bromodichloromethane	EPA 8260D	<20.0	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Bromoform	EPA 8260D	<15.0	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Carbon disulfide	EPA 8260D	<18.5	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Carbon tetrachloride	EPA 8260D	<13.9	SU	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Chlorobenzene	EPA 8260D	<11.8	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Chlorodibromomethane	EPA 8260D	<20.0	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Chloroethane (Ethyl chloride)	EPA 8260D	<99.8	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
Chloroform	EPA 8260D	<13.1	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
cis-1,2-Dichloroethylene	EPA 8260D	<22.9	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
cis-1,3-Dichloropropene	EPA 8260D	<26.9	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Cyclohexane	EPA 8260D	<27.3	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<43.1	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
Ethylbenzene	EPA 8260D	<25.3	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Isopropylbenzene	EPA 8260D	<22.5	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
m+p-Xylene	EPA 8260D	<47.5	U	µg/kg	71.3	1	10/23/25 07:31	10/16/25 15:29
Methyl bromide (Bromomethane)	EPA 8260D	<68.2	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
Methyl chloride (Chloromethane)	EPA 8260D	<97.4	U	µg/kg	119	1	10/23/25 07:31	10/16/25 15:29
Methyl tert-butyl ether (MTBE)	EPA 8260D	<26.0	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Methylcyclohexane	EPA 8260D	<13.6	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Methylene chloride (Dichloromethane)	EPA 8260D	<94.6	U	µg/kg	297	1	10/23/25 07:31	10/16/25 15:29
o-Xylene	EPA 8260D	<13.8	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Styrene	EPA 8260D	<14.1	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<21.5	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Toluene	EPA 8260D	<29.4	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Total Xylene	EPA 8260D	<13.8	U	µg/kg	107	1	10/23/25 07:31	10/16/25 15:29
trans-1,2-Dichloroethylene	EPA 8260D	<29.4	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
trans-1,3-Dichloropropylene	EPA 8260D	<19.9	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Trichloroethene (Trichloroethylene)	EPA 8260D	<16.0	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:10
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-2 (1-2)

Lab ID: HN2515421-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<18.2	SU	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29
Vinyl chloride (Chloroethene)	EPA 8260D	<23.7	U	µg/kg	35.6	1	10/23/25 07:31	10/16/25 15:29

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:15
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-3 (5-6)	Lab ID: HN2515421-003
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Chlorinated Herbicides by GC/ECD								
2,4,5-T	EPA 8151A	<2.55	U	µg/kg	13.8	1	10/24/25 22:02	10/22/25 09:07
2,4,5-TP (Silvex)	EPA 8151A	<4.54	U	µg/kg	13.8	1	10/24/25 22:02	10/22/25 09:07
2,4-D	EPA 8151A	<7.39	U	µg/kg	27.7	1	10/24/25 22:02	10/22/25 09:07
Surr: DCAA	EPA 8151A	52.0		%REC	10-116	1	10/24/25 22:02	10/22/25 09:07
General Chemistry Parameters								
Percent Moisture	EPA 3550C	13.6		%	0.1	1	10/16/25 20:46	NA
Chloride	EPA 9056A	19.1		mg/kg	11.7	1	10/21/25 00:52	10/20/25 15:35
Metals								
Arsenic	EPA 6010D	5.78		mg/kg	0.319	1	10/24/25 13:24	10/23/25 10:32
Barium	EPA 6010D	46.7		mg/kg	0.638	1	10/24/25 13:24	10/23/25 10:32
Cadmium	EPA 6010D	<0.0523	U	mg/kg	0.638	1	10/24/25 13:24	10/23/25 10:32
Chromium	EPA 6010D	17.0		mg/kg	0.319	1	10/24/25 13:24	10/23/25 10:32
Copper	EPA 6010D	53.2		mg/kg	0.638	1	10/24/25 13:24	10/23/25 10:32
Lead	EPA 6010D	30.6		mg/kg	0.319	1	10/24/25 13:24	10/23/25 10:32
Selenium	EPA 6010D	<0.179	U	mg/kg	0.638	1	10/24/25 13:24	10/23/25 10:32
Silver	EPA 6010D	<0.153	U	mg/kg	0.319	1	10/24/25 13:24	10/23/25 10:32
Zinc	EPA 6010D	84.5		mg/kg	0.638	1	10/24/25 13:24	10/23/25 10:32
Mercury	EPA 7471B	<0.0136	U	mg/kg	0.0200	1	10/23/25 11:52	10/23/25 09:31
Organochlorine Pesticides by GC/ECD								
4,4'-DDD	EPA 8081B	<17.9	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
4,4'-DDE	EPA 8081B	64.0		µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
4,4'-DDT	EPA 8081B	47.2		µg/kg	28.0	1	10/23/25 18:03	10/21/25 11:23
Aldrin	EPA 8081B	<18.2	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
alpha-BHC	EPA 8081B	<18.4	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
beta-BHC	EPA 8081B	<18.4	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Chlordane, Technical	EPA 8081B	<27.8	U	µg/kg	70.1	1	10/22/25 02:57	10/21/25 11:23
cis-Chlordane	EPA 8081B	<18.7	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
delta-BHC	EPA 8081B	<18.4	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Dieldrin	EPA 8081B	<19.6	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Endosulfan I	EPA 8081B	<18.8	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Endosulfan II	EPA 8081B	<18.6	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:15
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-3 (5-6) **Lab ID: HN2515421-003**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan sulfate	EPA 8081B	<17.2	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Endrin	EPA 8081B	<22.7	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Endrin aldehyde	EPA 8081B	<17.8	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Endrin ketone	EPA 8081B	<17.1	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
gamma-BHC (Lindane)	EPA 8081B	<18.4	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Heptachlor	EPA 8081B	<18.1	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Heptachlor epoxide	EPA 8081B	<18.5	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Methoxychlor	EPA 8081B	<18.7	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
Toxaphene	EPA 8081B	<30.3	U	µg/kg	168	1	10/22/25 02:57	10/21/25 11:23
trans-Chlordane	EPA 8081B	<18.6	U	µg/kg	28.0	1	10/22/25 02:57	10/21/25 11:23
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	121		%REC	53-151	1	10/22/25 02:57	10/21/25 11:23
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	89.3		%REC	67-127	1	10/22/25 02:57	10/21/25 11:23

Polychlorinated Biphenyls (PCBs) by GC/ECD

Aroclor 1016	EPA 8082A	<64.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
Aroclor 1221	EPA 8082A	<64.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
Aroclor 1232	EPA 8082A	<64.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
Aroclor 1242	EPA 8082A	<64.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
Aroclor 1248	EPA 8082A	<64.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
Aroclor 1254	EPA 8082A	<52.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
Aroclor 1260	EPA 8082A	<52.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
Aroclor 1262	EPA 8082A	<52.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
Aroclor 1268	EPA 8082A	<52.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
Total PCB	EPA 8082A	<52.5	U	µg/kg	188	1	10/18/25 18:07	10/16/25 13:05
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	122		%REC	54-146	1	10/18/25 18:07	10/16/25 13:05
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	95.5		%REC	58-140	1	10/18/25 18:07	10/16/25 13:05

Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<15.7	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<22.2	U	µg/kg	963	1	10/21/25 20:18	10/16/25 12:13
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<69.1	U	µg/kg	482	1	10/21/25 20:18	10/16/25 12:13
1-Methylnaphthalene	EPA 8270E	<13.9	U	µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:15
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-3 (5-6)	Lab ID: HN2515421-003
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl) ether	EPA 8270E	<22.6	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2,3,4,6-Tetrachlorophenol	EPA 8270E	<70.6	U	µg/kg	193	1	10/21/25 20:18	10/16/25 12:13
2,4,5-Trichlorophenol	EPA 8270E	<57.1	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2,4,6-Trichlorophenol	EPA 8270E	<25.7	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2,4-Dichlorophenol	EPA 8270E	<51.9	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2,4-Dimethylphenol	EPA 8270E	<49.6	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2,4-Dinitrophenol	EPA 8270E	<705	U	µg/kg	963	1	10/21/25 20:18	10/16/25 12:13
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<62.6	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<24.6	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2-Chloronaphthalene	EPA 8270E	<13.5	U	µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
2-Chlorophenol	EPA 8270E	<63.1	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<80.5	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2-Methylphenol (o-Cresol)	EPA 8270E	<26.1	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2-Nitroaniline	EPA 8270E	<53.6	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
2-Nitrophenol	EPA 8270E	<27.5	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
3&4-Methylphenol	EPA 8270E	314		µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
3,3'-Dichlorobenzidine	EPA 8270E	<45.0	U	µg/kg	482	1	10/21/25 20:18	10/16/25 12:13
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<52.8	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
4-Chloro-3-methylphenol	EPA 8270E	<27.5	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
4-Chloroaniline	EPA 8270E	<49.0	U	µg/kg	193	1	10/21/25 20:18	10/16/25 12:13
4-Chlorophenyl phenylether	EPA 8270E	<26.6	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
4-Nitroaniline	EPA 8270E	<150	U	µg/kg	482	1	10/21/25 20:18	10/16/25 12:13
4-Nitrophenol	EPA 8270E	<226	U	µg/kg	963	1	10/21/25 20:18	10/16/25 12:13
Acenaphthene	EPA 8270E	<13.9	U	µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Acenaphthylene	EPA 8270E	<16.7	U	µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Acetophenone	EPA 8270E	<15.1	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Anthracene	EPA 8270E	55.9		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Atrazine	EPA 8270E	<56.5	SU	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Benzaldehyde	EPA 8270E	<148	U	µg/kg	193	1	10/21/25 20:18	10/16/25 12:13

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:15
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-3 (5-6)	Lab ID: HN2515421-003
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Benzo(a)anthracene	EPA 8270E	129		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Benzo(a)pyrene	EPA 8270E	141		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Benzo(b)fluoranthene	EPA 8270E	191		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Benzo(g,h,i)perylene	EPA 8270E	125		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Benzo(k)fluoranthene	EPA 8270E	73.3		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
bis(2-Chloroethoxy) methane	EPA 8270E	<61.1	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
bis(2-Chloroethyl) ether	EPA 8270E	<27.3	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Butyl benzyl phthalate	EPA 8270E	<121	U	µg/kg	193	1	10/21/25 20:18	10/16/25 12:13
Caprolactam	EPA 8270E	<87.0	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Carbazole	EPA 8270E	<28.4	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Chrysene	EPA 8270E	118		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	EPA 8270E	135		µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Dibenz(a,h) anthracene	EPA 8270E	<10.4	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Dibenzofuran	EPA 8270E	<14.2	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Diethyl phthalate	EPA 8270E	<32.8	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Dimethyl phthalate	EPA 8270E	<18.8	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Fluoranthene	EPA 8270E	262		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Fluorene	EPA 8270E	<14.0	U	µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Hexachlorobenzene	EPA 8270E	<28.1	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Hexachlorobutadiene	EPA 8270E	<22.7	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Hexachlorocyclopentadiene	EPA 8270E	<91.4	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Hexachloroethane	EPA 8270E	<39.9	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Indeno(1,2,3-cd) pyrene	EPA 8270E	133		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Isophorone	EPA 8270E	<18.8	U	µg/kg	482	1	10/21/25 20:18	10/16/25 12:13
Methylphenol, Total	EPA 8270E	314		µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Naphthalene	EPA 8270E	<12.3	U	µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Nitrobenzene	EPA 8270E	<32.4	U	µg/kg	482	1	10/21/25 20:18	10/16/25 12:13
n-Nitrosodi-n-propylamine	EPA 8270E	<15.9	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
N-Nitrosodiphenylamine	EPA 8270E	<55.8	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Pentachlorophenol	EPA 8270E	<76.6	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Phenanthrene	EPA 8270E	139		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:15
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-3 (5-6)	Lab ID: HN2515421-003
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Phenol	EPA 8270E	<48.4	U	µg/kg	95.5	1	10/21/25 20:18	10/16/25 12:13
Pyrene	EPA 8270E	235		µg/kg	19.3	1	10/21/25 20:18	10/16/25 12:13
Pyridine	EPA 8270E	<190	U	µg/kg	482	1	10/21/25 20:18	10/16/25 12:13

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<17.6	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,1,2,2-Tetrachloroethane	EPA 8260D	<17.1	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<24.5	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,1,2-Trichloroethane	EPA 8260D	<16.4	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,1-Dichloroethane	EPA 8260D	<14.1	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,1-Dichloroethylene	EPA 8260D	<12.5	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,2,3-Trichlorobenzene	EPA 8260D	<46.4	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
1,2,3-Trichloropropane	EPA 8260D	<16.2	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,2,4-Trichlorobenzene	EPA 8260D	<43.9	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
1,2,4-Trimethylbenzene	EPA 8260D	<28.4	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<35.6	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<22.8	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<14.7	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<22.8	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
1,2-Dichloropropane	EPA 8260D	<28.5	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,3,5-Trimethylbenzene	EPA 8260D	<27.3	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<26.7	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
1,3-Dichloropropene	EPA 8260D	<21.6	U	µg/kg	77.4	1	10/23/25 07:47	10/16/25 15:29
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<31.4	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<92.1	U	µg/kg	258	1	10/23/25 07:47	10/16/25 15:29
2-Hexanone	EPA 8260D	<19.2	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<36.1	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Acetone	EPA 8260D	<115	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
Benzene	EPA 8260D	<18.7	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Bromochloromethane	EPA 8260D	<19.7	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:15
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-3 (5-6)	Lab ID: HN2515421-003
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Bromodichloromethane	EPA 8260D	<21.7	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Bromoform	EPA 8260D	<16.3	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Carbon disulfide	EPA 8260D	<20.0	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Carbon tetrachloride	EPA 8260D	<15.1	SU	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Chlorobenzene	EPA 8260D	<12.8	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Chlorodibromomethane	EPA 8260D	<21.7	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Chloroethane (Ethyl chloride)	EPA 8260D	<108	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
Chloroform	EPA 8260D	<14.2	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
cis-1,2-Dichloroethylene	EPA 8260D	<24.9	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
cis-1,3-Dichloropropene	EPA 8260D	<29.2	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Cyclohexane	EPA 8260D	<29.6	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<46.8	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
Ethylbenzene	EPA 8260D	<27.4	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Isopropylbenzene	EPA 8260D	<24.4	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
m+p-Xylene	EPA 8260D	<51.6	U	µg/kg	77.4	1	10/23/25 07:47	10/16/25 15:29
Methyl bromide (Bromomethane)	EPA 8260D	<74.0	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
Methyl chloride (Chloromethane)	EPA 8260D	<106	U	µg/kg	129	1	10/23/25 07:47	10/16/25 15:29
Methyl tert-butyl ether (MTBE)	EPA 8260D	<28.2	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Methylcyclohexane	EPA 8260D	<14.8	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Methylene chloride (Dichloromethane)	EPA 8260D	<103	U	µg/kg	322	1	10/23/25 07:47	10/16/25 15:29
o-Xylene	EPA 8260D	<15.0	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Styrene	EPA 8260D	<15.3	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<23.3	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Toluene	EPA 8260D	<31.9	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Total Xylene	EPA 8260D	<15.0	U	µg/kg	116	1	10/23/25 07:47	10/16/25 15:29
trans-1,2-Dichloroethylene	EPA 8260D	<31.9	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
trans-1,3-Dichloropropylene	EPA 8260D	<21.6	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Trichloroethene (Trichloroethylene)	EPA 8260D	<17.3	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29

Analytical Report



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

Work Order: HN2515421
Date Collected: 10/15/25 09:15
Date Received: 10/16/25 08:00

CLIENT ID: 10034 Petoskey SB-3 (5-6)

Lab ID: HN2515421-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<19.8	SU	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29
Vinyl chloride (Chloroethene)	EPA 8260D	<25.7	U	µg/kg	38.7	1	10/23/25 07:47	10/16/25 15:29



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2290565

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3623700

Chlorinated Herbicides by GC/ECD

MB	CLIENT ID: Method Blank	Lab ID: QC-2290565-001
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Method: EPA 8151A **Dilution:** 1 **Analysis Date:** 10/24/25 19:00
Prep Date: 10/22/25 09:08

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	<0.920	µg/kg	5.00							U
2,4,5-TP (Silvex)	<1.64	µg/kg	5.00							U
2,4-D	<2.67	µg/kg	10.0							U
Surr: DCAA	78.0	µg/kg		50		156	10-116			S

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2290565-002
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Method: EPA 8151A **Dilution:** 1 **Analysis Date:** 10/24/25 19:13
Prep Date: 10/22/25 09:08

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	30.0	µg/kg	5.00	50		60.0	10-119			
2,4,5-TP (Silvex)	27.0	µg/kg	5.00	50		54.0	10-101			
2,4-D	28.0	µg/kg	10.0	50		56.0	10-128			
Surr: DCAA	37.0	µg/kg		50		74.0	10-116			

MS	CLIENT ID: Batch QC	Lab ID: QC-2290565-005
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Method: EPA 8151A **Dilution:** 1 **Analysis Date:** 10/24/25 19:26
Prep Date: 10/22/25 09:08

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	23.6	µg/kg	8.36	49.237	<0.906	48.0	10-119			
2,4,5-TP (Silvex)	20.7	µg/kg	8.36	49.237	<1.61	42.0	10-101			
2,4-D	50.2	µg/kg	16.7	49.237	<2.63	102	10-128			
Surr: DCAA	76.8	µg/kg		49.237		156	10-116			S

MSD	CLIENT ID: Batch QC	Lab ID: QC-2290565-006
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Method: EPA 8151A **Dilution:** 1 **Analysis Date:** 10/24/25 19:39
Prep Date: 10/22/25 09:08

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	27.6	µg/kg	8.36	49.237	<0.920	56.0	10-119	15.4	30	
2,4,5-TP (Silvex)	32.5	µg/kg	8.36	49.237	<1.64	66.0	10-101	44.4	30	R
2,4-D	62.0	µg/kg	16.7	49.237	<2.67	126	10-128	21.1	30	
Surr: DCAA	84.7	µg/kg		49.237		172	10-116	9.76	30	S

The following samples were analyzed in this batch: HN2515421-001, HN2515421-002, HN2515421-003



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2280520

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3595774

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2280520-001
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Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 10/16/25 20:46
Prep Date: NA

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

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2280520-002
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Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 10/16/25 20:46
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			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2280520-004
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Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 10/16/25 20:46
Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	7.0	%	0.1		6.8			2.77	10	

The following samples were analyzed in this batch: HN2515421-001, HN2515421-002, HN2515421-003



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2280520

Work Order: HN2515421
Date Collected: 10/15/25 11:45
Date Received: 10/16/25 08:00
Run ID: 3599388

General Chemistry Parameters

DUP	CLIENT ID: Batch QC	Lab ID: QC-2280520-015
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Method: EPA 3550C	Dilution: 1	Analysis Date: 10/17/25 16:48
Prep Date: NA		

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	5.8	%	0.1		<0.1			7.15	10	

The following samples were analyzed in this batch: HN2515421-001, HN2515421-002, HN2515421-003

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2286473

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3606696

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2286473-001
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Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 10/20/25 21:46
Prep Date: 10/20/25 15:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	<3.10	mg/kg	10.0							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2286473-002
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Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 10/20/25 21:56
Prep Date: 10/20/25 15:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	96.3	mg/kg	10.0	100		96.3	87-110			

MS	CLIENT ID: Batch QC	Lab ID: QC-2286473-004
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Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 10/20/25 22:16
Prep Date: 10/20/25 15:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	105	mg/kg	10.6	99.602	7.3	98.2	87-110			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2286473-005
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Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 10/20/25 22:25
Prep Date: 10/20/25 15:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	105	mg/kg	10.7	100.6	7.3	97.9	87-110	0.680	15	

The following samples were analyzed in this batch: HN2515421-001, HN2515421-002, HN2515421-003

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2288570

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3616433

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2288570-001
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Method: EPA 7471B **Dilution:** 1 **Analysis Date:** 10/23/25 11:18
Prep Date: 10/23/25 09:32

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	<0.0136	mg/kg	0.0200							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2288570-002
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Method: EPA 7471B **Dilution:** 1 **Analysis Date:** 10/23/25 11:20
Prep Date: 10/23/25 09:32

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.168	mg/kg	0.0200	0.1665		101	80-120			

MS	CLIENT ID: Batch QC	Lab ID: QC-2288570-004
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Method: EPA 7471B **Dilution:** 1 **Analysis Date:** 10/23/25 11:23
Prep Date: 10/23/25 09:32

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.181	mg/kg	0.0203	0.15228	0.0462	91.8	75-125			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2288570-005
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Method: EPA 7471B **Dilution:** 1 **Analysis Date:** 10/23/25 11:25
Prep Date: 10/23/25 09:32

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.169	mg/kg	0.0200	0.14955	0.0462	85.3	75-125	6.98	35	

The following samples were analyzed in this batch: HN2515421-001, HN2515421-002, HN2515421-003

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2293152

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3621340

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2293152-001
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Method: EPA 6010D **Dilution:** 1 **Analysis Date:** 10/24/25 11:32
Prep Date: 10/23/25 10:33

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	<0.163	mg/kg	0.250							U
Barium	<0.310	mg/kg	0.500							U
Cadmium	<0.0410	mg/kg	0.500							U
Chromium	<0.150	mg/kg	0.250							U
Copper	<0.370	mg/kg	0.500							U
Lead	<0.200	mg/kg	0.250							U
Selenium	<0.140	mg/kg	0.500							U
Silver	<0.120	mg/kg	0.250							U
Zinc	<0.480	mg/kg	0.500							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2293152-002
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Method: EPA 6010D **Dilution:** 1 **Analysis Date:** 10/24/25 11:38
Prep Date: 10/23/25 10:33

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	4.70	mg/kg	0.250	5		94.0	80-120			
Barium	4.89	mg/kg	0.500	5		97.8	80-120			
Cadmium	4.83	mg/kg	0.500	5		96.6	80-120			
Chromium	5.01	mg/kg	0.250	5		100	80-120			
Copper	5.08	mg/kg	0.500	5		102	80-120			
Lead	4.90	mg/kg	0.250	5		98.0	80-120			
Selenium	4.75	mg/kg	0.500	5		94.9	80-120			
Silver	5.03	mg/kg	0.250	5		101	80-120			
Zinc	4.98	mg/kg	0.500	5		99.6	80-120			

MS	CLIENT ID: Batch QC	Lab ID: QC-2293152-004
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Method: EPA 6010D **Dilution:** 1 **Analysis Date:** 10/24/25 11:49
Prep Date: 10/23/25 10:33

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	9.82	mg/kg	0.327	5.8962	7.12	57.8	75-125			S
Barium	263	mg/kg	0.655	5	62.7	NC	75-125			O
Cadmium	5.72	mg/kg	0.655	5.8962	0.47	89.8	75-125			
Chromium	21.5	mg/kg	0.327	5.8962	14.6	142	75-125			S
Copper	30.6	mg/kg	0.655	5.8962	22.1	181	75-125			S
Lead	59.5	mg/kg	0.327	5	54.8	NC	75-125			O
Selenium	5.21	mg/kg	0.655	5.8962	0.35	83.0	75-125			
Silver	6.41	mg/kg	0.327	5.8962	0.22	105	75-125			
Zinc	111	mg/kg	0.655	5	103	NC	75-125			O

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2293152

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3621340

MSD	CLIENT ID: Batch QC	Lab ID: QC-2293152-005
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Method: EPA 6010D **Dilution:** 1 **Analysis Date:** 10/24/25 11:55
Prep Date: 10/23/25 10:33

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	9.40	mg/kg	0.322	5.8072	7.12	51.4	75-125	4.39	20	S
Barium	31.4	mg/kg	0.645	5	62.7	NC	75-125	157	20	OR
Cadmium	5.81	mg/kg	0.645	5.8072	0.47	92.8	75-125	1.57	20	
Chromium	12.5	mg/kg	0.322	5	14.6	NC	75-125	53.4	20	R
Copper	17.0	mg/kg	0.645	5	22.1	NC	75-125	57.2	20	R
Lead	16.8	mg/kg	0.322	5	54.8	NC	75-125	112	20	OR
Selenium	3.29	mg/kg	0.645	5.8072	0.35	51.2	75-125	45.2	20	RS
Silver	6.42	mg/kg	0.322	5.8072	0.22	107	75-125	0.150	20	
Zinc	72.7	mg/kg	0.645	5	103	NC	75-125	41.7	20	OR

PDS	CLIENT ID: Batch QC	Lab ID: QC-2293152-006
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Method: EPA 6010D **Dilution:** 1 **Analysis Date:** 10/24/25 12:00
Prep Date: 10/23/25 10:33

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	12.2	mg/kg	0.331	5.9524	7.12	97.6	75-125			
Barium	63.2	mg/kg	0.661	5	62.7	NC	75-125			O
Cadmium	6.30	mg/kg	0.661	5.9524	0.47	98.7	75-125			
Chromium	19.4	mg/kg	0.331	5.9524	14.6	105	75-125			
Copper	26.9	mg/kg	0.661	5.9524	22.1	117	75-125			
Lead	54.5	mg/kg	0.331	5	54.8	NC	75-125			O
Selenium	5.89	mg/kg	0.661	5.9524	0.35	93.7	75-125			
Silver	6.42	mg/kg	0.331	5.9524	0.22	104	75-125			
Zinc	97.7	mg/kg	0.661	5	103	NC	75-125			O

The following samples were analyzed in this batch: HN2515421-001, HN2515421-002, HN2515421-003



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2288434

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3614355

Organochlorine Pesticides by GC/ECD

MB	CLIENT ID: Method Blank	Lab ID: QC-2288434-001
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Method: EPA 8081B**Dilution:** 1**Analysis Date:** 10/21/25 23:53**Prep Date:** 10/21/25 11:24

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	<6.39	µg/kg	10.0							U
4,4'-DDE	<6.59	µg/kg	10.0							U
4,4'-DDT	<6.65	µg/kg	10.0							U
Aldrin	<6.50	µg/kg	10.0							U
alpha-BHC	<6.58	µg/kg	10.0							U
beta-BHC	<6.57	µg/kg	10.0							U
Chlordane, Technical	<9.92	µg/kg	25.0							U
cis-Chlordane	<6.68	µg/kg	10.0							U
delta-BHC	<6.55	µg/kg	10.0							U
Dieldrin	<6.99	µg/kg	10.0							U
Endosulfan I	<6.72	µg/kg	10.0							U
Endosulfan II	<6.62	µg/kg	10.0							U
Endosulfan sulfate	<6.15	µg/kg	10.0							U
Endrin	<8.09	µg/kg	10.0							U
Endrin aldehyde	<6.34	µg/kg	10.0							U
Endrin ketone	<6.08	µg/kg	10.0							U
gamma-BHC (Lindane)	<6.56	µg/kg	10.0							U
Heptachlor	<6.45	µg/kg	10.0							U
Heptachlor epoxide	<6.62	µg/kg	10.0							U
Methoxychlor	<6.69	µg/kg	10.0							U
Toxaphene	<10.8	µg/kg	60.0							U
trans-Chlordane	<6.64	µg/kg	10.0							U
Surr: Decachlorobiphenyl	48.6	µg/kg		33.33		146	53-151			
Surr: Tetrachloro-m-xylene	33.6	µg/kg		33.33		101	67-127			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2288434-002
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Method: EPA 8081B**Dilution:** 1**Analysis Date:** 10/22/25 00:04**Prep Date:** 10/21/25 11:24

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	38.1	µg/kg	10.0	33.33		114	55-141			
4,4'-DDE	37.4	µg/kg	10.0	33.33		112	55-143			
4,4'-DDT	30.8	µg/kg	10.0	33.33		92.4	50-144			
Aldrin	34.5	µg/kg	10.0	33.33		103	57-141			
alpha-BHC	35.1	µg/kg	10.0	33.33		105	58-144			
beta-BHC	35.9	µg/kg	10.0	33.33		108	55-147			
cis-Chlordane	34.1	µg/kg	10.0	33.33		102	58-142			
delta-BHC	30.0	µg/kg	10.0	33.33		90.0	59-142			
Dieldrin	34.9	µg/kg	10.0	33.33		105	59-142			
Endosulfan I	34.8	µg/kg	10.0	33.33		105	57-145			
Endosulfan II	35.5	µg/kg	10.0	33.33		107	58-138			
Endosulfan sulfate	35.4	µg/kg	10.0	33.33		106	54-136			
Endrin	31.0	µg/kg	10.0	33.33		92.9	45-150			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2288434

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3614355

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2288434-002
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Method: EPA 8081B

Dilution: 1

Analysis Date: 10/22/25 00:04

Prep Date: 10/21/25 11:24

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Endrin aldehyde	41.8	µg/kg	10.0	33.33		126	41-147			
Endrin ketone	34.8	µg/kg	10.0	33.33		104	54-146			
gamma-BHC (Lindane)	34.7	µg/kg	10.0	33.33		104	58-145			
Heptachlor	32.0	µg/kg	10.0	33.33		95.9	51-145			
Heptachlor epoxide	34.9	µg/kg	10.0	33.33		105	59-143			
Methoxychlor	30.1	µg/kg	10.0	33.33		90.3	43-144			
trans-Chlordane	34.5	µg/kg	10.0	33.33		103	56-145			
Surr: Decachlorobiphenyl	45.6	µg/kg		33.33		137	51-151			
Surr: Tetrachloro-m-xylene	32.3	µg/kg		33.33		96.9	67-127			

MS	CLIENT ID: Batch QC	Lab ID: QC-2288434-005
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Method: EPA 8081B

Dilution: 1

Analysis Date: 10/22/25 00:16

Prep Date: 10/21/25 11:24

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	22.6	µg/kg	11.0	33.088	<6.34	64.2	55-141			
4,4'-DDE	30.1	µg/kg	11.0	33.088	8.08	68.9	55-143			
4,4'-DDT	25.0	µg/kg	11.0	33.088	<6.60	56.2	50-144			
Aldrin	20.2	µg/kg	11.0	33.088	<6.45	61.2	57-141			
alpha-BHC	20.6	µg/kg	11.0	33.088	<6.53	62.3	58-144			
beta-BHC	19.9	µg/kg	11.0	33.088	<6.52	60.1	55-147			
cis-Chlordane	20.1	µg/kg	11.0	33.088	<6.63	60.7	58-142			
delta-BHC	15.9	µg/kg	11.0	33.088	<6.50	48.2	59-142			S
Dieldrin	20.0	µg/kg	11.0	33.088	<6.94	60.4	59-142			
Endosulfan I	19.2	µg/kg	11.0	33.088	<6.67	58.1	57-145			
Endosulfan II	18.0	µg/kg	11.0	33.088	<6.57	54.3	58-138			S
Endosulfan sulfate	18.0	µg/kg	11.0	33.088	<6.11	54.4	54-135			
Endrin	19.0	µg/kg	11.0	33.088	<8.03	57.5	45-150			
Endrin aldehyde	20.8	µg/kg	11.0	33.088	<6.29	63.0	41-147			
Endrin ketone	18.9	µg/kg	11.0	33.088	<6.04	57.3	54-146			
gamma-BHC (Lindane)	20.5	µg/kg	11.0	33.088	<6.51	61.9	58-145			
Heptachlor	18.9	µg/kg	11.0	33.088	<6.41	57.2	51-145			
Heptachlor epoxide	20.0	µg/kg	11.0	33.088	<6.57	60.5	59-143			
Methoxychlor	17.1	µg/kg	11.0	33.088	<6.64	51.6	43-144			
trans-Chlordane	19.9	µg/kg	11.0	33.088	<6.59	60.3	56-145			
Surr: Decachlorobiphenyl	26.7	µg/kg		33.088		80.7	53-151			
Surr: Tetrachloro-m-xylene	17.3	µg/kg		33.088		52.2	67-127			S

MSD	CLIENT ID: Batch QC	Lab ID: QC-2288434-006
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Method: EPA 8081B

Dilution: 1

Analysis Date: 10/22/25 00:27

Prep Date: 10/21/25 11:24

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	21.9	µg/kg	10.8	32.361	<6.39	63.4	55-141	3.25	20	

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2288434

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3614355

MSD	CLIENT ID: Batch QC	Lab ID: QC-2288434-006
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Method: EPA 8081B

Dilution: 1

Analysis Date: 10/22/25 00:27

Prep Date: 10/21/25 11:24

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDE	27.3	µg/kg	10.8	32.361	8.08	62.0	55-143	9.57	20	
4,4'-DDT	20.1	µg/kg	10.8	32.361	<6.65	42.6	50-144	21.3	20	RS
Aldrin	20.0	µg/kg	10.8	32.361	<6.50	62.0	57-141	0.922	20	
alpha-BHC	20.6	µg/kg	10.8	32.361	<6.58	63.7	58-144	0.0009	20	
							60			
beta-BHC	19.7	µg/kg	10.8	32.361	<6.57	60.8	55-147	0.980	20	
cis-Chlordane	19.2	µg/kg	10.8	32.361	<6.68	59.4	58-142	4.47	20	
delta-BHC	15.6	µg/kg	10.8	32.361	<6.55	48.1	59-142	2.53	20	S
Dieldrin	19.1	µg/kg	10.8	32.361	<6.99	58.9	59-142	4.74	20	S
Endosulfan I	18.6	µg/kg	10.8	32.361	<6.72	57.4	57-145	3.43	20	
Endosulfan II	17.8	µg/kg	10.8	32.361	<6.62	55.1	58-138	0.759	20	S
Endosulfan sulfate	16.7	µg/kg	10.8	32.361	<6.15	51.8	54-135	7.21	20	S
Endrin	17.2	µg/kg	10.8	32.361	<8.09	53.0	45-150	10.4	20	
Endrin aldehyde	19.3	µg/kg	10.8	32.361	<6.34	59.8	41-147	7.51	20	
Endrin ketone	18.3	µg/kg	10.8	32.361	<6.08	56.5	54-146	3.63	20	
gamma-BHC (Lindane)	20.1	µg/kg	10.8	32.361	<6.56	62.2	58-145	1.74	20	
Heptachlor	17.0	µg/kg	10.8	32.361	<6.45	52.6	51-145	10.7	20	
Heptachlor epoxide	19.2	µg/kg	10.8	32.361	<6.62	59.3	59-143	4.23	20	
Methoxychlor	15.5	µg/kg	10.8	32.361	<6.69	47.9	43-144	9.76	20	
trans-Chlordane	19.7	µg/kg	10.8	32.361	<6.64	60.9	56-145	1.23	20	
Surr: Decachlorobiphenyl	29.0	µg/kg		32.361		89.5	53-151	8.19	30	
Surr: Tetrachloro-m-xylene	19.0	µg/kg		32.361		58.9	67-127	9.86	30	S

The following samples were analyzed in this batch: HN2515421-003



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2293802

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3621549

Organochlorine Pesticides by GC/ECD

MB	CLIENT ID: Method Blank	Lab ID: QC-2293802-001
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Method: EPA 8081B

Dilution: 1

Analysis Date: 10/23/25 19:46

Prep Date: 10/23/25 14:40

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	<6.39	µg/kg	10.0							U
4,4'-DDE	<6.59	µg/kg	10.0							U
4,4'-DDT	<6.65	µg/kg	10.0							U
Aldrin	<6.50	µg/kg	10.0							U
alpha-BHC	<6.58	µg/kg	10.0							U
beta-BHC	<6.57	µg/kg	10.0							U
Chlordane, Technical	<9.92	µg/kg	25.0							U
cis-Chlordane	<6.68	µg/kg	10.0							U
delta-BHC	<6.55	µg/kg	10.0							U
Dieldrin	<6.99	µg/kg	10.0							U
Endosulfan I	<6.72	µg/kg	10.0							U
Endosulfan II	<6.62	µg/kg	10.0							U
Endosulfan sulfate	<6.15	µg/kg	10.0							U
Endrin	<8.09	µg/kg	10.0							U
Endrin aldehyde	<6.34	µg/kg	10.0							U
Endrin ketone	<6.08	µg/kg	10.0							U
gamma-BHC (Lindane)	<6.56	µg/kg	10.0							U
Heptachlor	<6.45	µg/kg	10.0							U
Heptachlor epoxide	<6.62	µg/kg	10.0							U
Methoxychlor	<6.69	µg/kg	10.0							U
Toxaphene	<10.8	µg/kg	60.0							U
trans-Chlordane	<6.64	µg/kg	10.0							U
Surr: Decachlorobiphenyl	51.3	µg/kg		33.33		154	53-151			S
Surr: Tetrachloro-m-xylene	36.2	µg/kg		33.33		109	67-127			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2293802-002
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Method: EPA 8081B

Dilution: 1

Analysis Date: 10/23/25 19:58

Prep Date: 10/23/25 14:40

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	39.7	µg/kg	10.0	33.33		119	55-141			
4,4'-DDE	38.1	µg/kg	10.0	33.33		114	55-143			
4,4'-DDT	40.8	µg/kg	10.0	33.33		122	50-144			
Aldrin	35.0	µg/kg	10.0	33.33		105	57-141			
alpha-BHC	35.8	µg/kg	10.0	33.33		107	58-144			
beta-BHC	37.1	µg/kg	10.0	33.33		111	55-147			
cis-Chlordane	35.4	µg/kg	10.0	33.33		106	58-142			
delta-BHC	31.2	µg/kg	10.0	33.33		93.5	59-142			
Dieldrin	36.0	µg/kg	10.0	33.33		108	59-142			
Endosulfan I	35.2	µg/kg	10.0	33.33		106	57-145			
Endosulfan II	36.2	µg/kg	10.0	33.33		109	58-138			
Endosulfan sulfate	36.4	µg/kg	10.0	33.33		109	54-136			
Endrin	37.9	µg/kg	10.0	33.33		114	45-150			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2293802

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3621549

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2293802-002
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Method: EPA 8081B**Dilution:** 1**Analysis Date:** 10/23/25 19:58**Prep Date:** 10/23/25 14:40

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Endrin aldehyde	42.0	µg/kg	10.0	33.33		126	41-147			
Endrin ketone	37.0	µg/kg	10.0	33.33		111	54-146			
gamma-BHC (Lindane)	36.4	µg/kg	10.0	33.33		109	58-145			
Heptachlor	36.4	µg/kg	10.0	33.33		109	51-145			
Heptachlor epoxide	35.7	µg/kg	10.0	33.33		107	59-143			
Methoxychlor	40.2	µg/kg	10.0	33.33		121	43-144			
trans-Chlordane	36.2	µg/kg	10.0	33.33		108	56-145			
Surr: Decachlorobiphenyl	48.1	µg/kg		33.33		144	51-151			
Surr: Tetrachloro-m-xylene	34.0	µg/kg		33.33		102	67-127			

MS	CLIENT ID: 10034 Petoskey SB-1 (3-4)	Lab ID: QC-2293802-005
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Method: EPA 8081B**Dilution:** 1**Analysis Date:** 10/23/25 20:09**Prep Date:** 10/23/25 14:40

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	29.4	µg/kg	11.1	32.827	15.3	48.4	55-141			S
4,4'-DDT	<6.55	µg/kg	11.1	33.33	7.48	NC	50-144			U
Aldrin	<6.40	µg/kg	11.1	32.827	<6.40	19.8	57-141			SU
alpha-BHC	<6.48	µg/kg	11.1	32.827	<6.48	23.3	58-144			SU
beta-BHC	11.2	µg/kg	11.1	32.827	<6.47	34.1	55-147			S
cis-Chlordane	22.7	µg/kg	11.1	32.827	<6.58	69.2	58-142			
delta-BHC	<6.45	µg/kg	11.1	32.827	<6.45	5.75	59-142			SU
Dieldrin	18.0	µg/kg	11.1	32.827	<6.89	54.9	59-142			S
Endosulfan I	<6.62	µg/kg	11.1	32.827	<6.62	16.3	57-145			SU
Endosulfan II	<6.52	µg/kg	11.1	32.827	<6.52	17.8	58-138			SU
Endosulfan sulfate	<6.06	µg/kg	11.1	32.827	<6.06	9.70	54-135			SU
Endrin	<7.97	µg/kg	11.1	32.827	<7.97	24.3	45-150			SU
Endrin aldehyde	<6.24	µg/kg	11.1	32.827	<6.24	31.4	41-147			SU
Endrin ketone	<5.99	µg/kg	11.1	32.827	<5.99	13.8	54-146			SU
gamma-BHC (Lindane)	<6.46	µg/kg	11.1	32.827	<6.46	15.2	58-145			SU
Heptachlor	<6.36	µg/kg	11.1	32.827	<6.36	5.25	51-145			SU
Heptachlor epoxide	15.1	µg/kg	11.1	32.827	<6.52	45.9	59-143			S
Methoxychlor	<6.59	µg/kg	11.1	32.827	<6.59	0.00	43-144			SU
trans-Chlordane	697	µg/kg	11.1	32.827	<6.54	2120	56-145			ES
Surr: Decachlorobiphenyl	27.8	µg/kg		32.827		84.8	53-151			
Surr: Tetrachloro-m-xylene	16.3	µg/kg		32.827		49.6	67-127			S

MSD	CLIENT ID: 10034 Petoskey SB-1 (3-4)	Lab ID: QC-2293802-006
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Method: EPA 8081B**Dilution:** 1**Analysis Date:** 10/23/25 20:20**Prep Date:** 10/23/25 14:40

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	19.8	µg/kg	11.0	32.443	15.3	19.3	55-141	39.1	20	RS
4,4'-DDT	<6.65	µg/kg	11.0	32.443	7.48	9.70	50-144			US

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2293802

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3621549

MSD	CLIENT ID: 10034 Petoskey SB-1 (3-4)	Lab ID: QC-2293802-006
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Method: EPA 8081B

Dilution: 1

Analysis Date: 10/23/25 20:20

Prep Date: 10/23/25 14:40

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aldrin	<6.50	µg/kg	11.0	32.443	<6.50	24.6	57-141			US
alpha-BHC	<6.58	µg/kg	11.0	32.443	<6.58	24.2	58-144			US
beta-BHC	<6.57	µg/kg	11.0	32.443	<6.57	31.5	55-147	NC		US
cis-Chlordane	14.8	µg/kg	11.0	32.443	<6.68	45.8	58-142	41.9	20	RS
delta-BHC	<6.55	µg/kg	11.0	32.443	<6.55	9.40	59-142			US
Dieldrin	12.0	µg/kg	11.0	32.443	<6.99	37.0	59-142	40.2	20	RS
Endosulfan I	<6.72	µg/kg	11.0	32.443	<6.72	20.5	57-145			US
Endosulfan II	<6.62	µg/kg	11.0	32.443	<6.62	14.3	58-138			US
Endosulfan sulfate	<6.15	µg/kg	11.0	32.443	<6.15	11.0	54-135			US
Endrin	<8.09	µg/kg	11.0	32.443	<8.09	27.0	45-150			US
Endrin aldehyde	<6.34	µg/kg	11.0	32.443	<6.34	21.5	41-147			US
Endrin ketone	<6.08	µg/kg	11.0	32.443	<6.08	17.2	54-146			US
gamma-BHC (Lindane)	<6.56	µg/kg	11.0	32.443	<6.56	22.4	58-145			US
Heptachlor	<6.45	µg/kg	11.0	32.443	<6.45	15.5	51-145			US
Heptachlor epoxide	11.1	µg/kg	11.0	32.443	<6.62	34.1	59-143	30.6	20	RS
Methoxychlor	<6.69	µg/kg	11.0	32.443	<6.69	14.4	43-144			US
trans-Chlordane	939	µg/kg	11.0	32.443	<6.64	2890	56-145	29.5	20	ERS
Surr: Decachlorobiphenyl	15.7	µg/kg		32.443		48.3	53-151	56.0	30	SR
Surr: Tetrachloro-m-xylene	9.20	µg/kg		32.443		28.4	67-127	55.5	30	SR

The following samples were analyzed in this batch: HN2515421-001, HN2515421-002



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2279041

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3605132

Polychlorinated Biphenyls (PCBs) by GC/ECD

MB **CLIENT ID: Method Blank** **Lab ID: QC-2279041-001**

Method: EPA 8082A **Dilution:** 1 **Analysis Date:** 10/18/25 15:10
Prep Date: 10/16/25 13:06

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	<22.9	µg/kg	66.7							U
Aroclor 1221	<22.9	µg/kg	66.7							U
Aroclor 1232	<22.9	µg/kg	66.7							U
Aroclor 1242	<22.9	µg/kg	66.7							U
Aroclor 1248	<22.9	µg/kg	66.7							U
Aroclor 1254	<18.6	µg/kg	66.7							U
Aroclor 1260	<18.6	µg/kg	66.7							U
Aroclor 1262	<18.6	µg/kg	66.7							U
Aroclor 1268	<18.6	µg/kg	66.7							U
Total PCB	<18.6	µg/kg	66.7							U
Surr: Decachlorobiphenyl	33.1	µg/kg		33.3		99.4	54-146			
Surr: Tetrachloro-m-xylene	29.1	µg/kg		33.3		87.4	58-140			

LCS **CLIENT ID: Laboratory Control Sample** **Lab ID: QC-2279041-002**

Method: EPA 8082A **Dilution:** 1 **Analysis Date:** 10/18/25 15:22
Prep Date: 10/16/25 13:06

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	786	µg/kg	66.7	833		94.4	71-135			
Aroclor 1260	806	µg/kg	66.7	833		96.7	67-135			
Surr: Decachlorobiphenyl	37.6	µg/kg		33.3		113	54-146			
Surr: Tetrachloro-m-xylene	31.6	µg/kg		33.3		95.0	58-140			

MS **CLIENT ID: Batch QC** **Lab ID: QC-2279041-005**

Method: EPA 8082A **Dilution:** 1 **Analysis Date:** 10/18/25 15:33
Prep Date: 10/16/25 13:06

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	792	µg/kg	72.0	822.23	<22.6	96.4	71-135			
Aroclor 1260	834	µg/kg	72.0	822.23	<18.4	101	67-135			
Surr: Decachlorobiphenyl	39.0	µg/kg		32.87		119	54-146			
Surr: Tetrachloro-m-xylene	31.3	µg/kg		32.87		95.2	58-140			

MSD **CLIENT ID: Batch QC** **Lab ID: QC-2279041-006**

Method: EPA 8082A **Dilution:** 1 **Analysis Date:** 10/18/25 15:45
Prep Date: 10/16/25 13:06

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	792	µg/kg	71.8	819.25	<22.9	96.7	71-135	0.0372	20	
Aroclor 1260	826	µg/kg	71.8	819.25	<18.6	101	67-135	0.894	20	
Surr: Decachlorobiphenyl	38.6	µg/kg		32.75		118	54-146	0.956	30	
Surr: Tetrachloro-m-xylene	31.9	µg/kg		32.75		97.4	58-140	1.92	30	

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2279041

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3605132

The following samples were analyzed in this batch: HN2515421-002, HN2515421-003
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Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2288188

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3614644

Polychlorinated Biphenyls (PCBs) by GC/ECD

MB	CLIENT ID: Method Blank	Lab ID: QC-2288188-001
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Method: EPA 8082A **Dilution:** 1 **Analysis Date:** 10/22/25 10:23
Prep Date: 10/21/25 10:07

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	<22.9	µg/kg	66.7							U
Aroclor 1221	<22.9	µg/kg	66.7							U
Aroclor 1232	<22.9	µg/kg	66.7							U
Aroclor 1242	<22.9	µg/kg	66.7							U
Aroclor 1248	<22.9	µg/kg	66.7							U
Aroclor 1254	<18.6	µg/kg	66.7							U
Aroclor 1260	<18.6	µg/kg	66.7							U
Aroclor 1262	<18.6	µg/kg	66.7							U
Aroclor 1268	<18.6	µg/kg	66.7							U
Total PCB	<18.6	µg/kg	66.7							U
Surr: Decachlorobiphenyl	48.8	µg/kg		33.3		147	54-146			S
Surr: Tetrachloro-m-xylene	42.2	µg/kg		33.3		127	58-140			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2288188-002
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Method: EPA 8082A **Dilution:** 1 **Analysis Date:** 10/22/25 10:35
Prep Date: 10/21/25 10:07

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	869	µg/kg	66.7	833		104	71-135			
Aroclor 1260	829	µg/kg	66.7	833		99.6	67-135			
Surr: Decachlorobiphenyl	43.2	µg/kg		33.3		130	54-146			
Surr: Tetrachloro-m-xylene	36.5	µg/kg		33.3		110	58-140			

MS	CLIENT ID: Batch QC	Lab ID: QC-2288188-005
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Method: EPA 8082A **Dilution:** 1 **Analysis Date:** 10/22/25 10:46
Prep Date: 10/21/25 10:07

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	868	µg/kg	73.7	830.14	<22.8	105	71-135			
Aroclor 1260	875	µg/kg	73.7	830.14	<18.6	105	67-135			
Surr: Decachlorobiphenyl	43.2	µg/kg		33.186		130	54-146			
Surr: Tetrachloro-m-xylene	33.5	µg/kg		33.186		101	58-140			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2288188-006
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Method: EPA 8082A **Dilution:** 1 **Analysis Date:** 10/22/25 10:58
Prep Date: 10/21/25 10:07

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	814	µg/kg	72.8	819.16	<22.9	99.4	71-135	6.44	20	
Aroclor 1260	820	µg/kg	72.8	819.16	<18.6	100	67-135	6.50	20	
Surr: Decachlorobiphenyl	44.6	µg/kg		32.747		136	54-146	3.37	30	
Surr: Tetrachloro-m-xylene	33.5	µg/kg		32.747		102	58-140	0.0999	30	

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2288188

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3614644

The following samples were analyzed in this batch: HN2515421-001



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2279011

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3612730

Semivolatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2279011-001
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/21/25 15:44

Prep Date: 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	<5.41	µg/kg	33.0							U
1,2,4,5-Tetrachlorobenzene	<7.69	µg/kg	333							U
1,4-Dioxane (1,4- Diethyleneoxide)	<23.9	µg/kg	167							U
1-Methylnaphthalene	<4.80	µg/kg	6.67							U
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	<7.81	µg/kg	33.0							U
2,3,4,6-Tetrachlorophenol	<24.4	µg/kg	67.0							U
2,4,5-Trichlorophenol	<19.8	µg/kg	33.0							U
2,4,6-Trichlorophenol	<8.87	µg/kg	33.0							U
2,4-Dichlorophenol	<17.9	µg/kg	33.0							U
2,4-Dimethylphenol	<17.1	µg/kg	33.0							U
2,4-Dinitrophenol	<244	µg/kg	333							U
2,4-Dinitrotoluene (2,4-DNT)	<21.6	µg/kg	33.0							U
2,6-Dinitrotoluene (2,6-DNT)	<8.51	µg/kg	33.0							U
2-Chloronaphthalene	<4.66	µg/kg	6.67							U
2-Chlorophenol	<21.8	µg/kg	33.0							U
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	<27.8	µg/kg	33.0							U
2-Methylphenol (o-Cresol)	<9.01	µg/kg	33.0							U
2-Nitroaniline	<18.5	µg/kg	33.0							U
2-Nitrophenol	<9.50	µg/kg	33.0							U
3&4-Methylphenol	<18.2	µg/kg	33.0							U
3,3'-Dichlorobenzidine	<15.6	µg/kg	167							U
4-Bromophenyl phenyl ether (BDE-3)	<18.3	µg/kg	33.0							U
4-Chloro-3-methylphenol	<9.50	µg/kg	33.0							U
4-Chloroaniline	<16.9	µg/kg	67.0							U
4-Chlorophenyl phenylether	<9.21	µg/kg	33.0							U
4-Nitroaniline	<51.7	µg/kg	167							U
4-Nitrophenol	<78.1	µg/kg	333							U
Acenaphthene	<4.82	µg/kg	6.67							U
Acenaphthylene	<5.78	µg/kg	6.67							U
Acetophenone	<5.22	µg/kg	33.0							U
Anthracene	<4.70	µg/kg	6.67							U
Atrazine	<19.5	µg/kg	33.0							U
Benzaldehyde	<51.2	µg/kg	67.0							U
Benzo(a)anthracene	<5.76	µg/kg	6.67							U
Benzo(a)pyrene	<4.09	µg/kg	6.67							U
Benzo(b)fluoranthene	<4.97	µg/kg	6.67							U
Benzo(g,h,i)perylene	<5.11	µg/kg	6.67							U
Benzo(k)fluoranthene	<5.05	µg/kg	6.67							U
bis(2-Chloroethoxy)methane	<21.1	µg/kg	33.0							U
bis(2-Chloroethyl) ether	<9.44	µg/kg	33.0							U
Butyl benzyl phthalate	<41.7	µg/kg	67.0							U
Caprolactam	<30.1	µg/kg	33.0							U



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2279011

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3612730

MB	CLIENT ID: Method Blank	Lab ID: QC-2279011-001
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/21/25 15:44

Prep Date: 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Carbazole	<9.82	µg/kg	33.0							U
Chrysene	<5.39	µg/kg	6.67							U
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	<27.6	µg/kg	33.0							U
Dibenz(a,h) anthracene	<3.60	µg/kg	33.0							U
Dibenzofuran	<4.90	µg/kg	33.0							U
Diethyl phthalate	<11.3	µg/kg	33.0							U
Dimethyl phthalate	<6.50	µg/kg	33.0							U
Fluoranthene	<3.20	µg/kg	6.67							U
Fluorene	<4.84	µg/kg	6.67							U
Hexachlorobenzene	<9.70	µg/kg	33.0							U
Hexachlorobutadiene	<7.85	µg/kg	33.0							U
Hexachlorocyclopentadiene	<31.6	µg/kg	33.0							U
Hexachloroethane	<13.8	µg/kg	33.0							U
Indeno(1,2,3-cd) pyrene	<4.64	µg/kg	6.67							U
Isophorone	<6.51	µg/kg	167							U
Methylphenol, Total	<9.01	µg/kg	67.0							U
Naphthalene	<4.26	µg/kg	6.67							U
Nitrobenzene	<11.2	µg/kg	167							U
n-Nitrosodi-n-propylamine	<5.50	µg/kg	33.0							U
N-Nitrosodiphenylamine	<19.3	µg/kg	33.0							U
Pentachlorophenol	<26.5	µg/kg	33.0							U
Phenanthrene	<3.10	µg/kg	6.67							U
Phenol	<16.7	µg/kg	33.0							U
Pyrene	<3.33	µg/kg	6.67							U
Pyridine	<65.6	µg/kg	167							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2279011-002
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/21/25 16:05

Prep Date: 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	977	µg/kg	33.0	1333		73.3	57-101			
1,2,4,5-Tetrachlorobenzene	956	µg/kg	333	1333		71.7	54-98			
1-Methylnaphthalene	987	µg/kg	6.67	1333		74.1	56-100			
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	937	µg/kg	33.0	1333		70.3	50-101			
2,3,4,6-Tetrachlorophenol	889	µg/kg	67.0	1333		66.7	48-103			
2,4,5-Trichlorophenol	1010	µg/kg	33.0	1333		75.5	54-98			
2,4,6-Trichlorophenol	1060	µg/kg	33.0	1333		79.6	56-97			
2,4-Dichlorophenol	954	µg/kg	33.0	1333		71.6	54-99			
2,4-Dimethylphenol	881	µg/kg	33.0	1333		66.1	47-102			
2,4-Dinitrophenol	802	µg/kg	333	1333		60.2	10-100			
2,4-Dinitrotoluene (2,4-DNT)	1040	µg/kg	33.0	1333		78.0	62-105			
2,6-Dinitrotoluene (2,6-DNT)	1050	µg/kg	33.0	1333		79.1	62-103			
2-Chloronaphthalene	1050	µg/kg	6.67	1333		78.5	57-101			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2279011

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3612730

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2279011-002
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/21/25 16:05

Prep Date: 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2-Chlorophenol	953	µg/kg	33.0	1333		71.5	52-102			
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	915	µg/kg	33.0	1333		68.7	42-104			
2-Methylphenol (o-Cresol)	912	µg/kg	33.0	1333		68.4	54-103			
2-Nitroaniline	1050	µg/kg	33.0	1333		78.4	57-103			
2-Nitrophenol	988	µg/kg	33.0	1333		74.1	52-102			
3&4-Methylphenol	930	µg/kg	33.0	1333		69.8	56-103			
3,3'-Dichlorobenzidine	811	µg/kg	167	1333		60.9	41-91			
4-Bromophenyl phenyl ether (BDE-3)	1040	µg/kg	33.0	1333		78.2	63-104			
4-Chloro-3-methylphenol	935	µg/kg	33.0	1333		70.1	57-103			
4-Chloroaniline	979	µg/kg	67.0	1333		73.4	32-99			
4-Chlorophenyl phenylether	1040	µg/kg	33.0	1333		78.4	62-100			
4-Nitroaniline	595	µg/kg	167	1333		44.6	19-124			
4-Nitrophenol	996	µg/kg	333	1333		74.7	44-106			
Acenaphthene	1050	µg/kg	6.67	1333		78.5	60-101			
Acenaphthylene	1080	µg/kg	6.67	1333		80.8	59-101			
Acetophenone	921	µg/kg	33.0	1333		69.1	54-102			
Anthracene	1030	µg/kg	6.67	1333		77.1	63-96			
Atrazine	<19.5	µg/kg	33.0	1333		0.00	60-110			SU
Benzaldehyde	421	µg/kg	67.0	1333		31.6	10-143			
Benzo(a)anthracene	1030	µg/kg	6.67	1333		77.3	66-102			
Benzo(a)pyrene	1050	µg/kg	6.67	1333		78.9	66-105			
Benzo(b)fluoranthene	1040	µg/kg	6.67	1333		77.7	67-105			
Benzo(g,h,i)perylene	1060	µg/kg	6.67	1333		79.8	59-110			
Benzo(k)fluoranthene	1060	µg/kg	6.67	1333		79.7	68-106			
bis(2-Chloroethoxy)methane	937	µg/kg	33.0	1333		70.3	54-102			
bis(2-Chloroethyl) ether	940	µg/kg	33.0	1333		70.5	51-101			
Butyl benzyl phthalate	1030	µg/kg	67.0	1333		77.6	59-107			
Caprolactam	928	µg/kg	33.0	1333		69.6	49-103			
Carbazole	1010	µg/kg	33.0	1333		76.0	63-103			
Chrysene	1040	µg/kg	6.67	1333		77.9	66-105			
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1080	µg/kg	33.0	1333		81.3	63-101			
Dibenz(a,h) anthracene	1070	µg/kg	33.0	1333		80.2	61-109			
Dibenzofuran	1060	µg/kg	33.0	1333		79.4	61-101			
Diethyl phthalate	1030	µg/kg	33.0	1333		77.4	63-105			
Dimethyl phthalate	1040	µg/kg	33.0	1333		77.7	64-104			
Fluoranthene	1020	µg/kg	6.67	1333		76.2	66-105			
Fluorene	1040	µg/kg	6.67	1333		78.2	62-101			
Hexachlorobenzene	1010	µg/kg	33.0	1333		75.5	61-104			
Hexachlorobutadiene	985	µg/kg	33.0	1333		73.9	52-99			
Hexachlorocyclopentadiene	1010	µg/kg	33.0	1333		75.5	39-106			
Hexachloroethane	943	µg/kg	33.0	1333		70.7	59-99			
Indeno(1,2,3-cd) pyrene	1170	µg/kg	6.67	1333		87.7	57-114			
Isophorone	968	µg/kg	167	1333		72.6	55-101			
Methylphenol, Total	1840	µg/kg	67.0	2667		69.1	54-103			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2279011

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3612730

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2279011-002
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/21/25 16:05

Prep Date: 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Naphthalene	1020	µg/kg	6.67	1333		76.3	54-99			
Nitrobenzene	1010	µg/kg	167	1333		75.8	53-100			
n-Nitrosodi-n-propylamine	933	µg/kg	33.0	1333		70.0	52-104			
N-Nitrosodiphenylamine	1030	µg/kg	33.0	1333		77.0	61-104			
Pentachlorophenol	883	µg/kg	33.0	1333		66.3	35-100			
Phenanthrene	1030	µg/kg	6.67	1333		77.0	64-101			
Phenol	935	µg/kg	33.0	1333		70.1	51-107			
Pyrene	1040	µg/kg	6.67	1333		78.0	62-114			
Pyridine	872	µg/kg	167	1333		65.4	40-84			

MS	CLIENT ID: Batch QC	Lab ID: QC-2279011-005
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Method: EPA 8270E

Dilution: 10

Analysis Date: 10/21/25 16:26

Prep Date: 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	976	µg/kg	365	1327.7	<53.9	73.5	57-101			
1,2,4,5-Tetrachlorobenzene	<76.6	µg/kg	3680	1327.7	<76.6	69.5	54-98			U
1-Methylnaphthalene	950	µg/kg	73.7	1327.7	<47.8	71.5	56-100			
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	863	µg/kg	365	1327.7	<77.8	65.0	50-101			
2,3,4,6-Tetrachlorophenol	777	µg/kg	737	1327.7	<243	58.5	48-103			
2,4,5-Trichlorophenol	1070	µg/kg	365	1327.7	<197	80.5	54-98			
2,4,6-Trichlorophenol	1060	µg/kg	365	1327.7	<88.4	80.0	56-97			
2,4-Dichlorophenol	910	µg/kg	365	1327.7	<179	68.5	54-99			
2,4-Dimethylphenol	1310	µg/kg	365	1327.7	<171	99.0	47-102			
2,4-Dinitrophenol	<2430	µg/kg	3680	1327.7	<2430	38.5	10-100			U
2,4-Dinitrotoluene (2,4-DNT)	950	µg/kg	365	1327.7	<216	71.5	62-105			
2,6-Dinitrotoluene (2,6-DNT)	1000	µg/kg	365	1327.7	<84.8	75.5	62-103			
2-Chloronaphthalene	1080	µg/kg	73.7	1327.7	<46.4	81.0	57-101			
2-Chlorophenol	950	µg/kg	365	1327.7	<217	71.5	52-102			
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	697	µg/kg	365	1327.7	<277	52.5	42-104			
2-Methylphenol (o-Cresol)	1020	µg/kg	365	1327.7	<89.7	77.0	54-103			
2-Nitroaniline	1130	µg/kg	365	1327.7	<184	85.0	57-103			
2-Nitrophenol	963	µg/kg	365	1327.7	<94.6	72.5	52-102			
3&4-Methylphenol	1010	µg/kg	365	1327.7	<181	76.0	56-103			
3,3'-Dichlorobenzidine	<155	µg/kg	1840	1327.7	<155	66.0	41-91			U
4-Bromophenyl phenyl ether (BDE-3)	1100	µg/kg	365	1327.7	<182	83.0	63-104			
4-Chloro-3-methylphenol	989	µg/kg	365	1327.7	<94.6	74.5	57-103			
4-Chloroaniline	850	µg/kg	737	1327.7	<169	64.0	32-99			
4-Chlorophenyl phenylether	996	µg/kg	365	1327.7	<91.7	75.0	62-100			
4-Nitroaniline	<515	µg/kg	1840	1327.7	<515	68.0	19-124			U
4-Nitrophenol	<778	µg/kg	3680	1327.7	<778	61.0	44-106			U
Acenaphthene	1050	µg/kg	73.7	1327.7	<48.0	79.0	60-101			
Acenaphthylene	1100	µg/kg	73.7	1327.7	<57.6	78.6	59-101			
Acetophenone	863	µg/kg	365	1327.7	<52.0	65.0	54-102			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2279011

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3612730

MS	CLIENT ID: Batch QC	Lab ID: QC-2279011-005
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Method: EPA 8270E**Dilution:** 10**Analysis Date:** 10/21/25 16:26**Prep Date:** 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Anthracene	1140	µg/kg	73.7	1327.7	87.2	80.1	63-96			
Atrazine	1060	µg/kg	365	1327.7	<195	80.0	60-110			
Benzaldehyde	1040	µg/kg	737	1327.7	<510	78.0	10-143			
Benzo(a)anthracene	1490	µg/kg	73.7	1327.7	349	88.9	66-102			
Benzo(a)pyrene	1550	µg/kg	73.7	1327.7	392	90.4	66-105			
Benzo(b)fluoranthene	1630	µg/kg	73.7	1327.7	545	85.6	67-105			
Benzo(g,h,i)perylene	1490	µg/kg	73.7	1327.7	349	88.4	59-110			
Benzo(k)fluoranthene	1290	µg/kg	73.7	1327.7	196	83.7	68-106			
bis(2-Chloroethoxy)methane	863	µg/kg	365	1327.7	<210	65.0	54-102			
bis(2-Chloroethyl) ether	1000	µg/kg	365	1327.7	<94.0	75.5	51-101			
Butyl benzyl phthalate	1180	µg/kg	737	1327.7	<416	89.0	59-107			
Caprolactam	1120	µg/kg	365	1327.7	<300	84.0	49-103			
Carbazole	1120	µg/kg	365	1327.7	<97.8	84.0	63-103			
Chrysene	1380	µg/kg	73.7	1327.7	312	82.8	66-105			
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1300	µg/kg	365	1327.7	371	72.9	63-101			
Dibenz(a,h) anthracene	1150	µg/kg	365	1327.7	<35.9	86.5	61-109			
Dibenzofuran	1040	µg/kg	365	1327.7	<48.8	78.0	61-101			
Diethyl phthalate	1070	µg/kg	365	1327.7	<113	80.5	63-105			
Dimethyl phthalate	1020	µg/kg	365	1327.7	<64.7	77.0	64-104			
Fluoranthene	1940	µg/kg	73.7	1327.7	683	99.7	66-105			
Fluorene	1030	µg/kg	73.7	1327.7	<48.2	77.5	62-101			
Hexachlorobenzene	983	µg/kg	365	1327.7	<96.6	74.0	61-104			
Hexachlorobutadiene	989	µg/kg	365	1327.7	<78.2	74.5	52-99			
Hexachlorocyclopentadiene	<325	µg/kg	365	1327.7	<325	0.00	39-106			SU
Hexachloroethane	910	µg/kg	365	1327.7	<137	68.5	59-99			
Indeno(1,2,3-cd) pyrene	1570	µg/kg	73.7	1327.7	392	91.9	57-114			
Isophorone	<64.8	µg/kg	1840	1327.7	<64.8	73.5	55-101			U
Methylphenol, Total	2030	µg/kg	365	2656.5	<89.7	76.5	54-103			
Naphthalene	1010	µg/kg	73.7	1327.7	<42.4	76.0	54-99			
Nitrobenzene	<112	µg/kg	1840	1327.7	<112	72.0	53-100			U
n-Nitrosodi-n-propylamine	916	µg/kg	365	1327.7	<54.8	69.0	52-104			
N-Nitrosodiphenylamine	1070	µg/kg	365	1327.7	<192	80.5	61-104			
Pentachlorophenol	803	µg/kg	365	1327.7	<264	60.5	35-100			
Phenanthrene	1540	µg/kg	73.7	1327.7	327	93.9	64-101			
Phenol	963	µg/kg	365	1327.7	<167	72.5	51-107			
Pyrene	1960	µg/kg	73.7	1327.7	639	104	52-114			
Pyridine	<654	µg/kg	1840	1327.7	<654	64.0	40-84			U

MSD	CLIENT ID: Batch QC	Lab ID: QC-2279011-006
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Method: EPA 8270E**Dilution:** 10**Analysis Date:** 10/21/25 16:47**Prep Date:** 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	960	µg/kg	362	1315.3	<53.4	73.0	57-101	1.62	30	

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2279011

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3612730

MSD	CLIENT ID: Batch QC	Lab ID: QC-2279011-006
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Method: EPA 8270E

Dilution: 10

Analysis Date: 10/21/25 16:47

Prep Date: 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,2,4,5-Tetrachlorobenzene	<75.9	µg/kg	3650	1315.3	<75.9	71.5	54-98	NC		U
1-Methylnaphthalene	947	µg/kg	73.1	1315.3	<47.4	72.0	56-100	0.242	30	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	921	µg/kg	362	1315.3	<77.1	70.0	50-101	6.47	30	
2,3,4,6-Tetrachlorophenol	849	µg/kg	731	1315.3	<241	64.5	48-103	8.82	30	
2,4,5-Trichlorophenol	941	µg/kg	362	1315.3	<195	71.5	54-98	12.8	30	
2,4,6-Trichlorophenol	1000	µg/kg	362	1315.3	<87.5	76.0	56-97	6.07	30	
2,4-Dichlorophenol	1010	µg/kg	362	1315.3	<177	77.0	54-99	10.7	30	
2,4-Dimethylphenol	1230	µg/kg	362	1315.3	<169	93.5	47-102	6.65	30	
2,4-Dinitrophenol	<2400	µg/kg	3650	1315.3	<2400	35.5	10-100	NC		U
2,4-Dinitrotoluene (2,4-DNT)	875	µg/kg	362	1315.3	<214	66.5	62-105	8.18	30	
2,6-Dinitrotoluene (2,6-DNT)	1220	µg/kg	362	1315.3	<84.0	93.0	62-103	19.8	30	
2-Chloronaphthalene	1020	µg/kg	73.1	1315.3	<46.0	77.5	57-101	5.36	30	
2-Chlorophenol	895	µg/kg	362	1315.3	<215	68.0	52-102	5.96	30	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	710	µg/kg	362	1315.3	<275	54.0	42-104	1.88	30	
2-Methylphenol (o-Cresol)	974	µg/kg	362	1315.3	<88.9	74.0	54-103	4.91	30	
2-Nitroaniline	921	µg/kg	362	1315.3	<183	70.0	57-103	20.3	30	
2-Nitrophenol	980	µg/kg	362	1315.3	<93.7	74.5	52-102	1.78	30	
3&4-Methylphenol	974	µg/kg	362	1315.3	<179	74.0	56-103	3.61	30	
3,3'-Dichlorobenzidine	<154	µg/kg	1830	1315.3	<154	62.0	41-91	NC		U
4-Bromophenyl phenyl ether (BDE-3)	1000	µg/kg	362	1315.3	<180	76.0	63-104	9.74	30	
4-Chloro-3-methylphenol	928	µg/kg	362	1315.3	<93.7	70.5	57-103	6.46	30	
4-Chloroaniline	<167	µg/kg	731	1315.3	<167	51.5	32-99	NC		U
4-Chlorophenyl phenylether	1050	µg/kg	362	1315.3	<90.9	79.5	62-100	4.89	30	
4-Nitroaniline	<510	µg/kg	1830	1315.3	<510	72.0	19-124	NC		U
4-Nitrophenol	<770	µg/kg	3650	1315.3	<770	59.5	44-106	NC		U
Acenaphthene	1010	µg/kg	73.1	1315.3	<47.6	77.0	60-101	3.50	30	
Acenaphthylene	1020	µg/kg	73.1	1315.3	<57.0	73.5	59-101	7.19	30	
Acetophenone	987	µg/kg	362	1315.3	<51.5	75.0	54-102	13.4	30	
Anthracene	1020	µg/kg	73.1	1315.3	87.2	71.6	63-96	11.3	30	
Atrazine	1080	µg/kg	362	1315.3	<193	82.0	60-110	1.53	30	
Benzaldehyde	<505	µg/kg	731	1315.3	<505	40.0	10-143	NC		U
Benzo(a)anthracene	1310	µg/kg	73.1	1315.3	349	75.6	66-102	13.2	30	
Benzo(a)pyrene	1340	µg/kg	73.1	1315.3	392	75.2	66-105	14.6	30	
Benzo(b)fluoranthene	1490	µg/kg	73.1	1315.3	545	75.7	67-105	9.01	30	
Benzo(g,h,i)perylene	1290	µg/kg	73.1	1315.3	349	74.1	59-110	14.3	30	
Benzo(k)fluoranthene	1100	µg/kg	73.1	1315.3	196	70.1	68-106	15.9	30	
bis(2-Chloroethoxy)methane	921	µg/kg	362	1315.3	<208	70.0	54-102	6.47	30	
bis(2-Chloroethyl) ether	921	µg/kg	362	1315.3	<93.1	70.0	51-101	8.50	30	
Butyl benzyl phthalate	1150	µg/kg	731	1315.3	<412	87.5	59-107	2.64	30	
Caprolactam	1100	µg/kg	362	1315.3	<297	83.5	49-103	1.54	30	
Carbazole	1040	µg/kg	362	1315.3	<96.9	79.0	63-103	7.07	30	
Chrysene	1300	µg/kg	73.1	1315.3	312	77.1	66-105	6.37	30	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1330	µg/kg	362	1315.3	371	75.7	63-101	2.08	30	

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2279011

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3612730

MSD	CLIENT ID: Batch QC	Lab ID: QC-2279011-006
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Method: EPA 8270E

Dilution: 10

Analysis Date: 10/21/25 16:47

Prep Date: 10/16/25 12:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dibenz(a,h) anthracene	1050	µg/kg	362	1315.3	<35.5	79.5	61-109	9.37	30	
Dibenzofuran	1020	µg/kg	362	1315.3	<48.4	77.5	61-101	1.58	30	
Diethyl phthalate	980	µg/kg	362	1315.3	<112	74.5	63-105	8.68	30	
Dimethyl phthalate	1000	µg/kg	362	1315.3	<64.1	76.0	64-104	2.25	30	
Fluoranthene	1690	µg/kg	73.1	1315.3	683	81.8	66-105	13.7	30	
Fluorene	993	µg/kg	73.1	1315.3	<47.8	75.5	62-101	3.55	30	
Hexachlorobenzene	941	µg/kg	362	1315.3	<95.7	71.5	61-104	4.38	30	
Hexachlorobutadiene	967	µg/kg	362	1315.3	<77.5	73.5	52-99	2.29	30	
Hexachlorocyclopentadiene	<322	µg/kg	362	1315.3	<322	17.0	39-106	NC		US
Hexachloroethane	967	µg/kg	362	1315.3	<136	73.5	59-99	6.10	30	
Indeno(1,2,3-cd) pyrene	1410	µg/kg	73.1	1315.3	392	80.2	57-114	11.1	30	
Isophorone	<64.2	µg/kg	1830	1315.3	<64.2	74.5	55-101	NC		U
Methylphenol, Total	1950	µg/kg	362	2631.6	<88.9	74.0	54-103	4.26	30	
Naphthalene	993	µg/kg	73.1	1315.3	<42.0	75.5	54-99	1.60	30	
Nitrobenzene	<111	µg/kg	1830	1315.3	<111	75.5	53-100	NC		U
n-Nitrosodi-n-propylamine	914	µg/kg	362	1315.3	<54.3	69.5	52-104	0.217	30	
N-Nitrosodiphenylamine	1120	µg/kg	362	1315.3	<190	85.0	61-104	4.50	30	
Pentachlorophenol	908	µg/kg	362	1315.3	<261	69.0	35-100	12.2	30	
Phenanthrene	1290	µg/kg	73.1	1315.3	327	75.6	64-101	17.8	30	
Phenol	914	µg/kg	362	1315.3	<165	69.5	51-107	5.16	30	
Pyrene	1700	µg/kg	73.1	1315.3	639	85.3	52-114	14.3	30	
Pyridine	<647	µg/kg	1830	1315.3	<647	65.0	40-84	NC		U

The following samples were analyzed in this batch: HN2515421-001, HN2515421-002, HN2515421-003



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2280030

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3616792

Volatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2280030-001
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/23/25 04:15

Prep Date: 10/16/25 15:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	<13.6	µg/kg	30.0							U
1,1,2,2-Tetrachloroethane	<13.2	µg/kg	30.0							U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<19.0	µg/kg	30.0							U
1,1,2-Trichloroethane	<12.8	µg/kg	30.0							U
1,1-Dichloroethane	<10.9	µg/kg	30.0							U
1,1-Dichloroethylene	<9.72	µg/kg	30.0							U
1,2,3-Trichlorobenzene	<36.0	µg/kg	100							U
1,2,3-Trichloropropane	<12.6	µg/kg	30.0							U
1,2,4-Trichlorobenzene	<34.0	µg/kg	100							U
1,2,4-Trimethylbenzene	<22.0	µg/kg	30.0							U
1,2-Dibromo-3-chloropropane (DBCP)	<27.6	µg/kg	100							U
1,2-Dibromoethane (EDB, Ethylene dibromide)	<17.6	µg/kg	30.0							U
1,2-Dichlorobenzene (o-Dichlorobenzene)	<11.4	µg/kg	30.0							U
1,2-Dichloroethane (Ethylene dichloride)	<26.3	µg/kg	100							U
1,2-Dichloropropane	<22.1	µg/kg	30.0							U
1,3,5-Trimethylbenzene	<21.2	µg/kg	100							U
1,3-Dichlorobenzene (m-Dichlorobenzene)	<20.7	µg/kg	30.0							U
1,3-Dichloropropene	<16.8	µg/kg	60.0							U
1,4-Dichlorobenzene (p-Dichlorobenzene)	<24.4	µg/kg	30.0							U
2-Butanone (Methyl ethyl ketone, MEK)	<71.4	µg/kg	200							U
2-Hexanone	<14.9	µg/kg	30.0							U
4-Methyl-2-pentanone (MIBK)	<28.0	µg/kg	30.0							U
Acetone	<89.0	µg/kg	100							U
Benzene	<14.5	µg/kg	30.0							U
Bromochloromethane	<15.3	µg/kg	30.0							U
Bromodichloromethane	<16.8	µg/kg	30.0							U
Bromoform	<12.6	µg/kg	30.0							U
Carbon disulfide	<15.5	µg/kg	30.0							U
Carbon tetrachloride	<11.7	µg/kg	30.0							U
Chlorobenzene	<9.96	µg/kg	30.0							U
Chlorodibromomethane	<16.8	µg/kg	30.0							U
Chloroethane (Ethyl chloride)	<84.0	µg/kg	100							U
Chloroform	<11.0	µg/kg	30.0							U
cis-1,2-Dichloroethylene	<19.3	µg/kg	30.0							U
cis-1,3-Dichloropropene	<22.6	µg/kg	30.0							U
Cyclohexane	<23.0	µg/kg	100							U
Dichlorodifluoromethane (Freon-12)	<36.3	µg/kg	100							U
Ethylbenzene	<21.3	µg/kg	30.0							U

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2280030

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3616792

MB	CLIENT ID: Method Blank	Lab ID: QC-2280030-001
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/23/25 04:15

Prep Date: 10/16/25 15:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Isopropylbenzene	<19.0	µg/kg	30.0							U
m+p-Xylene	<40.0	µg/kg	60.0							U
Methyl bromide (Bromomethane)	<57.4	µg/kg	100							U
Methyl chloride (Chloromethane)	<82.0	µg/kg	100							U
Methyl tert-butyl ether (MTBE)	<21.9	µg/kg	30.0							U
Methylcyclohexane	<11.4	µg/kg	30.0							U
Methylene chloride (Dichloromethane)	<79.6	µg/kg	250							U
o-Xylene	<11.6	µg/kg	30.0							U
Styrene	<11.9	µg/kg	30.0							U
Tetrachloroethylene (Perchloroethylene)	<18.1	µg/kg	30.0							U
Toluene	<24.7	µg/kg	30.0							U
Total Xylene	<11.6	µg/kg	90.0							U
trans-1,2-Dichloroethylene	<24.8	µg/kg	30.0							U
trans-1,3-Dichloropropylene	<16.8	µg/kg	30.0							U
Trichloroethene (Trichloroethylene)	<13.4	µg/kg	30.0							U
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	<15.3	µg/kg	30.0							U
Vinyl chloride (Chloroethene)	<19.9	µg/kg	30.0							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2280030-002
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/23/25 03:27

Prep Date: 10/16/25 15:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1140	µg/kg	30.0	1000		114	75-121			
1,1,2,2-Tetrachloroethane	986	µg/kg	30.0	1000		98.6	79-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1030	µg/kg	30.0	1000		103	62-129			
1,1,2-Trichloroethane	942	µg/kg	30.0	1000		94.2	80-123			
1,1-Dichloroethane	1010	µg/kg	30.0	1000		101	74-124			
1,1-Dichloroethylene	1030	µg/kg	30.0	1000		103	68-131			
1,2,3-Trichlorobenzene	960	µg/kg	100	1000		96.0	60-135			
1,2,3-Trichloropropane	988	µg/kg	30.0	1000		98.8	77-121			
1,2,4-Trichlorobenzene	960	µg/kg	100	1000		96.0	63-130			
1,2,4-Trimethylbenzene	922	µg/kg	30.0	1000		92.2	64-126			
1,2-Dibromo-3-chloropropane (DBCP)	1010	µg/kg	100	1000		101	55-135			
1,2-Dibromoethane (EDB, Ethylene dibromide)	921	µg/kg	30.0	1000		92.1	63-155			
1,2-Dichlorobenzene (o-Dichlorobenzene)	1000	µg/kg	30.0	1000		100	77-122			
1,2-Dichloroethane (Ethylene dichloride)	1060	µg/kg	100	1000		106	70-130			
1,2-Dichloropropane	968	µg/kg	30.0	1000		96.8	71-130			
1,3,5-Trimethylbenzene	980	µg/kg	100	1000		98.0	66-130			
1,3-Dichlorobenzene (m-Dichlorobenzene)	999	µg/kg	30.0	1000		99.9	78-121			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2280030

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3616792

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2280030-002
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/23/25 03:27

Prep Date: 10/16/25 15:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,3-Dichloropropene	1850	µg/kg	60.0	2000		92.4	62-124			
1,4-Dichlorobenzene (p-Dichlorobenzene)	1010	µg/kg	30.0	1000		101	78-122			
2-Butanone (Methyl ethyl ketone, MEK)	1060	µg/kg	200	1000		106	47-164			
2-Hexanone	996	µg/kg	30.0	1000		99.6	70-137			
4-Methyl-2-pentanone (MIBK)	1380	µg/kg	30.0	1000		138	57-200			
Acetone	1060	µg/kg	100	1000		106	52-190			
Benzene	1010	µg/kg	30.0	1000		101	78-122			
Bromochloromethane	1040	µg/kg	30.0	1000		104	68-130			
Bromodichloromethane	1110	µg/kg	30.0	1000		111	75-125			
Bromoform	926	µg/kg	30.0	1000		92.6	59-120			
Carbon disulfide	1300	µg/kg	30.0	1000		130	60-163			
Carbon tetrachloride	1310	µg/kg	30.0	1000		131	69-123			S
Chlorobenzene	961	µg/kg	30.0	1000		96.1	79-120			
Chlorodibromomethane	914	µg/kg	30.0	1000		91.4	57-123			
Chloroethane (Ethyl chloride)	1030	µg/kg	100	1000		103	38-132			
Chloroform	1020	µg/kg	30.0	1000		102	72-122			
cis-1,2-Dichloroethylene	1060	µg/kg	30.0	1000		106	74-125			
cis-1,3-Dichloropropene	1050	µg/kg	30.0	1000		105	62-124			
Dichlorodifluoromethane (Freon-12)	887	µg/kg	100	1000		88.7	28-137			
Ethylbenzene	976	µg/kg	30.0	1000		97.6	75-121			
Isopropylbenzene	995	µg/kg	30.0	1000		99.5	74-121			
m+p-Xylene	1960	µg/kg	60.0	2000		98.0	67-129			
Methyl bromide (Bromomethane)	1070	µg/kg	100	1000		107	31-169			
Methyl chloride (Chloromethane)	870	µg/kg	100	1000		87.0	24-119			
Methyl tert-butyl ether (MTBE)	1200	µg/kg	30.0	1000		120	79-139			
Methylene chloride (Dichloromethane)	1060	µg/kg	250	1000		106	62-135			
o-Xylene	990	µg/kg	30.0	1000		99.0	75-120			
Styrene	942	µg/kg	30.0	1000		94.2	74-126			
Tetrachloroethylene (Perchloroethylene)	1000	µg/kg	30.0	1000		100.0	76-128			
Toluene	963	µg/kg	30.0	1000		96.3	76-120			
Total Xylene	2950	µg/kg	90.0	3000		98.3	67-129			
trans-1,2-Dichloroethylene	1030	µg/kg	30.0	1000		103	72-127			
trans-1,3-Dichloropropylene	798	µg/kg	30.0	1000		79.8	66-120			
Trichloroethene (Trichloroethylene)	946	µg/kg	30.0	1000		94.6	75-122			
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	1200	µg/kg	30.0	1000		120	51-115			S
Vinyl chloride (Chloroethene)	926	µg/kg	30.0	1000		92.6	43-128			

MS	CLIENT ID: Batch QC	Lab ID: QC-2280030-005
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/23/25 10:13

Prep Date: 10/16/25 15:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
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QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2280030

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3616792

MS	CLIENT ID: Batch QC	Lab ID: QC-2280030-005
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/23/25 10:13

Prep Date: 10/16/25 15:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1150	µg/kg	34.5	1036.3	<14.1	111	75-121			
1,1,2,2-Tetrachloroethane	737	µg/kg	34.5	1036.3	<13.7	71.2	79-125			S
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	997	µg/kg	34.5	1036.3	<19.7	96.2	62-129			
1,1,2-Trichloroethane	1010	µg/kg	34.5	1036.3	<13.2	97.7	80-123			
1,1-Dichloroethane	1000	µg/kg	34.5	1036.3	<11.3	96.9	74-124			
1,1-Dichloroethylene	1020	µg/kg	34.5	1036.3	<10.1	98.2	68-131			
1,2,3-Trichlorobenzene	940	µg/kg	115	1036.3	<37.3	90.8	60-135			
1,2,3-Trichloropropane	1030	µg/kg	34.5	1036.3	<13.0	99.4	77-121			
1,2,4-Trichlorobenzene	885	µg/kg	115	1036.3	<35.2	85.4	63-130			
1,2,4-Trimethylbenzene	993	µg/kg	34.5	1036.3	<22.8	95.8	64-126			
1,2-Dibromo-3-chloropropane (DBCP)	891	µg/kg	115	1036.3	<28.6	86.0	55-135			
1,2-Dibromoethane (EDB, Ethylene dibromide)	1010	µg/kg	34.5	1036.3	<18.3	97.8	63-155			
1,2-Dichlorobenzene (o-Dichlorobenzene)	1040	µg/kg	34.5	1036.3	<11.8	101	77-122			
1,2-Dichloroethane (Ethylene dichloride)	1030	µg/kg	115	1036.3	<27.3	99.3	70-130			
1,2-Dichloropropane	1030	µg/kg	34.5	1036.3	<22.9	99.2	71-130			
1,3,5-Trimethylbenzene	1050	µg/kg	115	1036.3	<22.0	101	66-130			
1,3-Dichlorobenzene (m-Dichlorobenzene)	997	µg/kg	34.5	1036.3	<21.5	96.2	78-121			
1,3-Dichloropropene	1590	µg/kg	68.9	2072.5	<17.4	76.6	62-124			
1,4-Dichlorobenzene (p-Dichlorobenzene)	993	µg/kg	34.5	1036.3	<25.3	95.8	78-122			
2-Butanone (Methyl ethyl ketone, MEK)	1120	µg/kg	230	1036.3	<74.0	108	47-164			
2-Hexanone	1080	µg/kg	34.5	1036.3	<15.4	104	70-137			
4-Methyl-2-pentanone (MIBK)	1110	µg/kg	34.5	1036.3	<29.0	107	57-200			
Acetone	1800	µg/kg	115	1036.3	<92.3	174	52-190			
Benzene	1110	µg/kg	34.5	1036.3	<15.1	107	78-122			
Bromochloromethane	1010	µg/kg	34.5	1036.3	<15.8	97.2	68-130			
Bromodichloromethane	1020	µg/kg	34.5	1036.3	<17.4	98.6	75-125			
Bromoform	814	µg/kg	34.5	1036.3	<13.1	78.6	59-120			
Carbon disulfide	963	µg/kg	34.5	1036.3	<16.1	93.0	60-163			
Carbon tetrachloride	1260	µg/kg	34.5	1036.3	<12.2	122	69-123			
Chlorobenzene	1040	µg/kg	34.5	1036.3	<10.3	100.0	79-120			
Chlorodibromomethane	832	µg/kg	34.5	1036.3	<17.5	80.2	57-123			
Chloroethane (Ethyl chloride)	1130	µg/kg	115	1036.3	<87.1	109	38-132			
Chloroform	985	µg/kg	34.5	1036.3	<11.4	95.0	72-122			
cis-1,2-Dichloroethylene	991	µg/kg	34.5	1036.3	<20.0	95.6	74-125			
cis-1,3-Dichloropropene	907	µg/kg	34.5	1036.3	<23.4	87.5	62-124			
Dichlorodifluoromethane (Freon-12)	860	µg/kg	115	1036.3	<37.6	83.0	28-137			
Ethylbenzene	1060	µg/kg	34.5	1036.3	<22.1	102	75-121			
Isopropylbenzene	1060	µg/kg	34.5	1036.3	<19.6	102	74-121			
m+p-Xylene	2120	µg/kg	68.9	2072.5	<41.5	102	67-129			
Methyl bromide (Bromomethane)	1140	µg/kg	115	1036.3	<59.5	110	31-169			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2280030

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3616792

MS	CLIENT ID: Batch QC	Lab ID: QC-2280030-005
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/23/25 10:13

Prep Date: 10/16/25 15:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Methyl chloride (Chloromethane)	990	µg/kg	115	1036.3	<85.0	95.6	24-119			
Methyl tert-butyl ether (MTBE)	1130	µg/kg	34.5	1036.3	<22.7	109	79-139			
Methylene chloride (Dichloromethane)	1100	µg/kg	287	1036.3	<82.5	106	62-135			
o-Xylene	1080	µg/kg	34.5	1036.3	<12.0	104	75-120			
Styrene	1020	µg/kg	34.5	1036.3	<12.3	98.8	74-126			
Tetrachloroethylene (Perchloroethylene)	1950	µg/kg	34.5	1036.3	<18.7	188	76-128			S
Toluene	1060	µg/kg	34.5	1036.3	<25.6	102	76-120			
Total Xylene	3200	µg/kg	103	3108.8	<12.0	103	67-129			
trans-1,2-Dichloroethylene	963	µg/kg	34.5	1036.3	<25.6	92.9	72-127			
trans-1,3-Dichloropropylene	682	µg/kg	34.5	1036.3	<17.4	65.8	66-120			S
Trichloroethene (Trichloroethylene)	1230	µg/kg	34.5	1036.3	<13.9	119	75-122			
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	1260	µg/kg	34.5	1036.3	<15.9	121	51-115			S
Vinyl chloride (Chloroethene)	1040	µg/kg	34.5	1036.3	<20.7	100	43-128			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2280030-006
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/23/25 10:29

Prep Date: 10/16/25 15:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1330	µg/kg	34.5	1036.3	<14.1	128	75-121	14.9	30	S
1,1,2,2-Tetrachloroethane	578	µg/kg	34.5	1036.3	<13.7	55.8	79-125	24.2	30	S
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	995	µg/kg	34.5	1036.3	<19.7	96.0	62-129	0.156	30	
1,1,2-Trichloroethane	787	µg/kg	34.5	1036.3	<13.2	75.9	80-123	25.1	30	S
1,1-Dichloroethane	1010	µg/kg	34.5	1036.3	<11.3	97.1	74-124	0.206	30	
1,1-Dichloroethylene	1090	µg/kg	34.5	1036.3	<10.1	105	68-131	6.79	30	
1,2,3-Trichlorobenzene	975	µg/kg	115	1036.3	<37.3	94.0	60-135	3.57	30	
1,2,3-Trichloropropane	971	µg/kg	34.5	1036.3	<13.0	93.7	77-121	5.90	30	
1,2,4-Trichlorobenzene	911	µg/kg	115	1036.3	<35.2	87.9	63-130	2.83	30	
1,2,4-Trimethylbenzene	941	µg/kg	34.5	1036.3	<22.8	90.8	64-126	5.36	30	
1,2-Dibromo-3-chloropropane (DBCP)	856	µg/kg	115	1036.3	<28.6	82.6	55-135	4.03	30	
1,2-Dibromoethane (EDB, Ethylene dibromide)	861	µg/kg	34.5	1036.3	<18.3	83.0	63-155	16.3	30	
1,2-Dichlorobenzene (o-Dichlorobenzene)	1010	µg/kg	34.5	1036.3	<11.8	97.4	77-122	3.23	30	
1,2-Dichloroethane (Ethylene dichloride)	1340	µg/kg	115	1036.3	<27.3	129	70-130	26.2	30	
1,2-Dichloropropane	1020	µg/kg	34.5	1036.3	<22.9	98.0	71-130	1.17	30	
1,3,5-Trimethylbenzene	1010	µg/kg	115	1036.3	<22.0	97.7	66-130	3.62	30	
1,3-Dichlorobenzene (m-Dichlorobenzene)	976	µg/kg	34.5	1036.3	<21.5	94.2	78-121	2.15	30	
1,3-Dichloropropene	1540	µg/kg	68.9	2072.5	<17.4	74.5	62-124	2.88	30	
1,4-Dichlorobenzene (p-Dichlorobenzene)	970	µg/kg	34.5	1036.3	<25.3	93.6	78-122	2.32	30	

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2280030

Work Order: HN2515421
Date Collected: NA
Date Received: NA
Run ID: 3616792

MSD	CLIENT ID: Batch QC	Lab ID: QC-2280030-006
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Method: EPA 8260D

Dilution: 1

Analysis Date: 10/23/25 10:29

Prep Date: 10/16/25 15:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2-Butanone (Methyl ethyl ketone, MEK)	1160	µg/kg	230	1036.3	<74.0	112	47-164	4.00	30	
2-Hexanone	958	µg/kg	34.5	1036.3	<15.4	92.4	70-137	12.1	30	
4-Methyl-2-pentanone (MIBK)	825	µg/kg	34.5	1036.3	<29.0	79.6	57-200	29.4	30	
Acetone	2050	µg/kg	115	1036.3	<92.3	198	52-190	12.9	30	S
Benzene	1080	µg/kg	34.5	1036.3	<15.1	104	78-122	3.08	30	
Bromochloromethane	1060	µg/kg	34.5	1036.3	<15.8	102	68-130	4.67	30	
Bromodichloromethane	1240	µg/kg	34.5	1036.3	<17.4	119	75-125	19.1	30	
Bromoform	806	µg/kg	34.5	1036.3	<13.1	77.8	59-120	0.959	30	
Carbon disulfide	928	µg/kg	34.5	1036.3	<16.1	89.6	60-163	3.67	30	
Carbon tetrachloride	1470	µg/kg	34.5	1036.3	<12.2	142	69-123	15.0	30	S
Chlorobenzene	1020	µg/kg	34.5	1036.3	<10.3	98.4	79-120	1.56	30	
Chlorodibromomethane	717	µg/kg	34.5	1036.3	<17.5	69.2	57-123	14.9	30	
Chloroethane (Ethyl chloride)	1570	µg/kg	115	1036.3	<87.1	151	38-132	32.8	30	RS
Chloroform	1110	µg/kg	34.5	1036.3	<11.4	108	72-122	12.3	30	
cis-1,2-Dichloroethylene	1090	µg/kg	34.5	1036.3	<20.0	106	74-125	9.85	30	
cis-1,3-Dichloropropene	991	µg/kg	34.5	1036.3	<23.4	95.6	62-124	8.90	30	
Dichlorodifluoromethane (Freon-12)	1240	µg/kg	115	1036.3	<37.6	119	28-137	35.8	30	R
Ethylbenzene	1040	µg/kg	34.5	1036.3	<22.1	100	75-121	2.17	30	
Isopropylbenzene	1020	µg/kg	34.5	1036.3	<19.6	98.9	74-121	3.57	30	
m+p-Xylene	2080	µg/kg	68.9	2072.5	<41.5	100	67-129	2.15	30	
Methyl bromide (Bromomethane)	1620	µg/kg	115	1036.3	<59.5	156	31-169	35.0	30	R
Methyl chloride (Chloromethane)	1210	µg/kg	115	1036.3	<85.0	117	24-119	20.1	30	
Methyl tert-butyl ether (MTBE)	1150	µg/kg	34.5	1036.3	<22.7	111	79-139	1.68	30	
Methylene chloride (Dichloromethane)	1090	µg/kg	287	1036.3	<82.5	105	62-135	0.947	30	
o-Xylene	1050	µg/kg	34.5	1036.3	<12.0	102	75-120	2.38	30	
Styrene	976	µg/kg	34.5	1036.3	<12.3	94.2	74-126	4.82	30	
Tetrachloroethylene (Perchloroethylene)	1470	µg/kg	34.5	1036.3	<18.7	142	76-128	28.0	30	S
Toluene	788	µg/kg	34.5	1036.3	<25.6	76.0	76-120	29.5	30	
Total Xylene	3130	µg/kg	103	3108.8	<12.0	101	67-129	2.23	30	
trans-1,2-Dichloroethylene	961	µg/kg	34.5	1036.3	<25.6	92.8	72-127	0.162	30	
trans-1,3-Dichloropropylene	552	µg/kg	34.5	1036.3	<17.4	53.3	66-120	21.0	30	S
Trichloroethene (Trichloroethylene)	1380	µg/kg	34.5	1036.3	<13.9	133	75-122	11.6	30	S
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	1890	µg/kg	34.5	1036.3	<15.9	182	51-115	40.0	30	RS
Vinyl chloride (Chloroethene)	1210	µg/kg	34.5	1036.3	<20.7	116	43-128	14.8	30	

The following samples were analyzed in this batch: HN2515421-001, HN2515421-002, HN2515421-003