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# FILL MATERIAL SAMPLING REPORT

**12277 MAIDEN STREET  
DETROIT, WAYNE COUNTY, MICHIGAN 48213**



**DECEMBER 16, 2025**

PREPARED FOR:

**THE CITY OF DETROIT DEMOLITION DEPARTMENT**

1301 THIRD STREET, SUITE 606

DETROIT, MICHIGAN 48226



# FILL MATERIAL SAMPLING REPORT

**12277 MAIDEN STREET  
DETROIT, WAYNE COUNTY, MICHIGAN 48213**

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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 12277 Maiden Street, Detroit, Wayne County, Michigan (hereinafter, the "Site"). The Site location, as referenced to nearby roads and major geographic features, is shown on Figure 1, *Site Location Map*. Figure 2, *Site Layout*, depicts the current layout of the Site.

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

The purpose of the work was to assist the COD's blight remediation efforts with the sampling and analysis of fill material at the Site through soil sample collection from pre-determined depths, as described in the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025. Sample analyses associated with this work included volatile organic compounds (VOCs); 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 12277 SB01, 12277 SB02, and 12277 SB03 generally consisted of brown sand underlain by brown and gray 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 2.0 parts per million (ppm). There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities; however, concrete debris was observed in 12277 SB02 and 12277 SB03.
- Concentrations of arsenic were detected in soil sample 12277 SB03 (5-6') in excess of its respective Part 201 groundwater surface water interface protection criteria (GSIPC), drinking water protection criteria (DWPC), and direct contact criteria (DCC).
- Concentrations of 4,4'-DDD, 4,4'-DDE, 4,4'-DDT alpha-chlordane, anthracene, barium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, beta-chlordane, bis(2-ethylhexyl) phthalate, cadmium, chloride, chromium (Total), chrysene, copper, fluoranthene, gamma-technical, heptachlor epoxide, indeno(1,2,3-cd)pyrene, lead, mercury, phenanthrene, pyrene, and zinc were detected in soil samples 12277 SB01 (1-2'), 12277 SB02 (3-4'), and/or 12277 SB03 (5-6') at concentrations above laboratory method detection limits; however, detected concentrations were below their respective Part 201 GRCC and/or Statewide Default Background Levels.
- VOCs and PCBs were not detected above laboratory method detection reporting limits.
- Groundwater was not encountered during soil boring activities completed as part of this investigation. Groundwater is not utilized as drinking water at or near the Site, as municipal water is supplied via the COD, and the general geology of the Site and surrounding area consists of fill materials underlain by clay overlying bedrock. Therefore, the drinking water (DW) exposure pathway can be considered not applicable. Additionally, groundwater was not encountered during this investigation to transport contaminants to either storm sewers or surface water and the clay layer also inhibits migration. Therefore, the groundwater surface water exposure pathway can be considered not applicable. Given that the site is residential, exceedances of direct contact criteria may merit further consideration.

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

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

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## 1.0 INTRODUCTION

The Mannik & Smith Group, Inc. (MSG) was retained by the City of Detroit (COD) to conduct sampling and analysis of fill materials at the property commonly addressed as 12277 Maiden Street, Detroit, Wayne County, Michigan (hereinafter, the "Site"). The Site location as referenced to nearby roads and major geographic features is presented as *Figure 1, Site Location Map*. *Figure 2, Site Layout*, depicts the current layout of the Site.

The purpose of this work was to assist the COD's blight remediation efforts with the sampling and analysis of fill material at the Site through soil sample collection from pre-determined depths. The scope of work for this investigation was performed in general accordance with the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025. This report presents the findings of this investigation. Soil samples were collected by MSG on August 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 onsite soil borings to a maximum depth of six feet below ground surface (bgs) utilizing a direct push drill rig at the locations depicted on Figure 2.
- Collected one 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 November 20, 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 12277 SB01, 12277 SB02, and 12277 SB03, using a direct push drill rig at the locations depicted on Figure 2. Photographs collected during completion of this work are provided in *Appendix C, Investigation Photographs*.

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

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

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

### 3.3 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 12277 SB01 (1-2'), 12277 SB02 (3-4'), and 12277 SB03 (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 November 20, 2025.

### 4.1 Site Geology and Hydrogeology

The stratigraphy encountered during soil boring advancement of 12277 SB01, 12277 SB02, and 12277 SB03 generally consisted of brown sand underlain by brown and gray 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 2.0 ppm. There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities; however, concrete debris was observed in 12277 SB02 and 12277 SB03.

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

### 4.2 Soil Sample Analytical Results

Three (3) soil samples, designated 12277 SB01 (1-2'), 12277 SB02 (3-4'), and 12277 SB03 (5-6'), were collected from the Site and submitted to ALS for laboratory analysis of VOCs, SVOCs, PCBs, Michigan 10 Metals, chloride, herbicides, and pesticides.

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

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

Chemical	CAS Number	Soil Sample (feet bgs)	Part 201 GRCC Exceeded / Concentration (µg/kg <sup>1</sup> )	Maximum Detected Concentration (µg/kg)
Arsenic	7440-38-2	12277 SB03 (5-6)	GSIPC <sup>2</sup> / 4,600 DWPC <sup>3</sup> / 4,600 DCC <sup>4</sup> / 7,600	13,100

<sup>1</sup>µg/kg – micrograms per kilogram;

<sup>2</sup>GSIPC – Groundwater Surface Water Interface Protection Criteria

<sup>3</sup>DWPC – Drinking Water Protection Criteria

<sup>4</sup>DCC – Direct Contact 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 drinking water (DW) exposure pathway can be considered not applicable. Additionally, groundwater was not encountered during this investigation to transport contaminants to either storm sewers or surface water and the clay layer also inhibits migration, therefore, the groundwater surface water exposure pathway can be considered not applicable. Given that the site is residential, exceedances of direct contact criteria may merit further consideration.

## 5.0 FINDINGS

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

- The stratigraphy encountered during soil boring advancement of 12277 SB01, 12277 SB02, and 12277 SB03 generally consisted of brown sand underlain by brown and gray 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 2.0 ppm. There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities; however, concrete debris was observed in 12277 SB02 and 12277 SB03.
- Concentrations of arsenic were detected in soil sample 12277 SB03 (5-6') in excess of its respective Part 201 groundwater surface water interface protection criteria (GSIPC), drinking water protection criteria (DWPC), and direct contact criteria (DCC).
- Concentrations of 4,4'-DDD, 4,4'-DDE, 4,4-DDT alpha-chlordane, anthracene, barium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, beta-chlordane, bis(2-ethylhexyl) phthalate, cadmium, chloride, chromium (Total), chrysene, copper, fluoranthene, gamma-technical, heptachlor epoxide, indeno(1,2,3-cd)pyrene, lead, mercury, phenanthrene, pyrene, and zinc were detected in soil samples 12277 SB01 (1-2'), 12277 SB02 (3-4'), and/or 12277 SB03 (5-6') at concentrations above laboratory method detection limits; however, detected concentrations were below their respective Part 201 GRCC and/or Statewide Default Background Levels.
- VOCs and PCBs were not detected above laboratory method detection reporting limits.
- Groundwater was not encountered during soil boring activities completed as part of this investigation. Groundwater is not utilized as drinking water at or near the Site, as municipal water is supplied via the COD, and the general geology of the Site and surrounding area consists of fill materials underlain by clay overlying bedrock. Therefore, the drinking water (DW) exposure pathway can be considered not applicable. Additionally, groundwater was not encountered during this investigation to transport contaminants to either storm sewers or surface water and the clay layer also inhibits migration. Therefore, the groundwater surface water exposure pathway can be considered not applicable. Given that the site is residential, exceedances of direct contact criteria may merit further consideration.

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

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

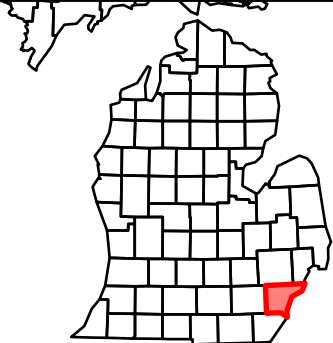
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FIGURES

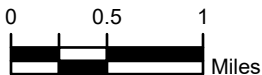




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★ Site Location

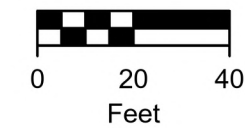


**FIGURE 1**  
SITE LOCATION

12277 Maiden, Detroit, MI

DATE 11/25/2025	DRAWN BY JWW	DESIGNED BY JWW	PROJECT NO. DETRO060
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- Sample Locations
- Subject Property
- Parcels (Current)

**Notes**  
• Parcel boundaries are approximate  
• Basemap Credits: SampleLocations:  
All Roads:  
Parcels (Qry):  
Parcels (Current):  
Wayne - 2020 - 6in - 4-band:



**FIGURE 2**  
Site Layout

12277 Maiden, Detroit, MI

DATE 12/17/2025	DRAWN BY JWW	DESIGNED BY KRB	PROJECT NO. DETR0060
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TABLE



**Table 1  
Soil Sample Analytical Detection Summary  
12277 Maiden  
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			Metals							Pesticides/Herbicides							
			Arsenic (B)	Barium (B)	Cadmium (B)	Chromium, Total (B)	Copper (B)	Lead (B)	Zinc (B)	Mercury (B)	4,4-DDT	Alpha-Chlordane	Beta-Chlordane	Gamma-Technical	Heptachlor Epoxide	4,4'-DDD	4,4'-DDE
CAS Number			7440-38-2	7440-39-3	7440-43-9	7440-47-3	7440-50-8	7439-92-1	7440-66-6	7439-97-6	50-29-3	5103-71-9	5103-74-2	12789-03-6	1024-57-3	72-54-8	72-55-9
Statewide Default Background Levels			5,800	75,000	1,200	18,000	32,000	21,000	47,000	130	NC	NC	NC	NC	NC	NC	NC
Drinking Water Protection Criteria (DWPC)			4,600	1.30E+06	6,000	30,000	5.80E+06	7.00E+05	2.40E+06	1,700	NLL	NC	NC	NC	NLL	NLL	NLL
Groundwater Surface Water Interface Protection Criteria (GSIPC)			4,600	4.40E+05 <sup>(G)</sup>	3,600 <sup>(G)</sup>	3,300	75,000 <sup>(G)</sup>	6.00E+06 <sup>(G)</sup>	1.60E+05	50 <sup>(M,1.2)</sup>	NLL	NC	NC	NC	NLL	NLL	NLL
Soil Volatilization to Indoor Air Inhalation (SVIIC)			NLV	NLV	NLV	NC	NLV	NLV	NC	48,000	NLV	NC	NC	NC	NLV	NLV	NLV
Soil Volatilization to Indoor Air Pathway (SVIAP)			NC	NC	NC	NC	NC	NC	NC	22 <sup>(M)</sup>	NC	NC	NC	NC	NC	NC	39,000
Infinite Source Volatile Soil Inhalation Criteria (VSIC)			NLV	NLV	NLV	NC	NLV	NLV	NC	52,000	NLV	NC	NC	NC	NLV	NLV	NLV
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)			NLV	NLV	NLV	NC	NLV	NLV	NC	52,000	NLV	NC	NC	NC	NLV	NLV	NLV
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)			NLV	NLV	NLV	NC	NLV	NLV	NC	52,000	NLV	NC	NC	NC	NLV	NLV	NLV
Particulate Soil Inhalation Criteria (PSIC)			7.20E+05	3.30E+08	1.70E+06	2.60E+05	1.30E+08	1.00E+08	NC	2.00E+07	3.20E+07	NC	NC	NC	1.20E+06	4.40E+07	3.20E+07
Direct Contact Criteria (DCC)			7,600	3.70E+07	5.50E+05	2.50E+06	2.00E+07	4.00E+05	1.70E+08	1.60E+05	57,000	NC	NC	NC	3,100	95,000	45,000
Soil Saturation Concentration Screening Levels (Csat)			NA	NA	NA	NC	NA	NA	NC	NA	NA	NC	NC	NC	NA	NA	NA
Sample ID	Sample Depth (ft)	Sample Date															
12277 SB01	1-2	11/20/2025	<b>2,230</b>	<b>5,330</b>	<17.7	<b>2,590</b>	<b>3,320</b>	<b>2,310</b>	<b>15,100</b>	<13.6	<11.6	<11.7	<11.6	<17.4	<11.6	<11.2	<11.5
12277 SB02	3-4	11/20/2025	<b>2,300</b>	<b>11,000</b>	<21	<b>3,730</b>	<b>4,410</b>	<b>5,250</b>	<b>17,800</b>	<13.6	<b>742</b>	<b>337</b>	<b>83.8</b>	<b>157</b>	<b>42.1</b>	<17.3	<b>2,140</b>
12277 SB03	5-6	11/20/2025	<b>13,100</b>	<b>87,300</b>	<b>178</b>	<b>15,600</b>	<b>22,300</b>	<b>27,600</b>	<b>49,800</b>	<b>78.5</b>	<b>105</b>	<21	<20.9	<31.2	<20.8	<b>39.9</b>	<b>228</b>

**Notes**

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= No Detection above laboratory reporting limits

NC = No Criteria; NA = Not Applicable; 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  
12277 Maiden  
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			Semivolatile Organic Compounds (SVOCs)											Inorganic Anions/Ions	Volatile Organic Compounds (VOCs)	Polychlorinated Biphenyls (PCBs)	
			Anthracene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Bis(2-ethylhexyl) phthalate	Chrysene	Fluoranthene	Indeno(1,2,3-Cd)Pyrene	Phenanthrene	Pyrene			Chloride
CAS Number	120-12-7	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	117-81-7	218-01-9	206-44-0	193-39-5	85-01-8	129-00-0	16887006				
Statewide Default Background Levels	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NA			
Drinking Water Protection Criteria (DWPC)	41,000	NLL	NLL	NLL	NLL	NLL	NLL	NLL	7.30E+05	NLL	56,000	4.80E+05	5.00E+06				
Groundwater Surface Water Interface Protection Criteria (GSIPC)	ID	NLL	NLL	NLL	NLL	NLL	NLL	NLL	5,500	NLL	2,100	ID	(X)				
Soil Volatilization to Indoor Air Inhalation (SVIIC)	1.00E+09	NLV	NLV	ID	NLV	NLV	NLV	ID	1.00E+09	NLV	2.80E+06	1.00E+09	NLV				
Soil Volatilization to Indoor Air Pathway (SVIAP)	1.30E+07	1.60E+05 <sup>(M)</sup>	NC	NC	NC	NC	NC	NC	NC	NC	1,700	2.50E+07	--				
Infinite Source Volatile Soil Inhalation Criteria (VSIC)	1.40E+09	NLV	NLV	ID	NLV	NLV	NLV	ID	7.40E+08	NLV	1.60E+05	6.50E+08	NLV				
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	1.40E+09	NLV	NLV	ID	NLV	NLV	NLV	ID	7.40E+08	NLV	1.60E+05	6.50E+08	NLV				
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	1.40E+09	NLV	NLV	ID	NLV	NLV	NLV	ID	7.40E+08	NLV	1.60E+05	6.50E+08	NLV				
Particulate Soil Inhalation Criteria (PSIC)	6.70E+10	ID	1.50E+06	ID	8.00E+08	ID	7.00E+08	ID	9.30E+09	ID	6.70E+06	6.70E+09	ID				
Direct Contact Criteria (DCC)	2.30E+08	20,000	2,000	20,000	2.50E+06	2.00E+05	2.80E+06	2.00E+06	4.60E+07	20,000	1.60E+06	2.90E+07	5.0E+5 (F)				
Soil Saturation Concentration Screening Levels (Csat)	NA	NA	NA	NA	NA	NA	1.00E+07	NA	NA	NA	NA	NA	NA				
Sample ID	Sample Depth (ft)	Sample Date															
12277 SB01	1-2	11/20/2025	<4.96	<6.08	<4.32	<5.25	<5.4	<5.33	<29.1	<5.69	<3.38	<4.9	<3.27	<3.51	<3,240	ND	ND
12277 SB02	3-4	11/20/2025	<b>36.6</b>	<b>143</b>	<b>143</b>	<b>178</b>	<b>93.4</b>	<b>69.6</b>	<b>117</b>	<b>119</b>	<b>308</b>	<b>125</b>	<b>147</b>	<b>249</b>	<3,430	ND	ND
12277 SB03	5-6	11/20/2025	<149	<182	<b>274</b>	<b>253</b>	<162	<160	<873	<171	<b>253</b>	<147	<98.1	<105	<b>16,700</b>	ND	ND

**Notes**

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= No Detection above laboratory reporting limits

NC = No Criteria; NA = Not Applicable; 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

**Report No.:** 1  
**Job No.:** DETR0060

<b>Date:</b> <u>11/20/2025</u>	<b>Day:</b> <u>Thursday</u>	<b>Temp:</b> <u>N/A</u> (AM) <u>40° F</u> (PM)
<b>MSG Personnel:</b> <u>SRK, MC, BM</u>	<b>Cloud Cover:</b> <u>N/A</u> (AM) <u>100%</u> (PM)	<b>Precip.:</b> <u>N/A</u> (AM) <u>N/A</u> (PM)
<b>Personnel:</b> <u>MSG</u>		
<b>MSG Hours On-Site:</b> <u>~ 1 hour</u>		

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

Summary of Work Performed:
<ul style="list-style-type: none"> <li>Advanced three (3) onsite soil borings to a maximum depth of 6 feet below ground surface (bgs)</li> <li>Collected soil samples from each soil boring (from the interval with the greatest potential to be impacted based on field indicators).</li> </ul>

Field Notes:
<ul style="list-style-type: none"> <li>1358 – MSG (SRK, MC, BM) onsite (12277 Maiden Street)</li> <li>1400 – Located site and marked boring locations</li> <li>1402 – Unloaded equipment</li> <li>1408 – Began drilling SB01</li> <li>1410 – Finished drilling SB01</li> <li>1413 – Began drilling SB02</li> <li>1415 – Finished drilling SB02</li> <li>1415 – Sampled 12277 SB01 (1-2')</li> <li>1417 – Sampled 12277 SB01 (1-2')</li> <li>1417 – Began drilling SB03</li> <li>1419 – Finished drilling SB03</li> <li>1420 – Hit refusal at 5 ft bgs at SB03. Moved over 2 ft and drilled SB03 again.</li> <li>1436 – Sampled 12277 SB02 (3-4')</li> <li>1441 – Sampled 12277 SB02 (3-4')</li> <li>1450 – Sampled 12277 SB03 (5-6')</li> <li>1455 – Sampled 12277 SB03 (5-6')</li> <li>1457 – Collected GPS points</li> <li>1500 – MSG off site</li> </ul>

Supporting Documentation								
Photograph Taken	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Samples Collected	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Boring/MW Logs	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Photo Log Attached	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	COC Attached	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Field Note Book Taken	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Problem Identification and Corrective Measures	
N/A	
Resolved?	Yes <input type="checkbox"/> No <input type="checkbox"/>

**APPENDIX C**  
INVESTIGATION PHOTOGRAPHS





Photo 1: Viewing Site Pre-Drilling, Facing Northwest.



Photo 2: Viewing 12277 SB01 Drilling, Facing Northwest.

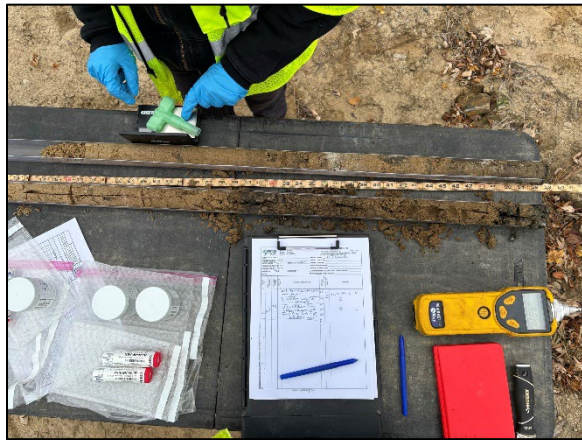


Photo 3: Viewing 12277 SB01 Soils, Facing Northwest.

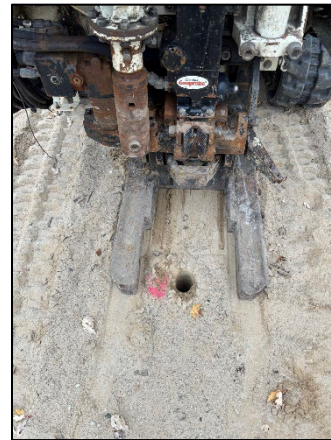


Photo 4: Viewing 12277 SB02 Drilling, Facing Northwest.



Photo 5: Viewing 12277 SB02 Soils, Facing Northwest.

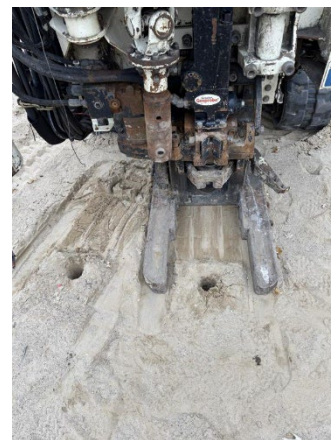


Photo 6: Viewing 12277 SB03 Drilling, Facing Northwest.



Photo 7: Viewing 12277 SB03 Soils, Facing Northwest.



Photo 8: Viewing Site Post-Drilling, Facing Northwest.

**APPENDIX D**  
SOIL BORING LOGS





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

**BOREHOLE NUMBER SB01**

Sheet 1 of 1

**CLIENT** City of Detroit  
**PROJECT NUMBER** DETR0060\_12277 Maiden  
**DATE STARTED** 11-20-2025 **COMPLETED** 11-20-2025  
**DRILLING CONTRACTOR** MSG  
**DRILLING METHOD** Direct Push  
**EQUIPMENT** Geoprobe 7822DT **Operator** BM

**PROJECT NAME** Backfill Soil Sampling  
**PROJECT LOCATION** 12277 Maiden, Detroit, MI  
**POSITION** \_\_\_\_\_  
**SURFACE ELEVATION** \_\_\_\_\_ **FINAL DEPTH** 6.0 ft  
**LOGGED BY** SRK **CHECKED BY** PDH  
**REMARKS** Additional sample collected for analysis if needed

DEPTH (ft)	SAMPLE INTERVALS	RECOVERY %	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (PPM)	REMARKS	
				Brown SAND, trace gravel, trace clay, dry	1.5	- Collected soil sample 12277 SB01 (1-2) at 14:15	
	ES	58			2.0		
			3.0				0.8
			3.2	Gray Sandy CLAY, trace gravel, moist			0.1
				Brown Clayey SAND, trace gravel, moist			0.1
5			5.5			0.1	
			6.0	Gray Sandy CLAY, trace gravel, moist	0.1		
				Terminated at 6.00 ft.			
10							
15							
20							
25							
30							

**LEGEND:**

- ▽ AT TIME OF DRILLING \_\_\_\_\_
- ▼ AT END OF DRILLING \_\_\_\_\_
- ▽ AFTER DRILLING \_\_\_\_\_



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**BOREHOLE NUMBER SB02**

Sheet 1 of 1

**CLIENT** City of Detroit  
**PROJECT NUMBER** DETR0060\_12277 Maiden  
**DATE STARTED** 11-20-2025 **COMPLETED** 11-20-2025  
**DRILLING CONTRACTOR** MSG  
**DRILLING METHOD** Direct Push  
**EQUIPMENT** Geoprobe 7822DT **Operator** BM

**PROJECT NAME** Backfill Soil Sampling  
**PROJECT LOCATION** 12277 Maiden, Detroit, MI  
**POSITION** \_\_\_\_\_  
**SURFACE ELEVATION** \_\_\_\_\_ **FINAL DEPTH** 6.0 ft  
**LOGGED BY** SRK **CHECKED BY** PDH  
**REMARKS** Additional sample collected for analysis if needed

DEPTH (ft)	SAMPLE INTERVALS	RECOVERY %	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (PPM)	REMARKS
5	ES	50		Brown SAND, trace gravel, dry	0.8	- Collected soil sample 12277 SB02 (3-4) at 14:36
					0.3	
				3.0	0.0	
				3.5 Brown Sandy CLAY, dry	0.0	
				3.8 Concrete debris, dry	0.0	
				5.0 Brown Clayey SAND, trace concrete debris, dry	0.0	
6.0 Gray CLAY, some concrete debris, moist	0.0					
				Terminated at 6.00 ft.		
10						
15						
20						
25						
30						

**LEGEND:**

- ▽ AT TIME OF DRILLING \_\_\_\_\_
- ▼ AT END OF DRILLING \_\_\_\_\_
- ▽ AFTER DRILLING \_\_\_\_\_



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**BOREHOLE NUMBER SB03**

Sheet 1 of 1

**CLIENT** City of Detroit  
**PROJECT NUMBER** DETR0060\_12277 Maiden  
**DATE STARTED** 11-20-2025 **COMPLETED** 11-20-2025  
**DRILLING CONTRACTOR** MSG  
**DRILLING METHOD** Direct Push  
**EQUIPMENT** Geoprobe 7822DT **Operator** BM

**PROJECT NAME** Backfill Soil Sampling  
**PROJECT LOCATION** 12277 Maiden, Detroit, MI  
**POSITION** \_\_\_\_\_  
**SURFACE ELEVATION** \_\_\_\_\_ **FINAL DEPTH** 6.0 ft  
**LOGGED BY** SRK **CHECKED BY** PDH  
**REMARKS** Additional sample collected for analysis if needed

DEPTH (ft)	SAMPLE INTERVALS	RECOVERY %	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (PPM)	REMARKS
5	ES	58		Brown SAND, trace clay, dry Brown and Gray CLAY, little sand, trace concrete debris, moist	0.0 0.0 0.0 0.0 0.0	- Collected soil sample 12277 SB03 (5-6) at 14:50
6.0				Terminated at 6.00 ft.		

**LEGEND:**

- ▽ AT TIME OF DRILLING \_\_\_\_\_
- ▼ AT END OF DRILLING \_\_\_\_\_
- ▽ AFTER DRILLING \_\_\_\_\_

**APPENDIX E**  
LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY FORMS





right solutions.  
right partner.

December 12, 2025

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

Re: **12277 Maiden**

Date Received: **11/22/2025**

Work Order: **HN2517783**

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

**Kathy Jones-Gronda**

/S/ KATHY JONES-GRONDA

**Project Manager**



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden

**Work Order:** HN2517783  
**Date Received:** 22-Nov-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 22-Nov-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.

#### WorkOrder: HN2517783

Soil/solid results are reported on a dry-weight basis, corrected using laboratory-determined percent moisture content, unless explicitly identified otherwise.

#### Organics

##### EPA 8270E-FULL HN-3546-S

###### Run ID: 3720703

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: bis(2-Chloroethyl) ether.

HN2517783-005: The reporting limit is elevated due to dilution needed to eliminate matrix-related interference.

##### EPA 8081B-3546-S (High)

###### Run ID: 3721014

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:

Endrin Aldehyde

HN2517783-003: The RPD between the sample results on the primary and confirmation columns exceeded 40%. The lower result was reported due to apparent chromatographic interference for: Heptachlor epoxide

##### EPA 8260D - 5035A

###### Run ID: 3716840

QC-2352386-002: 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

## 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.



<b>CLIENT ID: 12277 SB01 (1-2)</b>	<b>Lab ID: HN2517783-001</b>
------------------------------------	------------------------------

Analyte	Results	Flag	MRL	Units	Method
Arsenic	2.23		0.296	mg/kg	EPA 6020B
Barium	5.33		0.296	mg/kg	EPA 6020B
Chromium	2.59		0.296	mg/kg	EPA 6020B
Copper	3.32		0.296	mg/kg	EPA 6020B
Lead	2.31		0.296	mg/kg	EPA 6020B
Percent Moisture	6.7		0.1	%	EPA 3550C
Zinc	15.1		0.592	mg/kg	EPA 6020B

<b>CLIENT ID: 12277 SB02 (3-4)</b>	<b>Lab ID: HN2517783-003</b>
------------------------------------	------------------------------

Analyte	Results	Flag	MRL	Units	Method
4,4'-DDE	2140		271	µg/kg	EPA 8081B
4,4'-DDT	742		271	µg/kg	EPA 8081B
Anthracene	36.6		18.3	µg/kg	EPA 8270E
Arsenic	2.30		0.350	mg/kg	EPA 6020B
Barium	11.0		0.350	mg/kg	EPA 6020B
Benzo(a)anthracene	143		18.3	µg/kg	EPA 8270E
Benzo(a)pyrene	143		18.3	µg/kg	EPA 8270E
Benzo(b)fluoranthene	178		18.3	µg/kg	EPA 8270E
Benzo(g,h,i)perylene	93.4		18.3	µg/kg	EPA 8270E
Benzo(k)fluoranthene	69.6		18.3	µg/kg	EPA 8270E
Chlordane, Technical	157		67.7	µg/kg	EPA 8081B
Chromium	3.73		0.350	mg/kg	EPA 6020B
Chrysene	119		18.3	µg/kg	EPA 8270E
cis-Chlordane	337		135	µg/kg	EPA 8081B
Copper	4.41		0.350	mg/kg	EPA 6020B
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	117		90.7	µg/kg	EPA 8270E
Fluoranthene	308		18.3	µg/kg	EPA 8270E
Heptachlor epoxide	42.1		27.1	µg/kg	EPA 8081B
Indeno(1,2,3-cd) pyrene	125		18.3	µg/kg	EPA 8270E
Lead	5.25		0.350	mg/kg	EPA 6020B
Percent Moisture	11.7		0.1	%	EPA 3550C
Phenanthrene	147		18.3	µg/kg	EPA 8270E
Pyrene	249		18.3	µg/kg	EPA 8270E
trans-Chlordane	83.8		27.1	µg/kg	EPA 8081B
Zinc	17.8		0.701	mg/kg	EPA 6020B

<b>CLIENT ID: 12277 SB03 (5-6)</b>	<b>Lab ID: HN2517783-005</b>
------------------------------------	------------------------------

Analyte	Results	Flag	MRL	Units	Method
4,4'-DDD	39.9		31.5	µg/kg	EPA 8081B
4,4'-DDE	228		31.5	µg/kg	EPA 8081B
4,4'-DDT	105		31.5	µg/kg	EPA 8081B

## 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: 12277 SB03 (5-6)**

**Lab ID: HN2517783-005**

<b>Analyte</b>	<b>Results</b>	<b>Flag</b>	<b>MRL</b>	<b>Units</b>	<b>Method</b>
Arsenic	13.1		0.394	mg/kg	EPA 6020B
Barium	87.3		0.394	mg/kg	EPA 6020B
Benzo(a)pyrene	274		211	µg/kg	EPA 8270E
Benzo(b)fluoranthene	253		211	µg/kg	EPA 8270E
Cadmium	0.178		0.158	mg/kg	EPA 6020B
Chloride	16.7		12.2	mg/kg	EPA 9056A
Chromium	15.6		0.394	mg/kg	EPA 6020B
Copper	22.3		0.394	mg/kg	EPA 6020B
Fluoranthene	253		211	µg/kg	EPA 8270E
Lead	27.6		0.394	mg/kg	EPA 6020B
Mercury	0.0785		0.0212	mg/kg	EPA 7471B
Percent Moisture	21.3		0.1	%	EPA 3550C
Zinc	49.8		0.789	mg/kg	EPA 6020B

# SAMPLE SUMMARY



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Workorder:** HN2517783

<b>Laboratory Sample ID</b>	<b>Client Sample ID</b>	<b>Sample Matrix</b>	<b>Collection Date</b>	<b>Date Received</b>
HN2517783-001	12277 SB01 (1-2)	SOIL/SOLID	11/20/25 14:15	11/22/25 08:00
HN2517783-001	12277 SB01 (1-2)	SOIL/SOLID	11/20/25 14:15	11/22/25 08:00
HN2517783-003	12277 SB02 (3-4)	SOIL/SOLID	11/20/25 14:36	11/22/25 08:00
HN2517783-005	12277 SB03 (5-6)	SOIL/SOLID	11/20/25 14:50	11/22/25 08:00



ALS Environmental

# Chain of Custody Form

Laboratory location: \_\_\_\_\_

Page 1 of 1

Customer Information		ALS Project Manager:				Work Order #:					
Project Information		Parameter/Method Request for Analysis									
Purchase Order		Project Name	12277 Maiden			A	VOCs (U.S. EPA Method 8260C (or Method 8260))				
Work Order		Project Number	DETR0060			B	SVOCs (U.S. EPA Method 8270D (or Method 8270))				
Company Name	The Mannik and Smith Group	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	Chorides (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					
Fax		Fax				I					
e-Mail Address	RMontri@manniksmithgroup.com	e-Mail Address:	OMitchell@manniksmithgroup.com			J					

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	12277 SB01 (1-2)	11/20/25	1415	Soil	7	4	✓	✓	✓	✓	✓	✓	✓				
2	12277 SB01 (1-2)		1420	Soil	7	4											✓
3	12277 SB02 (3-4)		1436	Soil	7	4	✓	✓	✓	✓	✓	✓	✓				
4	12277 SB02 (3-4)		1441	Soil	7	4											✓
5	12277 SB03 (5-6)		1450	Soil	7	4	✓	✓	✓	✓	✓	✓	✓				
6	12277 SB03 (5-6)	11/20/25	1455	Soil	7	4											✓
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign *Sharon K... [Signature]* Shipment Method: Required Turnaround Time:  Other *3 wk drills* Results Due Date:

STD 10 Wk Days  5 Wk Days  2 Wk Days  24 Hour

Relinquished by: *[Signature]* Date: 11/21/25 Time: 16:25 Received by: *[Signature]* Notes: Quote# HN-061825-M&S-MA

Relinquished by: *Colin...* Date: 11/21/25 Time: 1:00 Received by (Laboratory): *QS*

Logged by (Laboratory): *AB* Date: 11/22/25 Time: 1227 Checked by (Laboratory): *1.3c 126*

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Cooler Temp. *1.3c 126*

QC Package: (Check Box Below)

Level II: Standard QC

Level III: Std QC + Raw Data

Level IV: SW846 CLP-Like

Other: \_\_\_\_\_

Environmental Division  
Holland  
Work Order Reference  
**HN2517783**



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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Page 6 of 59



ALS Holland  
3352 128<sup>th</sup> Ave., Holland MI 49424

ALS Holland Sample Receiving Checklist

Received by: Allyssa B

Date/Time: 11/22/25 0800

Carrier Name: QS

Shipping container/cooler in good condition? (Yes) / No / Not Present

Custody seals intact on shipping container/cooler? Yes / No / ~~Not Present~~

Custody seals intact on sample bottles? Yes / ~~No~~ / Not Present

Chain of Custody present? (Yes) / No

COC signed when relinquished and received? (Yes) / No

COC agrees with sample labels? (Yes) / No

Samples in proper container/bottle? (Yes) / No

Sample containers intact? (Yes) / No

Sufficient sample volume for indicated test? (Yes) / No

All samples received within holding time? (Yes) / No

Container/Temp Blank temperature in compliance? (Yes) / No

Temperature(s) (°C): 1.3c / 1.3c

Thermometer(s): 1R6

Sample(s) received on ice? (Yes) / No

Matrix/Matrices: soil

Cooler(s)/Kit(s): -

Date/Time sample(s) sent to storage: 11/22/25 1227

Water – VOA vials have zero headspace? Yes / No / ~~No Vials~~

Water – pH acceptable upon receipt? Yes / No / ~~N/A~~

pH strip lot #: \_\_\_\_\_ < 2 \_\_\_\_\_ > 12 \_\_\_\_\_ Other \_\_\_\_\_

pH adjusted (note adjustments below)? Yes / No / ~~N/A~~

pH adjusted by: \_\_\_\_\_

Login Notes:

## REPORT QUALIFIERS AND DEFINITIONS

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

### Holland Laboratory Certifications<sup>1</sup>

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	09/01/2025	09/01/2027
Kansas	NELAP (Secondary)	E-10411	08/01/2025	07/31/2026
Kentucky	Waste Water	KY98004	12/20/2024	12/31/2025
Kentucky	UST	120474	07/07/2025	06/30/2026
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	07/01/2025	6/30/2026
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	11/25/2025	07/31/2026
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	08/08/2025	08/31/2026

<sup>1</sup> - Scope available upon request

# ANALYST SUMMARY



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden

**Work Order:** HN2517783

**Sample Name:** 12277 SB01 (1-2)  
**Laboratory Code:** HN2517783-001  
**Sample Matrix:** SOIL/SOLID

**Date Collected:** 11/20/25  
**Date Received:** 11/22/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		001-AB	2352274		3713522	Nicole Maleski
EPA 6020B	EPA 3050B	001-AA	2352163	Weston Kotecki	3715790	Denise Coffey
EPA 7471B	Method	001-AA	2352769	Maxx Richey	3716896	Maxx Richey
EPA 8081B	EPA 3546	001-AB	2352161	Benjamin Farmer	3721014	Nathaniel Dietlin
EPA 8082A	EPA 3546	001-AA	2352142	Benjamin Farmer	3720655	Madison VandenBer
EPA 8082A	EPA 3546	001-AA	2352142	Benjamin Farmer	3720655	Madison VandenBer
EPA 8151A	Method	001-AB	2363045	Rachel Plantinga	3750933	Kathy Malmyga
EPA 8260D	EPA 5035A	001-AC	2352386	Jonathan Vazquez	3716843	Nathan Jenkins
EPA 8260D	EPA 5035A	001-AC	2352386	Jonathan Vazquez	3716843	Nathan Jenkins
EPA 8270E	EPA 3546	001-AA	2352164	Mya Harmer	3720703	Taryn Van Wyngarde
EPA 8270E	EPA 3546	001-AA	2352164	Mya Harmer	3720703	Taryn Van Wyngarde
EPA 9056A	EPA 9056A	001-AA	2351778	Sage Hansen	3717186	Jessica Bacon

**Sample Name:** 12277 SB02 (3-4)  
**Laboratory Code:** HN2517783-003  
**Sample Matrix:** SOIL/SOLID

**Date Collected:** 11/20/25  
**Date Received:** 11/22/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		003-AB	2352274		3713522	Nicole Maleski
EPA 6020B	EPA 3050B	003-AA	2352163	Weston Kotecki	3715790	Denise Coffey
EPA 7471B	Method	003-AA	2352769	Maxx Richey	3716896	Maxx Richey
EPA 8081B	EPA 3546	003-AB	2352161	Benjamin Farmer	3721014	Nathaniel Dietlin
EPA 8081B	EPA 3546	003-AB	2352161	Benjamin Farmer	3732995	Madison VandenBer
EPA 8081B	EPA 3546	003-AB	2352161	Benjamin Farmer	3733510	Nathaniel Dietlin
EPA 8081B	EPA 3546	003-AB	2352161	Benjamin Farmer	3733975	Nathaniel Dietlin
EPA 8082A	EPA 3546	003-AA	2352142	Benjamin Farmer	3720655	Madison VandenBer
EPA 8151A	Method	003-AB	2363045	Rachel Plantinga	3750933	Kathy Malmyga
EPA 8260D	EPA 5035A	003-AC	2352386	Jonathan Vazquez	3716843	Nathan Jenkins
EPA 8270E	EPA 3546	003-AA	2352164	Mya Harmer	3720703	Taryn Van Wyngarde
EPA 9056A	EPA 9056A	003-AA	2351778	Sage Hansen	3717186	Jessica Bacon

# ANALYST SUMMARY



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden

**Work Order:** HN2517783

**Sample Name:** 12277 SB03 (5-6)  
**Laboratory Code:** HN2517783-005  
**Sample Matrix:** SOIL/SOLID

**Date Collected:** 11/20/25  
**Date Received:** 11/22/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		005-AB	2352274		3713522	Nicole Maleski
EPA 6020B	EPA 3050B	005-AA	2352163	Weston Kotecki	3715790	Denise Coffey
EPA 7471B	Method	005-AA	2352820	Maxx Richey	3716896	Maxx Richey
EPA 8081B	EPA 3546	005-AB	2352161	Benjamin Farmer	3721014	Nathaniel Dietlin
EPA 8082A	EPA 3546	005-AA	2352142	Benjamin Farmer	3720655	Madison VandenBer
EPA 8151A	Method	005-AB	2363045	Rachel Plantinga	3750933	Kathy Malmyga
EPA 8260D	EPA 5035A	005-AC	2352386	Jonathan Vazquez	3716843	Nathan Jenkins
EPA 8270E	EPA 3546	005-AA	2352164	Mya Harmer	3720703	Taryn Van Wyngarde
EPA 9056A	EPA 9056A	005-AA	2351778	Sage Hansen	3717186	Jessica Bacon

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:15  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB01 (1-2)

**Lab ID:** HN2517783-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
<b>Chlorinated Herbicides by GC/ECD</b>								
2,4,5-T	EPA 8151A	<0.976	U	µg/kg	5.30	1	12/08/25 08:21	12/01/25 08:09
2,4,5-TP (Silvex)	EPA 8151A	<1.74	U	µg/kg	5.30	1	12/08/25 08:21	12/01/25 08:09
2,4-D	EPA 8151A	<2.83	U	µg/kg	10.6	1	12/08/25 08:21	12/01/25 08:09
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	<b>78.0</b>		<i>%REC</i>	<i>10-116</i>	<i>1</i>	<i>12/08/25 08:21</i>	<i>12/01/25 08:09</i>
<b>General Chemistry Parameters</b>								
Percent Moisture	EPA 3550C	<b>6.7</b>		%	0.1	1	11/24/25 16:23	NA
Chloride	EPA 9056A	<3.24	U	mg/kg	10.4	1	11/24/25 21:05	11/24/25 09:25
<b>Metals</b>								
Arsenic	EPA 6020B	<b>2.23</b>		mg/kg	0.296	1	11/26/25 05:21	11/24/25 09:44
Barium	EPA 6020B	<b>5.33</b>		mg/kg	0.296	1	11/26/25 05:21	11/24/25 09:44
Cadmium	EPA 6020B	<0.0177	U	mg/kg	0.118	1	11/26/25 05:21	11/24/25 09:44
Chromium	EPA 6020B	<b>2.59</b>		mg/kg	0.296	1	11/26/25 05:21	11/24/25 09:44
Copper	EPA 6020B	<b>3.32</b>		mg/kg	0.296	1	11/26/25 05:21	11/24/25 09:44
Lead	EPA 6020B	<b>2.31</b>		mg/kg	0.296	1	11/26/25 05:21	11/24/25 09:44
Selenium	EPA 6020B	<0.272	U	mg/kg	0.296	1	11/26/25 05:21	11/24/25 09:44
Silver	EPA 6020B	<0.0390	U	mg/kg	0.296	1	11/26/25 05:21	11/24/25 09:44
Zinc	EPA 6020B	<b>15.1</b>		mg/kg	0.592	1	11/26/25 05:21	11/24/25 09:44
Mercury	EPA 7471B	<0.0136	U	mg/kg	0.0200	1	11/25/25 16:29	11/25/25 08:37
<b>Organochlorine Pesticides by GC/ECD</b>								
4,4'-DDD	EPA 8081B	<11.2	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
4,4'-DDE	EPA 8081B	<11.5	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
4,4'-DDT	EPA 8081B	<11.6	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Aldrin	EPA 8081B	<11.4	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
alpha-BHC	EPA 8081B	<11.5	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
beta-BHC	EPA 8081B	<11.5	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Chlordane, Technical	EPA 8081B	<17.4	U	µg/kg	43.8	1	11/25/25 21:02	11/24/25 20:19
cis-Chlordane	EPA 8081B	<11.7	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
delta-BHC	EPA 8081B	<11.5	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Dieldrin	EPA 8081B	<12.3	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:15  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB01 (1-2)

**Lab ID:** HN2517783-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan I	EPA 8081B	<11.8	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Endosulfan II	EPA 8081B	<11.6	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Endosulfan sulfate	EPA 8081B	<10.8	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Endrin	EPA 8081B	<14.2	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Endrin aldehyde	EPA 8081B	<11.1	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Endrin ketone	EPA 8081B	<10.7	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
gamma-BHC (Lindane)	EPA 8081B	<11.5	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Heptachlor	EPA 8081B	<11.3	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Heptachlor epoxide	EPA 8081B	<11.6	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Methoxychlor	EPA 8081B	<11.7	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
Toxaphene	EPA 8081B	<18.9	U	µg/kg	105	1	11/25/25 21:02	11/24/25 20:19
trans-Chlordane	EPA 8081B	<11.6	U	µg/kg	17.5	1	11/25/25 21:02	11/24/25 20:19
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	<b>112</b>		<i>%REC</i>	<i>53-151</i>	<i>1</i>	<i>11/25/25 21:02</i>	<i>11/24/25 20:19</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	<b>90.6</b>		<i>%REC</i>	<i>67-127</i>	<i>1</i>	<i>11/25/25 21:02</i>	<i>11/24/25 20:19</i>

### Polychlorinated Biphenyls (PCBs) by GC/ECD

Aroclor 1016	EPA 8082A	<40.0	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
Aroclor 1221	EPA 8082A	<40.0	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
Aroclor 1232	EPA 8082A	<40.0	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
Aroclor 1242	EPA 8082A	<40.0	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
Aroclor 1248	EPA 8082A	<40.0	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
Aroclor 1254	EPA 8082A	<32.6	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
Aroclor 1260	EPA 8082A	<32.6	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
Aroclor 1262	EPA 8082A	<32.6	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
Aroclor 1268	EPA 8082A	<32.6	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
Total PCB	EPA 8082A	<32.6	U	µg/kg	117	1	11/25/25 14:40	11/24/25 19:31
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	<b>106</b>		<i>%REC</i>	<i>54-146</i>	<i>1</i>	<i>11/25/25 14:40</i>	<i>11/24/25 19:31</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	<b>93.6</b>		<i>%REC</i>	<i>58-140</i>	<i>1</i>	<i>11/25/25 14:40</i>	<i>11/24/25 19:31</i>

### Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<5.71	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<8.12	U	µg/kg	352	1	11/26/25 01:34	11/24/25 12:18

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:15  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB01 (1-2)**

**Lab ID: HN2517783-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<25.2	U	µg/kg	176	1	11/26/25 01:34	11/24/25 12:18
1-Methylnaphthalene	EPA 8270E	<5.07	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<8.25	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2,3,4,6-Tetrachlorophenol	EPA 8270E	<25.8	U	µg/kg	70.4	1	11/26/25 01:34	11/24/25 12:18
2,4,5-Trichlorophenol	EPA 8270E	<20.9	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2,4,6-Trichlorophenol	EPA 8270E	<9.37	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2,4-Dichlorophenol	EPA 8270E	<18.9	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2,4-Dimethylphenol	EPA 8270E	<18.1	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2,4-Dinitrophenol	EPA 8270E	<257	U	µg/kg	352	1	11/26/25 01:34	11/24/25 12:18
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<22.9	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<8.99	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2-Chloronaphthalene	EPA 8270E	<4.92	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
2-Chlorophenol	EPA 8270E	<23.0	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<29.4	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2-Methylnaphthalene	EPA 8270E	<3.58	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
2-Methylphenol (o-Cresol)	EPA 8270E	<9.51	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2-Nitroaniline	EPA 8270E	<19.5	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
2-Nitrophenol	EPA 8270E	<10.0	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
3&4-Methylphenol	EPA 8270E	<19.2	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
3,3'-Dichlorobenzidine	EPA 8270E	<16.4	U	µg/kg	176	1	11/26/25 01:34	11/24/25 12:18
3-Nitroaniline	EPA 8270E	<20.4	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<19.3	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
4-Chloro-3-methylphenol	EPA 8270E	<10.0	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
4-Chloroaniline	EPA 8270E	<17.9	U	µg/kg	70.4	1	11/26/25 01:34	11/24/25 12:18
4-Chlorophenyl phenylether	EPA 8270E	<9.72	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
4-Nitroaniline	EPA 8270E	<54.6	U	µg/kg	176	1	11/26/25 01:34	11/24/25 12:18
4-Nitrophenol	EPA 8270E	<82.4	U	µg/kg	352	1	11/26/25 01:34	11/24/25 12:18
Acenaphthene	EPA 8270E	<5.09	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:15  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB01 (1-2)**

**Lab ID: HN2517783-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution	Date	Date
						Factor	Analyzed	Extracted
Acenaphthylene	EPA 8270E	<6.10	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Acetophenone	EPA 8270E	<5.51	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Anthracene	EPA 8270E	<4.96	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Atrazine	EPA 8270E	<20.6	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Benzaldehyde	EPA 8270E	<54.1	U	µg/kg	70.4	1	11/26/25 01:34	11/24/25 12:18
Benzo(a)anthracene	EPA 8270E	<6.08	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Benzo(a)pyrene	EPA 8270E	<4.32	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Benzo(b)fluoranthene	EPA 8270E	<5.25	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Benzo(g,h,i)perylene	EPA 8270E	<5.40	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Benzo(k)fluoranthene	EPA 8270E	<5.33	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
bis(2-Chloroethoxy) methane	EPA 8270E	<22.3	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
bis(2-Chloroethyl) ether	EPA 8270E	<9.97	SU	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Butyl benzyl phthalate	EPA 8270E	<44.1	U	µg/kg	70.4	1	11/26/25 01:34	11/24/25 12:18
Caprolactam	EPA 8270E	<31.8	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Carbazole	EPA 8270E	<10.4	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Chrysene	EPA 8270E	<5.69	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<29.1	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Dibenz(a,h) anthracene	EPA 8270E	<3.80	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Dibenzofuran	EPA 8270E	<5.17	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Diethyl phthalate	EPA 8270E	<12.0	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Dimethyl phthalate	EPA 8270E	<6.86	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Fluoranthene	EPA 8270E	<3.38	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Fluorene	EPA 8270E	<5.11	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Hexachlorobenzene	EPA 8270E	<10.2	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Hexachlorobutadiene	EPA 8270E	<8.29	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Hexachlorocyclopentadiene	EPA 8270E	<33.4	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Hexachloroethane	EPA 8270E	<14.6	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Indeno(1,2,3-cd) pyrene	EPA 8270E	<4.90	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Isophorone	EPA 8270E	<6.87	U	µg/kg	176	1	11/26/25 01:34	11/24/25 12:18
Methylphenol, Total	EPA 8270E	<9.51	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:15  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB01 (1-2)

**Lab ID:** HN2517783-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Naphthalene	EPA 8270E	<4.50	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Nitrobenzene	EPA 8270E	<11.8	U	µg/kg	176	1	11/26/25 01:34	11/24/25 12:18
n-Nitrosodi-n-propylamine	EPA 8270E	<5.81	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
N-Nitrosodiphenylamine	EPA 8270E	<20.4	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Pentachlorophenol	EPA 8270E	<28.0	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Phenanthrene	EPA 8270E	<3.27	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Phenol	EPA 8270E	<17.7	U	µg/kg	34.8	1	11/26/25 01:34	11/24/25 12:18
Pyrene	EPA 8270E	<3.51	U	µg/kg	7.04	1	11/26/25 01:34	11/24/25 12:18
Pyridine	EPA 8270E	<69.3	U	µg/kg	176	1	11/26/25 01:34	11/24/25 12:18
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<b>68.1</b>		<i>%REC</i>	<i>48-94</i>	<i>1</i>	<i>11/26/25 01:34</i>	<i>11/24/25 12:18</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<b>87.3</b>		<i>%REC</i>	<i>50-103</i>	<i>1</i>	<i>11/26/25 01:34</i>	<i>11/24/25 12:18</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<b>85.0</b>		<i>%REC</i>	<i>43-105</i>	<i>1</i>	<i>11/26/25 01:34</i>	<i>11/24/25 12:18</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	<b>90.9</b>		<i>%REC</i>	<i>55-111</i>	<i>1</i>	<i>11/26/25 01:34</i>	<i>11/24/25 12:18</i>
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	<b>82.0</b>		<i>%REC</i>	<i>47-100</i>	<i>1</i>	<i>11/26/25 01:34</i>	<i>11/24/25 12:18</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<b>92.8</b>		<i>%REC</i>	<i>49-110</i>	<i>1</i>	<i>11/26/25 01:34</i>	<i>11/24/25 12:18</i>

### Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<16.0	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,1,2,2-Tetrachloroethane	EPA 8260D	<15.5	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<22.3	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,1,2-Trichloroethane	EPA 8260D	<15.0	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,1-Dichloroethane	EPA 8260D	<12.8	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,1-Dichloroethylene	EPA 8260D	<11.4	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,2,3-Trichlorobenzene	EPA 8260D	<42.2	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
1,2,3-Trichloropropane	EPA 8260D	<14.7	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,2,4-Trichlorobenzene	EPA 8260D	<39.9	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
1,2,4-Trimethylbenzene	EPA 8260D	<25.8	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<32.4	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<20.7	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<13.3	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:15  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB01 (1-2)**

**Lab ID: HN2517783-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<20.7	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
1,2-Dichloropropane	EPA 8260D	<25.9	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,3,5-Trimethylbenzene	EPA 8260D	<24.8	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<24.3	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
1,3-Dichloropropene	EPA 8260D	<19.6	U	µg/kg	70.4	1	11/25/25 00:31	11/24/25 16:42
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<28.6	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<83.7	U	µg/kg	235	1	11/25/25 00:31	11/24/25 16:42
2-Hexanone	EPA 8260D	<17.4	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<32.8	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Acetone	EPA 8260D	<104	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
Benzene	EPA 8260D	<17.0	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Bromochloromethane	EPA 8260D	<17.9	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Bromodichloromethane	EPA 8260D	<19.7	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Bromoform	EPA 8260D	<14.8	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Carbon disulfide	EPA 8260D	<18.2	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Carbon tetrachloride	EPA 8260D	<13.8	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Chlorobenzene	EPA 8260D	<11.7	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Chlorodibromomethane	EPA 8260D	<19.8	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Chloroethane (Ethyl chloride)	EPA 8260D	<98.5	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
Chloroform	EPA 8260D	<12.9	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
cis-1,2-Dichloroethylene	EPA 8260D	<22.6	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
cis-1,3-Dichloropropene	EPA 8260D	<26.5	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Cyclohexane	EPA 8260D	<26.9	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<42.6	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
Ethylbenzene	EPA 8260D	<25.0	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Isopropylbenzene	EPA 8260D	<22.2	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
m+p-Xylene	EPA 8260D	<46.9	U	µg/kg	70.4	1	11/25/25 00:31	11/24/25 16:42
Methyl acetate	EPA 8260D	<42.1	U	µg/kg	293	1	11/25/25 00:31	11/24/25 16:42
Methyl bromide (Bromomethane)	EPA 8260D	<67.3	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:15  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB01 (1-2)** **Lab ID: HN2517783-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Methyl chloride (Chloromethane)	EPA 8260D	<96.2	U	µg/kg	117	1	11/25/25 00:31	11/24/25 16:42
Methyl tert-butyl ether (MTBE)	EPA 8260D	<25.7	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Methylcyclohexane	EPA 8260D	<13.4	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Methylene chloride (Dichloromethane)	EPA 8260D	<93.4	U	µg/kg	293	1	11/25/25 00:31	11/24/25 16:42
o-Xylene	EPA 8260D	<13.6	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Styrene	EPA 8260D	<13.9	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<21.2	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Toluene	EPA 8260D	<29.0	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Total Xylene	EPA 8260D	<13.6	U	µg/kg	106	1	11/25/25 00:31	11/24/25 16:42
trans-1,2-Dichloroethylene	EPA 8260D	<29.0	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
trans-1,3-Dichloropropylene	EPA 8260D	<19.6	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Trichloroethene (Trichloroethylene)	EPA 8260D	<15.8	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<18.0	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
Vinyl chloride (Chloroethene)	EPA 8260D	<23.4	U	µg/kg	35.2	1	11/25/25 00:31	11/24/25 16:42
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	<b>106</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>11/25/25 00:31</i>	<i>11/24/25 16:42</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	<b>94.9</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>11/25/25 00:31</i>	<i>11/24/25 16:42</i>
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	<b>90.0</b>		<i>%REC</i>	<i>72-120</i>	<i>1</i>	<i>11/25/25 00:31</i>	<i>11/24/25 16:42</i>
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	<b>95.2</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>11/25/25 00:31</i>	<i>11/24/25 16:42</i>

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:36  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB02 (3-4)

**Lab ID:** HN2517783-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
<b>Chlorinated Herbicides by GC/ECD</b>								
2,4,5-T	EPA 8151A	<2.48	U	µg/kg	13.5	1	12/08/25 08:21	12/01/25 08:09
2,4,5-TP (Silvex)	EPA 8151A	<4.42	U	µg/kg	13.5	1	12/08/25 08:21	12/01/25 08:09
2,4-D	EPA 8151A	<7.19	U	µg/kg	26.9	1	12/08/25 08:21	12/01/25 08:09
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	<b>70.0</b>		<i>%REC</i>	<i>10-116</i>	<i>1</i>	<i>12/08/25 08:21</i>	<i>12/01/25 08:09</i>
<b>General Chemistry Parameters</b>								
Percent Moisture	EPA 3550C	<b>11.7</b>		%	0.1	1	11/24/25 16:23	NA
Chloride	EPA 9056A	<3.43	U	mg/kg	11.1	1	11/24/25 21:15	11/24/25 09:25
<b>Metals</b>								
Arsenic	EPA 6020B	<b>2.30</b>		mg/kg	0.350	1	11/26/25 05:24	11/24/25 09:44
Barium	EPA 6020B	<b>11.0</b>		mg/kg	0.350	1	11/26/25 05:24	11/24/25 09:44
Cadmium	EPA 6020B	<0.0210	U	mg/kg	0.140	1	11/26/25 05:24	11/24/25 09:44
Chromium	EPA 6020B	<b>3.73</b>		mg/kg	0.350	1	11/26/25 05:24	11/24/25 09:44
Copper	EPA 6020B	<b>4.41</b>		mg/kg	0.350	1	11/26/25 05:24	11/24/25 09:44
Lead	EPA 6020B	<b>5.25</b>		mg/kg	0.350	1	11/26/25 05:24	11/24/25 09:44
Selenium	EPA 6020B	<0.322	U	mg/kg	0.350	1	11/26/25 05:24	11/24/25 09:44
Silver	EPA 6020B	<0.0462	U	mg/kg	0.350	1	11/26/25 05:24	11/24/25 09:44
Zinc	EPA 6020B	<b>17.8</b>		mg/kg	0.701	1	11/26/25 05:24	11/24/25 09:44
Mercury	EPA 7471B	<0.0136	U	mg/kg	0.0200	1	11/25/25 16:30	11/25/25 08:37
<b>Organochlorine Pesticides by GC/ECD</b>								
4,4'-DDD	EPA 8081B	<17.3	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
4,4'-DDE	EPA 8081B	<b>2140</b>		µg/kg	271	10	11/26/25 19:46	11/24/25 20:19
4,4'-DDT	EPA 8081B	<b>742</b>		µg/kg	271	10	11/26/25 19:46	11/24/25 20:19
Aldrin	EPA 8081B	<17.6	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
alpha-BHC	EPA 8081B	<17.8	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
beta-BHC	EPA 8081B	<17.8	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Chlordane, Technical	EPA 8081B	<b>157</b>		µg/kg	67.7	1	11/26/25 15:46	11/24/25 20:19
cis-Chlordane	EPA 8081B	<b>337</b>		µg/kg	135	5	12/01/25 15:36	11/24/25 20:19
delta-BHC	EPA 8081B	<17.7	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Dieldrin	EPA 8081B	<18.9	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:36  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB02 (3-4)

**Lab ID:** HN2517783-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan I	EPA 8081B	<18.2	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Endosulfan II	EPA 8081B	<17.9	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Endosulfan sulfate	EPA 8081B	<16.7	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Endrin	EPA 8081B	<21.9	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Endrin aldehyde	EPA 8081B	<17.2	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Endrin ketone	EPA 8081B	<16.5	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
gamma-BHC (Lindane)	EPA 8081B	<17.8	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Heptachlor	EPA 8081B	<17.5	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Heptachlor epoxide	EPA 8081B	<b>42.1</b>		µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Methoxychlor	EPA 8081B	<18.1	U	µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
Toxaphene	EPA 8081B	<29.3	U	µg/kg	163	1	11/25/25 21:17	11/24/25 20:19
trans-Chlordane	EPA 8081B	<b>83.8</b>		µg/kg	27.1	1	11/25/25 21:17	11/24/25 20:19
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	<i>112</i>		<i>%REC</i>	<i>53-151</i>	<i>1</i>	<i>11/25/25 21:17</i>	<i>11/24/25 20:19</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	<i>88.2</i>		<i>%REC</i>	<i>67-127</i>	<i>1</i>	<i>11/25/25 21:17</i>	<i>11/24/25 20:19</i>

### Polychlorinated Biphenyls (PCBs) by GC/ECD

Aroclor 1016	EPA 8082A	<61.9	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
Aroclor 1221	EPA 8082A	<61.9	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
Aroclor 1232	EPA 8082A	<61.9	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
Aroclor 1242	EPA 8082A	<61.9	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
Aroclor 1248	EPA 8082A	<61.9	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
Aroclor 1254	EPA 8082A	<50.4	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
Aroclor 1260	EPA 8082A	<50.4	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
Aroclor 1262	EPA 8082A	<50.4	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
Aroclor 1268	EPA 8082A	<50.4	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
Total PCB	EPA 8082A	<50.4	U	µg/kg	181	1	11/25/25 14:52	11/24/25 19:31
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	<i>111</i>		<i>%REC</i>	<i>54-146</i>	<i>1</i>	<i>11/25/25 14:52</i>	<i>11/24/25 19:31</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	<i>93.8</i>		<i>%REC</i>	<i>58-140</i>	<i>1</i>	<i>11/25/25 14:52</i>	<i>11/24/25 19:31</i>

### Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<14.9	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<21.1	U	µg/kg	915	1	11/26/25 01:55	11/24/25 12:18

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:36  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB02 (3-4)**

**Lab ID: HN2517783-003**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<65.7	U	µg/kg	458	1	11/26/25 01:55	11/24/25 12:18
1-Methylnaphthalene	EPA 8270E	<13.2	U	µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<21.5	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2,3,4,6-Tetrachlorophenol	EPA 8270E	<67.1	U	µg/kg	183	1	11/26/25 01:55	11/24/25 12:18
2,4,5-Trichlorophenol	EPA 8270E	<54.3	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2,4,6-Trichlorophenol	EPA 8270E	<24.4	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2,4-Dichlorophenol	EPA 8270E	<49.3	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2,4-Dimethylphenol	EPA 8270E	<47.1	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2,4-Dinitrophenol	EPA 8270E	<670	U	µg/kg	915	1	11/26/25 01:55	11/24/25 12:18
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<59.5	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<23.4	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2-Chloronaphthalene	EPA 8270E	<12.8	U	µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
2-Chlorophenol	EPA 8270E	<59.9	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<76.5	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2-Methylnaphthalene	EPA 8270E	<9.32	U	µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
2-Methylphenol (o-Cresol)	EPA 8270E	<24.8	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2-Nitroaniline	EPA 8270E	<50.9	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
2-Nitrophenol	EPA 8270E	<26.1	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
3&4-Methylphenol	EPA 8270E	<49.9	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
3,3'-Dichlorobenzidine	EPA 8270E	<42.8	U	µg/kg	458	1	11/26/25 01:55	11/24/25 12:18
3-Nitroaniline	EPA 8270E	<53.2	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<50.2	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
4-Chloro-3-methylphenol	EPA 8270E	<26.1	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
4-Chloroaniline	EPA 8270E	<46.5	U	µg/kg	183	1	11/26/25 01:55	11/24/25 12:18
4-Chlorophenyl phenylether	EPA 8270E	<25.3	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
4-Nitroaniline	EPA 8270E	<142	U	µg/kg	458	1	11/26/25 01:55	11/24/25 12:18
4-Nitrophenol	EPA 8270E	<215	U	µg/kg	915	1	11/26/25 01:55	11/24/25 12:18
Acenaphthene	EPA 8270E	<13.2	U	µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:36  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB02 (3-4)

**Lab ID:** HN2517783-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Acenaphthylene	EPA 8270E	<15.9	U	µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Acetophenone	EPA 8270E	<14.3	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Anthracene	EPA 8270E	<b>36.6</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Atrazine	EPA 8270E	<53.7	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Benzaldehyde	EPA 8270E	<141	U	µg/kg	183	1	11/26/25 01:55	11/24/25 12:18
Benzo(a)anthracene	EPA 8270E	<b>143</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Benzo(a)pyrene	EPA 8270E	<b>143</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Benzo(b)fluoranthene	EPA 8270E	<b>178</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Benzo(g,h,i)perylene	EPA 8270E	<b>93.4</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Benzo(k)fluoranthene	EPA 8270E	<b>69.6</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
bis(2-Chloroethoxy) methane	EPA 8270E	<58.0	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
bis(2-Chloroethyl) ether	EPA 8270E	<25.9	SU	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Butyl benzyl phthalate	EPA 8270E	<115	U	µg/kg	183	1	11/26/25 01:55	11/24/25 12:18
Caprolactam	EPA 8270E	<82.7	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Carbazole	EPA 8270E	<27.0	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Chrysene	EPA 8270E	<b>119</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<b>117</b>		µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Dibenz(a,h) anthracene	EPA 8270E	<9.89	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Dibenzofuran	EPA 8270E	<13.5	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Diethyl phthalate	EPA 8270E	<31.2	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Dimethyl phthalate	EPA 8270E	<17.9	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Fluoranthene	EPA 8270E	<b>308</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Fluorene	EPA 8270E	<13.3	U	µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Hexachlorobenzene	EPA 8270E	<26.7	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Hexachlorobutadiene	EPA 8270E	<21.6	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Hexachlorocyclopentadiene	EPA 8270E	<86.8	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Hexachloroethane	EPA 8270E	<37.9	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Indeno(1,2,3-cd) pyrene	EPA 8270E	<b>125</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Isophorone	EPA 8270E	<17.9	U	µg/kg	458	1	11/26/25 01:55	11/24/25 12:18
Methylphenol, Total	EPA 8270E	<24.8	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:36  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB02 (3-4)

**Lab ID:** HN2517783-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Naphthalene	EPA 8270E	<11.7	U	µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Nitrobenzene	EPA 8270E	<30.8	U	µg/kg	458	1	11/26/25 01:55	11/24/25 12:18
n-Nitrosodi-n-propylamine	EPA 8270E	<15.1	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
N-Nitrosodiphenylamine	EPA 8270E	<53.0	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Pentachlorophenol	EPA 8270E	<72.8	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Phenanthrene	EPA 8270E	<b>147</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Phenol	EPA 8270E	<46.0	U	µg/kg	90.7	1	11/26/25 01:55	11/24/25 12:18
Pyrene	EPA 8270E	<b>249</b>		µg/kg	18.3	1	11/26/25 01:55	11/24/25 12:18
Pyridine	EPA 8270E	<180	U	µg/kg	458	1	11/26/25 01:55	11/24/25 12:18
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<b>71.8</b>		<i>%REC</i>	<i>48-94</i>	<i>1</i>	<i>11/26/25 01:55</i>	<i>11/24/25 12:18</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<b>87.0</b>		<i>%REC</i>	<i>50-103</i>	<i>1</i>	<i>11/26/25 01:55</i>	<i>11/24/25 12:18</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<b>81.7</b>		<i>%REC</i>	<i>43-105</i>	<i>1</i>	<i>11/26/25 01:55</i>	<i>11/24/25 12:18</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	<b>88.9</b>		<i>%REC</i>	<i>55-111</i>	<i>1</i>	<i>11/26/25 01:55</i>	<i>11/24/25 12:18</i>
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	<b>79.0</b>		<i>%REC</i>	<i>47-100</i>	<i>1</i>	<i>11/26/25 01:55</i>	<i>11/24/25 12:18</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<b>90.2</b>		<i>%REC</i>	<i>49-110</i>	<i>1</i>	<i>11/26/25 01:55</i>	<i>11/24/25 12:18</i>

### Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<18.0	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,1,2,2-Tetrachloroethane	EPA 8260D	<17.5	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<25.1	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,1,2-Trichloroethane	EPA 8260D	<16.9	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,1-Dichloroethane	EPA 8260D	<14.5	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,1-Dichloroethylene	EPA 8260D	<12.9	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,2,3-Trichlorobenzene	EPA 8260D	<47.6	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
1,2,3-Trichloropropane	EPA 8260D	<16.6	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,2,4-Trichlorobenzene	EPA 8260D	<45.0	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
1,2,4-Trimethylbenzene	EPA 8260D	<29.1	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<36.5	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<23.3	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<15.1	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:36  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB02 (3-4)**

**Lab ID: HN2517783-003**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<23.3	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
1,2-Dichloropropane	EPA 8260D	<29.2	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,3,5-Trimethylbenzene	EPA 8260D	<28.0	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<27.4	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
1,3-Dichloropropene	EPA 8260D	<22.2	U	µg/kg	79.4	1	11/25/25 00:47	11/24/25 16:42
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<32.2	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<94.4	U	µg/kg	265	1	11/25/25 00:47	11/24/25 16:42
2-Hexanone	EPA 8260D	<19.7	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<37.0	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Acetone	EPA 8260D	<118	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
Benzene	EPA 8260D	<19.2	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Bromochloromethane	EPA 8260D	<20.2	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Bromodichloromethane	EPA 8260D	<22.2	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Bromoform	EPA 8260D	<16.7	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Carbon disulfide	EPA 8260D	<20.5	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Carbon tetrachloride	EPA 8260D	<15.5	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Chlorobenzene	EPA 8260D	<13.2	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Chlorodibromomethane	EPA 8260D	<22.3	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Chloroethane (Ethyl chloride)	EPA 8260D	<111	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
Chloroform	EPA 8260D	<14.5	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
cis-1,2-Dichloroethylene	EPA 8260D	<25.5	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
cis-1,3-Dichloropropene	EPA 8260D	<29.9	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Cyclohexane	EPA 8260D	<30.4	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<48.0	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
Ethylbenzene	EPA 8260D	<28.1	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Isopropylbenzene	EPA 8260D	<25.1	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
m+p-Xylene	EPA 8260D	<52.9	U	µg/kg	79.4	1	11/25/25 00:47	11/24/25 16:42
Methyl acetate	EPA 8260D	<47.5	U	µg/kg	331	1	11/25/25 00:47	11/24/25 16:42
Methyl bromide (Bromomethane)	EPA 8260D	<75.9	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:36  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB02 (3-4)**

**Lab ID: HN2517783-003**

Analyte	Method	Results	Qual	Units	MRL	Dilution	Date	Date
						Factor	Analyzed	Extracted
Methyl chloride (Chloromethane)	EPA 8260D	<108	U	µg/kg	132	1	11/25/25 00:47	11/24/25 16:42
Methyl tert-butyl ether (MTBE)	EPA 8260D	<28.9	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Methylcyclohexane	EPA 8260D	<15.1	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Methylene chloride (Dichloromethane)	EPA 8260D	<105	U	µg/kg	331	1	11/25/25 00:47	11/24/25 16:42
o-Xylene	EPA 8260D	<15.3	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Styrene	EPA 8260D	<15.7	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<23.9	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Toluene	EPA 8260D	<32.7	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Total Xylene	EPA 8260D	<15.3	U	µg/kg	119	1	11/25/25 00:47	11/24/25 16:42
trans-1,2-Dichloroethylene	EPA 8260D	<32.7	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
trans-1,3-Dichloropropylene	EPA 8260D	<22.2	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Trichloroethene (Trichloroethylene)	EPA 8260D	<17.8	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<20.3	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
Vinyl chloride (Chloroethene)	EPA 8260D	<26.4	U	µg/kg	39.7	1	11/25/25 00:47	11/24/25 16:42
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	<b>106</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>11/25/25 00:47</i>	<i>11/24/25 16:42</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	<b>104</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>11/25/25 00:47</i>	<i>11/24/25 16:42</i>
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	<b>90.8</b>		<i>%REC</i>	<i>72-120</i>	<i>1</i>	<i>11/25/25 00:47</i>	<i>11/24/25 16:42</i>
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	<b>99.2</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>11/25/25 00:47</i>	<i>11/24/25 16:42</i>

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:50  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB03 (5-6)

**Lab ID:** HN2517783-005

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
<b>Chlorinated Herbicides by GC/ECD</b>								
2,4,5-T	EPA 8151A	<3.73	U	µg/kg	20.3	1	12/08/25 08:21	12/01/25 08:09
2,4,5-TP (Silvex)	EPA 8151A	<6.66	U	µg/kg	20.3	1	12/08/25 08:21	12/01/25 08:09
2,4-D	EPA 8151A	<10.8	U	µg/kg	40.6	1	12/08/25 08:21	12/01/25 08:09
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	<b>70.0</b>		<i>%REC</i>	<i>10-116</i>	<i>1</i>	<i>12/08/25 08:21</i>	<i>12/01/25 08:09</i>
<b>General Chemistry Parameters</b>								
Percent Moisture	EPA 3550C	<b>21.3</b>		%	0.1	1	11/24/25 16:23	NA
Chloride	EPA 9056A	<b>16.7</b>		mg/kg	12.2	1	11/24/25 21:25	11/24/25 09:25
<b>Metals</b>								
Arsenic	EPA 6020B	<b>13.1</b>		mg/kg	0.394	1	11/26/25 05:26	11/24/25 09:44
Barium	EPA 6020B	<b>87.3</b>		mg/kg	0.394	1	11/26/25 05:26	11/24/25 09:44
Cadmium	EPA 6020B	<b>0.178</b>		mg/kg	0.158	1	11/26/25 05:26	11/24/25 09:44
Chromium	EPA 6020B	<b>15.6</b>		mg/kg	0.394	1	11/26/25 05:26	11/24/25 09:44
Copper	EPA 6020B	<b>22.3</b>		mg/kg	0.394	1	11/26/25 05:26	11/24/25 09:44
Lead	EPA 6020B	<b>27.6</b>		mg/kg	0.394	1	11/26/25 05:26	11/24/25 09:44
Selenium	EPA 6020B	<0.363	U	mg/kg	0.394	1	11/26/25 05:26	11/24/25 09:44
Silver	EPA 6020B	<0.0521	U	mg/kg	0.394	1	11/26/25 05:26	11/24/25 09:44
Zinc	EPA 6020B	<b>49.8</b>		mg/kg	0.789	1	11/26/25 05:26	11/24/25 09:44
Mercury	EPA 7471B	<b>0.0785</b>		mg/kg	0.0212	1	11/25/25 16:43	11/25/25 08:38
<b>Organochlorine Pesticides by GC/ECD</b>								
4,4'-DDD	EPA 8081B	<b>39.9</b>		µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
4,4'-DDE	EPA 8081B	<b>228</b>		µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
4,4'-DDT	EPA 8081B	<b>105</b>		µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Aldrin	EPA 8081B	<20.5	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
alpha-BHC	EPA 8081B	<20.7	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
beta-BHC	EPA 8081B	<20.7	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Chlordane, Technical	EPA 8081B	<31.2	U	µg/kg	78.7	1	11/25/25 21:32	11/24/25 20:19
cis-Chlordane	EPA 8081B	<21.0	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
delta-BHC	EPA 8081B	<20.6	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Dieldrin	EPA 8081B	<22.0	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:50  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB03 (5-6)

**Lab ID:** HN2517783-005

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan I	EPA 8081B	<21.2	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Endosulfan II	EPA 8081B	<20.9	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Endosulfan sulfate	EPA 8081B	<19.4	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Endrin	EPA 8081B	<25.5	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Endrin aldehyde	EPA 8081B	<20.0	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Endrin ketone	EPA 8081B	<19.2	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
gamma-BHC (Lindane)	EPA 8081B	<20.7	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Heptachlor	EPA 8081B	<20.3	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Heptachlor epoxide	EPA 8081B	<20.8	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Methoxychlor	EPA 8081B	<21.1	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
Toxaphene	EPA 8081B	<34.0	U	µg/kg	189	1	11/25/25 21:32	11/24/25 20:19
trans-Chlordane	EPA 8081B	<20.9	U	µg/kg	31.5	1	11/25/25 21:32	11/24/25 20:19
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	<b>105</b>		<i>%REC</i>	<i>53-151</i>	<i>1</i>	<i>11/25/25 21:32</i>	<i>11/24/25 20:19</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	<b>87.8</b>		<i>%REC</i>	<i>67-127</i>	<i>1</i>	<i>11/25/25 21:32</i>	<i>11/24/25 20:19</i>

### Polychlorinated Biphenyls (PCBs) by GC/ECD

Aroclor 1016	EPA 8082A	<72.0	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
Aroclor 1221	EPA 8082A	<72.0	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
Aroclor 1232	EPA 8082A	<72.0	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
Aroclor 1242	EPA 8082A	<72.0	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
Aroclor 1248	EPA 8082A	<72.0	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
Aroclor 1254	EPA 8082A	<58.6	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
Aroclor 1260	EPA 8082A	<58.6	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
Aroclor 1262	EPA 8082A	<58.6	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
Aroclor 1268	EPA 8082A	<58.6	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
Total PCB	EPA 8082A	<58.6	U	µg/kg	210	1	11/25/25 15:04	11/24/25 19:31
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	<b>117</b>		<i>%REC</i>	<i>54-146</i>	<i>1</i>	<i>11/25/25 15:04</i>	<i>11/24/25 19:31</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	<b>88.6</b>		<i>%REC</i>	<i>58-140</i>	<i>1</i>	<i>11/25/25 15:04</i>	<i>11/24/25 19:31</i>

### Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<171	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<243	U	µg/kg	10500	10	11/26/25 04:45	11/24/25 12:18

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:50  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB03 (5-6)**

**Lab ID: HN2517783-005**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<756	U	µg/kg	5270	10	11/26/25 04:45	11/24/25 12:18
1-Methylnaphthalene	EPA 8270E	<152	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<247	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2,3,4,6-Tetrachlorophenol	EPA 8270E	<773	U	µg/kg	2110	10	11/26/25 04:45	11/24/25 12:18
2,4,5-Trichlorophenol	EPA 8270E	<625	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2,4,6-Trichlorophenol	EPA 8270E	<281	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2,4-Dichlorophenol	EPA 8270E	<568	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2,4-Dimethylphenol	EPA 8270E	<542	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2,4-Dinitrophenol	EPA 8270E	<7710	U	µg/kg	10500	10	11/26/25 04:45	11/24/25 12:18
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<685	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<269	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2-Chloronaphthalene	EPA 8270E	<147	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
2-Chlorophenol	EPA 8270E	<690	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<881	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2-Methylnaphthalene	EPA 8270E	<107	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
2-Methylphenol (o-Cresol)	EPA 8270E	<285	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2-Nitroaniline	EPA 8270E	<586	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
2-Nitrophenol	EPA 8270E	<301	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
3&4-Methylphenol	EPA 8270E	<575	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
3,3'-Dichlorobenzidine	EPA 8270E	<492	U	µg/kg	5270	10	11/26/25 04:45	11/24/25 12:18
3-Nitroaniline	EPA 8270E	<612	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<578	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
4-Chloro-3-methylphenol	EPA 8270E	<301	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
4-Chloroaniline	EPA 8270E	<536	U	µg/kg	2110	10	11/26/25 04:45	11/24/25 12:18
4-Chlorophenyl phenylether	EPA 8270E	<291	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
4-Nitroaniline	EPA 8270E	<1640	U	µg/kg	5270	10	11/26/25 04:45	11/24/25 12:18
4-Nitrophenol	EPA 8270E	<2470	U	µg/kg	10500	10	11/26/25 04:45	11/24/25 12:18
Acenaphthene	EPA 8270E	<153	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:50  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB03 (5-6)

**Lab ID:** HN2517783-005

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Acenaphthylene	EPA 8270E	<183	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Acetophenone	EPA 8270E	<165	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Anthracene	EPA 8270E	<149	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Atrazine	EPA 8270E	<618	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Benzaldehyde	EPA 8270E	<1620	U	µg/kg	2110	10	11/26/25 04:45	11/24/25 12:18
Benzo(a)anthracene	EPA 8270E	<182	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Benzo(a)pyrene	EPA 8270E	<b>274</b>		µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Benzo(b)fluoranthene	EPA 8270E	<b>253</b>		µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Benzo(g,h,i)perylene	EPA 8270E	<162	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Benzo(k)fluoranthene	EPA 8270E	<160	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
bis(2-Chloroethoxy) methane	EPA 8270E	<668	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
bis(2-Chloroethyl) ether	EPA 8270E	<299	SU	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Butyl benzyl phthalate	EPA 8270E	<1320	U	µg/kg	2110	10	11/26/25 04:45	11/24/25 12:18
Caprolactam	EPA 8270E	<952	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Carbazole	EPA 8270E	<311	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Chrysene	EPA 8270E	<171	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<873	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Dibenz(a,h) anthracene	EPA 8270E	<114	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Dibenzofuran	EPA 8270E	<155	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Diethyl phthalate	EPA 8270E	<359	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Dimethyl phthalate	EPA 8270E	<206	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Fluoranthene	EPA 8270E	<b>253</b>		µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Fluorene	EPA 8270E	<153	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Hexachlorobenzene	EPA 8270E	<307	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Hexachlorobutadiene	EPA 8270E	<249	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Hexachlorocyclopentadiene	EPA 8270E	<1000	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Hexachloroethane	EPA 8270E	<437	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Indeno(1,2,3-cd) pyrene	EPA 8270E	<147	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Isophorone	EPA 8270E	<206	U	µg/kg	5270	10	11/26/25 04:45	11/24/25 12:18
Methylphenol, Total	EPA 8270E	<285	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:50  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB03 (5-6)**

**Lab ID: HN2517783-005**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Naphthalene	EPA 8270E	<135	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Nitrobenzene	EPA 8270E	<354	U	µg/kg	5270	10	11/26/25 04:45	11/24/25 12:18
n-Nitrosodi-n-propylamine	EPA 8270E	<174	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
N-Nitrosodiphenylamine	EPA 8270E	<611	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Pentachlorophenol	EPA 8270E	<838	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Phenanthrene	EPA 8270E	<98.1	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Phenol	EPA 8270E	<530	U	µg/kg	1040	10	11/26/25 04:45	11/24/25 12:18
Pyrene	EPA 8270E	<105	U	µg/kg	211	10	11/26/25 04:45	11/24/25 12:18
Pyridine	EPA 8270E	<2080	U	µg/kg	5270	10	11/26/25 04:45	11/24/25 12:18
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<b>70.2</b>		<i>%REC</i>	<i>48-94</i>	<i>10</i>	<i>11/26/25 04:45</i>	<i>11/24/25 12:18</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<b>71.4</b>		<i>%REC</i>	<i>50-103</i>	<i>10</i>	<i>11/26/25 04:45</i>	<i>11/24/25 12:18</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<b>73.4</b>		<i>%REC</i>	<i>43-105</i>	<i>10</i>	<i>11/26/25 04:45</i>	<i>11/24/25 12:18</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	<b>80.0</b>		<i>%REC</i>	<i>55-111</i>	<i>10</i>	<i>11/26/25 04:45</i>	<i>11/24/25 12:18</i>
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	<b>63.8</b>		<i>%REC</i>	<i>47-100</i>	<i>10</i>	<i>11/26/25 04:45</i>	<i>11/24/25 12:18</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<b>77.4</b>		<i>%REC</i>	<i>49-110</i>	<i>10</i>	<i>11/26/25 04:45</i>	<i>11/24/25 12:18</i>

### Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<22.0	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,1,2,2-Tetrachloroethane	EPA 8260D	<21.4	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<30.8	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,1,2-Trichloroethane	EPA 8260D	<20.7	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,1-Dichloroethane	EPA 8260D	<17.7	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,1-Dichloroethylene	EPA 8260D	<15.7	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,2,3-Trichlorobenzene	EPA 8260D	<58.3	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
1,2,3-Trichloropropane	EPA 8260D	<20.3	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,2,4-Trichlorobenzene	EPA 8260D	<55.1	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
1,2,4-Trimethylbenzene	EPA 8260D	<35.6	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<44.7	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<28.6	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<18.4	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:50  
**Date Received:** 11/22/25 08:00

**CLIENT ID:** 12277 SB03 (5-6)

**Lab ID:** HN2517783-005

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<28.6	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
1,2-Dichloropropane	EPA 8260D	<35.8	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,3,5-Trimethylbenzene	EPA 8260D	<34.3	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<33.6	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
1,3-Dichloropropene	EPA 8260D	<27.1	U	µg/kg	97.2	1	11/25/25 01:04	11/24/25 16:42
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<39.5	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<116	U	µg/kg	324	1	11/25/25 01:04	11/24/25 16:42
2-Hexanone	EPA 8260D	<24.1	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<45.3	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Acetone	EPA 8260D	<144	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
Benzene	EPA 8260D	<23.5	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Bromochloromethane	EPA 8260D	<24.7	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Bromodichloromethane	EPA 8260D	<27.2	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Bromoform	EPA 8260D	<20.5	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Carbon disulfide	EPA 8260D	<25.2	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Carbon tetrachloride	EPA 8260D	<19.0	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Chlorobenzene	EPA 8260D	<16.1	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Chlorodibromomethane	EPA 8260D	<27.3	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Chloroethane (Ethyl chloride)	EPA 8260D	<136	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
Chloroform	EPA 8260D	<17.8	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
cis-1,2-Dichloroethylene	EPA 8260D	<31.2	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
cis-1,3-Dichloropropene	EPA 8260D	<36.6	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Cyclohexane	EPA 8260D	<37.2	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<58.8	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
Ethylbenzene	EPA 8260D	<34.5	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Isopropylbenzene	EPA 8260D	<30.7	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
m+p-Xylene	EPA 8260D	<64.8	U	µg/kg	97.2	1	11/25/25 01:04	11/24/25 16:42
Methyl acetate	EPA 8260D	<58.2	U	µg/kg	405	1	11/25/25 01:04	11/24/25 16:42
Methyl bromide (Bromomethane)	EPA 8260D	<93.0	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 14:50  
**Date Received:** 11/22/25 08:00

**CLIENT ID: 12277 SB03 (5-6)**

**Lab ID: HN2517783-005**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Methyl chloride (Chloromethane)	EPA 8260D	<133	U	µg/kg	162	1	11/25/25 01:04	11/24/25 16:42
Methyl tert-butyl ether (MTBE)	EPA 8260D	<35.4	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Methylcyclohexane	EPA 8260D	<18.5	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Methylene chloride (Dichloromethane)	EPA 8260D	<129	U	µg/kg	405	1	11/25/25 01:04	11/24/25 16:42
o-Xylene	EPA 8260D	<18.8	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Styrene	EPA 8260D	<19.3	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<29.3	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Toluene	EPA 8260D	<40.1	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Total Xylene	EPA 8260D	<18.8	U	µg/kg	146	1	11/25/25 01:04	11/24/25 16:42
trans-1,2-Dichloroethylene	EPA 8260D	<40.1	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
trans-1,3-Dichloropropylene	EPA 8260D	<27.1	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Trichloroethene (Trichloroethylene)	EPA 8260D	<21.8	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<24.9	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
Vinyl chloride (Chloroethene)	EPA 8260D	<32.3	U	µg/kg	48.6	1	11/25/25 01:04	11/24/25 16:42
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	<b>104</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>11/25/25 01:04</i>	<i>11/24/25 16:42</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	<b>99.5</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>11/25/25 01:04</i>	<i>11/24/25 16:42</i>
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	<b>89.1</b>		<i>%REC</i>	<i>72-120</i>	<i>1</i>	<i>11/25/25 01:04</i>	<i>11/24/25 16:42</i>
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	<b>100</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>11/25/25 01:04</i>	<i>11/24/25 16:42</i>



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2363045

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3750933

**Chlorinated Herbicides by GC/ECD**

**MB** CLIENT ID: Method Blank Lab ID: QC-2363045-001

**Method:** EPA 8151A **Dilution:** 1 **Analysis Date:** 12/08/25 08:22  
**Prep Date:** 12/01/25 08:10

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	<b>41.0</b>	µg/kg		50		82.0	10-116			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2363045-002

**Method:** EPA 8151A **Dilution:** 1 **Analysis Date:** 12/08/25 08:22  
**Prep Date:** 12/01/25 08:10

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	19.0	µg/kg	5.00	50		38.0	10-119			
2,4,5-TP (Silvex)	16.0	µg/kg	5.00	50		32.0	10-101			
2,4-D	17.0	µg/kg	10.0	50		34.0	10-128			
Surr: DCAA	<b>27.0</b>	µg/kg		50		54.0	10-116			

**MS** CLIENT ID: 12277 SB01 (1-2) Lab ID: QC-2363045-005

**Method:** EPA 8151A **Dilution:** 1 **Analysis Date:** 12/08/25 08:22  
**Prep Date:** 12/01/25 08:10

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	20.7	µg/kg	5.28	49.285	<0.907	42.0	10-119			
2,4,5-TP (Silvex)	17.7	µg/kg	5.28	49.285	<1.62	36.0	10-101			
2,4-D	18.7	µg/kg	10.6	49.285	<2.63	38.0	10-128			
Surr: DCAA	<b>28.6</b>	µg/kg		49.285		58.0	10-116			

**MSD** CLIENT ID: 12277 SB01 (1-2) Lab ID: QC-2363045-006

**Method:** EPA 8151A **Dilution:** 1 **Analysis Date:** 12/08/25 08:22  
**Prep Date:** 12/01/25 08:10

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	19.7	µg/kg	5.29	49.334	<0.920	40.0	10-119	4.78	30	
2,4,5-TP (Silvex)	16.8	µg/kg	5.29	49.334	<1.64	34.0	10-101	5.62	30	
2,4-D	18.7	µg/kg	10.6	49.334	<2.67	38.0	10-128	0.0986	30	
Surr: DCAA	<b>25.7</b>	µg/kg		49.334		52.0	10-116	10.8	30	

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2351778

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3717186

General Chemistry Parameters

**MB** CLIENT ID: Method Blank Lab ID: QC-2351778-001

Method: EPA 9056A Dilution: 1 Analysis Date: 11/24/25 18:09  
 Prep Date: 11/24/25 09:26

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-2351778-002

Method: EPA 9056A Dilution: 1 Analysis Date: 11/24/25 18:19  
 Prep Date: 11/24/25 09:26

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	99.4	mg/kg	10.0	100		99.4	87-110			

**MS** CLIENT ID: Batch QC Lab ID: QC-2351778-004

Method: EPA 9056A Dilution: 1 Analysis Date: 11/24/25 18:39  
 Prep Date: 11/24/25 09:26

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	99.4	mg/kg	10.4	99.206	<3.08	97.7	87-110			

**MSD** CLIENT ID: Batch QC Lab ID: QC-2351778-005

Method: EPA 9056A Dilution: 1 Analysis Date: 11/24/25 18:48  
 Prep Date: 11/24/25 09:26

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	100	mg/kg	10.5	99.602	<3.10	97.9	87-110	0.664	15	

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352274

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3713522

**General Chemistry Parameters**

**MB** CLIENT ID: Method Blank Lab ID: QC-2352274-001  
 Method: EPA 3550C Dilution: 1 Analysis Date: 11/24/25 16:23  
 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-2352274-002  
 Method: EPA 3550C Dilution: 1 Analysis Date: 11/24/25 16:23  
 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	98-102			

**DUP** CLIENT ID: Batch QC Lab ID: QC-2352274-004  
 Method: EPA 3550C Dilution: 1 Analysis Date: 11/24/25 16:23  
 Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	14.9	%	0.1		15.1			1.53	10	

**DUP** CLIENT ID: 12277 SB03 (5-6) Lab ID: QC-2352274-015  
 Method: EPA 3550C Dilution: 1 Analysis Date: 11/24/25 16:23  
 Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	22.0	%	0.1		21.3			3.51	10	

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352163

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3715790

**Metals**

**MB CLIENT ID: Method Blank Lab ID: QC-2352163-001**

**Method:** EPA 6020B **Dilution:** 1 **Analysis Date:** 11/26/25 04:25  
**Prep Date:** 11/24/25 09:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	<0.0300	mg/kg	0.250							U
Barium	<0.230	mg/kg	0.250							U
Cadmium	<0.0150	mg/kg	0.100							U
Chromium	<0.110	mg/kg	0.250							U
Copper	<0.250	mg/kg	0.250							U
Lead	<0.120	mg/kg	0.250							U
Selenium	<0.230	mg/kg	0.250							U
Silver	<0.0330	mg/kg	0.250							U
Zinc	<0.490	mg/kg	0.500							U

**LCS CLIENT ID: Laboratory Control Sample Lab ID: QC-2352163-002**

**Method:** EPA 6020B **Dilution:** 1 **Analysis Date:** 11/26/25 04:28  
**Prep Date:** 11/24/25 09:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	5.47	mg/kg	0.250	5		109	80-120			
Cadmium	5.07	mg/kg	0.100	5		101	80-120			
Chromium	5.52	mg/kg	0.250	5		110	80-120			
Copper	5.68	mg/kg	0.250	5		114	80-120			
Lead	5.09	mg/kg	0.250	5		102	80-120			
Selenium	4.97	mg/kg	0.250	5		99.4	80-120			
Silver	5.54	mg/kg	0.250	5		111	80-120			
Zinc	5.69	mg/kg	0.500	5		114	80-120			

**MS CLIENT ID: Batch QC Lab ID: QC-2352163-004**

**Method:** EPA 6020B **Dilution:** 1 **Analysis Date:** 11/26/25 04:37  
**Prep Date:** 11/24/25 09:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Barium	38.2	mg/kg	0.353	5	48.7	NC	75-125			O
Cadmium	5.10	mg/kg	0.141	5.988	0.0414	84.6	75-125			
Selenium	5.21	mg/kg	0.353	5.988	<0.275	83.5	75-125			
Silver	5.40	mg/kg	0.353	5.988	<0.0395	90.0	75-125			
Zinc	31.5	mg/kg	0.707	5	39.0	NC	75-125			O

**MSD CLIENT ID: Batch QC Lab ID: QC-2352163-005**

**Method:** EPA 6020B **Dilution:** 1 **Analysis Date:** 11/26/25 04:39  
**Prep Date:** 11/24/25 09:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Barium	66.7	mg/kg	0.349	5	48.7	NC	75-125	54.4	20	OR
Cadmium	4.95	mg/kg	0.139	5.9102	0.0414	83.2	75-125	3.05	20	

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352163

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3715790

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352163-005

**Method:** EPA 6020B **Dilution:** 1 **Analysis Date:** 11/26/25 04:39  
**Prep Date:** 11/24/25 09:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	
								RPD	Limit Qual
Selenium	5.11	mg/kg	0.349	5.9102	<0.272	82.9	75-125	1.89	20
Silver	5.07	mg/kg	0.349	5.9102	<0.0390	85.6	75-125	6.29	20
Zinc	38.9	mg/kg	0.697	5	39.0	NC	75-125	21.0	20 OR

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352163

**Work Order:** HN2517783  
**Date Collected:** 11/20/25 12:45  
**Date Received:** 11/21/25 08:00  
**Run ID:** 3721582

**Metals**

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2352163-002

**Method:** EPA 6020B **Dilution:** 1 **Analysis Date:** 11/26/25 17:05  
**Prep Date:** 11/24/25 09:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Barium	4.88	mg/kg	0.250	5		97.5	80-120			

**MS** CLIENT ID: Batch QC Lab ID: QC-2352163-004

**Method:** EPA 6020B **Dilution:** 10 **Analysis Date:** 11/26/25 17:09  
**Prep Date:** 11/24/25 09:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	10.2	mg/kg	3.53	5.988	8.81	46.0	75-125		20	S
Chromium	12.6	mg/kg	3.53	5.988	10.5	61.7	75-125		20	S
Copper	13.7	mg/kg	3.53	5.988	14.0	31.4	75-125		20	S
Lead	10.3	mg/kg	3.53	5.988	8.11	56.7	75-125		20	S

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352163-005

**Method:** EPA 6020B **Dilution:** 10 **Analysis Date:** 11/26/25 17:10  
**Prep Date:** 11/24/25 09:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	12.8	mg/kg	3.49	5.9102	8.81	90.4	75-125	22.4	20	R
Chromium	16.1	mg/kg	3.49	5.9102	10.5	122	75-125	24.5	20	R
Copper	16.4	mg/kg	3.49	5.9102	14.0	78.1	75-125	18.2	20	
Lead	12.7	mg/kg	3.49	5.9102	8.11	98.0	75-125	20.9	20	R

**PDS** CLIENT ID: Batch QC Lab ID: QC-2352163-007

**Method:** EPA 6020B **Dilution:** 10 **Analysis Date:** 11/26/25 17:14  
**Prep Date:** 11/24/25 09:45

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	63.8	mg/kg	3.51	59.524	8.81	94.6	75-125			
Chromium	65.3	mg/kg	3.51	59.524	10.5	94.8	75-125			
Copper	66.9	mg/kg	3.51	59.524	14.0	92.5	75-125			
Lead	62.1	mg/kg	3.51	59.524	8.11	92.9	75-125			

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352769

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3716896

**Metals**

**MB CLIENT ID: Method Blank Lab ID: QC-2352769-001**

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 11/25/25 15:35  
**Prep Date:** 11/25/25 08:37

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-2352769-002**

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 11/25/25 15:37  
**Prep Date:** 11/25/25 08:37

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

**MS CLIENT ID: Batch QC Lab ID: QC-2352769-004**

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 11/25/25 15:41  
**Prep Date:** 11/25/25 08:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.180	mg/kg	0.0200	0.15136	0.0244	103	75-125			

**MSD CLIENT ID: Batch QC Lab ID: QC-2352769-005**

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 11/25/25 15:44  
**Prep Date:** 11/25/25 08:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.174	mg/kg	0.0200	0.15984	0.0244	94.5	75-125	2.91	35	

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352820

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3716896

**Metals**

**MB** CLIENT ID: Method Blank Lab ID: QC-2352820-001

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 11/25/25 16:32  
**Prep Date:** 11/25/25 08:39

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-2352820-002

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 11/25/25 16:34  
**Prep Date:** 11/25/25 08:39

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: 12277 SB03 (5-6) Lab ID: QC-2352820-004

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 11/25/25 16:44  
**Prep Date:** 11/25/25 08:39

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.172	mg/kg	0.0215	0.1409	0.0785	78.2	75-125			

**MSD** CLIENT ID: 12277 SB03 (5-6) Lab ID: QC-2352820-005

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 11/25/25 16:47  
**Prep Date:** 11/25/25 08:39

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.187	mg/kg	0.0210	0.13779	0.0785	90.8	75-125	8.26	35	

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352161

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3718965

**Organochlorine Pesticides by GC/ECD**

**MB** CLIENT ID: Method Blank Lab ID: QC-2352161-001

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 11/25/25 13:34  
**Prep Date:** 11/24/25 20:20

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	35.7	µg/kg		33.33		107	53-151			
Surr: Tetrachloro-m-xylene	32.1	µg/kg		33.33		96.3	67-127			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2352161-002

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 11/25/25 13:49  
**Prep Date:** 11/24/25 20:20

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	31.4	µg/kg	10.0	33.33		94.1	55-141			
4,4'-DDE	31.4	µg/kg	10.0	33.33		94.2	55-143			
4,4'-DDT	31.5	µg/kg	10.0	33.33		94.5	50-144			
Aldrin	31.8	µg/kg	10.0	33.33		95.4	57-141			
alpha-BHC	30.6	µg/kg	10.0	33.33		92.0	58-144			
beta-BHC	31.4	µg/kg	10.0	33.33		94.3	55-147			
cis-Chlordane	31.4	µg/kg	10.0	33.33		94.4	58-142			
delta-BHC	25.8	µg/kg	10.0	33.33		77.5	59-142			
Dieldrin	31.6	µg/kg	10.0	33.33		94.8	59-142			
Endosulfan I	30.9	µg/kg	10.0	33.33		92.8	57-145			
Endosulfan II	31.1	µg/kg	10.0	33.33		93.3	58-138			
Endosulfan sulfate	29.9	µg/kg	10.0	33.33		89.8	54-136			
Endrin	28.3	µg/kg	10.0	33.33		84.9	45-150			

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352161

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3718965

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2352161-002

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 11/25/25 13:49  
**Prep Date:** 11/24/25 20:20

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Endrin aldehyde	31.3	µg/kg	10.0	33.33		93.9	41-147			
Endrin ketone	30.3	µg/kg	10.0	33.33		91.0	54-146			
gamma-BHC (Lindane)	30.8	µg/kg	10.0	33.33		92.5	58-145			
Heptachlor	32.5	µg/kg	10.0	33.33		97.6	51-145			
Heptachlor epoxide	32.0	µg/kg	10.0	33.33		96.0	59-143			
Methoxychlor	31.4	µg/kg	10.0	33.33		94.2	43-144			
trans-Chlordane	31.5	µg/kg	10.0	33.33		94.6	56-145			
Surr: Decachlorobiphenyl	35.4	µg/kg		33.33		106	51-151			
Surr: Tetrachloro-m-xylene	31.5	µg/kg		33.33		94.6	67-127			

**MS** CLIENT ID: Batch QC Lab ID: QC-2352161-005

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 11/25/25 14:04  
**Prep Date:** 11/24/25 20:20

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	51.2	µg/kg	17.3	54.819	<10.5	93.4	55-141			
4,4'-DDE	51.0	µg/kg	17.3	54.819	<10.8	93.1	55-143			
4,4'-DDT	52.4	µg/kg	17.3	54.819	<10.9	95.6	50-144			
Aldrin	51.9	µg/kg	17.3	54.819	<10.7	94.7	57-141			
alpha-BHC	50.4	µg/kg	17.3	54.819	<10.8	91.9	58-144			
beta-BHC	51.4	µg/kg	17.3	54.819	<10.8	93.8	55-147			
cis-Chlordane	51.2	µg/kg	17.3	54.819	<11.0	93.3	58-142			
delta-BHC	42.2	µg/kg	17.3	54.819	<10.8	77.1	59-142			
Dieldrin	51.3	µg/kg	17.3	54.819	<11.5	93.7	59-142			
Endosulfan I	50.5	µg/kg	17.3	54.819	<11.1	92.1	57-145			
Endosulfan II	51.0	µg/kg	17.3	54.819	<10.9	93.0	58-138			
Endosulfan sulfate	49.4	µg/kg	17.3	54.819	<10.1	90.2	54-135			
Endrin	48.4	µg/kg	17.3	54.819	<13.3	88.4	45-150			
Endrin aldehyde	54.9	µg/kg	17.3	54.819	<10.4	100	41-147			
Endrin ketone	49.6	µg/kg	17.3	54.819	<10.0	90.4	54-146			
gamma-BHC (Lindane)	50.6	µg/kg	17.3	54.819	<10.8	92.3	58-145			
Heptachlor	53.5	µg/kg	17.3	54.819	<10.6	97.7	51-145			
Heptachlor epoxide	52.1	µg/kg	17.3	54.819	<10.9	95.0	59-143			
Methoxychlor	56.0	µg/kg	17.3	54.819	<11.0	102	43-144			
trans-Chlordane	51.2	µg/kg	17.3	54.819	<10.9	93.4	56-145			
Surr: Decachlorobiphenyl	57.6	µg/kg		54.819		105	53-151			
Surr: Tetrachloro-m-xylene	51.2	µg/kg		54.819		93.3	67-127			

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352161-006

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 11/25/25 14:18  
**Prep Date:** 11/24/25 20:20

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	51.9	µg/kg	17.3	54.819	<10.5	94.8	55-141	1.49	20	



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352161

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3718965

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352161-006

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 11/25/25 14:18  
**Prep Date:** 11/24/25 20:20

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDE	51.9	µg/kg	17.3	54.819	<10.8	94.6	55-143	1.65	20	
4,4'-DDT	52.2	µg/kg	17.3	54.819	<10.9	95.3	50-144	0.314	20	
Aldrin	52.8	µg/kg	17.3	54.819	<10.7	96.3	57-141	1.68	20	
alpha-BHC	51.0	µg/kg	17.3	54.819	<10.8	93.0	58-144	1.14	20	
beta-BHC	52.3	µg/kg	17.3	54.819	<10.8	95.5	55-147	1.74	20	
cis-Chlordane	52.1	µg/kg	17.3	54.819	<11.0	95.0	58-142	1.75	20	
delta-BHC	43.0	µg/kg	17.3	54.819	<10.8	78.4	59-142	1.67	20	
Dieldrin	52.2	µg/kg	17.3	54.819	<11.5	95.2	59-142	1.59	20	
Endosulfan I	51.7	µg/kg	17.3	54.819	<11.1	94.3	57-145	2.41	20	
Endosulfan II	51.8	µg/kg	17.3	54.819	<10.9	94.5	58-138	1.60	20	
Endosulfan sulfate	50.2	µg/kg	17.3	54.819	<10.1	91.7	54-135	1.65	20	
Endrin	49.9	µg/kg	17.3	54.819	<13.3	91.0	45-150	2.90	20	
Endrin aldehyde	56.1	µg/kg	17.3	54.819	<10.4	102	41-147	2.13	20	
Endrin ketone	50.4	µg/kg	17.3	54.819	<10.0	91.9	54-146	1.65	20	
gamma-BHC (Lindane)	51.0	µg/kg	17.3	54.819	<10.8	93.1	58-145	0.809	20	
Heptachlor	54.1	µg/kg	17.3	54.819	<10.6	98.8	51-145	1.12	20	
Heptachlor epoxide	52.9	µg/kg	17.3	54.819	<10.9	96.4	59-143	1.52	20	
Methoxychlor	54.0	µg/kg	17.3	54.819	<11.0	98.5	43-144	3.74	20	
trans-Chlordane	52.2	µg/kg	17.3	54.819	<10.9	95.2	56-145	1.91	20	
Surr: Decachlorobiphenyl	<b>56.6</b>	µg/kg		54.819		103	53-151	1.78	30	
Surr: Tetrachloro-m-xylene	<b>51.4</b>	µg/kg		54.819		93.7	67-127	0.428	30	

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352142

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3720655

**Polychlorinated Biphenyls (PCBs) by GC/ECD**

**MB** CLIENT ID: Method Blank Lab ID: QC-2352142-001

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 11/25/25 10:31  
**Prep Date:** 11/24/25 19:32

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	35.7	µg/kg		33.3		107	54-146			
Surr: Tetrachloro-m-xylene	31.0	µg/kg		33.3		92.9	58-140			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2352142-002

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 11/25/25 10:43  
**Prep Date:** 11/24/25 19:32

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	805	µg/kg	66.7	833		96.6	71-135			
Aroclor 1260	731	µg/kg	66.7	833		87.8	67-135			
Surr: Decachlorobiphenyl	34.3	µg/kg		33.3		103	54-146			
Surr: Tetrachloro-m-xylene	30.6	µg/kg		33.3		91.9	58-140			

**MS** CLIENT ID: Batch QC Lab ID: QC-2352142-005

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 11/25/25 10:55  
**Prep Date:** 11/24/25 19:32

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	1330	µg/kg	116	1376.1	<37.8	96.9	71-135			
Aroclor 1260	1210	µg/kg	116	1376.1	<30.8	88.0	67-135			
Surr: Decachlorobiphenyl	57.7	µg/kg		55.011		105	54-146			
Surr: Tetrachloro-m-xylene	49.4	µg/kg		55.011		89.9	58-140			

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352142-006

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 11/25/25 11:07  
**Prep Date:** 11/24/25 19:32

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	1300	µg/kg	116	1376.1	<37.8	94.5	71-135	2.46	20	
Aroclor 1260	1180	µg/kg	116	1376.1	<30.8	85.7	67-135	2.71	20	
Surr: Decachlorobiphenyl	56.2	µg/kg		55.011		102	54-146	2.56	30	
Surr: Tetrachloro-m-xylene	48.9	µg/kg		55.011		88.8	58-140	1.18	30	

# QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352142

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3720655

**The following samples were analyzed in this batch:** HN2517783-001, HN2517783-003, HN2517783-005



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352164

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3720703

## Semivolatile Organic Compounds by GC-MS

**MB** CLIENT ID: Method Blank Lab ID: QC-2352164-001

**Method:** EPA 8270E

**Dilution:** 1

**Analysis Date:** 11/25/25 20:59

**Prep Date:** 11/24/25 12:19

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-Methylnaphthalene	<3.39	µg/kg	6.67							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
3-Nitroaniline	<19.4	µg/kg	33.0							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



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352164

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3720703

**MB** CLIENT ID: Method Blank Lab ID: QC-2352164-001

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 11/25/25 20:59  
**Prep Date:** 11/24/25 12:19

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Butyl benzyl phthalate	<41.7	µg/kg	67.0							U
Caprolactam	<30.1	µg/kg	33.0							U
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
Surr: 2,4,6-Tribromophenol	<b>1990</b>	µg/kg		3333		59.8	48-94			
Surr: 2-Fluorobiphenyl	<b>2920</b>	µg/kg		3333		87.7	50-103			
Surr: 2-Fluorophenol	<b>2870</b>	µg/kg		3333		86.0	43-105			
Surr: 4-Terphenyl-d14	<b>2960</b>	µg/kg		3333		88.8	55-111			
Surr: Nitrobenzene-d5	<b>2740</b>	µg/kg		3333		82.3	47-100			
Surr: Phenol-d6	<b>3080</b>	µg/kg		3333		92.5	49-110			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2352164-002

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 11/25/25 21:20  
**Prep Date:** 11/24/25 12:19

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	1180	µg/kg	33.0	1333		88.2	57-101			
1,2,4,5-Tetrachlorobenzene	1160	µg/kg	333	1333		87.3	54-98			
1-Methylnaphthalene	1190	µg/kg	6.67	1333		89.6	56-100			
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	1120	µg/kg	33.0	1333		84.1	50-101			
2,3,4,6-Tetrachlorophenol	1130	µg/kg	67.0	1333		85.1	48-103			





**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352164

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3720703

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2352164-002

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 11/25/25 21:20  
**Prep Date:** 11/24/25 12:19

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dimethyl phthalate	1160	µg/kg	33.0	1333		86.7	64-104			
Fluoranthene	1180	µg/kg	6.67	1333		88.8	66-105			
Fluorene	1170	µg/kg	6.67	1333		88.1	62-101			
Hexachlorobenzene	1120	µg/kg	33.0	1333		83.9	61-104			
Hexachlorobutadiene	1160	µg/kg	33.0	1333		86.7	52-99			
Hexachlorocyclopentadiene	1100	µg/kg	33.0	1333		82.2	39-106			
Hexachloroethane	1110	µg/kg	33.0	1333		83.4	59-99			
Indeno(1,2,3-cd) pyrene	1170	µg/kg	6.67	1333		88.1	57-114			
Isophorone	1190	µg/kg	167	1333		89.2	55-101			
Methylphenol, Total	2250	µg/kg	67.0	2667		84.2	54-103			
Naphthalene	1170	µg/kg	6.67	1333		88.0	54-99			
Nitrobenzene	1220	µg/kg	167	1333		91.5	53-100			
n-Nitrosodi-n-propylamine	1130	µg/kg	33.0	1333		85.0	52-104			
N-Nitrosodiphenylamine	1160	µg/kg	33.0	1333		87.4	61-104			
Pentachlorophenol	999	µg/kg	33.0	1333		74.9	35-100			
Phenanthrene	1210	µg/kg	6.67	1333		90.9	64-101			
Phenol	1120	µg/kg	33.0	1333		84.2	51-107			
Pyrene	1170	µg/kg	6.67	1333		88.0	62-114			
Pyridine	841	µg/kg	167	1333		63.1	40-84			
Surr: 2,4,6-Tribromophenol	2260	µg/kg		3333		67.8	48-94			
Surr: 2-Fluorobiphenyl	2930	µg/kg		3333		87.9	50-103			
Surr: 2-Fluorophenol	2770	µg/kg		3333		83.2	43-105			
Surr: 4-Terphenyl-d14	2880	µg/kg		3333		86.4	55-111			
Surr: Nitrobenzene-d5	2930	µg/kg		3333		87.9	47-100			
Surr: Phenol-d6	3040	µg/kg		3333		91.1	49-110			

**MS** CLIENT ID: Batch QC Lab ID: QC-2352164-005

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 11/25/25 21:42  
**Prep Date:** 11/24/25 12:19

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	1150	µg/kg	34.4	1323.3	<5.37	87.0	57-101			
1,2,4,5-Tetrachlorobenzene	1140	µg/kg	348	1323.3	<7.63	86.1	54-98			
1-Methylnaphthalene	1160	µg/kg	6.96	1323.3	<4.77	87.9	56-100			
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	1110	µg/kg	34.4	1323.3	<7.75	83.6	50-101			
2,3,4,6-Tetrachlorophenol	1090	µg/kg	69.6	1323.3	<24.2	82.6	48-103			
2,4,5-Trichlorophenol	1070	µg/kg	34.4	1323.3	<19.6	80.9	54-98			
2,4,6-Trichlorophenol	1140	µg/kg	34.4	1323.3	<8.81	86.4	56-97			
2,4-Dichlorophenol	1170	µg/kg	34.4	1323.3	<17.8	88.5	54-99			
2,4-Dimethylphenol	987	µg/kg	34.4	1323.3	<17.0	74.6	47-102			
2,4-Dinitrophenol	<242	µg/kg	348	1323.3	<242	19.5	10-100			U
2,4-Dinitrotoluene (2,4-DNT)	1180	µg/kg	34.4	1323.3	<21.5	89.5	62-105			
2,6-Dinitrotoluene (2,6-DNT)	1240	µg/kg	34.4	1323.3	<8.45	93.9	62-103			
2-Chloronaphthalene	1110	µg/kg	6.96	1323.3	<4.63	84.1	57-101			



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352164

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3720703

**MS** CLIENT ID: Batch QC Lab ID: QC-2352164-005

**Method:** EPA 8270E

**Dilution:** 1

**Analysis Date:** 11/25/25 21:42

**Prep Date:** 11/24/25 12:19

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	
								RPD	Limit Qual
2-Chlorophenol	1120	µg/kg	34.4	1323.3	<21.7	84.7	52-102		
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	492	µg/kg	34.4	1323.3	<27.6	37.2	42-104		S
2-Methylnaphthalene	1150	µg/kg	6.96	1323.3	<3.37	87.0	55-102		
2-Methylphenol (o-Cresol)	1110	µg/kg	34.4	1323.3	<8.94	83.9	54-103		
2-Nitroaniline	1200	µg/kg	34.4	1323.3	<18.4	90.6	57-103		
2-Nitrophenol	1210	µg/kg	34.4	1323.3	<9.43	91.5	52-102		
3&4-Methylphenol	1130	µg/kg	34.4	1323.3	<18.0	85.7	56-103		
3,3'-Dichlorobenzidine	960	µg/kg	174	1323.3	<15.4	72.6	41-91		
3-Nitroaniline	1020	µg/kg	34.4	1323.3	<19.2	77.3	35-107		
4-Bromophenyl phenyl ether (BDE-3)	972	µg/kg	34.4	1323.3	<18.1	73.4	63-104		
4-Chloro-3-methylphenol	1180	µg/kg	34.4	1323.3	<9.43	89.3	57-103		
4-Chloroaniline	821	µg/kg	69.6	1323.3	<16.8	62.0	32-99		
4-Chlorophenyl phenylether	1160	µg/kg	34.4	1323.3	<9.14	87.8	62-100		
4-Nitroaniline	772	µg/kg	174	1323.3	<51.3	58.3	19-124		
4-Nitrophenol	868	µg/kg	348	1323.3	<77.5	65.6	44-106		
Acenaphthene	1130	µg/kg	6.96	1323.3	<4.78	85.7	60-101		
Acenaphthylene	1150	µg/kg	6.96	1323.3	<5.74	86.6	59-101		
Acetophenone	1120	µg/kg	34.4	1323.3	<5.18	84.3	54-102		
Anthracene	1170	µg/kg	6.96	1323.3	<4.67	88.7	63-96		
Atrazine	1170	µg/kg	34.4	1323.3	<19.4	88.3	60-110		
Benzaldehyde	120	µg/kg	69.6	1323.3	<50.8	9.05	10-143		S
Benzo(a)anthracene	1170	µg/kg	6.96	1323.3	<5.72	88.0	66-102		
Benzo(a)pyrene	1210	µg/kg	6.96	1323.3	<4.06	91.5	66-105		
Benzo(b)fluoranthene	1220	µg/kg	6.96	1323.3	<4.93	92.0	67-105		
Benzo(g,h,i)perylene	1170	µg/kg	6.96	1323.3	<5.07	88.8	59-110		
Benzo(k)fluoranthene	1130	µg/kg	6.96	1323.3	<5.01	85.5	68-106		
bis(2-Chloroethoxy)methane	1110	µg/kg	34.4	1323.3	<21.0	83.6	54-102		
bis(2-Chloroethyl) ether	1500	µg/kg	34.4	1323.3	<9.37	114	51-101		S
Butyl benzyl phthalate	1010	µg/kg	69.6	1323.3	<41.4	76.0	59-107		
Caprolactam	1160	µg/kg	34.4	1323.3	35.9	85.1	49-103		
Carbazole	1200	µg/kg	34.4	1323.3	<9.75	90.6	63-103		
Chrysene	1160	µg/kg	6.96	1323.3	<5.65	87.4	66-105		
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1170	µg/kg	34.4	1323.3	31.8	86.0	63-101		
Dibenz(a,h) anthracene	1220	µg/kg	34.4	1323.3	<3.57	92.4	61-109		
Dibenzofuran	1150	µg/kg	34.4	1323.3	<4.86	86.9	61-101		
Diethyl phthalate	1170	µg/kg	34.4	1323.3	<11.3	88.4	63-105		
Dimethyl phthalate	1150	µg/kg	34.4	1323.3	<6.45	87.3	64-104		
Fluoranthene	1210	µg/kg	6.96	1323.3	4.84	90.7	66-105		
Fluorene	1140	µg/kg	6.96	1323.3	<4.80	86.5	62-101		
Hexachlorobenzene	1140	µg/kg	34.4	1323.3	<9.63	85.9	61-104		
Hexachlorobutadiene	1130	µg/kg	34.4	1323.3	<7.79	85.6	52-99		
Hexachlorocyclopentadiene	1050	µg/kg	34.4	1323.3	<32.4	79.3	39-106		
Hexachloroethane	1070	µg/kg	34.4	1323.3	<13.7	81.2	59-99		
Indeno(1,2,3-cd) pyrene	1190	µg/kg	6.96	1323.3	<4.61	89.9	57-114		



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352164

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3720703

**MS** CLIENT ID: Batch QC Lab ID: QC-2352164-005

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 11/25/25 21:42  
**Prep Date:** 11/24/25 12:19

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Isophorone	1150	µg/kg	174	1323.3	<6.46	87.0	55-101			
Methylphenol, Total	2240	µg/kg	34.4	2647.6	<8.94	84.8	54-103			
Naphthalene	1130	µg/kg	6.96	1323.3	<4.23	85.6	54-99			
Nitrobenzene	1180	µg/kg	174	1323.3	<11.1	89.3	53-100			
n-Nitrosodi-n-propylamine	1150	µg/kg	34.4	1323.3	<5.46	86.8	52-104			
N-Nitrosodiphenylamine	1170	µg/kg	34.4	1323.3	<19.2	88.8	61-104			
Pentachlorophenol	866	µg/kg	34.4	1323.3	<26.3	65.5	35-100			
Phenanthrene	1200	µg/kg	6.96	1323.3	<3.08	90.3	64-101			
Phenol	1100	µg/kg	34.4	1323.3	<16.6	82.8	51-107			
Pyrene	1160	µg/kg	6.96	1323.3	<3.30	87.6	52-114			
Pyridine	979	µg/kg	174	1323.3	<65.1	74.0	40-84			
Surr: 2,4,6-Tribromophenol	2300	µg/kg		3308.7		69.6	48-94			
Surr: 2-Fluorobiphenyl	2850	µg/kg		3308.7		86.0	50-103			
Surr: 2-Fluorophenol	2730	µg/kg		3308.7		82.4	43-105			
Surr: 4-Terphenyl-d14	2790	µg/kg		3308.7		84.3	55-111			
Surr: Nitrobenzene-d5	2820	µg/kg		3308.7		85.2	47-100			
Surr: Phenol-d6	2940	µg/kg		3308.7		88.9	49-110			

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352164-006

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 11/25/25 22:03  
**Prep Date:** 11/24/25 12:19

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	1140	µg/kg	33.7	1295	<5.41	87.9	57-101	1.13	30	
1,2,4,5-Tetrachlorobenzene	1140	µg/kg	340	1295	<7.69	88.2	54-98	0.249	30	
1-Methylnaphthalene	1140	µg/kg	6.81	1295	<4.80	88.2	56-100	1.82	30	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	1090	µg/kg	33.7	1295	<7.81	84.1	50-101	1.56	30	
2,3,4,6-Tetrachlorophenol	1070	µg/kg	68.1	1295	<24.4	82.5	48-103	2.34	30	
2,4,5-Trichlorophenol	1050	µg/kg	33.7	1295	<19.8	81.2	54-98	1.79	30	
2,4,6-Trichlorophenol	1130	µg/kg	33.7	1295	<8.87	87.0	56-97	1.41	30	
2,4-Dichlorophenol	1150	µg/kg	33.7	1295	<17.9	88.7	54-99	1.99	30	
2,4-Dimethylphenol	994	µg/kg	33.7	1295	<17.1	76.8	47-102	0.748	30	
2,4-Dinitrophenol	<244	µg/kg	340	1295	<244	18.9	10-100	NC		U
2,4-Dinitrotoluene (2,4-DNT)	1180	µg/kg	33.7	1295	<21.6	90.9	62-105	0.608	30	
2,6-Dinitrotoluene (2,6-DNT)	1170	µg/kg	33.7	1295	<8.51	90.6	62-103	5.74	30	
2-Chloronaphthalene	1120	µg/kg	6.81	1295	<4.66	86.3	57-101	0.422	30	
2-Chlorophenol	1100	µg/kg	33.7	1295	<21.8	85.0	52-102	1.81	30	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	568	µg/kg	33.7	1295	<27.8	43.9	42-104	14.4	30	
2-Methylnaphthalene	1130	µg/kg	6.81	1295	<3.39	86.9	55-102	2.28	30	
2-Methylphenol (o-Cresol)	1090	µg/kg	33.7	1295	<9.01	84.5	54-103	1.39	30	
2-Nitroaniline	1150	µg/kg	33.7	1295	<18.5	88.8	57-103	4.11	30	
2-Nitrophenol	1240	µg/kg	33.7	1295	<9.50	95.6	52-102	2.23	30	
3&4-Methylphenol	1120	µg/kg	33.7	1295	<18.2	86.8	56-103	0.885	30	
3,3'-Dichlorobenzidine	961	µg/kg	170	1295	<15.6	74.2	41-91	0.0883	30	



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352164

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3720703

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352164-006

**Method:** EPA 8270E

**Dilution:** 1

**Analysis Date:** 11/25/25 22:03

**Prep Date:** 11/24/25 12:19

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
3-Nitroaniline	1020	µg/kg	33.7	1295	<19.4	79.0	35-107	0.0796	30	
4-Bromophenyl phenyl ether (BDE-3)	942	µg/kg	33.7	1295	<18.3	72.8	63-104	3.05	30	
4-Chloro-3-methylphenol	1200	µg/kg	33.7	1295	<9.50	92.8	57-103	1.69	30	
4-Chloroaniline	817	µg/kg	68.1	1295	<16.9	63.1	32-99	0.402	30	
4-Chlorophenyl phenylether	1170	µg/kg	33.7	1295	<9.21	90.0	62-100	0.259	30	
4-Nitroaniline	734	µg/kg	170	1295	<51.7	56.7	19-124	4.94	30	
4-Nitrophenol	878	µg/kg	340	1295	<78.1	67.8	44-106	1.14	30	
Acenaphthene	1120	µg/kg	6.81	1295	<4.82	86.6	60-101	1.17	30	
Acenaphthylene	1140	µg/kg	6.81	1295	<5.78	88.0	59-101	0.499	30	
Acetophenone	1100	µg/kg	33.7	1295	<5.22	85.3	54-102	0.981	30	
Anthracene	1150	µg/kg	6.81	1295	<4.70	88.5	63-96	2.44	30	
Atrazine	1150	µg/kg	33.7	1295	<19.5	89.1	60-110	1.20	30	
Benzaldehyde	113	µg/kg	68.1	1295	<51.2	8.70	10-143	6.10	30	S
Benzo(a)anthracene	1140	µg/kg	6.81	1295	<5.76	87.6	66-102	2.61	30	
Benzo(a)pyrene	1200	µg/kg	6.81	1295	<4.09	92.5	66-105	1.13	30	
Benzo(b)fluoranthene	1220	µg/kg	6.81	1295	<4.97	94.2	67-105	0.257	30	
Benzo(g,h,i)perylene	1150	µg/kg	6.81	1295	<5.11	88.4	59-110	2.56	30	
Benzo(k)fluoranthene	1100	µg/kg	6.81	1295	<5.05	85.2	68-106	2.51	30	
bis(2-Chloroethoxy)methane	1090	µg/kg	33.7	1295	<21.1	84.1	54-102	1.56	30	
bis(2-Chloroethyl) ether	1490	µg/kg	33.7	1295	<9.44	115	51-101	0.893	30	S
Butyl benzyl phthalate	1010	µg/kg	68.1	1295	<41.7	77.6	59-107	0.0771	30	
Caprolactam	1100	µg/kg	33.7	1295	35.9	82.7	49-103	4.93	30	
Carbazole	1150	µg/kg	33.7	1295	<9.82	88.8	63-103	4.17	30	
Chrysene	1140	µg/kg	6.81	1295	<5.69	88.3	66-105	1.19	30	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1160	µg/kg	33.7	1295	31.8	87.4	63-101	0.475	30	
Dibenz(a,h) anthracene	1190	µg/kg	33.7	1295	<3.60	91.8	61-109	2.76	30	
Dibenzofuran	1140	µg/kg	33.7	1295	<4.90	88.1	61-101	0.789	30	
Diethyl phthalate	1170	µg/kg	33.7	1295	<11.3	90.2	63-105	0.0882	30	
Dimethyl phthalate	1120	µg/kg	33.7	1295	<6.50	86.9	64-104	2.62	30	
Fluoranthene	1180	µg/kg	6.81	1295	4.84	90.5	66-105	2.38	30	
Fluorene	1150	µg/kg	6.81	1295	<4.84	88.5	62-101	0.125	30	
Hexachlorobenzene	1120	µg/kg	33.7	1295	<9.70	86.2	61-104	1.81	30	
Hexachlorobutadiene	1110	µg/kg	33.7	1295	<7.85	85.6	52-99	2.10	30	
Hexachlorocyclopentadiene	1060	µg/kg	33.7	1295	<32.6	82.0	39-106	1.19	30	
Hexachloroethane	1080	µg/kg	33.7	1295	<13.8	83.5	59-99	0.573	30	
Indeno(1,2,3-cd) pyrene	1170	µg/kg	6.81	1295	<4.64	90.5	57-114	1.55	30	
Isophorone	1150	µg/kg	170	1295	<6.51	88.9	55-101	0.0574	30	
Methylphenol, Total	2220	µg/kg	67.0	2591	<9.01	85.6	54-103	1.13	30	
Naphthalene	1110	µg/kg	6.81	1295	<4.26	86.1	54-99	1.64	30	
Nitrobenzene	1160	µg/kg	170	1295	<11.2	89.6	53-100	1.77	30	
n-Nitrosodi-n-propylamine	1140	µg/kg	33.7	1295	<5.50	87.9	52-104	0.901	30	
N-Nitrosodiphenylamine	1140	µg/kg	33.7	1295	<19.3	87.9	61-104	3.18	30	
Pentachlorophenol	852	µg/kg	33.7	1295	<26.5	65.8	35-100	1.63	30	
Phenanthrene	1170	µg/kg	6.81	1295	<3.10	90.1	64-101	2.38	30	
Phenol	1090	µg/kg	33.7	1295	<16.7	84.1	51-107	0.542	30	

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352164

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3720703

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352164-006

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 11/25/25 22:03  
**Prep Date:** 11/24/25 12:19

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Pyrene	1130	µg/kg	6.81	1295	<3.33	87.6	52-114	2.16	30	
Pyridine	985	µg/kg	170	1295	<65.6	76.1	40-84	0.640	30	
Surr: 2,4,6-Tribromophenol	<b>2250</b>	µg/kg		3238		69.4	48-94	2.48	30	
Surr: 2-Fluorobiphenyl	<b>2820</b>	µg/kg		3238		87.0	50-103	1.03	30	
Surr: 2-Fluorophenol	<b>2700</b>	µg/kg		3238		83.4	43-105	0.930	30	
Surr: 4-Terphenyl-d14	<b>2770</b>	µg/kg		3238		85.5	55-111	0.794	30	
Surr: Nitrobenzene-d5	<b>2830</b>	µg/kg		3238		87.5	47-100	0.503	30	
Surr: Phenol-d6	<b>2930</b>	µg/kg		3238		90.3	49-110	0.554	30	

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352386

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3716840

**Volatile Organic Compounds by GC-MS**

**MB** CLIENT ID: Method Blank Lab ID: QC-2352386-001

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 11/24/25 20:11  
**Prep Date:** 11/24/25 16:43

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



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352386

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3716840

**MB** CLIENT ID: Method Blank Lab ID: QC-2352386-001

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 11/24/25 20:11  
**Prep Date:** 11/24/25 16:43

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 acetate	<35.9	µg/kg	250							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	<15.3	µg/kg	30.0							U
(Fluorotrichloromethane, Freon 11)										
Vinyl chloride (Chloroethene)	<19.9	µg/kg	30.0							U
Surr: 1,2-Dichloroethane-d4	1050	µg/kg		1000		105	80-120			
Surr: 4-Bromofluorobenzene	1000	µg/kg		1000		100	80-120			
Surr: Dibromofluoromethane	964	µg/kg		1000		96.4	72-120			
Surr: Toluene-d8	986	µg/kg		1000		98.6	80-120			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2352386-002

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 11/24/25 19:39  
**Prep Date:** 11/24/25 16:43

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1110	µg/kg	30.0	1000		111	75-121			
1,1,2,2-Tetrachloroethane	1040	µg/kg	30.0	1000		104	79-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1140	µg/kg	30.0	1000		114	62-129			
1,1,2-Trichloroethane	984	µg/kg	30.0	1000		98.4	80-123			
1,1-Dichloroethane	1120	µg/kg	30.0	1000		112	74-124			
1,1-Dichloroethylene	1150	µg/kg	30.0	1000		115	68-131			
1,2,3-Trichlorobenzene	1020	µg/kg	100	1000		102	60-135			
1,2,3-Trichloropropane	946	µg/kg	30.0	1000		94.6	77-121			
1,2,4-Trichlorobenzene	970	µg/kg	100	1000		97.0	63-130			
1,2,4-Trimethylbenzene	948	µg/kg	30.0	1000		94.8	64-126			
1,2-Dibromo-3-chloropropane (DBCP)	988	µg/kg	100	1000		98.8	55-135			
1,2-Dibromoethane (EDB, Ethylene dibromide)	976	µg/kg	30.0	1000		97.6	63-155			
1,2-Dichlorobenzene (o-Dichlorobenzene)	1030	µg/kg	30.0	1000		103	77-122			



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352386

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3716840

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2352386-002

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 11/24/25 19:39

**Prep Date:** 11/24/25 16:43

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,2-Dichloroethane (Ethylene dichloride)	1070	µg/kg	100	1000		107	70-130			
1,2-Dichloropropane	1050	µg/kg	30.0	1000		105	71-130			
1,3,5-Trimethylbenzene	986	µg/kg	100	1000		98.6	66-130			
1,3-Dichlorobenzene (m-Dichlorobenzene)	1000	µg/kg	30.0	1000		100	78-121			
1,3-Dichloropropene	1760	µg/kg	60.0	2000		87.8	62-124			
1,4-Dichlorobenzene (p-Dichlorobenzene)	1020	µg/kg	30.0	1000		102	78-122			
2-Butanone (Methyl ethyl ketone, MEK)	1070	µg/kg	200	1000		107	47-164			
2-Hexanone	1130	µg/kg	30.0	1000		113	70-137			
4-Methyl-2-pentanone (MIBK)	1570	µg/kg	30.0	1000		157	57-200			
Acetone	1200	µg/kg	100	1000		120	52-190			
Benzene	1060	µg/kg	30.0	1000		106	78-122			
Bromochloromethane	1180	µg/kg	30.0	1000		118	68-130			
Bromodichloromethane	1150	µg/kg	30.0	1000		115	75-125			
Bromoform	1030	µg/kg	30.0	1000		103	59-120			
Carbon disulfide	1290	µg/kg	30.0	1000		129	60-163			
Carbon tetrachloride	1290	µg/kg	30.0	1000		129	69-123			S
Chlorobenzene	1000	µg/kg	30.0	1000		100.0	79-120			
Chlorodibromomethane	938	µg/kg	30.0	1000		93.8	57-123			
Chloroethane (Ethyl chloride)	917	µg/kg	100	1000		91.7	38-132			
Chloroform	1050	µg/kg	30.0	1000		105	72-122			
cis-1,2-Dichloroethylene	1090	µg/kg	30.0	1000		109	74-125			
cis-1,3-Dichloropropene	934	µg/kg	30.0	1000		93.4	62-124			
Dichlorodifluoromethane (Freon-12)	669	µg/kg	100	1000		66.9	28-137			
Ethylbenzene	991	µg/kg	30.0	1000		99.1	75-121			
Isopropylbenzene	971	µg/kg	30.0	1000		97.1	74-121			
m+p-Xylene	2020	µg/kg	60.0	2000		101	67-129			
Methyl acetate	1070	µg/kg	250	1000		107	61-125			
Methyl bromide (Bromomethane)	870	µg/kg	100	1000		87.0	31-169			
Methyl chloride (Chloromethane)	1000	µg/kg	100	1000		100	24-119			
Methyl tert-butyl ether (MTBE)	992	µg/kg	30.0	1000		99.2	79-139			
Methylene chloride (Dichloromethane)	1220	µg/kg	250	1000		122	62-135			
o-Xylene	1030	µg/kg	30.0	1000		103	75-120			
Styrene	1020	µg/kg	30.0	1000		102	74-126			
Tetrachloroethylene (Perchloroethylene)	1040	µg/kg	30.0	1000		104	76-128			
Toluene	1010	µg/kg	30.0	1000		101	76-120			
Total Xylene	3050	µg/kg	90.0	3000		102	67-129			
trans-1,2-Dichloroethylene	1110	µg/kg	30.0	1000		111	72-127			
trans-1,3-Dichloropropylene	822	µg/kg	30.0	1000		82.2	66-120			
Trichloroethene (Trichloroethylene)	1030	µg/kg	30.0	1000		103	75-122			
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	1000	µg/kg	30.0	1000		100	51-115			
Vinyl chloride (Chloroethene)	970	µg/kg	30.0	1000		97.0	43-128			



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352386

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3716840

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2352386-002

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 11/24/25 19:39  
**Prep Date:** 11/24/25 16:43

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Surr: 1,2-Dichloroethane-d4	1060	µg/kg		1000		106	80-120			
Surr: 4-Bromofluorobenzene	986	µg/kg		1000		98.6	80-120			
Surr: Dibromofluoromethane	1070	µg/kg		1000		107	72-120			
Surr: Toluene-d8	988	µg/kg		1000		98.8	80-120			

**MS** CLIENT ID: Batch QC Lab ID: QC-2352386-005

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 11/25/25 01:53  
**Prep Date:** 11/24/25 16:43

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1100	µg/kg	33.3	1007	<13.7	109	75-121			
1,1,2,2-Tetrachloroethane	884	µg/kg	33.3	1007	<13.3	87.8	79-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1050	µg/kg	33.3	1007	<19.1	104	62-129			
1,1,2-Trichloroethane	1060	µg/kg	33.3	1007	<12.8	105	80-123			
1,1-Dichloroethane	1090	µg/kg	33.3	1007	<11.0	109	74-124			
1,1-Dichloroethylene	1110	µg/kg	33.3	1007	<9.79	110	68-131			
1,2,3-Trichlorobenzene	979	µg/kg	111	1007	<36.3	97.2	60-135			
1,2,3-Trichloropropane	1040	µg/kg	33.3	1007	<12.6	103	77-121			
1,2,4-Trichlorobenzene	961	µg/kg	111	1007	<34.2	95.4	63-130			
1,2,4-Trimethylbenzene	1040	µg/kg	33.3	1007	<22.2	103	64-126			
1,2-Dibromo-3-chloropropane (DBCP)	872	µg/kg	111	1007	<27.8	86.6	55-135			
1,2-Dibromoethane (EDB, Ethylene dibromide)	1040	µg/kg	33.3	1007	<17.8	104	63-155			
1,2-Dichlorobenzene (o-Dichlorobenzene)	1080	µg/kg	33.3	1007	<11.5	107	77-122			
1,2-Dichloroethane (Ethylene dichloride)	1160	µg/kg	111	1007	<26.5	115	70-130			
1,2-Dichloropropane	1100	µg/kg	33.3	1007	<22.3	109	71-130			
1,3,5-Trimethylbenzene	1090	µg/kg	111	1007	<21.3	108	66-130			
1,3-Dichlorobenzene (m-Dichlorobenzene)	1010	µg/kg	33.3	1007	<20.9	100	78-121			
1,3-Dichloropropene	1710	µg/kg	66.6	2014.1	<16.9	84.7	62-124			
1,4-Dichlorobenzene (p-Dichlorobenzene)	1050	µg/kg	33.3	1007	<24.6	104	78-122			
2-Butanone (Methyl ethyl ketone, MEK)	1210	µg/kg	222	1007	<71.9	120	47-164			
2-Hexanone	1410	µg/kg	33.3	1007	<15.0	140	70-137			S
4-Methyl-2-pentanone (MIBK)	1490	µg/kg	33.3	1007	<28.2	148	57-200			
Acetone	1790	µg/kg	111	1007	<89.7	178	52-190			
Benzene	1160	µg/kg	33.3	1007	<14.6	115	78-122			
Bromochloromethane	1130	µg/kg	33.3	1007	<15.4	112	68-130			
Bromodichloromethane	1090	µg/kg	33.3	1007	<16.9	108	75-125			
Bromoform	913	µg/kg	33.3	1007	<12.7	90.7	59-120			
Carbon disulfide	1020	µg/kg	33.3	1007	<15.6	101	60-163			
Carbon tetrachloride	1280	µg/kg	33.3	1007	<11.8	128	69-123			S
Chlorobenzene	1090	µg/kg	33.3	1007	<10.0	108	79-120			



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352386

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3716840

**MS** CLIENT ID: Batch QC Lab ID: QC-2352386-005

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 11/25/25 01:53  
**Prep Date:** 11/24/25 16:43

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chlorodibromomethane	862	µg/kg	33.3	1007	<17.0	85.6	57-123			
Chloroethane (Ethyl chloride)	718	µg/kg	111	1007	<84.6	71.2	38-132			
Chloroform	1020	µg/kg	33.3	1007	<11.1	101	72-122			
cis-1,2-Dichloroethylene	1080	µg/kg	33.3	1007	<19.4	107	74-125			
cis-1,3-Dichloropropene	917	µg/kg	33.3	1007	<22.8	91.0	62-124			
Dichlorodifluoromethane (Freon-12)	681	µg/kg	111	1007	<36.6	67.6	28-137			
Ethylbenzene	1090	µg/kg	33.3	1007	<21.4	108	75-121			
Isopropylbenzene	1100	µg/kg	33.3	1007	<19.1	109	74-121			
m+p-Xylene	2230	µg/kg	66.6	2014.1	<40.3	111	67-129			
Methyl acetate	921	µg/kg	278	1007	<36.2	91.5	61-125			
Methyl bromide (Bromomethane)	658	µg/kg	111	1007	<57.8	65.3	31-169			
Methyl chloride (Chloromethane)	1220	µg/kg	111	1007	<82.6	121	24-119			S
Methyl tert-butyl ether (MTBE)	969	µg/kg	33.3	1007	<22.0	96.2	79-139			
Methylene chloride (Dichloromethane)	1170	µg/kg	278	1007	<80.2	116	62-135			
o-Xylene	1110	µg/kg	33.3	1007	<11.7	110	75-120			
Styrene	1090	µg/kg	33.3	1007	<12.0	108	74-126			
Tetrachloroethylene (Perchloroethylene)	2100	µg/kg	33.3	1007	<18.2	209	76-128			S
Toluene	1100	µg/kg	33.3	1007	<24.9	109	76-120			
Total Xylene	3340	µg/kg	99.9	3021.1	<11.7	110	67-129			
trans-1,2-Dichloroethylene	1060	µg/kg	33.3	1007	<24.9	105	72-127			
trans-1,3-Dichloropropylene	790	µg/kg	33.3	1007	<16.9	78.4	66-120			
Trichloroethene (Trichloroethylene)	1230	µg/kg	33.3	1007	<13.5	122	75-122			
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	887	µg/kg	33.3	1007	<15.4	88.1	51-115			
Vinyl chloride (Chloroethene)	952	µg/kg	33.3	1007	<20.1	94.5	43-128			
Surr: 1,2-Dichloroethane-d4	1090	µg/kg		1007		108	80-120			
Surr: 4-Bromofluorobenzene	1020	µg/kg		1007		101	80-120			
Surr: Dibromofluoromethane	1020	µg/kg		1007		101	72-120			
Surr: Toluene-d8	1000	µg/kg		1007		99.8	80-120			

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352386-006

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 11/25/25 02:09  
**Prep Date:** 11/24/25 16:43

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1110	µg/kg	33.3	1007	<13.7	110	75-121	1.05	30	
1,1,2,2-Tetrachloroethane	904	µg/kg	33.3	1007	<13.3	89.8	79-125	2.25	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1080	µg/kg	33.3	1007	<19.1	107	62-129	2.60	30	
1,1,2-Trichloroethane	1100	µg/kg	33.3	1007	<12.8	109	80-123	3.36	30	
1,1-Dichloroethane	1110	µg/kg	33.3	1007	<11.0	110	74-124	1.14	30	
1,1-Dichloroethylene	1190	µg/kg	33.3	1007	<9.79	118	68-131	6.87	30	
1,2,3-Trichlorobenzene	1110	µg/kg	111	1007	<36.3	110	60-135	12.4	30	
1,2,3-Trichloropropane	1160	µg/kg	33.3	1007	<12.6	116	77-121	11.5	30	
1,2,4-Trichlorobenzene	1020	µg/kg	111	1007	<34.2	102	63-130	6.29	30	



QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 12277 Maiden  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2352386

**Work Order:** HN2517783  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3716840

**MSD** CLIENT ID: Batch QC Lab ID: QC-2352386-006

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 11/25/25 02:09  
**Prep Date:** 11/24/25 16:43

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
trans-1,2-Dichloroethylene	1150	µg/kg	33.3	1007	<24.9	114	72-127	8.03	30	
trans-1,3-Dichloropropylene	830	µg/kg	33.3	1007	<16.9	82.4	66-120	5.04	30	
Trichloroethene (Trichloroethylene)	1330	µg/kg	33.3	1007	<13.5	132	75-122	7.75	30	S
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	785	µg/kg	33.3	1007	<15.4	78.0	51-115	12.2	30	
Vinyl chloride (Chloroethene)	1010	µg/kg	33.3	1007	<20.1	100	43-128	5.86	30	
Surr: 1,2-Dichloroethane-d4	<b>1050</b>	µg/kg		1007		104	80-120	3.20	30	
Surr: 4-Bromofluorobenzene	<b>1030</b>	µg/kg		1007		103	80-120	1.52	30	
Surr: Dibromofluoromethane	<b>1020</b>	µg/kg		1007		101	72-120	0.148	30	
Surr: Toluene-d8	<b>1030</b>	µg/kg		1007		102	80-120	2.62	30	

The following samples were analyzed in this batch: HN2517783-001, HN2517783-003, HN2517783-005