

**DRAFT**

# FILL MATERIAL SAMPLING REPORT

4821 COOPER STREET  
DETROIT, WAYNE COUNTY, MICHIGAN 48214



FEBRUARY 16, 2026

PREPARED FOR:

**THE CITY OF DETROIT DEMOLITION DEPARTMENT**

1301 THIRD STREET, SUITE 606

DETROIT, MICHIGAN 48226



# FILL MATERIAL SAMPLING REPORT

4821 COOPER STREET  
DETROIT, WAYNE COUNTY, MICHIGAN 48214

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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 4821 Cooper 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 4821 SB01, 4821 SB02, and 4821 SB03 generally consisted of brown to dark brown and gray sand and silty clay to six (6) feet below ground surface (bgs), the maximum depth explored for this investigation. Field photoionization detector (PID) readings of the recovered soil cores ranged from 0.0 to 0.1 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.
- Concentrations of arsenic were detected in soil sample 4821 SB03 (5-6')\_20260121 in excess of Part 201 groundwater surface water interface protection criteria (GSIPC), drinking water protection criteria (DWPC), and direct contact criteria (DCC).
- Concentrations of barium, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, chromium (Total), copper, fluoranthene, indeno(1,2,3-cd)pyrene, lead, mercury, pyrene, and zinc were detected in soil samples 4821 SB01 (1-2')\_20260121, 4821 SB02 (3-4')\_20260121, 4821 SB03 (5-6')\_20260121, and/or 4821 DUP-1\_20260121 at concentrations above laboratory method detection limits; however, detected concentrations were below their respective Part 201 GRCC and/or Statewide Default Background Levels.
- VOCs, PCBs, pesticides, and herbicides 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 4821 Cooper 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 January 21, 2026. The findings of this report are valid as of the report date, subject to the limitations presented in *Appendix A, Limitations*.

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

## 2.0 PURPOSE AND SCOPE OF WORK

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

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

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

Per the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025, sample analyses included volatile organic compounds (VOCs); 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 January 21, 2026. 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 4821 SB01, 4821 SB02, and 4821 SB03, using a direct push drill rig at the locations depicted on Figure 2. Photographs collected during the 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 four (4) soil samples designated 4821 SB01 (1-2')\_20260121, 4821 SB02 (3-4')\_20260121, 4821 SB03 (5-6')\_20260121, and 4821 DUP-1\_20260121 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. One (1) duplicate soil sample (4821 DUP-1\_20260121) was collected by MSG, which corresponds with soil sample 4821 SB02 (3-4')\_20260121. The data associated with the duplicate soil sample was used to demonstrate a generally acceptable degree of precision with respect to the analyzed parameters.

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 January 21, 2026.

### 4.1 Site Geology and Hydrogeology

The stratigraphy encountered during soil boring advancement of 4821 SB01, 4821 SB02, and 4821 SB03 generally consisted of brown to dark brown and gray sand and silty clay to six (6) feet below ground surface (bgs), the maximum depth explored for this investigation. Field photoionization detector (PID) readings of the recovered soil cores ranged from 0.0 to 0.1 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.

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

### 4.2 Soil Sample Analytical Results

Four (4) soil samples, designated 4821 SB01 (1-2')\_20260121, 4821 SB02 (3-4')\_20260121, 4821 SB03 (5-6')\_20260121, and 4821 DUP-1\_20260121 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 ( $\mu\text{g}/\text{kg}^1$ )	Maximum Detected Concentration ( $\mu\text{g}/\text{kg}$ )
Arsenic	7440-38-2	4821 SB03 (5-6')_20260121	GSIPC <sup>2</sup> / 4,600 DWPC <sup>3</sup> / 4,600 DCC <sup>4</sup> / 7,600	12,100

<sup>1</sup> $\mu\text{g}/\text{kg}$  – 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 4821 SB01, 4821 SB02, and 4821 SB03 generally consisted of brown to dark brown and gray sand and silty clay to six (6) feet bgs, the maximum depth explored for this investigation. Field PID readings of the recovered soil cores ranged from 0.0 to 0.1 ppm. There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities.
- Concentrations of arsenic were detected in soil sample 4821 SB03 (5-6')\_20260121 in excess of Part 201 GSIPC, DWPC, and DCC.
- Concentrations of barium, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, chromium (Total), copper, fluoranthene, indeno(1,2,3-cd)pyrene, lead, mercury, pyrene, and zinc were detected in soil samples 4821 SB01 (1-2')\_20260121, 4821 SB02 (3-4')\_20260121, 4821 SB03 (5-6')\_20260121, and/or 4821 DUP-1\_20260121 at concentrations above laboratory method detection limits; however, detected concentrations were below their respective Part 201 GRCC and/or Statewide Default Background Levels.
- VOCs, PCBs, pesticides, and herbicides 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.

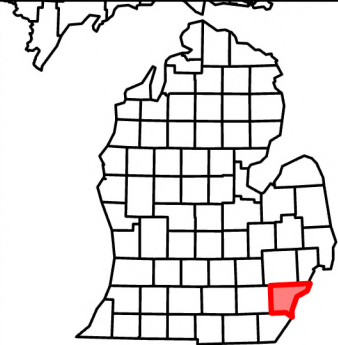
MSG warrants that no substantive information or documentation was deleted, omitted, or changed that would otherwise cause the MSG to reach a different conclusion. Furthermore, MSG understands that the COD and its agencies and authorities may rely upon the overall completeness, accuracy, and conclusions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

## FIGURES





Date Saved: 1/8/2026 11:31 AM Coordinate System: GCS WGS 1984  
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★ Site Location

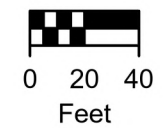
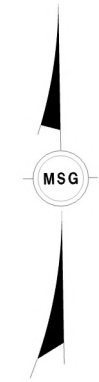


**FIGURE 1**  
 SITE LOCATION

4821 Cooper, Detroit, MI

DATE 1/8/2026	DRAWN BY JWW	DESIGNED BY JWW	PROJECT NO. DETR0060
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Date Saved: 1/6/2026 8:15 PM  
Path: W:\Projects\Projects A-E\DETR0060\ENGAPPS\GIS\21\_QQ 6.17.2025 Backfill Sampling\DETR0060\_Backfill\_Sampling.aprx



- Sample Locations
- - - Parcels (Current)
- - - Subject Property

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



**FIGURE 2**  
Site Layout

4821 Cooper, Detroit, MI

DATE 1/6/2026	DRAWN BY JWW	DESIGNED BY KRB	PROJECT NO. DETR0060
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## TABLE



**Table 1  
Soil Sample Analytical Detection Summary**

**Detroit Backfill Sampling  
4821 Cooper, 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			Inorganic Anions/Ions	Metals						Semivolatile Organic Compounds (SVOCs)						
			Chloride	Arsenic (B)	Barium (B)	Chromium, Total (B)	Copper (B)	Lead (B)	Mercury (B)	Zinc (B)	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Fluoranthene	Indeno(1,2,3-Cd)Pyrene	Pyrene
CAS Number	16887-00-6	7440-38-2	7440-39-3	7440-47-3	7440-50-8	7439-92-1	7439-97-6	7440-66-6	56-55-3	50-32-8	205-99-2	206-44-0	193-39-5	129-00-0		
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg		
Statewide Default Background Levels	NC	5,800	75,000	18,000	32,000	21,000	130	47,000	NC	NC	NC	NC	NC	NC		
Drinking Water Protection Criteria (DWPC)	5.00E+06	4,600	1.30E+06	30,000	5.80E+06	7.00E+05	1,700	2.40E+06	NLL	NLL	NLL	7.30E+05	NLL	4.80E+05		
Groundwater Surface Water Interface Protection Criteria (GSIPC)	NC	4,600	4.40E+05 <sup>(G)</sup>	3,300	75,000 <sup>(G)</sup>	6.00E+06 <sup>(G)</sup>	50 <sup>(M,1,2)</sup>	1.60E+05	NLL	NLL	NLL	5,500	NLL	ID		
Soil Volatilization to Indoor Air Inhalation (SVIIC)	NC	NLV	NLV	NC	NLV	NLV	48,000	NC	NLV	NLV	ID	1.00E+09	NLV	1.00E+09		
Soil Volatilization to Indoor Air Pathway (SVIAP)	NC	NC	NC	NC	NC	NC	22 <sup>(M)</sup>	NC	1.60E+05 <sup>(M)</sup>	NC	NC	NC	NC	2.50E+07		
Infinite Source Volatile Soil Inhalation Criteria (VSIC)	NC	NLV	NLV	NC	NLV	NLV	52,000	NC	NLV	NLV	ID	7.40E+08	NLV	6.50E+08		
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	NC	NLV	NLV	NC	NLV	NLV	52,000	NC	NLV	NLV	ID	7.40E+08	NLV	6.50E+08		
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	NC	NLV	NLV	NC	NLV	NLV	52,000	NC	NLV	NLV	ID	7.40E+08	NLV	6.50E+08		
Particulate Soil Inhalation Criteria (PSIC)	NC	7.20E+05	3.30E+08	2.60E+05	1.30E+08	1.00E+08	2.00E+07	NC	ID	1.50E+06	ID	9.30E+09	ID	6.70E+09		
Direct Contact Criteria (DCC)	5.00E+05	7,600	3.70E+07	2.50E+06	2.00E+07	4.00E+05	1.60E+05	1.70E+08	20,000	2,000	20,000	4.60E+07	20,000	2.90E+07		
Soil Saturation Concentration Screening Levels (C <sub>sat</sub> )	NC	NA	NA	NC	NA	NA	NA	NC	NA	NA	NA	NA	NA	NA		
Sample ID	Sample Depth (ft)	Sample Date														
4821 SB01	1.0 - 2.0	01/21/2026	<3,490	<379	<b>8,870</b>	<b>3,430</b>	<b>5,140</b>	<1,520	<b>49.9</b>	<b>17,900</b>	<9.98	<7.08	<8.61	<5.54	<8.04	<b>12.7</b>
4821 SB02	3.0 - 4.0	01/21/2026	<3,570	<390	<b>10,100</b>	<b>3,490</b>	<b>5,390</b>	<b>4,640</b>	<b>46.7</b>	<b>18,900</b>	<b>15.6</b>	<b>16.8</b>	<b>20.4</b>	<b>26.4</b>	<b>16.8</b>	<b>26.4</b>
4821 SB02 ( 4821 DUP-1)	3.0 - 4.0	01/21/2026	<b>16,500</b>	<395	<b>9,610</b>	<b>3,720</b>	<b>4,520</b>	<b>5,240</b>	<b>52.9</b>	<b>16,700</b>	<b>11.6</b>	<7.12	<8.66	<b>12.8</b>	<8.08	<b>11.6</b>
4821 SB03	5.0 - 6.0	01/21/2026	<3,830	<b>12,100</b>	<b>58,300</b>	<b>13,000</b>	<b>17,500</b>	<b>9,820</b>	<b>70.6</b>	<b>44,000</b>	<17.1	<12.1	<14.7	<9.49	<13.8	<9.87

**Notes**

Only parameters with one or more detections are shown.

ug/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 C<sub>sat</sub>, likely exceeds others.

**Bold** indicates concentration above laboratory reporting limits.

NC = No Criteria; NA = Not Applicable; NLV = Not Likely to Volatize; NLL = Not Likely to Leach.

Part 201 GSIPC Hardness specific criteria (G) calculated using a regional hardness value

of the lower portion of the lower peninsula, 150 mg CaCO<sub>3</sub>/L.

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>01/21/2026</u>	<b>Day:</b> <u>Wednesday</u>	<b>Temp:</b> <u>N/A</u> (AM) <u>20° F</u> (PM)
<b>MSG Personnel:</b> <u>SRK, ZG, MW</u>	<b>Cloud Cover:</b> <u>N/A</u> (AM) <u>100%</u> (PM)	<b>Precip.:</b> <u>N/A</u> (AM) <u>Snow</u> (PM)
<b>Personnel:</b> <u>MSG</u>		
<b>MSG Hours On-Site:</b> <u>~ 1 hours</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>1308 – SRK, ZG, and MW onsite (4821 Cooper Street)</li> <li>1310 – Unloaded and prepared equipment</li> <li>1314 – Began drilling SB01</li> <li>1316 – Finished drilling SB01</li> <li>1322 – Began drilling SB02</li> <li>1324 – Finished drilling SB02</li> <li>1325 – Sampled 4821 SB01 (1-2')_20260121</li> <li>1329 – Began drilling SB03</li> <li>1331 – Finished drilling SB03</li> <li>1338 – Sampled 4821 SB02 (3-4')_20260121 and 4821 DUP-1_20260121</li> <li>1355 – Sampled 4821 SB03 (5-6')_20260121</li> <li>1400 – Packed up equipment</li> <li>1405 – 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: View of the Site pre-drilling, facing west.



Photo 2: View of 4821 SB01, facing southwest.



Photo 3: Viewing 4821 SB01 soil recovery, facing west.



Photo 4: View of 4821 SB02, facing southwest.



Photo 5: Viewing 4821 SB02 soil recovery, facing west.



Photo 6: View of 4821 SB03, facing west.



Photo 7: Viewing 4821 SB03 soil recovery, facing west.



Photo 8: View of the Site post-drilling, facing west.

**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

<b>CLIENT</b> City of Detroit	<b>PROJECT NAME</b> Backfill Soil Sampling
<b>PROJECT NUMBER</b> DETR0060_4821 Cooper	<b>PROJECT LOCATION</b> 4821 Cooper, Detroit, MI
<b>DATE STARTED</b> 01-21-2026 <b>COMPLETED</b> 01-21-2026	<b>POSITION</b>
<b>DRILLING CONTRACTOR</b> MSG	<b>SURFACE ELEVATION</b> <b>FINAL DEPTH</b> 6.0 ft
<b>DRILLING METHOD</b> Direct Push	<b>LOGGED BY</b> SRK <b>CHECKED BY</b> PDH
<b>EQUIPMENT</b> Geoprobe 7822DT <b>Operator</b> MW	<b>REMARKS</b>

DEPTH (ft)	SAMPLE INTERVALS	RECOVERY %	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (PPM)	REMARKS
				Brown, SAND, Little Gravel, Dry	0.1	- Collected Soil Sample 4821 SB01 (1-2') _20260121 at 13:25
					0.1	
ES		58			0.1	
					0.1	
5				5.2 - Becomes moist at 5' bgs Brown, Silty CLAY, Moist	0.1	
				6.0	0.1	
				Terminated at 6.00 ft.		
10						

**LEGEND:**

- ▽ AT TIME OF DRILLING Not Encountered
- ▼ AT END OF DRILLING \_\_\_\_\_
- ▽ AFTER DRILLING \_\_\_\_\_



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 SB02**

Sheet 1 of 1

**CLIENT** City of Detroit  
**PROJECT NUMBER** DETR0060\_4821 Cooper  
**DATE STARTED** 01-21-2026 **COMPLETED** 01-21-2026  
**DRILLING CONTRACTOR** MSG  
**DRILLING METHOD** Direct Push  
**EQUIPMENT** Geoprobe 7822DT **Operator** MW

**PROJECT NAME** Backfill Soil Sampling  
**PROJECT LOCATION** 4821 Cooper, Detroit, MI  
**POSITION** \_\_\_\_\_  
**SURFACE ELEVATION** \_\_\_\_\_ **FINAL DEPTH** 6.0 ft  
**LOGGED BY** SRK **CHECKED BY** PDH  
**REMARKS** \_\_\_\_\_

DEPTH (ft)	SAMPLE INTERVALS	RECOVERY %	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (PPM)	REMARKS
				Brown, SAND, Trace Gravel, Dry	0.0	
					0.0	
	ES	58		- Becomes moist at 4' bgs	0.0	- Collected Soil Sample 4821 SB02 (3-4') _20260121 at 13:38 And 4821 DUP-1_20260121
5				Gray and Brown, CLAY, Trace Gravel, Dry	0.0	
					0.0	
				Terminated at 6.00 ft.		
10						

**LEGEND:**

- ▽ AT TIME OF DRILLING Not Encountered
- ▼ AT END OF DRILLING \_\_\_\_\_
- ▽ AFTER DRILLING \_\_\_\_\_





## APPENDIX E

### LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY FORMS





right solutions.  
right partner.

January 29, 2026

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

Re: **4821 Cooper**

Date Received: **01/22/2026**

Work Order: **HN2601026**

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:** 4821 Cooper

**Work Order:** HN2601026  
**Date Received:** 22-Jan-2026

### 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

4 soil/solid samples were received for analysis at ALS Environmental on 22-Jan-2026. 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: HN2601026

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

#### Organics

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

###### Run ID: 3841981

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: Chloroethane (Ethyl chloride), Dichlorodifluoromethane (Freon-12), Methyl bromide (Bromomethane), Trichlorofluoromethane (Fluorotrchloromethane, Freon 11), Vinyl chloride (Chloroethene)

###### Run ID: 3841939

Parent Sample HN2601026-003: QC-2426924-005 and -006: The MS/MSD recoveries were above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: Acetone and tetrachloroethene

Parent Sample HN2601026-003: QC-2426924-005 and -006: The RPD for the MS/MSD pairing was outside the acceptance criteria for Methyl bromide (Bromomethane).

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: Chloroethane (Ethyl chloride), Dichlorodifluoromethane (Freon-12), Methyl bromide (Bromomethane), Trichlorofluoromethane (Fluorotrchloromethane, Freon 11), Vinyl chloride (Chloroethene)

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

###### Run ID: 3842647

The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: 2,4-Dinitrophenol.

#### Metals

##### EPA 6020B-3050B-S

###### Run ID: 3846892

Sample HN2601026-001: The reporting limits are elevated for As, Cd, Pb, Se and Ag due to the dilutions needed for high concentrations of non-target analytes.

**Run ID: 3846892**

Samples HN2601026-002 and -004: The reporting limits are elevated for As, Cd, Se and Ag due to the dilutions needed for high concentrations of non-target analytes.

Sample HN2601026-003: The reporting limits are elevated for Cd, Se and Ag due to the dilutions needed for high concentrations of non-target analytes.

## 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: 4821 SB01 (1-2')_20260121</b>	<b>Lab ID: HN2601026-001</b>
---	------------------------------

Analyte	Results	Flag	MRL	Units	Method
Barium	8.87		3.16	mg/kg	EPA 6020B
Chromium	3.43		3.16	mg/kg	EPA 6020B
Copper	5.14		3.16	mg/kg	EPA 6020B
Mercury	0.0499		0.0200	mg/kg	EPA 7471B
Percent Moisture	4.9		0.1	%	EPA 3550C
Pyrene	12.7		11.5	µg/kg	EPA 8270E
Zinc	17.9		6.32	mg/kg	EPA 6020B

<b>CLIENT ID: 4821 SB02 (3-4')_20260121</b>	<b>Lab ID: HN2601026-002</b>
---	------------------------------

Analyte	Results	Flag	MRL	Units	Method
Barium	10.1		3.25	mg/kg	EPA 6020B
Benzo(a)anthracene	15.6		12.0	µg/kg	EPA 8270E
Benzo(a)pyrene	16.8		12.0	µg/kg	EPA 8270E
Benzo(b)fluoranthene	20.4		12.0	µg/kg	EPA 8270E
Chromium	3.49		3.25	mg/kg	EPA 6020B
Copper	5.39		3.25	mg/kg	EPA 6020B
Fluoranthene	26.4		12.0	µg/kg	EPA 8270E
Indeno(1,2,3-cd) pyrene	16.8		12.0	µg/kg	EPA 8270E
Lead	4.64		3.25	mg/kg	EPA 6020B
Mercury	0.0467		0.0200	mg/kg	EPA 7471B
Percent Moisture	9.2		0.1	%	EPA 3550C
Pyrene	26.4		12.0	µg/kg	EPA 8270E
Zinc	18.9		6.49	mg/kg	EPA 6020B

<b>CLIENT ID: 4821 SB03 (5-6')_20260121</b>	<b>Lab ID: HN2601026-003</b>
---	------------------------------

Analyte	Results	Flag	MRL	Units	Method
Arsenic	12.1		3.27	mg/kg	EPA 6020B
Barium	58.3		3.27	mg/kg	EPA 6020B
Chromium	13.0		3.27	mg/kg	EPA 6020B
Copper	17.5		3.27	mg/kg	EPA 6020B
Lead	9.82		3.27	mg/kg	EPA 6020B
Mercury	0.0706		0.0221	mg/kg	EPA 7471B
Percent Moisture	18.2		0.1	%	EPA 3550C
Zinc	44.0		6.54	mg/kg	EPA 6020B

<b>CLIENT ID: 4821 DUP-1_20260121</b>	<b>Lab ID: HN2601026-004</b>
---------------------------------------	------------------------------

Analyte	Results	Flag	MRL	Units	Method
Barium	9.61		3.29	mg/kg	EPA 6020B
Benzo(a)anthracene	11.6		11.6	µg/kg	EPA 8270E
Chloride	16.5		12.1	mg/kg	EPA 9056A
Chromium	3.72		3.29	mg/kg	EPA 6020B
Copper	4.52		3.29	mg/kg	EPA 6020B

# SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

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



**CLIENT ID: 4821 DUP-1\_20260121** **Lab ID: HN2601026-004**

Analyte	Results	Flag	MRL	Units	Method
Fluoranthene	12.8		11.6	µg/kg	EPA 8270E
Lead	5.24		3.29	mg/kg	EPA 6020B
Mercury	0.0529		0.0200	mg/kg	EPA 7471B
Percent Moisture	6.8		0.1	%	EPA 3550C
Pyrene	11.6		11.6	µg/kg	EPA 8270E
Zinc	16.7		6.58	mg/kg	EPA 6020B

# SAMPLE SUMMARY



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Workorder:** HN2601026

<b>Laboratory Sample ID</b>	<b>Client Sample ID</b>	<b>Sample Matrix</b>	<b>Collection Date</b>	<b>Date Received</b>
HN2601026-001	4821 SB01 (1-2')_20260121	SOIL/SOLID	01/21/26 13:25	01/22/26 06:00
HN2601026-002	4821 SB02 (3-4')_20260121	SOIL/SOLID	01/21/26 13:38	01/22/26 06:00
HN2601026-003	4821 SB03 (5-6')_20260121	SOIL/SOLID	01/21/26 13:55	01/22/26 06:00
HN2601026-004	4821 DUP-1_20260121	SOIL/SOLID	01/21/26	01/22/26 06:00

# Chain of Custody Form

Page 1 of 1

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



Telephone : +1 616 399 6070

<b>ALS Project Manager:</b>				<b>Work Order #:</b>			
<b>Project Information</b>				<b>Parameter/Method Request for Analysis</b>			
Project Name: <b>4821 Cooper</b>		Project Number: <b>DETR0060</b>		A: <b>VOCs (U.S. EPA Method 8260C (or Method 8260))</b>		B: <b>SVOCs (U.S. EPA Method 8270D (or Method 8270))</b>	
Bill To Company: Mannik Smith Group		Invoice Attn:		C: <b>PCBs (U.S. EPA Method 8082)</b>		D: <b>Mi 10 Metals (U.S. EPA 6000/7000 Series Methods)</b>	
Address: 2365 South Haggerty Road		Address: 2365 South Haggerty Road		E: <b>Chlorides (U.S. EPA Method 9056A)</b>		F: <b>Pesticides (U.S. EPA Method 8081B (or Method 8081))</b>	
City/State/Zip: Canton, Mi 48188		City/State/Zip: Canton, Mi 48188		G: <b>Herbicides (U.S. EPA Method 8151A (or Method 8151))</b>		H:	
Phone: 734-397-3100		Phone: 734-397-3100		I:		J:	
Fax:		Fax:		e-Mail Address: <a href="mailto:montri@manniksmithgroup.com">montri@manniksmithgroup.com</a>		e-Mail Address: <a href="mailto:omitchell@manniksmithgroup.com">omitchell@manniksmithgroup.com</a>	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	4821 SB01 ( 1-2 ')_20260121	1/21/26	1325	Soil	7	3	✓	✓	✓	✓	✓	✓	✓				
2	4821 SB02 ( 3-4 ')_20260121	↓	1338	Soil	7	3	✓	✓	✓	✓	✓	✓	✓				
3	4821 SB03 ( 5-6 ')_20260121	↓	1355	Soil	7	3	✓	✓	✓	✓	✓	✓	✓				
4	4821 DUP-1_20260121	1/21/26	---	Soil	7	3	✓	✓	✓	✓	✓	✓	✓				
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign *Shannon Kaczmarek* Shipment Method: \_\_\_\_\_ Required Turnaround Time:  Other \_\_\_\_\_  STD 10 Wk Days  5 Wk Days  2 Wk Days  24 Hour Results Due Date: \_\_\_\_\_

Relinquished by: <i>Edwin Hunt</i>	Date: 1/21/26	Time: 1555	Received by: <i>[Signature]</i>	Date: 1/21/26	Time: 1555	Notes: Rec'd 1/22/26 0600 @ 20L
Relinquished by: <i>[Signature]</i>	Date: 1/21/26	Time: 1700	Received by (Laboratory): <i>[Signature]</i>	Date: 1/21/26	Time: 1700	Cooler Temp. 12.6 29.0
Logged by (Laboratory): <i>DFS</i>	Date: 1/22/26	Time: 0900	Checked by (Laboratory):	QC Package: (Check Box Below)		
					<input type="checkbox"/> Level II: Standard QC	TRRP-Checklist
					<input type="checkbox"/> Level III: Std QC + Raw Data	TRRP Level IV
					<input type="checkbox"/> Level IV: SW846 CLP-Like	
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035					Other: _____	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.  
Signature denotes acceptance of ALS Group USA, Corp. Terms and Conditions - Please click the link below for detailed Terms & Conditions:  
<https://www.alsglobal.com/ALSGroupUSACorpTC>  
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ALS Holland  
3352 128<sup>th</sup> Ave., Holland MI 49424

ALS Holland Sample Receiving Checklist

Received by: Diane F. Shaw  
 Date/Time: 1/22/26 0600  
 Carrier Name: QS  
 Shipping container/cooler in good condition? (Yes) / No / Not Present  
 Custody seals intact on shipping container/cooler? Yes / No (Not Present)  
 Custody seals intact on sample bottles? Yes / No (Not Present)  
 Chain of Custody present? (Yes) / No  
 COC signed when relinquished and received? (Yes) / No  
 COC agrees with sample labels? (Yes) / No  
 Samples in proper container/bottle? (Yes) / No  
 Sample containers intact? (Yes) / No  
 Sufficient sample volume for indicated test? (Yes) / No  
 All samples received within holding time? (Yes) / No  
 Container/Temp Blank temperature in compliance? (Yes) / No  
 Temperature(s) (°C): 2.9 / 2.9 °C  
 Thermometer(s): 1R6  
 Sample(s) received on ice? (Yes) / No  
 Matrix/Matrices: Soil  
 Cooler(s)/Kit(s): 1  
 Date/Time sample(s) sent to storage: 1/22/26 0915  
 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:** 4821 Cooper

**Work Order:** HN2601026

**Sample Name:** 4821 SB01 (1-2')\_20260121  
**Laboratory Code:** HN2601026-001  
**Sample Matrix:** SOIL/SOLID

**Date Collected:** 01/21/26  
**Date Received:** 01/22/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		001-AC	2426845		3836889	Nicole Maleski
EPA 6020B	EPA 3050B	001-AC	2431703	Weston Kotecki	3846892	Hunter Johnson
EPA 7471B	Method	001-AC	2429984	Maxx Richey	3843658	Maxx Richey
EPA 8081B	EPA 3546	001-AC	2427577	Mya Harmer	3846214	Quinn Garner
EPA 8082A	EPA 3546	001-AC	2427576	Mya Harmer	3842889	Nathaniel Dietlin
EPA 8151A	Method	001-AC	2429886	Willow Julien	3846338	Kathy Malmyga
EPA 8260D	EPA 5035A	001-AA	2426227	Jonathan Vazquez	3841939	John Garvale
EPA 8270E	EPA 3546	001-AC	2427640	Willow Julien	3842647	Alexa Montague
EPA 9056A	EPA 9056A	001-AC	2427662	Kelsey Beaudette	3839848	Katrina Grassel

**Sample Name:** 4821 SB02 (3-4')\_20260121  
**Laboratory Code:** HN2601026-002  
**Sample Matrix:** SOIL/SOLID

**Date Collected:** 01/21/26  
**Date Received:** 01/22/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		002-AC	2426845		3836889	Nicole Maleski
EPA 6020B	EPA 3050B	002-AC	2431703	Weston Kotecki	3846892	Hunter Johnson
EPA 7471B	Method	002-AC	2429984	Maxx Richey	3843658	Maxx Richey
EPA 8081B	EPA 3546	002-AC	2427577	Mya Harmer	3842917	Madison VandenBer
EPA 8082A	EPA 3546	002-AC	2427576	Mya Harmer	3842889	Nathaniel Dietlin
EPA 8151A	Method	002-AC	2429886	Willow Julien	3846338	Kathy Malmyga
EPA 8260D	EPA 5035A	002-AA	2426227	Jonathan Vazquez	3841939	John Garvale
EPA 8270E	EPA 3546	002-AC	2427640	Willow Julien	3842647	Alexa Montague
EPA 9056A	EPA 9056A	002-AC	2427662	Kelsey Beaudette	3839848	Katrina Grassel

**Sample Name:** 4821 SB03 (5-6')\_20260121  
**Laboratory Code:** HN2601026-003  
**Sample Matrix:** SOIL/SOLID

**Date Collected:** 01/21/26  
**Date Received:** 01/22/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		003-AC	2426845		3836889	Nicole Maleski

# ANALYST SUMMARY



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper

**Work Order:** HN2601026

**Sample Name:** 4821 SB03 (5-6')\_20260121  
**Laboratory Code:** HN2601026-003  
**Sample Matrix:** SOIL/SOLID

**Date Collected:** 01/21/26  
**Date Received:** 01/22/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 6020B	EPA 3050B	003-AC	2431703	Weston Kotecki	3846892	Hunter Johnson
EPA 7471B	Method	003-AC	2429984	Maxx Richey	3843658	Maxx Richey
EPA 8081B	EPA 3546	003-AC	2427639	Mya Harmer	3842990	Madison VandenBer
EPA 8082A	EPA 3546	003-AC	2427636	Mya Harmer	3842892	Nathaniel Dietlin
EPA 8151A	Method	003-AC	2429886	Willow Julien	3846338	Kathy Malmyga
EPA 8260D	EPA 5035A	003-AA	2426924	Jonathan Vazquez	3841939	John Garvale
EPA 8270E	EPA 3546	003-AC	2427640	Willow Julien	3842647	Alexa Montague
EPA 9056A	EPA 9056A	003-AC	2427662	Kelsey Beaudette	3839848	Katrina Grassel

**Sample Name:** 4821 DUP-1\_20260121  
**Laboratory Code:** HN2601026-004  
**Sample Matrix:** SOIL/SOLID

**Date Collected:** 01/21/26  
**Date Received:** 01/22/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		004-AC	2426845		3836889	Nicole Maleski
EPA 6020B	EPA 3050B	004-AC	2431703	Weston Kotecki	3846892	Hunter Johnson
EPA 7471B	Method	004-AC	2429984	Maxx Richey	3843658	Maxx Richey
EPA 8081B	EPA 3546	004-AC	2427639	Mya Harmer	3842990	Madison VandenBer
EPA 8082A	EPA 3546	004-AC	2427636	Mya Harmer	3842892	Nathaniel Dietlin
EPA 8151A	Method	004-AC	2429886	Willow Julien	3846338	Kathy Malmyga
EPA 8260D	EPA 5035A	004-AA	2426924	Jonathan Vazquez	3841981	John Garvale
EPA 8270E	EPA 3546	004-AC	2427640	Willow Julien	3842647	Alexa Montague
EPA 9056A	EPA 9056A	004-AC	2427662	Kelsey Beaudette	3839848	Katrina Grassel

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:25  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB01 (1-2')\_20260121

**Lab ID:** HN2601026-001

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	<1.60	U	µg/kg	8.67	1	01/28/26 20:43	01/26/26 16:09
2,4,5-TP (Silvex)	EPA 8151A	<2.84	U	µg/kg	8.67	1	01/28/26 20:43	01/26/26 16:09
2,4-D	EPA 8151A	<4.63	U	µg/kg	17.3	1	01/28/26 20:43	01/26/26 16:09
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	<b>44.0</b>		<i>%REC</i>	<i>10-116</i>	<i>1</i>	<i>01/28/26 20:43</i>	<i>01/26/26 16:09</i>
<b>General Chemistry Parameters</b>								
Percent Moisture	EPA 3550C	<b>4.9</b>		%	0.1	1	01/22/26 17:00	NA
Chloride	EPA 9056A	<3.49	U	mg/kg	11.3	1	01/24/26 04:53	01/23/26 11:56
<b>Metals</b>								
Arsenic	EPA 6020B	<0.379	U	mg/kg	3.16	10	01/28/26 17:19	01/27/26 14:38
Barium	EPA 6020B	<b>8.87</b>		mg/kg	3.16	10	01/28/26 17:19	01/27/26 14:38
Cadmium	EPA 6020B	<0.190	U	mg/kg	1.26	10	01/28/26 17:19	01/27/26 14:38
Chromium	EPA 6020B	<b>3.43</b>		mg/kg	3.16	10	01/28/26 17:19	01/27/26 14:38
Copper	EPA 6020B	<b>5.14</b>		mg/kg	3.16	10	01/28/26 17:19	01/27/26 14:38
Lead	EPA 6020B	<1.52	U	mg/kg	3.16	10	01/28/26 17:19	01/27/26 14:38
Selenium	EPA 6020B	<2.91	U	mg/kg	3.16	10	01/28/26 17:19	01/27/26 14:38
Silver	EPA 6020B	<0.417	U	mg/kg	3.16	10	01/28/26 17:19	01/27/26 14:38
Zinc	EPA 6020B	<b>17.9</b>		mg/kg	6.32	10	01/28/26 17:19	01/27/26 14:38
Mercury	EPA 7471B	<b>0.0499</b>		mg/kg	0.0200	1	01/27/26 09:45	01/26/26 14:13
<b>Organochlorine Pesticides by GC/ECD</b>								
4,4'-DDD	EPA 8081B	<6.59	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
4,4'-DDE	EPA 8081B	<6.79	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
4,4'-DDT	EPA 8081B	<6.85	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Aldrin	EPA 8081B	<6.70	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
alpha-BHC	EPA 8081B	<6.78	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
beta-BHC	EPA 8081B	<6.77	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Chlordane, Technical	EPA 8081B	<10.2	U	µg/kg	25.8	1	01/27/26 11:02	01/23/26 08:43
cis-Chlordane	EPA 8081B	<6.89	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
delta-BHC	EPA 8081B	<6.75	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Dieldrin	EPA 8081B	<7.21	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:25  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB01 (1-2')\_20260121

**Lab ID:** HN2601026-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan I	EPA 8081B	<6.93	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Endosulfan II	EPA 8081B	<6.82	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Endosulfan sulfate	EPA 8081B	<6.34	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Endrin	EPA 8081B	<8.34	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Endrin aldehyde	EPA 8081B	<6.53	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Endrin ketone	EPA 8081B	<6.27	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
gamma-BHC (Lindane)	EPA 8081B	<6.76	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Heptachlor	EPA 8081B	<6.65	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Heptachlor epoxide	EPA 8081B	<6.82	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Methoxychlor	EPA 8081B	<6.89	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
Toxaphene	EPA 8081B	<11.1	U	µg/kg	61.8	1	01/27/26 11:02	01/23/26 08:43
trans-Chlordane	EPA 8081B	<6.84	U	µg/kg	10.3	1	01/27/26 11:02	01/23/26 08:43
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	<b>80.7</b>		<i>%REC</i>	<i>53-151</i>	<i>1</i>	<i>01/27/26 11:02</i>	<i>01/23/26 08:43</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	<b>71.3</b>		<i>%REC</i>	<i>67-127</i>	<i>1</i>	<i>01/27/26 11:02</i>	<i>01/23/26 08:43</i>

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

Aroclor 1016	EPA 8082A	<23.6	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
Aroclor 1221	EPA 8082A	<23.6	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
Aroclor 1232	EPA 8082A	<23.6	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
Aroclor 1242	EPA 8082A	<23.6	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
Aroclor 1248	EPA 8082A	<23.6	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
Aroclor 1254	EPA 8082A	<19.2	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
Aroclor 1260	EPA 8082A	<19.2	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
Aroclor 1262	EPA 8082A	<19.2	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
Aroclor 1268	EPA 8082A	<19.2	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
Total PCB	EPA 8082A	<19.2	U	µg/kg	68.7	1	01/24/26 20:15	01/23/26 08:24
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	<b>103</b>		<i>%REC</i>	<i>54-146</i>	<i>1</i>	<i>01/24/26 20:15</i>	<i>01/23/26 08:24</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	<b>84.3</b>		<i>%REC</i>	<i>58-140</i>	<i>1</i>	<i>01/24/26 20:15</i>	<i>01/23/26 08:24</i>

### Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<9.37	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<13.3	U	µg/kg	577	1	01/26/26 15:18	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:25  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB01 (1-2')\_20260121

**Lab ID:** HN2601026-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<41.4	U	µg/kg	289	1	01/26/26 15:18	01/23/26 13:34
1-Methylnaphthalene	EPA 8270E	<8.31	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<13.5	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2,3,4,6-Tetrachlorophenol	EPA 8270E	<42.3	U	µg/kg	115	1	01/26/26 15:18	01/23/26 13:34
2,4,5-Trichlorophenol	EPA 8270E	<34.2	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2,4,6-Trichlorophenol	EPA 8270E	<15.4	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2,4-Dichlorophenol	EPA 8270E	<31.1	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2,4-Dimethylphenol	EPA 8270E	<29.7	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2,4-Dinitrophenol	EPA 8270E	<422	U	µg/kg	577	1	01/26/26 15:18	01/23/26 13:34
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<37.5	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<14.7	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2-Chloronaphthalene	EPA 8270E	<8.07	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
2-Chlorophenol	EPA 8270E	<37.8	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<48.2	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2-Methylnaphthalene	EPA 8270E	<5.87	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
2-Methylphenol (o-Cresol)	EPA 8270E	<15.6	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2-Nitroaniline	EPA 8270E	<32.1	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
2-Nitrophenol	EPA 8270E	<16.5	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
3&4-Methylphenol	EPA 8270E	<31.5	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
3,3'-Dichlorobenzidine	EPA 8270E	<27.0	U	µg/kg	289	1	01/26/26 15:18	01/23/26 13:34
3-Nitroaniline	EPA 8270E	<33.5	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<31.6	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
4-Chloro-3-methylphenol	EPA 8270E	<16.5	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
4-Chloroaniline	EPA 8270E	<29.3	U	µg/kg	115	1	01/26/26 15:18	01/23/26 13:34
4-Chlorophenyl phenylether	EPA 8270E	<16.0	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
4-Nitroaniline	EPA 8270E	<89.6	U	µg/kg	289	1	01/26/26 15:18	01/23/26 13:34
4-Nitrophenol	EPA 8270E	<135	U	µg/kg	577	1	01/26/26 15:18	01/23/26 13:34
Acenaphthene	EPA 8270E	<8.35	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:25  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB01 (1-2')\_20260121

**Lab ID:** HN2601026-001

Analyte	Method	Results	Qual	Units	MRL	Dilution	Date	Date
						Factor	Analyzed	Extracted
Acenaphthylene	EPA 8270E	<10.0	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Acetophenone	EPA 8270E	<9.04	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Anthracene	EPA 8270E	<8.14	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Atrazine	EPA 8270E	<33.8	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Benzaldehyde	EPA 8270E	<88.7	U	µg/kg	115	1	01/26/26 15:18	01/23/26 13:34
Benzo(a)anthracene	EPA 8270E	<9.98	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Benzo(a)pyrene	EPA 8270E	<7.08	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Benzo(b)fluoranthene	EPA 8270E	<8.61	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Benzo(g,h,i)perylene	EPA 8270E	<8.85	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Benzo(k)fluoranthene	EPA 8270E	<8.75	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
bis(2-Chloroethoxy) methane	EPA 8270E	<36.6	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
bis(2-Chloroethyl) ether	EPA 8270E	<16.4	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Butyl benzyl phthalate	EPA 8270E	<72.3	U	µg/kg	115	1	01/26/26 15:18	01/23/26 13:34
Caprolactam	EPA 8270E	<52.1	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Carbazole	EPA 8270E	<17.0	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Chrysene	EPA 8270E	<9.34	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<47.8	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Dibenz(a,h) anthracene	EPA 8270E	<6.24	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Dibenzofuran	EPA 8270E	<8.49	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Diethyl phthalate	EPA 8270E	<19.6	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Dimethyl phthalate	EPA 8270E	<11.3	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Fluoranthene	EPA 8270E	<5.54	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Fluorene	EPA 8270E	<8.38	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Hexachlorobenzene	EPA 8270E	<16.8	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Hexachlorobutadiene	EPA 8270E	<13.6	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Hexachlorocyclopentadiene	EPA 8270E	<54.7	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Hexachloroethane	EPA 8270E	<23.9	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Indeno(1,2,3-cd) pyrene	EPA 8270E	<8.04	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Isophorone	EPA 8270E	<11.3	U	µg/kg	289	1	01/26/26 15:18	01/23/26 13:34
Methylphenol, Total	EPA 8270E	<15.6	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:25  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB01 (1-2')\_20260121

**Lab ID:** HN2601026-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Naphthalene	EPA 8270E	<7.38	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Nitrobenzene	EPA 8270E	<19.4	U	µg/kg	289	1	01/26/26 15:18	01/23/26 13:34
n-Nitrosodi-n-propylamine	EPA 8270E	<9.53	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
N-Nitrosodiphenylamine	EPA 8270E	<33.4	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Pentachlorophenol	EPA 8270E	<45.9	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Phenanthrene	EPA 8270E	<5.37	U	µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Phenol	EPA 8270E	<29.0	U	µg/kg	57.2	1	01/26/26 15:18	01/23/26 13:34
Pyrene	EPA 8270E	<b>12.7</b>		µg/kg	11.5	1	01/26/26 15:18	01/23/26 13:34
Pyridine	EPA 8270E	<114	U	µg/kg	289	1	01/26/26 15:18	01/23/26 13:34
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<b>80.0</b>		<i>%REC</i>	<i>48-94</i>	<i>1</i>	<i>01/26/26 15:18</i>	<i>01/23/26 13:34</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<b>75.2</b>		<i>%REC</i>	<i>50-103</i>	<i>1</i>	<i>01/26/26 15:18</i>	<i>01/23/26 13:34</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<b>80.5</b>		<i>%REC</i>	<i>43-105</i>	<i>1</i>	<i>01/26/26 15:18</i>	<i>01/23/26 13:34</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	<b>88.4</b>		<i>%REC</i>	<i>55-111</i>	<i>1</i>	<i>01/26/26 15:18</i>	<i>01/23/26 13:34</i>
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	<b>91.6</b>		<i>%REC</i>	<i>47-100</i>	<i>1</i>	<i>01/26/26 15:18</i>	<i>01/23/26 13:34</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<b>79.8</b>		<i>%REC</i>	<i>49-110</i>	<i>1</i>	<i>01/26/26 15:18</i>	<i>01/23/26 13:34</i>

### Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<15.0	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,1,2,2-Tetrachloroethane	EPA 8260D	<14.6	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<21.0	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,1,2-Trichloroethane	EPA 8260D	<14.1	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,1-Dichloroethane	EPA 8260D	<12.1	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,1-Dichloroethylene	EPA 8260D	<10.7	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,2,3-Trichlorobenzene	EPA 8260D	<39.8	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
1,2,3-Trichloropropane	EPA 8260D	<13.9	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,2,4-Trichlorobenzene	EPA 8260D	<37.6	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
1,2,4-Trimethylbenzene	EPA 8260D	<24.3	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<30.5	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<19.5	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<12.6	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:25  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB01 (1-2')\_20260121

**Lab ID:** HN2601026-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<19.5	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
1,2-Dichloropropane	EPA 8260D	<24.4	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,3,5-Trimethylbenzene	EPA 8260D	<23.4	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<22.9	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
1,3-Dichloropropene	EPA 8260D	<18.5	U	µg/kg	66.3	1	01/23/26 16:52	01/22/26 11:01
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<26.9	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<78.9	U	µg/kg	221	1	01/23/26 16:52	01/22/26 11:01
2-Hexanone	EPA 8260D	<16.4	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<30.9	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Acetone	EPA 8260D	<98.4	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
Benzene	EPA 8260D	<16.1	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Bromochloromethane	EPA 8260D	<16.9	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Bromodichloromethane	EPA 8260D	<18.6	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Bromoform	EPA 8260D	<14.0	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Carbon disulfide	EPA 8260D	<17.2	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Carbon tetrachloride	EPA 8260D	<13.0	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Chlorobenzene	EPA 8260D	<11.0	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Chlorodibromomethane	EPA 8260D	<18.6	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Chloroethane (Ethyl chloride)	EPA 8260D	<92.8	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
Chloroform	EPA 8260D	<12.1	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
cis-1,2-Dichloroethylene	EPA 8260D	<21.3	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
cis-1,3-Dichloropropene	EPA 8260D	<25.0	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Cyclohexane	EPA 8260D	<25.4	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<40.1	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
Ethylbenzene	EPA 8260D	<23.5	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Isopropylbenzene	EPA 8260D	<20.9	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
m+p-Xylene	EPA 8260D	<44.2	U	µg/kg	66.3	1	01/23/26 16:52	01/22/26 11:01
Methyl acetate	EPA 8260D	<39.7	U	µg/kg	276	1	01/23/26 16:52	01/22/26 11:01
Methyl bromide (Bromomethane)	EPA 8260D	<63.4	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:25  
**Date Received:** 01/22/26 06:00

**CLIENT ID: 4821 SB01 (1-2')\_20260121**

**Lab ID: HN2601026-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date	
							Analyzed	Extracted
Methyl chloride (Chloromethane)	EPA 8260D	<90.6	U	µg/kg	110	1	01/23/26 16:52	01/22/26 11:01
Methyl tert-butyl ether (MTBE)	EPA 8260D	<24.2	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Methylcyclohexane	EPA 8260D	<12.6	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Methylene chloride (Dichloromethane)	EPA 8260D	<88.0	U	µg/kg	276	1	01/23/26 16:52	01/22/26 11:01
o-Xylene	EPA 8260D	<12.8	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Styrene	EPA 8260D	<13.1	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<20.0	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Toluene	EPA 8260D	<27.3	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Total Xylene	EPA 8260D	<12.8	U	µg/kg	99.4	1	01/23/26 16:52	01/22/26 11:01
trans-1,2-Dichloroethylene	EPA 8260D	<27.3	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
trans-1,3-Dichloropropylene	EPA 8260D	<18.5	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Trichloroethene (Trichloroethylene)	EPA 8260D	<14.9	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<17.0	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
Vinyl chloride (Chloroethene)	EPA 8260D	<22.0	U	µg/kg	33.1	1	01/23/26 16:52	01/22/26 11:01
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	<b>101</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 16:52</i>	<i>01/22/26 11:01</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	<b>102</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 16:52</i>	<i>01/22/26 11:01</i>
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	<b>97.6</b>		<i>%REC</i>	<i>72-120</i>	<i>1</i>	<i>01/23/26 16:52</i>	<i>01/22/26 11:01</i>
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	<b>97.2</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 16:52</i>	<i>01/22/26 11:01</i>

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:38  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB02 (3-4')\_20260121

**Lab ID:** HN2601026-002

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	<2.47	U	µg/kg	13.4	1	01/28/26 20:56	01/26/26 16:09
2,4,5-TP (Silvex)	EPA 8151A	<4.40	U	µg/kg	13.4	1	01/28/26 20:56	01/26/26 16:09
2,4-D	EPA 8151A	<7.17	U	µg/kg	26.9	1	01/28/26 20:56	01/26/26 16:09
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	<b>46.0</b>		<i>%REC</i>	<i>10-116</i>	<i>1</i>	<i>01/28/26 20:56</i>	<i>01/26/26 16:09</i>
<b>General Chemistry Parameters</b>								
Percent Moisture	EPA 3550C	<b>9.2</b>		%	0.1	1	01/22/26 17:00	NA
Chloride	EPA 9056A	<3.57	U	mg/kg	11.5	1	01/24/26 05:18	01/23/26 11:56
<b>Metals</b>								
Arsenic	EPA 6020B	<0.390	U	mg/kg	3.25	10	01/28/26 17:24	01/27/26 14:38
Barium	EPA 6020B	<b>10.1</b>		mg/kg	3.25	10	01/28/26 17:24	01/27/26 14:38
Cadmium	EPA 6020B	<0.195	U	mg/kg	1.30	10	01/28/26 17:24	01/27/26 14:38
Chromium	EPA 6020B	<b>3.49</b>		mg/kg	3.25	10	01/28/26 17:24	01/27/26 14:38
Copper	EPA 6020B	<b>5.39</b>		mg/kg	3.25	10	01/28/26 17:24	01/27/26 14:38
Lead	EPA 6020B	<b>4.64</b>		mg/kg	3.25	10	01/28/26 17:24	01/27/26 14:38
Selenium	EPA 6020B	<2.99	U	mg/kg	3.25	10	01/28/26 17:24	01/27/26 14:38
Silver	EPA 6020B	<0.429	U	mg/kg	3.25	10	01/28/26 17:24	01/27/26 14:38
Zinc	EPA 6020B	<b>18.9</b>		mg/kg	6.49	10	01/28/26 17:24	01/27/26 14:38
Mercury	EPA 7471B	<b>0.0467</b>		mg/kg	0.0200	1	01/27/26 09:46	01/26/26 14:13
<b>Organochlorine Pesticides by GC/ECD</b>								
4,4'-DDD	EPA 8081B	<6.93	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
4,4'-DDE	EPA 8081B	<7.15	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
4,4'-DDT	EPA 8081B	<7.21	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Aldrin	EPA 8081B	<7.05	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
alpha-BHC	EPA 8081B	<7.14	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
beta-BHC	EPA 8081B	<7.12	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Chlordane, Technical	EPA 8081B	<10.8	U	µg/kg	27.1	1	01/26/26 04:42	01/23/26 08:43
cis-Chlordane	EPA 8081B	<7.25	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
delta-BHC	EPA 8081B	<7.10	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Dieldrin	EPA 8081B	<7.59	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:38  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB02 (3-4')\_20260121

**Lab ID:** HN2601026-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan I	EPA 8081B	<7.29	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Endosulfan II	EPA 8081B	<7.19	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Endosulfan sulfate	EPA 8081B	<6.67	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Endrin	EPA 8081B	<8.78	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Endrin aldehyde	EPA 8081B	<6.88	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Endrin ketone	EPA 8081B	<6.60	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
gamma-BHC (Lindane)	EPA 8081B	<7.12	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Heptachlor	EPA 8081B	<7.00	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Heptachlor epoxide	EPA 8081B	<7.18	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Methoxychlor	EPA 8081B	<7.25	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
Toxaphene	EPA 8081B	<11.7	U	µg/kg	65.1	1	01/26/26 04:42	01/23/26 08:43
trans-Chlordane	EPA 8081B	<7.21	U	µg/kg	10.8	1	01/26/26 04:42	01/23/26 08:43
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	<b>121</b>		<i>%REC</i>	<i>53-151</i>	<i>1</i>	<i>01/26/26 04:42</i>	<i>01/23/26 08:43</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	<b>80.6</b>		<i>%REC</i>	<i>67-127</i>	<i>1</i>	<i>01/26/26 04:42</i>	<i>01/23/26 08:43</i>

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

Aroclor 1016	EPA 8082A	<24.8	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
Aroclor 1221	EPA 8082A	<24.8	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
Aroclor 1232	EPA 8082A	<24.8	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
Aroclor 1242	EPA 8082A	<24.8	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
Aroclor 1248	EPA 8082A	<24.8	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
Aroclor 1254	EPA 8082A	<20.2	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
Aroclor 1260	EPA 8082A	<20.2	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
Aroclor 1262	EPA 8082A	<20.2	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
Aroclor 1268	EPA 8082A	<20.2	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
Total PCB	EPA 8082A	<20.2	U	µg/kg	72.3	1	01/24/26 20:27	01/23/26 08:24
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	<b>133</b>		<i>%REC</i>	<i>54-146</i>	<i>1</i>	<i>01/24/26 20:27</i>	<i>01/23/26 08:24</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	<b>108</b>		<i>%REC</i>	<i>58-140</i>	<i>1</i>	<i>01/24/26 20:27</i>	<i>01/23/26 08:24</i>

### Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<9.75	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<13.8	U	µg/kg	600	1	01/26/26 15:39	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:38  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB02 (3-4')\_20260121

**Lab ID:** HN2601026-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<43.1	U	µg/kg	300	1	01/26/26 15:39	01/23/26 13:34
1-Methylnaphthalene	EPA 8270E	<8.65	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<14.1	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2,3,4,6-Tetrachlorophenol	EPA 8270E	<44.0	U	µg/kg	120	1	01/26/26 15:39	01/23/26 13:34
2,4,5-Trichlorophenol	EPA 8270E	<35.6	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2,4,6-Trichlorophenol	EPA 8270E	<16.0	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2,4-Dichlorophenol	EPA 8270E	<32.3	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2,4-Dimethylphenol	EPA 8270E	<30.9	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2,4-Dinitrophenol	EPA 8270E	<439	U	µg/kg	600	1	01/26/26 15:39	01/23/26 13:34
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<39.0	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<15.3	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2-Chloronaphthalene	EPA 8270E	<8.39	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
2-Chlorophenol	EPA 8270E	<39.3	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<50.1	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2-Methylnaphthalene	EPA 8270E	<6.11	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
2-Methylphenol (o-Cresol)	EPA 8270E	<16.2	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2-Nitroaniline	EPA 8270E	<33.3	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
2-Nitrophenol	EPA 8270E	<17.1	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
3&4-Methylphenol	EPA 8270E	<32.7	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
3,3'-Dichlorobenzidine	EPA 8270E	<28.0	U	µg/kg	300	1	01/26/26 15:39	01/23/26 13:34
3-Nitroaniline	EPA 8270E	<34.9	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<32.9	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
4-Chloro-3-methylphenol	EPA 8270E	<17.1	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
4-Chloroaniline	EPA 8270E	<30.5	U	µg/kg	120	1	01/26/26 15:39	01/23/26 13:34
4-Chlorophenyl phenylether	EPA 8270E	<16.6	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
4-Nitroaniline	EPA 8270E	<93.1	U	µg/kg	300	1	01/26/26 15:39	01/23/26 13:34
4-Nitrophenol	EPA 8270E	<141	U	µg/kg	600	1	01/26/26 15:39	01/23/26 13:34
Acenaphthene	EPA 8270E	<8.68	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:38  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB02 (3-4')\_20260121

**Lab ID:** HN2601026-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Acenaphthylene	EPA 8270E	<10.4	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Acetophenone	EPA 8270E	<9.40	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Anthracene	EPA 8270E	<8.47	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Atrazine	EPA 8270E	<35.2	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Benzaldehyde	EPA 8270E	<92.2	U	µg/kg	120	1	01/26/26 15:39	01/23/26 13:34
Benzo(a)anthracene	EPA 8270E	<b>15.6</b>		µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Benzo(a)pyrene	EPA 8270E	<b>16.8</b>		µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Benzo(b)fluoranthene	EPA 8270E	<b>20.4</b>		µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Benzo(g,h,i)perylene	EPA 8270E	<9.20	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Benzo(k)fluoranthene	EPA 8270E	<9.10	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
bis(2-Chloroethoxy) methane	EPA 8270E	<38.0	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
bis(2-Chloroethyl) ether	EPA 8270E	<17.0	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Butyl benzyl phthalate	EPA 8270E	<75.2	U	µg/kg	120	1	01/26/26 15:39	01/23/26 13:34
Caprolactam	EPA 8270E	<54.2	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Carbazole	EPA 8270E	<17.7	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Chrysene	EPA 8270E	<9.71	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<49.7	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Dibenz(a,h) anthracene	EPA 8270E	<6.48	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Dibenzofuran	EPA 8270E	<8.83	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Diethyl phthalate	EPA 8270E	<20.4	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Dimethyl phthalate	EPA 8270E	<11.7	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Fluoranthene	EPA 8270E	<b>26.4</b>		µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Fluorene	EPA 8270E	<8.72	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Hexachlorobenzene	EPA 8270E	<17.5	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Hexachlorobutadiene	EPA 8270E	<14.1	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Hexachlorocyclopentadiene	EPA 8270E	<56.9	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Hexachloroethane	EPA 8270E	<24.9	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Indeno(1,2,3-cd) pyrene	EPA 8270E	<b>16.8</b>		µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Isophorone	EPA 8270E	<11.7	U	µg/kg	300	1	01/26/26 15:39	01/23/26 13:34
Methylphenol, Total	EPA 8270E	<16.2	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:38  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB02 (3-4')\_20260121

**Lab ID:** HN2601026-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Naphthalene	EPA 8270E	<7.67	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Nitrobenzene	EPA 8270E	<20.2	U	µg/kg	300	1	01/26/26 15:39	01/23/26 13:34
n-Nitrosodi-n-propylamine	EPA 8270E	<9.91	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
N-Nitrosodiphenylamine	EPA 8270E	<34.8	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Pentachlorophenol	EPA 8270E	<47.7	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Phenanthrene	EPA 8270E	<5.58	U	µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Phenol	EPA 8270E	<30.2	U	µg/kg	59.4	1	01/26/26 15:39	01/23/26 13:34
Pyrene	EPA 8270E	<b>26.4</b>		µg/kg	12.0	1	01/26/26 15:39	01/23/26 13:34
Pyridine	EPA 8270E	<118	U	µg/kg	300	1	01/26/26 15:39	01/23/26 13:34
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<b>75.3</b>		<i>%REC</i>	<i>48-94</i>	<i>1</i>	<i>01/26/26 15:39</i>	<i>01/23/26 13:34</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<b>75.7</b>		<i>%REC</i>	<i>50-103</i>	<i>1</i>	<i>01/26/26 15:39</i>	<i>01/23/26 13:34</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<b>81.9</b>		<i>%REC</i>	<i>43-105</i>	<i>1</i>	<i>01/26/26 15:39</i>	<i>01/23/26 13:34</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>01/26/26 15:39</i>	<i>01/23/26 13:34</i>
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	<b>95.2</b>		<i>%REC</i>	<i>47-100</i>	<i>1</i>	<i>01/26/26 15:39</i>	<i>01/23/26 13:34</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<b>81.1</b>		<i>%REC</i>	<i>49-110</i>	<i>1</i>	<i>01/26/26 15:39</i>	<i>01/23/26 13:34</i>

### Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<17.0	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,1,2,2-Tetrachloroethane	EPA 8260D	<16.5	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<23.7	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,1,2-Trichloroethane	EPA 8260D	<15.9	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,1-Dichloroethane	EPA 8260D	<13.6	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,1-Dichloroethylene	EPA 8260D	<12.1	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,2,3-Trichlorobenzene	EPA 8260D	<44.9	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
1,2,3-Trichloropropane	EPA 8260D	<15.7	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,2,4-Trichlorobenzene	EPA 8260D	<42.4	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
1,2,4-Trimethylbenzene	EPA 8260D	<27.4	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<34.4	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<22.0	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<14.2	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:38  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB02 (3-4')\_20260121

**Lab ID:** HN2601026-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<22.0	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
1,2-Dichloropropane	EPA 8260D	<27.6	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,3,5-Trimethylbenzene	EPA 8260D	<26.4	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<25.8	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
1,3-Dichloropropene	EPA 8260D	<20.9	U	µg/kg	74.8	1	01/23/26 17:11	01/22/26 11:01
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<30.4	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<89.1	U	µg/kg	249	1	01/23/26 17:11	01/22/26 11:01
2-Hexanone	EPA 8260D	<18.6	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<34.9	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Acetone	EPA 8260D	<111	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
Benzene	EPA 8260D	<18.1	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Bromochloromethane	EPA 8260D	<19.0	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Bromodichloromethane	EPA 8260D	<21.0	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Bromoform	EPA 8260D	<15.8	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Carbon disulfide	EPA 8260D	<19.4	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Carbon tetrachloride	EPA 8260D	<14.6	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Chlorobenzene	EPA 8260D	<12.4	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Chlorodibromomethane	EPA 8260D	<21.0	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Chloroethane (Ethyl chloride)	EPA 8260D	<105	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
Chloroform	EPA 8260D	<13.7	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
cis-1,2-Dichloroethylene	EPA 8260D	<24.1	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
cis-1,3-Dichloropropene	EPA 8260D	<28.2	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Cyclohexane	EPA 8260D	<28.6	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<45.3	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
Ethylbenzene	EPA 8260D	<26.5	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Isopropylbenzene	EPA 8260D	<23.6	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
m+p-Xylene	EPA 8260D	<49.9	U	µg/kg	74.8	1	01/23/26 17:11	01/22/26 11:01
Methyl acetate	EPA 8260D	<44.8	U	µg/kg	312	1	01/23/26 17:11	01/22/26 11:01
Methyl bromide (Bromomethane)	EPA 8260D	<71.6	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:38  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB02 (3-4')\_20260121

**Lab ID:** HN2601026-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Methyl chloride (Chloromethane)	EPA 8260D	<102	U	µg/kg	125	1	01/23/26 17:11	01/22/26 11:01
Methyl tert-butyl ether (MTBE)	EPA 8260D	<27.3	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Methylcyclohexane	EPA 8260D	<14.3	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Methylene chloride (Dichloromethane)	EPA 8260D	<99.3	U	µg/kg	312	1	01/23/26 17:11	01/22/26 11:01
o-Xylene	EPA 8260D	<14.5	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Styrene	EPA 8260D	<14.8	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<22.5	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Toluene	EPA 8260D	<30.8	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Total Xylene	EPA 8260D	<14.5	U	µg/kg	112	1	01/23/26 17:11	01/22/26 11:01
trans-1,2-Dichloroethylene	EPA 8260D	<30.9	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
trans-1,3-Dichloropropylene	EPA 8260D	<20.9	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Trichloroethene (Trichloroethylene)	EPA 8260D	<16.8	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<19.1	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
Vinyl chloride (Chloroethene)	EPA 8260D	<24.9	U	µg/kg	37.4	1	01/23/26 17:11	01/22/26 11:01
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	<b>97.8</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 17:11</i>	<i>01/22/26 11:01</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	<b>95.8</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 17:11</i>	<i>01/22/26 11:01</i>
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	<b>95.4</b>		<i>%REC</i>	<i>72-120</i>	<i>1</i>	<i>01/23/26 17:11</i>	<i>01/22/26 11:01</i>
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	<b>95.8</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 17:11</i>	<i>01/22/26 11:01</i>

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:55  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB03 (5-6')\_20260121

**Lab ID:** HN2601026-003

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	<2.75	U	µg/kg	14.9	1	01/28/26 21:09	01/26/26 16:09
2,4,5-TP (Silvex)	EPA 8151A	<4.89	U	µg/kg	14.9	1	01/28/26 21:09	01/26/26 16:09
2,4-D	EPA 8151A	<7.97	U	µg/kg	29.8	1	01/28/26 21:09	01/26/26 16:09
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	<b>40.0</b>		<i>%REC</i>	<i>10-116</i>	<i>1</i>	<i>01/28/26 21:09</i>	<i>01/26/26 16:09</i>
<b>General Chemistry Parameters</b>								
Percent Moisture	EPA 3550C	<b>18.2</b>		%	0.1	1	01/22/26 17:00	NA
Chloride	EPA 9056A	<3.83	U	mg/kg	12.4	1	01/24/26 05:26	01/23/26 11:56
<b>Metals</b>								
Arsenic	EPA 6020B	<b>12.1</b>		mg/kg	3.27	10	01/28/26 17:26	01/27/26 14:38
Barium	EPA 6020B	<b>58.3</b>		mg/kg	3.27	10	01/28/26 17:26	01/27/26 14:38
Cadmium	EPA 6020B	<0.196	U	mg/kg	1.31	10	01/28/26 17:26	01/27/26 14:38
Chromium	EPA 6020B	<b>13.0</b>		mg/kg	3.27	10	01/28/26 17:26	01/27/26 14:38
Copper	EPA 6020B	<b>17.5</b>		mg/kg	3.27	10	01/28/26 17:26	01/27/26 14:38
Lead	EPA 6020B	<b>9.82</b>		mg/kg	3.27	10	01/28/26 17:26	01/27/26 14:38
Selenium	EPA 6020B	<3.01	U	mg/kg	3.27	10	01/28/26 17:26	01/27/26 14:38
Silver	EPA 6020B	<0.432	U	mg/kg	3.27	10	01/28/26 17:26	01/27/26 14:38
Zinc	EPA 6020B	<b>44.0</b>		mg/kg	6.54	10	01/28/26 17:26	01/27/26 14:38
Mercury	EPA 7471B	<b>0.0706</b>		mg/kg	0.0221	1	01/27/26 09:48	01/26/26 14:13
<b>Organochlorine Pesticides by GC/ECD</b>								
4,4'-DDD	EPA 8081B	<19.1	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
4,4'-DDE	EPA 8081B	<19.7	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
4,4'-DDT	EPA 8081B	<19.9	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Aldrin	EPA 8081B	<19.4	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
alpha-BHC	EPA 8081B	<19.7	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
beta-BHC	EPA 8081B	<19.6	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Chlordane, Technical	EPA 8081B	<29.6	U	µg/kg	74.6	1	01/26/26 06:25	01/23/26 11:04
cis-Chlordane	EPA 8081B	<19.9	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
delta-BHC	EPA 8081B	<19.5	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Dieldrin	EPA 8081B	<20.9	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:55  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB03 (5-6')\_20260121

**Lab ID:** HN2601026-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan I	EPA 8081B	<20.1	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Endosulfan II	EPA 8081B	<19.8	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Endosulfan sulfate	EPA 8081B	<18.4	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Endrin	EPA 8081B	<24.2	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Endrin aldehyde	EPA 8081B	<18.9	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Endrin ketone	EPA 8081B	<18.2	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
gamma-BHC (Lindane)	EPA 8081B	<19.6	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Heptachlor	EPA 8081B	<19.3	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Heptachlor epoxide	EPA 8081B	<19.7	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Methoxychlor	EPA 8081B	<20.0	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
Toxaphene	EPA 8081B	<32.2	U	µg/kg	179	1	01/26/26 06:25	01/23/26 11:04
trans-Chlordane	EPA 8081B	<19.8	U	µg/kg	29.9	1	01/26/26 06:25	01/23/26 11:04
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	<b>106</b>		<i>%REC</i>	<i>53-151</i>	<i>1</i>	<i>01/26/26 06:25</i>	<i>01/23/26 11:04</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	<b>85.0</b>		<i>%REC</i>	<i>67-127</i>	<i>1</i>	<i>01/26/26 06:25</i>	<i>01/23/26 11:04</i>

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

Aroclor 1016	EPA 8082A	<68.2	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
Aroclor 1221	EPA 8082A	<68.2	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
Aroclor 1232	EPA 8082A	<68.2	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
Aroclor 1242	EPA 8082A	<68.2	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
Aroclor 1248	EPA 8082A	<68.2	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
Aroclor 1254	EPA 8082A	<55.6	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
Aroclor 1260	EPA 8082A	<55.6	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
Aroclor 1262	EPA 8082A	<55.6	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
Aroclor 1268	EPA 8082A	<55.6	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
Total PCB	EPA 8082A	<55.6	U	µg/kg	199	1	01/24/26 06:31	01/23/26 10:38
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	<b>104</b>		<i>%REC</i>	<i>54-146</i>	<i>1</i>	<i>01/24/26 06:31</i>	<i>01/23/26 10:38</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	<b>102</b>		<i>%REC</i>	<i>58-140</i>	<i>1</i>	<i>01/24/26 06:31</i>	<i>01/23/26 10:38</i>

### Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<16.0	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<22.8	U	µg/kg	988	1	01/26/26 16:00	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:55  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB03 (5-6')\_20260121

**Lab ID:** HN2601026-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<70.9	U	µg/kg	494	1	01/26/26 16:00	01/23/26 13:34
1-Methylnaphthalene	EPA 8270E	<14.2	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<23.2	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2,3,4,6-Tetrachlorophenol	EPA 8270E	<72.4	U	µg/kg	198	1	01/26/26 16:00	01/23/26 13:34
2,4,5-Trichlorophenol	EPA 8270E	<58.6	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2,4,6-Trichlorophenol	EPA 8270E	<26.3	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2,4-Dichlorophenol	EPA 8270E	<53.2	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2,4-Dimethylphenol	EPA 8270E	<50.8	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2,4-Dinitrophenol	EPA 8270E	<723	U	µg/kg	988	1	01/26/26 16:00	01/23/26 13:34
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<64.2	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<25.2	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2-Chloronaphthalene	EPA 8270E	<13.8	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
2-Chlorophenol	EPA 8270E	<64.7	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<82.6	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2-Methylnaphthalene	EPA 8270E	<10.1	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
2-Methylphenol (o-Cresol)	EPA 8270E	<26.7	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2-Nitroaniline	EPA 8270E	<54.9	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
2-Nitrophenol	EPA 8270E	<28.2	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
3&4-Methylphenol	EPA 8270E	<53.9	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
3,3'-Dichlorobenzidine	EPA 8270E	<46.2	U	µg/kg	494	1	01/26/26 16:00	01/23/26 13:34
3-Nitroaniline	EPA 8270E	<57.4	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<54.2	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
4-Chloro-3-methylphenol	EPA 8270E	<28.2	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
4-Chloroaniline	EPA 8270E	<50.2	U	µg/kg	198	1	01/26/26 16:00	01/23/26 13:34
4-Chlorophenyl phenylether	EPA 8270E	<27.3	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
4-Nitroaniline	EPA 8270E	<153	U	µg/kg	494	1	01/26/26 16:00	01/23/26 13:34
4-Nitrophenol	EPA 8270E	<232	U	µg/kg	988	1	01/26/26 16:00	01/23/26 13:34
Acenaphthene	EPA 8270E	<14.3	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:55  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB03 (5-6')\_20260121

**Lab ID:** HN2601026-003

Analyte	Method	Results	Qual	Units	MRL	Dilution	Date	Date
						Factor	Analyzed	Extracted
Acenaphthylene	EPA 8270E	<17.1	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Acetophenone	EPA 8270E	<15.5	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Anthracene	EPA 8270E	<13.9	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Atrazine	EPA 8270E	<57.9	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Benzaldehyde	EPA 8270E	<152	U	µg/kg	198	1	01/26/26 16:00	01/23/26 13:34
Benzo(a)anthracene	EPA 8270E	<17.1	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Benzo(a)pyrene	EPA 8270E	<12.1	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Benzo(b)fluoranthene	EPA 8270E	<14.7	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Benzo(g,h,i)perylene	EPA 8270E	<15.2	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Benzo(k)fluoranthene	EPA 8270E	<15.0	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
bis(2-Chloroethoxy) methane	EPA 8270E	<62.6	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
bis(2-Chloroethyl) ether	EPA 8270E	<28.0	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Butyl benzyl phthalate	EPA 8270E	<124	U	µg/kg	198	1	01/26/26 16:00	01/23/26 13:34
Caprolactam	EPA 8270E	<89.2	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Carbazole	EPA 8270E	<29.1	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Chrysene	EPA 8270E	<16.0	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<81.8	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Dibenz(a,h) anthracene	EPA 8270E	<10.7	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Dibenzofuran	EPA 8270E	<14.5	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Diethyl phthalate	EPA 8270E	<33.6	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Dimethyl phthalate	EPA 8270E	<19.3	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Fluoranthene	EPA 8270E	<9.49	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Fluorene	EPA 8270E	<14.4	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Hexachlorobenzene	EPA 8270E	<28.8	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Hexachlorobutadiene	EPA 8270E	<23.3	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Hexachlorocyclopentadiene	EPA 8270E	<93.7	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Hexachloroethane	EPA 8270E	<40.9	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Indeno(1,2,3-cd) pyrene	EPA 8270E	<13.8	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Isophorone	EPA 8270E	<19.3	U	µg/kg	494	1	01/26/26 16:00	01/23/26 13:34
Methylphenol, Total	EPA 8270E	<26.7	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:55  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB03 (5-6')\_20260121

**Lab ID:** HN2601026-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Naphthalene	EPA 8270E	<12.6	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Nitrobenzene	EPA 8270E	<33.2	U	µg/kg	494	1	01/26/26 16:00	01/23/26 13:34
n-Nitrosodi-n-propylamine	EPA 8270E	<16.3	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
N-Nitrosodiphenylamine	EPA 8270E	<57.2	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Pentachlorophenol	EPA 8270E	<78.5	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Phenanthrene	EPA 8270E	<9.20	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Phenol	EPA 8270E	<49.7	U	µg/kg	97.9	1	01/26/26 16:00	01/23/26 13:34
Pyrene	EPA 8270E	<9.87	U	µg/kg	19.8	1	01/26/26 16:00	01/23/26 13:34
Pyridine	EPA 8270E	<195	U	µg/kg	494	1	01/26/26 16:00	01/23/26 13:34
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<b>51.1</b>		<i>%REC</i>	<i>48-94</i>	<i>1</i>	<i>01/26/26 16:00</i>	<i>01/23/26 13:34</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<b>66.6</b>		<i>%REC</i>	<i>50-103</i>	<i>1</i>	<i>01/26/26 16:00</i>	<i>01/23/26 13:34</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<b>61.4</b>		<i>%REC</i>	<i>43-105</i>	<i>1</i>	<i>01/26/26 16:00</i>	<i>01/23/26 13:34</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	<b>77.6</b>		<i>%REC</i>	<i>55-111</i>	<i>1</i>	<i>01/26/26 16:00</i>	<i>01/23/26 13:34</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>01/26/26 16:00</i>	<i>01/23/26 13:34</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<b>60.9</b>		<i>%REC</i>	<i>49-110</i>	<i>1</i>	<i>01/26/26 16:00</i>	<i>01/23/26 13:34</i>

### Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<20.2	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,1,2,2-Tetrachloroethane	EPA 8260D	<19.7	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<28.3	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,1,2-Trichloroethane	EPA 8260D	<19.0	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,1-Dichloroethane	EPA 8260D	<16.3	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,1-Dichloroethylene	EPA 8260D	<14.5	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,2,3-Trichlorobenzene	EPA 8260D	<53.5	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
1,2,3-Trichloropropane	EPA 8260D	<18.7	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,2,4-Trichlorobenzene	EPA 8260D	<50.6	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
1,2,4-Trimethylbenzene	EPA 8260D	<32.7	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<41.1	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<26.2	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<16.9	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:55  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 SB03 (5-6')\_20260121

**Lab ID:** HN2601026-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<26.2	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
1,2-Dichloropropane	EPA 8260D	<32.9	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,3,5-Trimethylbenzene	EPA 8260D	<31.5	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<30.8	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
1,3-Dichloropropene	EPA 8260D	<24.9	U	µg/kg	89.2	1	01/23/26 17:31	01/22/26 15:36
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<36.3	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<106	U	µg/kg	297	1	01/23/26 17:31	01/22/26 15:36
2-Hexanone	EPA 8260D	<22.1	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<41.6	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Acetone	EPA 8260D	<132	SU	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
Benzene	EPA 8260D	<21.6	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Bromochloromethane	EPA 8260D	<22.7	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Bromodichloromethane	EPA 8260D	<25.0	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Bromoform	EPA 8260D	<18.8	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Carbon disulfide	EPA 8260D	<23.1	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Carbon tetrachloride	EPA 8260D	<17.5	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Chlorobenzene	EPA 8260D	<14.8	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Chlorodibromomethane	EPA 8260D	<25.1	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Chloroethane (Ethyl chloride)	EPA 8260D	<125	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
Chloroform	EPA 8260D	<16.3	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
cis-1,2-Dichloroethylene	EPA 8260D	<28.7	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
cis-1,3-Dichloropropene	EPA 8260D	<33.6	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Cyclohexane	EPA 8260D	<34.2	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<54.0	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
Ethylbenzene	EPA 8260D	<31.6	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Isopropylbenzene	EPA 8260D	<28.2	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
m+p-Xylene	EPA 8260D	<59.5	U	µg/kg	89.2	1	01/23/26 17:31	01/22/26 15:36
Methyl acetate	EPA 8260D	<53.4	U	µg/kg	372	1	01/23/26 17:31	01/22/26 15:36
Methyl bromide (Bromomethane)	EPA 8260D	<85.3	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 13:55  
**Date Received:** 01/22/26 06:00

**CLIENT ID: 4821 SB03 (5-6')\_20260121**

**Lab ID: HN2601026-003**

Analyte	Method	Results	Qual	Units	MRL	Dilution	Date	Date
						Factor	Analyzed	Extracted
Methyl chloride (Chloromethane)	EPA 8260D	<122	U	µg/kg	149	1	01/23/26 17:31	01/22/26 15:36
Methyl tert-butyl ether (MTBE)	EPA 8260D	<32.5	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Methylcyclohexane	EPA 8260D	<17.0	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Methylene chloride (Dichloromethane)	EPA 8260D	<118	U	µg/kg	372	1	01/23/26 17:31	01/22/26 15:36
o-Xylene	EPA 8260D	<17.3	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Styrene	EPA 8260D	<17.7	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<26.9	SU	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Toluene	EPA 8260D	<36.8	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Total Xylene	EPA 8260D	<17.3	U	µg/kg	134	1	01/23/26 17:31	01/22/26 15:36
trans-1,2-Dichloroethylene	EPA 8260D	<36.8	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
trans-1,3-Dichloropropylene	EPA 8260D	<24.9	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Trichloroethene (Trichloroethylene)	EPA 8260D	<20.0	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<22.8	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
Vinyl chloride (Chloroethene)	EPA 8260D	<29.7	U	µg/kg	44.6	1	01/23/26 17:31	01/22/26 15:36
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	<b>101</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 17:31</i>	<i>01/22/26 15:36</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	<b>98.6</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 17:31</i>	<i>01/22/26 15:36</i>
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	<b>98.7</b>		<i>%REC</i>	<i>72-120</i>	<i>1</i>	<i>01/23/26 17:31</i>	<i>01/22/26 15:36</i>
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	<b>97.8</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 17:31</i>	<i>01/22/26 15:36</i>

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 DUP-1\_20260121

**Lab ID:** HN2601026-004

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	<1.64	U	µg/kg	8.93	1	01/28/26 21:22	01/26/26 16:09
2,4,5-TP (Silvex)	EPA 8151A	<2.93	U	µg/kg	8.93	1	01/28/26 21:22	01/26/26 16:09
2,4-D	EPA 8151A	<4.77	U	µg/kg	17.9	1	01/28/26 21:22	01/26/26 16:09
<i>Surr: DCAA</i>	<i>EPA 8151A</i>	<b>40.0</b>		<i>%REC</i>	<i>10-116</i>	<i>1</i>	<i>01/28/26 21:22</i>	<i>01/26/26 16:09</i>
<b>General Chemistry Parameters</b>								
Percent Moisture	EPA 3550C	<b>6.8</b>		%	0.1	1	01/22/26 17:00	NA
Chloride	EPA 9056A	<b>16.5</b>		mg/kg	12.1	1	01/24/26 05:34	01/23/26 11:56
<b>Metals</b>								
Arsenic	EPA 6020B	<0.395	U	mg/kg	3.29	10	01/28/26 17:28	01/27/26 14:38
Barium	EPA 6020B	<b>9.61</b>		mg/kg	3.29	10	01/28/26 17:28	01/27/26 14:38
Cadmium	EPA 6020B	<0.197	U	mg/kg	1.32	10	01/28/26 17:28	01/27/26 14:38
Chromium	EPA 6020B	<b>3.72</b>		mg/kg	3.29	10	01/28/26 17:28	01/27/26 14:38
Copper	EPA 6020B	<b>4.52</b>		mg/kg	3.29	10	01/28/26 17:28	01/27/26 14:38
Lead	EPA 6020B	<b>5.24</b>		mg/kg	3.29	10	01/28/26 17:28	01/27/26 14:38
Selenium	EPA 6020B	<3.02	U	mg/kg	3.29	10	01/28/26 17:28	01/27/26 14:38
Silver	EPA 6020B	<0.434	U	mg/kg	3.29	10	01/28/26 17:28	01/27/26 14:38
Zinc	EPA 6020B	<b>16.7</b>		mg/kg	6.58	10	01/28/26 17:28	01/27/26 14:38
Mercury	EPA 7471B	<b>0.0529</b>		mg/kg	0.0200	1	01/27/26 09:50	01/26/26 14:13
<b>Organochlorine Pesticides by GC/ECD</b>								
4,4'-DDD	EPA 8081B	<6.65	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
4,4'-DDE	EPA 8081B	<6.86	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
4,4'-DDT	EPA 8081B	<6.92	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Aldrin	EPA 8081B	<6.77	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
alpha-BHC	EPA 8081B	<6.85	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
beta-BHC	EPA 8081B	<6.84	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Chlordane, Technical	EPA 8081B	<10.3	U	µg/kg	26.0	1	01/26/26 06:40	01/23/26 11:04
cis-Chlordane	EPA 8081B	<6.96	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
delta-BHC	EPA 8081B	<6.82	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Dieldrin	EPA 8081B	<7.28	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 DUP-1\_20260121

**Lab ID:** HN2601026-004

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Endosulfan I	EPA 8081B	<7.00	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Endosulfan II	EPA 8081B	<6.90	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Endosulfan sulfate	EPA 8081B	<6.40	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Endrin	EPA 8081B	<8.42	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Endrin aldehyde	EPA 8081B	<6.60	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Endrin ketone	EPA 8081B	<6.33	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
gamma-BHC (Lindane)	EPA 8081B	<6.83	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Heptachlor	EPA 8081B	<6.72	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Heptachlor epoxide	EPA 8081B	<6.89	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Methoxychlor	EPA 8081B	<6.96	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
Toxaphene	EPA 8081B	<11.2	U	µg/kg	62.5	1	01/26/26 06:40	01/23/26 11:04
trans-Chlordane	EPA 8081B	<6.92	U	µg/kg	10.4	1	01/26/26 06:40	01/23/26 11:04
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	<b>106</b>		<i>%REC</i>	<i>53-151</i>	<i>1</i>	<i>01/26/26 06:40</i>	<i>01/23/26 11:04</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	<b>74.9</b>		<i>%REC</i>	<i>67-127</i>	<i>1</i>	<i>01/26/26 06:40</i>	<i>01/23/26 11:04</i>

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

Aroclor 1016	EPA 8082A	<23.8	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
Aroclor 1221	EPA 8082A	<23.8	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
Aroclor 1232	EPA 8082A	<23.8	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
Aroclor 1242	EPA 8082A	<23.8	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
Aroclor 1248	EPA 8082A	<23.8	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
Aroclor 1254	EPA 8082A	<19.4	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
Aroclor 1260	EPA 8082A	<19.4	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
Aroclor 1262	EPA 8082A	<19.4	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
Aroclor 1268	EPA 8082A	<19.4	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
Total PCB	EPA 8082A	<19.4	U	µg/kg	69.4	1	01/24/26 12:01	01/23/26 10:38
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8082A</i>	<b>115</b>		<i>%REC</i>	<i>54-146</i>	<i>1</i>	<i>01/24/26 12:01</i>	<i>01/23/26 10:38</i>
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8082A</i>	<b>90.9</b>		<i>%REC</i>	<i>58-140</i>	<i>1</i>	<i>01/24/26 12:01</i>	<i>01/23/26 10:38</i>

### Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<9.42	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<13.4	U	µg/kg	580	1	01/26/26 16:21	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 DUP-1\_20260121

**Lab ID:** HN2601026-004

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<41.6	U	µg/kg	290	1	01/26/26 16:21	01/23/26 13:34
1-Methylnaphthalene	EPA 8270E	<8.36	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<13.6	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2,3,4,6-Tetrachlorophenol	EPA 8270E	<42.5	U	µg/kg	116	1	01/26/26 16:21	01/23/26 13:34
2,4,5-Trichlorophenol	EPA 8270E	<34.4	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2,4,6-Trichlorophenol	EPA 8270E	<15.5	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2,4-Dichlorophenol	EPA 8270E	<31.3	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2,4-Dimethylphenol	EPA 8270E	<29.9	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2,4-Dinitrophenol	EPA 8270E	<425	U	µg/kg	580	1	01/26/26 16:21	01/23/26 13:34
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<37.7	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<14.8	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2-Chloronaphthalene	EPA 8270E	<8.12	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
2-Chlorophenol	EPA 8270E	<38.0	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<48.5	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2-Methylnaphthalene	EPA 8270E	<5.91	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
2-Methylphenol (o-Cresol)	EPA 8270E	<15.7	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2-Nitroaniline	EPA 8270E	<32.2	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
2-Nitrophenol	EPA 8270E	<16.5	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
3&4-Methylphenol	EPA 8270E	<31.7	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
3,3'-Dichlorobenzidine	EPA 8270E	<27.1	U	µg/kg	290	1	01/26/26 16:21	01/23/26 13:34
3-Nitroaniline	EPA 8270E	<33.7	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<31.8	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
4-Chloro-3-methylphenol	EPA 8270E	<16.5	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
4-Chloroaniline	EPA 8270E	<29.5	U	µg/kg	116	1	01/26/26 16:21	01/23/26 13:34
4-Chlorophenyl phenylether	EPA 8270E	<16.0	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
4-Nitroaniline	EPA 8270E	<90.1	U	µg/kg	290	1	01/26/26 16:21	01/23/26 13:34
4-Nitrophenol	EPA 8270E	<136	U	µg/kg	580	1	01/26/26 16:21	01/23/26 13:34
Acenaphthene	EPA 8270E	<8.40	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 DUP-1\_20260121

**Lab ID:** HN2601026-004

Analyte	Method	Results	Qual	Units	MRL	Dilution	Date	Date
						Factor	Analyzed	Extracted
Acenaphthylene	EPA 8270E	<10.1	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Acetophenone	EPA 8270E	<9.09	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Anthracene	EPA 8270E	<8.19	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Atrazine	EPA 8270E	<34.0	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Benzaldehyde	EPA 8270E	<89.2	U	µg/kg	116	1	01/26/26 16:21	01/23/26 13:34
Benzo(a)anthracene	EPA 8270E	<b>11.6</b>		µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Benzo(a)pyrene	EPA 8270E	<7.12	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Benzo(b)fluoranthene	EPA 8270E	<8.66	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Benzo(g,h,i)perylene	EPA 8270E	<8.90	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Benzo(k)fluoranthene	EPA 8270E	<8.80	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
bis(2-Chloroethoxy) methane	EPA 8270E	<36.8	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
bis(2-Chloroethyl) ether	EPA 8270E	<16.4	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Butyl benzyl phthalate	EPA 8270E	<72.7	U	µg/kg	116	1	01/26/26 16:21	01/23/26 13:34
Caprolactam	EPA 8270E	<52.4	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Carbazole	EPA 8270E	<17.1	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Chrysene	EPA 8270E	<9.39	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<48.0	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Dibenz(a,h) anthracene	EPA 8270E	<6.27	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Dibenzofuran	EPA 8270E	<8.54	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Diethyl phthalate	EPA 8270E	<19.8	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Dimethyl phthalate	EPA 8270E	<11.3	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Fluoranthene	EPA 8270E	<b>12.8</b>		µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Fluorene	EPA 8270E	<8.43	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Hexachlorobenzene	EPA 8270E	<16.9	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Hexachlorobutadiene	EPA 8270E	<13.7	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Hexachlorocyclopentadiene	EPA 8270E	<55.0	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Hexachloroethane	EPA 8270E	<24.0	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Indeno(1,2,3-cd) pyrene	EPA 8270E	<8.08	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Isophorone	EPA 8270E	<11.3	U	µg/kg	290	1	01/26/26 16:21	01/23/26 13:34
Methylphenol, Total	EPA 8270E	<15.7	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 DUP-1\_20260121

**Lab ID:** HN2601026-004

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Naphthalene	EPA 8270E	<7.42	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Nitrobenzene	EPA 8270E	<19.5	U	µg/kg	290	1	01/26/26 16:21	01/23/26 13:34
n-Nitrosodi-n-propylamine	EPA 8270E	<9.58	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
N-Nitrosodiphenylamine	EPA 8270E	<33.6	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Pentachlorophenol	EPA 8270E	<46.1	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Phenanthrene	EPA 8270E	<5.40	U	µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Phenol	EPA 8270E	<29.2	U	µg/kg	57.5	1	01/26/26 16:21	01/23/26 13:34
Pyrene	EPA 8270E	<b>11.6</b>		µg/kg	11.6	1	01/26/26 16:21	01/23/26 13:34
Pyridine	EPA 8270E	<114	U	µg/kg	290	1	01/26/26 16:21	01/23/26 13:34
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	<b>79.5</b>		<i>%REC</i>	<i>48-94</i>	<i>1</i>	<i>01/26/26 16:21</i>	<i>01/23/26 13:34</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	<b>80.1</b>		<i>%REC</i>	<i>50-103</i>	<i>1</i>	<i>01/26/26 16:21</i>	<i>01/23/26 13:34</i>
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	<b>84.5</b>		<i>%REC</i>	<i>43-105</i>	<i>1</i>	<i>01/26/26 16:21</i>	<i>01/23/26 13:34</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	<b>91.9</b>		<i>%REC</i>	<i>55-111</i>	<i>1</i>	<i>01/26/26 16:21</i>	<i>01/23/26 13:34</i>
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	<b>94.9</b>		<i>%REC</i>	<i>47-100</i>	<i>1</i>	<i>01/26/26 16:21</i>	<i>01/23/26 13:34</i>
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	<b>82.7</b>		<i>%REC</i>	<i>49-110</i>	<i>1</i>	<i>01/26/26 16:21</i>	<i>01/23/26 13:34</i>

### Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<15.8	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,1,2,2-Tetrachloroethane	EPA 8260D	<15.4	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<22.0	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,1,2-Trichloroethane	EPA 8260D	<14.8	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,1-Dichloroethane	EPA 8260D	<12.7	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,1-Dichloroethylene	EPA 8260D	<11.3	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,2,3-Trichlorobenzene	EPA 8260D	<41.8	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
1,2,3-Trichloropropane	EPA 8260D	<14.6	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,2,4-Trichlorobenzene	EPA 8260D	<39.4	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
1,2,4-Trimethylbenzene	EPA 8260D	<25.5	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<32.0	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<20.5	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<13.2	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 DUP-1\_20260121

**Lab ID:** HN2601026-004

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<20.5	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
1,2-Dichloropropane	EPA 8260D	<25.7	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,3,5-Trimethylbenzene	EPA 8260D	<24.6	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<24.0	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
1,3-Dichloropropene	EPA 8260D	<19.4	U	µg/kg	69.6	1	01/23/26 17:50	01/22/26 15:36
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<28.3	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<82.9	U	µg/kg	232	1	01/23/26 17:50	01/22/26 15:36
2-Hexanone	EPA 8260D	<17.3	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<32.4	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Acetone	EPA 8260D	<103	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
Benzene	EPA 8260D	<16.9	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Bromochloromethane	EPA 8260D	<17.7	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Bromodichloromethane	EPA 8260D	<19.5	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Bromoform	EPA 8260D	<14.7	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Carbon disulfide	EPA 8260D	<18.0	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Carbon tetrachloride	EPA 8260D	<13.6	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Chlorobenzene	EPA 8260D	<11.6	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Chlorodibromomethane	EPA 8260D	<19.6	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Chloroethane (Ethyl chloride)	EPA 8260D	<97.5	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
Chloroform	EPA 8260D	<12.8	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
cis-1,2-Dichloroethylene	EPA 8260D	<22.4	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
cis-1,3-Dichloropropene	EPA 8260D	<26.2	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Cyclohexane	EPA 8260D	<26.7	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<42.1	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
Ethylbenzene	EPA 8260D	<24.7	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Isopropylbenzene	EPA 8260D	<22.0	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
m+p-Xylene	EPA 8260D	<46.4	U	µg/kg	69.6	1	01/23/26 17:50	01/22/26 15:36
Methyl acetate	EPA 8260D	<41.7	U	µg/kg	290	1	01/23/26 17:50	01/22/26 15:36
Methyl bromide (Bromomethane)	EPA 8260D	<66.6	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36

# Analytical Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID

**Work Order:** HN2601026  
**Date Collected:** 01/21/26  
**Date Received:** 01/22/26 06:00

**CLIENT ID:** 4821 DUP-1\_20260121

**Lab ID:** HN2601026-004

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Methyl chloride (Chloromethane)	EPA 8260D	<95.1	U	µg/kg	116	1	01/23/26 17:50	01/22/26 15:36
Methyl tert-butyl ether (MTBE)	EPA 8260D	<25.4	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Methylcyclohexane	EPA 8260D	<13.3	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Methylene chloride (Dichloromethane)	EPA 8260D	<92.4	U	µg/kg	290	1	01/23/26 17:50	01/22/26 15:36
o-Xylene	EPA 8260D	<13.5	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Styrene	EPA 8260D	<13.8	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<21.0	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Toluene	EPA 8260D	<28.7	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Total Xylene	EPA 8260D	<13.5	U	µg/kg	104	1	01/23/26 17:50	01/22/26 15:36
trans-1,2-Dichloroethylene	EPA 8260D	<28.7	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
trans-1,3-Dichloropropylene	EPA 8260D	<19.4	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Trichloroethene (Trichloroethylene)	EPA 8260D	<15.6	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<17.8	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
Vinyl chloride (Chloroethene)	EPA 8260D	<23.1	U	µg/kg	34.8	1	01/23/26 17:50	01/22/26 15:36
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	<b>97.7</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 17:50</i>	<i>01/22/26 15:36</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	<b>101</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 17:50</i>	<i>01/22/26 15:36</i>
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	<b>94.0</b>		<i>%REC</i>	<i>72-120</i>	<i>1</i>	<i>01/23/26 17:50</i>	<i>01/22/26 15:36</i>
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	<b>97.6</b>		<i>%REC</i>	<i>80-120</i>	<i>1</i>	<i>01/23/26 17:50</i>	<i>01/22/26 15:36</i>



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2429886

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3846338

**Chlorinated Herbicides by GC/ECD**

**MB** CLIENT ID: Method Blank Lab ID: QC-2429886-001

**Method:** EPA 8151A **Dilution:** 1 **Analysis Date:** 01/28/26 17:52  
**Prep Date:** 01/26/26 16:10

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>21.0</b>	µg/kg		50		42.0	10-116			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2429886-002

**Method:** EPA 8151A **Dilution:** 1 **Analysis Date:** 01/28/26 18:05  
**Prep Date:** 01/26/26 16:10

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	17.0	µg/kg	5.00	50		34.0	10-119			
2,4,5-TP (Silvex)	10.0	µg/kg	5.00	50		20.0	10-101			
2,4-D	19.0	µg/kg	10.0	50		38.0	10-128			
Surr: DCAA	<b>17.0</b>	µg/kg		50		34.0	10-116			

**MS** CLIENT ID: Batch QC Lab ID: QC-2429886-005

**Method:** EPA 8151A **Dilution:** 1 **Analysis Date:** 01/28/26 18:19  
**Prep Date:** 01/26/26 16:10

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	52.0	µg/kg	13.7	123.92	<2.28	42.0	10-119			
2,4,5-TP (Silvex)	42.1	µg/kg	13.7	123.92	<4.06	34.0	10-101			
2,4-D	74.3	µg/kg	27.4	123.92	<6.62	60.0	10-128			
Surr: DCAA	<b>49.6</b>	µg/kg		123.92		40.0	10-116			

**MSD** CLIENT ID: Batch QC Lab ID: QC-2429886-006

**Method:** EPA 8151A **Dilution:** 1 **Analysis Date:** 01/28/26 18:32  
**Prep Date:** 01/26/26 16:10

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	64.4	µg/kg	13.7	123.92	<2.28	52.0	10-119	21.3	30	
2,4,5-TP (Silvex)	52.0	µg/kg	13.7	123.92	<4.06	42.0	10-101	21.1	30	
2,4-D	66.9	µg/kg	27.4	123.92	<6.62	54.0	10-128	10.5	30	
Surr: DCAA	<b>59.5</b>	µg/kg		123.92		48.0	10-116	18.2	30	

The following samples were analyzed in this batch: HN2601026-001, HN2601026-002, HN2601026-003, HN2601026-004



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426845

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3836889

**General Chemistry Parameters**

**MB** CLIENT ID: Method Blank Lab ID: QC-2426845-001

**Method:** EPA 3550C **Dilution:** 1 **Analysis Date:** 01/22/26 17:00  
**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-2426845-002

**Method:** EPA 3550C **Dilution:** 1 **Analysis Date:** 01/22/26 17:00  
**Prep Date:** NA

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

**DUP** CLIENT ID: 4821 SB03 (5-6')\_20260121 Lab ID: QC-2426845-004

**Method:** EPA 3550C **Dilution:** 1 **Analysis Date:** 01/22/26 17:00  
**Prep Date:** NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	18.7	%	0.1		18.2			3.09	10	

**The following samples were analyzed in this batch:** HN2601026-001, HN2601026-002, HN2601026-003, HN2601026-004



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426845

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 14:12  
**Date Received:** 01/22/26 08:00  
**Run ID:** 3838818

**General Chemistry Parameters**

**DUP** CLIENT ID: Batch QC Lab ID: QC-2426845-015

Method: EPA 3550C Dilution: 1 Analysis Date: 01/23/26 13:05  
 Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	8.7	%	0.1		<0.1			45.4	10	R

The following samples were analyzed in this batch: HN2601026-001, HN2601026-002, HN2601026-003, HN2601026-004

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427662

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3839848

General Chemistry Parameters

<b>MB</b>	<b>CLIENT ID: Method Blank</b>	<b>Lab ID: QC-2427662-001</b>
<b>Method:</b> EPA 9056A	<b>Dilution:</b> 1	<b>Analysis Date:</b> 01/24/26 04:37
		<b>Prep Date:</b> 01/23/26 11:57

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

<b>LCS</b>	<b>CLIENT ID: Laboratory Control Sample</b>	<b>Lab ID: QC-2427662-002</b>
<b>Method:</b> EPA 9056A	<b>Dilution:</b> 1	<b>Analysis Date:</b> 01/24/26 04:45
		<b>Prep Date:</b> 01/23/26 11:57

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	94.2	mg/kg	10.0	100		94.2	87-110			

<b>MS</b>	<b>CLIENT ID: 4821 SB01 (1-2')_20260121</b>	<b>Lab ID: QC-2427662-004</b>
<b>Method:</b> EPA 9056A	<b>Dilution:</b> 1	<b>Analysis Date:</b> 01/24/26 05:01
		<b>Prep Date:</b> 01/23/26 11:57

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	98.9	mg/kg	11.0	104.65	<3.24	91.8	87-110			

<b>MSD</b>	<b>CLIENT ID: 4821 SB01 (1-2')_20260121</b>	<b>Lab ID: QC-2427662-005</b>
<b>Method:</b> EPA 9056A	<b>Dilution:</b> 1	<b>Analysis Date:</b> 01/24/26 05:09
		<b>Prep Date:</b> 01/23/26 11:57

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	99.3	mg/kg	11.0	104.72	<3.25	92.0	87-110	0.327	15	

The following samples were analyzed in this batch: HN2601026-001, HN2601026-002, HN2601026-003, HN2601026-004

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2429984

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3843658

**Metals**

**MB CLIENT ID: Method Blank Lab ID: QC-2429984-001**

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 01/27/26 09:13  
**Prep Date:** 01/26/26 14:14

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-2429984-002**

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 01/27/26 12:52  
**Prep Date:** 01/26/26 14:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.150	mg/kg	0.0200	0.1665		90.1	80-120			

**MS CLIENT ID: Batch QC Lab ID: QC-2429984-004**

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 01/27/26 09:23  
**Prep Date:** 01/26/26 14:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.162	mg/kg	0.0200	0.12534	0.0732	76.7	75-125			

**MSD CLIENT ID: Batch QC Lab ID: QC-2429984-005**

**Method:** EPA 7471B **Dilution:** 1 **Analysis Date:** 01/27/26 09:25  
**Prep Date:** 01/26/26 14:14

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.166	mg/kg	0.0200	0.1299	0.0732	76.5	75-125	2.02	35	

The following samples were analyzed in this batch: HN2601026-001, HN2601026-002, HN2601026-003, HN2601026-004



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2431703

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3846892

**Metals**

**MB** CLIENT ID: Method Blank Lab ID: QC-2431703-001

**Method:** EPA 6020B **Dilution:** 1 **Analysis Date:** 01/28/26 16:43  
**Prep Date:** 01/27/26 14:39

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-2431703-002

**Method:** EPA 6020B **Dilution:** 1 **Analysis Date:** 01/28/26 16:45  
**Prep Date:** 01/27/26 14:39

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	5.00	mg/kg	0.250	5		100.0	80-120			
Barium	5.25	mg/kg	0.250	5		105	80-120			
Cadmium	5.23	mg/kg	0.100	5		105	80-120			
Chromium	5.04	mg/kg	0.250	5		101	80-120			
Copper	5.14	mg/kg	0.250	5		103	80-120			
Lead	5.11	mg/kg	0.250	5		102	80-120			
Selenium	4.89	mg/kg	0.250	5		97.7	80-120			
Silver	5.32	mg/kg	0.250	5		106	80-120			
Zinc	4.97	mg/kg	0.500	5		99.3	80-120			

**MS** CLIENT ID: Batch QC Lab ID: QC-2431703-004

**Method:** EPA 6020B **Dilution:** 10 **Analysis Date:** 01/28/26 16:48  
**Prep Date:** 01/27/26 14:39

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	9.13	mg/kg	2.99	5.4171	4.89	86.7	75-125			
Barium	38.6	mg/kg	2.99	5	31.6	NC	75-125			O
Cadmium	5.33	mg/kg	1.20	5.4171	<0.163	96.0	75-125			
Chromium	13.9	mg/kg	2.99	5.4171	7.78	126	75-125			S
Copper	16.0	mg/kg	2.99	5.4171	9.56	135	75-125			S
Lead	13.2	mg/kg	2.99	5.4171	8.46	102	75-125			
Selenium	5.51	mg/kg	2.99	5.4171	<2.49	99.1	75-125			
Silver	5.28	mg/kg	2.99	5.4171	<0.358	97.0	75-125			
Zinc	31.1	mg/kg	5.98	5	32.9	NC	75-125			O

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2431703

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3846892

**MSD** CLIENT ID: Batch QC Lab ID: QC-2431703-005

**Method:** EPA 6020B **Dilution:** 10 **Analysis Date:** 01/28/26 16:50  
**Prep Date:** 01/27/26 14:39

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	9.90	mg/kg	2.78	5.0403	4.89	108	75-125	8.08	20	
Barium	33.4	mg/kg	2.78	5	31.6	NC	75-125	14.4	20	O
Cadmium	4.99	mg/kg	1.11	5.0403	<0.151	96.4	75-125	6.69	20	
Chromium	16.3	mg/kg	2.78	5.0403	7.78	183	75-125	15.7	20	S
Copper	14.1	mg/kg	2.78	5.0403	9.56	108	75-125	12.6	20	
Lead	15.3	mg/kg	2.78	5.0403	8.46	152	75-125	15.0	20	S
Selenium	4.71	mg/kg	2.78	5.0403	<2.32	90.5	75-125	15.7	20	
Silver	4.88	mg/kg	2.78	5.0403	<0.333	96.3	75-125	7.91	20	
Zinc	41.2	mg/kg	5.56	5	32.9	NC	75-125	28.0	20	OR

**PDS** CLIENT ID: Batch QC Lab ID: QC-2431703-007

**Method:** EPA 6020B **Dilution:** 10 **Analysis Date:** 01/28/26 16:53  
**Prep Date:** 01/27/26 14:39

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	57.4	mg/kg	2.87	51.921	4.89	102	75-125			
Barium	83.7	mg/kg	2.87	51.921	31.6	106	75-125			
Cadmium	53.4	mg/kg	1.15	51.921	<0.156	103	75-125			
Chromium	58.8	mg/kg	2.87	51.921	7.78	99.7	75-125			
Copper	59.2	mg/kg	2.87	51.921	9.56	97.3	75-125			
Lead	60.8	mg/kg	2.87	51.921	8.46	102	75-125			
Selenium	50.9	mg/kg	2.87	51.921	<2.39	97.7	75-125			
Silver	44.6	mg/kg	2.87	51.921	<0.343	85.8	75-125			
Zinc	82.0	mg/kg	5.73	51.921	32.9	101	75-125			

The following samples were analyzed in this batch: HN2601026-001, HN2601026-002, HN2601026-003, HN2601026-004



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427577

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842917

**Organochlorine Pesticides by GC/ECD**

**MB** CLIENT ID: Method Blank Lab ID: QC-2427577-001

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/25/26 21:32  
**Prep Date:** 01/23/26 08:44

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
<i>Surr: Decachlorobiphenyl</i>	<b>39.8</b>	<i>µg/kg</i>		33.33		120	53-151			
<i>Surr: Tetrachloro-m-xylene</i>	<b>28.6</b>	<i>µg/kg</i>		33.33		85.9	67-127			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2427577-002

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/25/26 21:47  
**Prep Date:** 01/23/26 08:44

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	29.9	µg/kg	10.0	33.33		89.6	55-141			
4,4'-DDE	29.8	µg/kg	10.0	33.33		89.5	55-143			
4,4'-DDT	31.3	µg/kg	10.0	33.33		94.0	50-144			
Aldrin	30.4	µg/kg	10.0	33.33		91.4	57-141			
alpha-BHC	30.2	µg/kg	10.0	33.33		90.7	58-144			
beta-BHC	29.6	µg/kg	10.0	33.33		89.0	55-147			
cis-Chlordane	30.1	µg/kg	10.0	33.33		90.3	58-142			
delta-BHC	30.6	µg/kg	10.0	33.33		91.8	59-142			
Dieldrin	30.0	µg/kg	10.0	33.33		89.9	59-142			
Endosulfan I	29.8	µg/kg	10.0	33.33		89.3	57-145			
Endosulfan II	30.3	µg/kg	10.0	33.33		91.0	58-138			
Endosulfan sulfate	30.6	µg/kg	10.0	33.33		92.0	54-136			
Endrin	33.0	µg/kg	10.0	33.33		98.9	45-150			

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427577

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842917

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2427577-002

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/25/26 21:47  
**Prep Date:** 01/23/26 08:44

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Endrin aldehyde	34.1	µg/kg	10.0	33.33		102	41-147			
Endrin ketone	31.4	µg/kg	10.0	33.33		94.1	54-146			
gamma-BHC (Lindane)	29.8	µg/kg	10.0	33.33		89.4	58-145			
Heptachlor	36.6	µg/kg	10.0	33.33		110	51-145			
Heptachlor epoxide	30.3	µg/kg	10.0	33.33		90.8	59-143			
Methoxychlor	33.1	µg/kg	10.0	33.33		99.4	43-144			
trans-Chlordane	29.8	µg/kg	10.0	33.33		89.6	56-145			
Surr: Decachlorobiphenyl	37.8	µg/kg		33.33		113	51-151			
Surr: Tetrachloro-m-xylene	28.3	µg/kg		33.33		85.0	67-127			

**MS** CLIENT ID: 4821 SB02 (3-4')\_20260121 Lab ID: QC-2427577-005

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/26/26 04:12  
**Prep Date:** 01/23/26 08:44

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	31.0	µg/kg	10.9	33.065	<6.34	93.6	55-141			
4,4'-DDE	29.8	µg/kg	10.9	33.065	<6.54	90.2	55-143			
4,4'-DDT	33.5	µg/kg	10.9	33.065	<6.60	101	50-144			
Aldrin	31.5	µg/kg	10.9	33.065	<6.45	95.3	57-141			
alpha-BHC	31.8	µg/kg	10.9	33.065	<6.53	96.2	58-144			
beta-BHC	30.8	µg/kg	10.9	33.065	<6.51	93.1	55-147			
cis-Chlordane	31.1	µg/kg	10.9	33.065	<6.63	94.2	58-142			
delta-BHC	32.5	µg/kg	10.9	33.065	<6.50	98.2	59-142			
Dieldrin	30.8	µg/kg	10.9	33.065	<6.94	93.1	59-142			
Endosulfan I	30.8	µg/kg	10.9	33.065	<6.67	93.3	57-145			
Endosulfan II	32.3	µg/kg	10.9	33.065	<6.57	97.6	58-138			
Endosulfan sulfate	32.9	µg/kg	10.9	33.065	<6.10	99.5	54-135			
Endrin	34.6	µg/kg	10.9	33.065	<8.03	105	45-150			
Endrin aldehyde	38.8	µg/kg	10.9	33.065	<6.29	117	41-147			
Endrin ketone	33.2	µg/kg	10.9	33.065	<6.04	101	54-146			
gamma-BHC (Lindane)	31.6	µg/kg	10.9	33.065	<6.51	95.5	58-145			
Heptachlor	38.9	µg/kg	10.9	33.065	<6.40	118	51-145			
Heptachlor epoxide	31.5	µg/kg	10.9	33.065	<6.56	95.3	59-143			
Methoxychlor	35.9	µg/kg	10.9	33.065	<6.63	108	43-144			
trans-Chlordane	31.1	µg/kg	10.9	33.065	<6.59	93.9	56-145			
Surr: Decachlorobiphenyl	39.5	µg/kg		33.065		119	53-151			
Surr: Tetrachloro-m-xylene	29.4	µg/kg		33.065		88.8	67-127			

**MSD** CLIENT ID: 4821 SB02 (3-4')\_20260121 Lab ID: QC-2427577-006

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/26/26 04:27  
**Prep Date:** 01/23/26 08:44

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	33.4	µg/kg	10.8	32.76	<6.39	102	55-141	7.71	20	

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427577

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842917

**MSD** CLIENT ID: 4821 SB02 (3-4')\_20260121 Lab ID: QC-2427577-006

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/26/26 04:27  
**Prep Date:** 01/23/26 08:44

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDE	31.6	µg/kg	10.8	32.76	<6.59	96.4	55-143	5.72	20	
4,4'-DDT	36.9	µg/kg	10.8	32.76	<6.65	112	50-144	9.55	20	
Aldrin	33.7	µg/kg	10.8	32.76	<6.50	103	57-141	6.74	20	
alpha-BHC	34.3	µg/kg	10.8	32.76	<6.58	105	58-144	7.39	20	
beta-BHC	32.2	µg/kg	10.8	32.76	<6.57	98.4	55-147	4.61	20	
cis-Chlordane	33.4	µg/kg	10.8	32.76	<6.68	102	58-142	7.08	20	
delta-BHC	34.6	µg/kg	10.8	32.76	<6.55	106	59-142	6.29	20	
Dieldrin	33.3	µg/kg	10.8	32.76	<6.99	102	59-142	8.01	20	
Endosulfan I	33.0	µg/kg	10.8	32.76	<6.72	101	57-145	6.85	20	
Endosulfan II	33.7	µg/kg	10.8	32.76	<6.62	103	58-138	4.31	20	
Endosulfan sulfate	33.9	µg/kg	10.8	32.76	<6.15	104	54-135	3.11	20	
Endrin	37.1	µg/kg	10.8	32.76	<8.09	113	45-150	6.87	20	
Endrin aldehyde	39.4	µg/kg	10.8	32.76	<6.34	120	41-147	1.64	20	
Endrin ketone	34.8	µg/kg	10.8	32.76	<6.08	106	54-146	4.73	20	
gamma-BHC (Lindane)	33.9	µg/kg	10.8	32.76	<6.56	104	58-145	7.11	20	
Heptachlor	41.8	µg/kg	10.8	32.76	<6.45	128	51-145	7.06	20	
Heptachlor epoxide	33.8	µg/kg	10.8	32.76	<6.62	103	59-143	6.94	20	
Methoxychlor	38.3	µg/kg	10.8	32.76	<6.69	117	43-144	6.49	20	
trans-Chlordane	33.3	µg/kg	10.8	32.76	<6.64	102	56-145	7.05	20	
Surr: Decachlorobiphenyl	<b>41.2</b>	µg/kg		32.76		126	53-151	4.17	30	
Surr: Tetrachloro-m-xylene	<b>30.1</b>	µg/kg		32.76		91.9	67-127	2.45	30	

The following samples were analyzed in this batch: HN2601026-001, HN2601026-002



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427639

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842990

**Organochlorine Pesticides by GC/ECD**

**MB** CLIENT ID: Method Blank Lab ID: QC-2427639-001

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/25/26 22:02  
**Prep Date:** 01/23/26 11:05

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	42.7	µg/kg		33.33		128	53-151			
Surr: Tetrachloro-m-xylene	32.8	µg/kg		33.33		98.3	67-127			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2427639-002

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/25/26 22:16  
**Prep Date:** 01/23/26 11:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	28.5	µg/kg	10.0	33.33		85.5	55-141			
4,4'-DDE	28.5	µg/kg	10.0	33.33		85.4	55-143			
4,4'-DDT	29.8	µg/kg	10.0	33.33		89.4	50-144			
Aldrin	29.2	µg/kg	10.0	33.33		87.6	57-141			
alpha-BHC	29.0	µg/kg	10.0	33.33		86.9	58-144			
beta-BHC	28.6	µg/kg	10.0	33.33		85.8	55-147			
cis-Chlordane	28.8	µg/kg	10.0	33.33		86.4	58-142			
delta-BHC	29.4	µg/kg	10.0	33.33		88.3	59-142			
Dieldrin	29.2	µg/kg	10.0	33.33		87.7	59-142			
Endosulfan I	28.4	µg/kg	10.0	33.33		85.3	57-145			
Endosulfan II	29.1	µg/kg	10.0	33.33		87.2	58-138			
Endosulfan sulfate	29.3	µg/kg	10.0	33.33		88.0	54-136			
Endrin	31.7	µg/kg	10.0	33.33		95.2	45-150			

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427639

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842990

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2427639-002

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/25/26 22:16  
**Prep Date:** 01/23/26 11:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Endrin aldehyde	33.4	µg/kg	10.0	33.33		100	41-147			
Endrin ketone	30.0	µg/kg	10.0	33.33		89.9	54-146			
gamma-BHC (Lindane)	28.7	µg/kg	10.0	33.33		86.1	58-145			
Heptachlor	35.3	µg/kg	10.0	33.33		106	51-145			
Heptachlor epoxide	29.1	µg/kg	10.0	33.33		87.4	59-143			
Methoxychlor	31.0	µg/kg	10.0	33.33		93.0	43-144			
trans-Chlordane	28.7	µg/kg	10.0	33.33		86.1	56-145			
Surr: Decachlorobiphenyl	35.2	µg/kg		33.33		105	51-151			
Surr: Tetrachloro-m-xylene	26.4	µg/kg		33.33		79.4	67-127			

**MS** CLIENT ID: Batch QC Lab ID: QC-2427639-005

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/26/26 04:57  
**Prep Date:** 01/23/26 11:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	64.8	µg/kg	26.2	78.608	<15.1	82.4	55-141			
4,4'-DDE	65.2	µg/kg	26.2	78.608	<15.5	83.0	55-143			
4,4'-DDT	68.6	µg/kg	26.2	78.608	<15.7	87.2	50-144			
Aldrin	67.5	µg/kg	26.2	78.608	<15.3	85.9	57-141			
alpha-BHC	67.8	µg/kg	26.2	78.608	<15.5	86.2	58-144			
beta-BHC	65.4	µg/kg	26.2	78.608	<15.5	83.2	55-147			
cis-Chlordane	65.7	µg/kg	26.2	78.608	<15.8	83.6	58-142			
delta-BHC	66.2	µg/kg	26.2	78.608	<15.4	84.2	59-142			
Dieldrin	64.9	µg/kg	26.2	78.608	<16.5	82.6	59-142			
Endosulfan I	63.9	µg/kg	26.2	78.608	<15.9	81.3	57-145			
Endosulfan II	64.2	µg/kg	26.2	78.608	<15.6	81.7	58-138			
Endosulfan sulfate	63.9	µg/kg	26.2	78.608	<14.5	81.3	54-135			
Endrin	72.3	µg/kg	26.2	78.608	<19.1	92.0	45-150			
Endrin aldehyde	69.9	µg/kg	26.2	78.608	<14.9	88.9	41-147			
Endrin ketone	65.7	µg/kg	26.2	78.608	<14.3	83.6	54-146			
gamma-BHC (Lindane)	67.5	µg/kg	26.2	78.608	<15.5	85.9	58-145			
Heptachlor	82.6	µg/kg	26.2	78.608	<15.2	105	51-145			
Heptachlor epoxide	66.7	µg/kg	26.2	78.608	<15.6	84.8	59-143			
Methoxychlor	70.2	µg/kg	26.2	78.608	<15.8	89.4	43-144			
trans-Chlordane	65.4	µg/kg	26.2	78.608	<15.7	83.2	56-145			
Surr: Decachlorobiphenyl	81.5	µg/kg		78.608		104	53-151			
Surr: Tetrachloro-m-xylene	61.5	µg/kg		78.608		78.3	67-127			

**MSD** CLIENT ID: Batch QC Lab ID: QC-2427639-006

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/26/26 05:11  
**Prep Date:** 01/23/26 11:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	66.6	µg/kg	26.5	79.231	<15.2	84.1	55-141	2.83	20	



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427639

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842990

**MSD** CLIENT ID: Batch QC Lab ID: QC-2427639-006

**Method:** EPA 8081B **Dilution:** 1 **Analysis Date:** 01/26/26 05:11  
**Prep Date:** 01/23/26 11:05

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDE	65.6	µg/kg	26.5	79.231	<15.7	82.8	55-143	0.548	20	
4,4'-DDT	71.5	µg/kg	26.5	79.231	<15.8	90.2	50-144	4.17	20	
Aldrin	67.8	µg/kg	26.5	79.231	<15.4	85.6	57-141	0.439	20	
alpha-BHC	68.0	µg/kg	26.5	79.231	<15.6	85.8	58-144	0.324	20	
beta-BHC	66.1	µg/kg	26.5	79.231	<15.6	83.5	55-147	1.09	20	
cis-Chlordane	66.6	µg/kg	26.5	79.231	<15.9	84.1	58-142	1.39	20	
delta-BHC	68.6	µg/kg	26.5	79.231	<15.6	86.6	59-142	3.60	20	
Dieldrin	68.6	µg/kg	26.5	79.231	<16.6	86.6	59-142	5.46	20	
Endosulfan I	65.5	µg/kg	26.5	79.231	<16.0	82.7	57-145	2.50	20	
Endosulfan II	67.8	µg/kg	26.5	79.231	<15.7	85.6	58-138	5.51	20	
Endosulfan sulfate	68.9	µg/kg	26.5	79.231	<14.6	87.0	54-135	7.50	20	
Endrin	73.8	µg/kg	26.5	79.231	<19.2	93.1	45-150	1.98	20	
Endrin aldehyde	75.5	µg/kg	26.5	79.231	<15.1	95.3	41-147	7.79	20	
Endrin ketone	70.4	µg/kg	26.5	79.231	<14.5	88.8	54-146	6.82	20	
gamma-BHC (Lindane)	68.3	µg/kg	26.5	79.231	<15.6	86.2	58-145	1.14	20	
Heptachlor	83.4	µg/kg	26.5	79.231	<15.3	105	51-145	0.884	20	
Heptachlor epoxide	67.6	µg/kg	26.5	79.231	<15.7	85.3	59-143	1.32	20	
Methoxychlor	75.5	µg/kg	26.5	79.231	<15.9	95.3	43-144	7.18	20	
trans-Chlordane	66.5	µg/kg	26.5	79.231	<15.8	84.0	56-145	1.69	20	
Surr: Decachlorobiphenyl	<b>83.0</b>	µg/kg		79.231		105	53-151	1.75	30	
Surr: Tetrachloro-m-xylene	<b>62.8</b>	µg/kg		79.231		79.2	67-127	2.00	30	

The following samples were analyzed in this batch: HN2601026-003, HN2601026-004



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427576

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842889

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

**MB** CLIENT ID: Method Blank Lab ID: QC-2427576-001

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 01/23/26 23:51  
**Prep Date:** 01/23/26 08:25

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	37.8	µg/kg		33.3		113	54-146			
Surr: Tetrachloro-m-xylene	34.4	µg/kg		33.3		103	58-140			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2427576-002

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 01/24/26 00:03  
**Prep Date:** 01/23/26 08:25

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	788	µg/kg	66.7	833		94.6	71-135			
Aroclor 1260	784	µg/kg	66.7	833		94.2	67-135			
Surr: Decachlorobiphenyl	37.0	µg/kg		33.3		111	54-146			
Surr: Tetrachloro-m-xylene	31.8	µg/kg		33.3		95.5	58-140			

**MS** CLIENT ID: Batch QC Lab ID: QC-2427576-005

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 01/24/26 05:32  
**Prep Date:** 01/23/26 08:25

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	1720	µg/kg	182	1953	<53.6	87.8	71-135			
Aroclor 1260	1680	µg/kg	182	1953	<43.7	86.1	67-135			
Surr: Decachlorobiphenyl	83.8	µg/kg		78.071		107	54-146			
Surr: Tetrachloro-m-xylene	68.9	µg/kg		78.071		88.2	58-140			

**MSD** CLIENT ID: Batch QC Lab ID: QC-2427576-006

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 01/24/26 05:44  
**Prep Date:** 01/23/26 08:25

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	1850	µg/kg	192	2067.3	<56.7	89.6	71-135	7.63	20	
Aroclor 1260	1700	µg/kg	192	2067.3	<46.2	82.1	67-135	0.997	20	
Surr: Decachlorobiphenyl	83.5	µg/kg		82.644		101	54-146	0.362	30	
Surr: Tetrachloro-m-xylene	75.0	µg/kg		82.644		90.8	58-140	8.54	30	

# QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427576

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842889

**The following samples were analyzed in this batch:** HN2601026-001, HN2601026-002



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427636

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842892

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

**MB** CLIENT ID: Method Blank Lab ID: QC-2427636-001

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 01/23/26 23:28  
**Prep Date:** 01/23/26 10:39

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	43.0	µg/kg		33.3		129	54-146			
Surr: Tetrachloro-m-xylene	38.2	µg/kg		33.3		115	58-140			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2427636-002

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 01/23/26 23:40  
**Prep Date:** 01/23/26 10:39

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	769	µg/kg	66.7	833		92.3	71-135			
Aroclor 1260	784	µg/kg	66.7	833		94.1	67-135			
Surr: Decachlorobiphenyl	37.2	µg/kg		33.3		112	54-146			
Surr: Tetrachloro-m-xylene	31.6	µg/kg		33.3		95.0	58-140			

**MS** CLIENT ID: 4821 SB03 (5-6')\_20260121 Lab ID: QC-2427636-005

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 01/24/26 06:08  
**Prep Date:** 01/23/26 10:39

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	1770	µg/kg	190	1946.3	<53.4	91.0	71-135			
Aroclor 1260	1640	µg/kg	190	1946.3	<43.5	84.5	67-135			
Surr: Decachlorobiphenyl	76.8	µg/kg		77.804		98.7	54-146			
Surr: Tetrachloro-m-xylene	71.3	µg/kg		77.804		91.6	58-140			

**MSD** CLIENT ID: 4821 SB03 (5-6')\_20260121 Lab ID: QC-2427636-006

**Method:** EPA 8082A **Dilution:** 1 **Analysis Date:** 01/24/26 06:19  
**Prep Date:** 01/23/26 10:39

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Aroclor 1016	1930	µg/kg	193	1977.1	<54.3	97.7	71-135	8.75	20	
Aroclor 1260	1830	µg/kg	193	1977.1	<44.2	92.5	67-135	10.7	20	
Surr: Decachlorobiphenyl	86.5	µg/kg		79.035		109	54-146	11.9	30	
Surr: Tetrachloro-m-xylene	76.9	µg/kg		79.035		97.2	58-140	7.56	30	

# QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427636

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842892

**The following samples were analyzed in this batch:** HN2601026-003, HN2601026-004



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427640

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842647

## Semivolatile Organic Compounds by GC-MS

**MB** CLIENT ID: Method Blank Lab ID: QC-2427640-001

**Method:** EPA 8270E

**Dilution:** 1

**Analysis Date:** 01/26/26 14:36

**Prep Date:** 01/23/26 13:35

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:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427640

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842647

**MB** CLIENT ID: Method Blank Lab ID: QC-2427640-001

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 01/26/26 14:36  
**Prep Date:** 01/23/26 13:35

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>2670</b>	µg/kg		3333		80.1	48-94			
Surr: 2-Fluorobiphenyl	<b>2650</b>	µg/kg		3333		79.5	50-103			
Surr: 2-Fluorophenol	<b>2840</b>	µg/kg		3333		85.3	43-105			
Surr: 4-Terphenyl-d14	<b>2970</b>	µg/kg		3333		89.1	55-111			
Surr: Nitrobenzene-d5	<b>3240</b>	µg/kg		3333		97.1	47-100			
Surr: Phenol-d6	<b>2750</b>	µg/kg		3333		82.5	49-110			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2427640-002

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 01/26/26 14:57  
**Prep Date:** 01/23/26 13:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	1060	µg/kg	33.0	1333		79.4	57-101			
1,2,4,5-Tetrachlorobenzene	1070	µg/kg	333	1333		80.5	54-98			
1-Methylnaphthalene	1090	µg/kg	6.67	1333		81.6	56-100			
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	1110	µg/kg	33.0	1333		83.4	50-101			
2,3,4,6-Tetrachlorophenol	1100	µg/kg	67.0	1333		82.5	48-103			



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427640

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842647

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2427640-002

**Method:** EPA 8270E

**Dilution:** 1

**Analysis Date:** 01/26/26 14:57

**Prep Date:** 01/23/26 13:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1090	µg/kg	33.0	1333		81.6	54-98			
2,4,6-Trichlorophenol	1070	µg/kg	33.0	1333		80.0	56-97			
2,4-Dichlorophenol	1090	µg/kg	33.0	1333		81.7	54-99			
2,4-Dimethylphenol	970	µg/kg	33.0	1333		72.8	47-102			
2,4-Dinitrophenol	843	µg/kg	333	1333		63.2	10-100			
2,4-Dinitrotoluene (2,4-DNT)	1040	µg/kg	33.0	1333		78.2	62-105			
2,6-Dinitrotoluene (2,6-DNT)	1070	µg/kg	33.0	1333		80.4	62-103			
2-Chloronaphthalene	1040	µg/kg	6.67	1333		77.9	57-101			
2-Chlorophenol	1030	µg/kg	33.0	1333		76.9	52-102			
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	1180	µg/kg	33.0	1333		88.3	42-104			
2-Methylnaphthalene	1040	µg/kg	6.67	1333		77.7	55-102			
2-Methylphenol (o-Cresol)	971	µg/kg	33.0	1333		72.8	54-103			
2-Nitroaniline	1170	µg/kg	33.0	1333		87.7	57-103			
2-Nitrophenol	1210	µg/kg	33.0	1333		90.5	52-102			
3&4-Methylphenol	957	µg/kg	33.0	1333		71.8	56-103			
3,3'-Dichlorobenzidine	929	µg/kg	167	1333		69.7	41-91			
3-Nitroaniline	785	µg/kg	33.0	1333		58.9	35-107			
4-Bromophenyl phenyl ether (BDE-3)	1070	µg/kg	33.0	1333		80.6	63-104			
4-Chloro-3-methylphenol	1100	µg/kg	33.0	1333		82.3	57-103			
4-Chloroaniline	1090	µg/kg	67.0	1333		81.8	32-99			
4-Chlorophenyl phenylether	971	µg/kg	33.0	1333		72.8	62-100			
4-Nitroaniline	637	µg/kg	167	1333		47.8	19-124			
4-Nitrophenol	979	µg/kg	333	1333		73.5	44-106			
Acenaphthene	1030	µg/kg	6.67	1333		77.4	60-101			
Acenaphthylene	1050	µg/kg	6.67	1333		78.6	59-101			
Acetophenone	1010	µg/kg	33.0	1333		76.1	54-102			
Anthracene	1080	µg/kg	6.67	1333		81.0	63-96			
Atrazine	1050	µg/kg	33.0	1333		78.4	60-110			
Benzaldehyde	351	µg/kg	67.0	1333		26.4	10-143			
Benzo(a)anthracene	1160	µg/kg	6.67	1333		86.9	66-102			
Benzo(a)pyrene	1110	µg/kg	6.67	1333		83.5	66-105			
Benzo(b)fluoranthene	1130	µg/kg	6.67	1333		84.7	67-105			
Benzo(g,h,i)perylene	1200	µg/kg	6.67	1333		89.7	59-110			
Benzo(k)fluoranthene	1050	µg/kg	6.67	1333		78.5	68-106			
bis(2-Chloroethoxy)methane	1110	µg/kg	33.0	1333		83.4	54-102			
bis(2-Chloroethyl) ether	1020	µg/kg	33.0	1333		76.5	51-101			
Butyl benzyl phthalate	1190	µg/kg	67.0	1333		89.5	59-107			
Caprolactam	1030	µg/kg	33.0	1333		77.0	49-103			
Carbazole	1040	µg/kg	33.0	1333		78.2	63-103			
Chrysene	1180	µg/kg	6.67	1333		88.2	66-105			
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1290	µg/kg	33.0	1333		96.8	63-101			
Dibenz(a,h) anthracene	1180	µg/kg	33.0	1333		88.6	61-109			
Dibenzofuran	1040	µg/kg	33.0	1333		77.8	61-101			
Diethyl phthalate	1040	µg/kg	33.0	1333		78.2	63-105			



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427640

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842647

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2427640-002

**Method:** EPA 8270E **Dilution:** 1 **Analysis Date:** 01/26/26 14:57  
**Prep Date:** 01/23/26 13:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dimethyl phthalate	1010	µg/kg	33.0	1333		75.5	64-104			
Fluoranthene	1060	µg/kg	6.67	1333		79.5	66-105			
Fluorene	1020	µg/kg	6.67	1333		76.8	62-101			
Hexachlorobenzene	1110	µg/kg	33.0	1333		83.3	61-104			
Hexachlorobutadiene	1100	µg/kg	33.0	1333		82.8	52-99			
Hexachlorocyclopentadiene	883	µg/kg	33.0	1333		66.3	39-106			
Hexachloroethane	1090	µg/kg	33.0	1333		81.7	59-99			
Indeno(1,2,3-cd) pyrene	1150	µg/kg	6.67	1333		86.5	57-114			
Isophorone	1110	µg/kg	167	1333		83.3	55-101			
Methylphenol, Total	1930	µg/kg	67.0	2667		72.3	54-103			
Naphthalene	1070	µg/kg	6.67	1333		80.4	54-99			
Nitrobenzene	1150	µg/kg	167	1333		86.2	53-100			
n-Nitrosodi-n-propylamine	1050	µg/kg	33.0	1333		79.0	52-104			
N-Nitrosodiphenylamine	1100	µg/kg	33.0	1333		82.6	61-104			
Pentachlorophenol	1030	µg/kg	33.0	1333		77.2	35-100			
Phenanthrene	1090	µg/kg	6.67	1333		81.6	64-101			
Phenol	984	µg/kg	33.0	1333		73.8	51-107			
Pyrene	1210	µg/kg	6.67	1333		90.4	62-114			
Pyridine	855	µg/kg	167	1333		64.1	40-84			
Surr: 2,4,6-Tribromophenol	2740	µg/kg		3333		82.2	48-94			
Surr: 2-Fluorobiphenyl	2590	µg/kg		3333		77.8	50-103			
Surr: 2-Fluorophenol	2580	µg/kg		3333		77.3	43-105			
Surr: 4-Terphenyl-d14	2950	µg/kg		3333		88.5	55-111			
Surr: Nitrobenzene-d5	3230	µg/kg		3333		96.8	47-100			
Surr: Phenol-d6	2670	µg/kg		3333		80.1	49-110			

**MS** CLIENT ID: Batch QC Lab ID: QC-2427640-005

**Method:** EPA 8270E **Dilution:** 5 **Analysis Date:** 01/26/26 19:28  
**Prep Date:** 01/23/26 13:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	2420	µg/kg	483	3158.8	<64.1	76.8	57-101			
1,2,4,5-Tetrachlorobenzene	<91.1	µg/kg	4880	3158.8	<91.1	78.0	54-98			U
1-Methylnaphthalene	2480	µg/kg	97.7	3158.8	<56.9	78.5	56-100			
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	2540	µg/kg	483	3158.8	<92.5	80.5	50-101			
2,3,4,6-Tetrachlorophenol	2580	µg/kg	977	3158.8	<289	81.8	48-103			
2,4,5-Trichlorophenol	2810	µg/kg	483	3158.8	<234	89.0	54-98			
2,4,6-Trichlorophenol	2480	µg/kg	483	3158.8	<105	78.5	56-97			
2,4-Dichlorophenol	2520	µg/kg	483	3158.8	<213	79.8	54-99			
2,4-Dimethylphenol	2460	µg/kg	483	3158.8	<203	78.0	47-102			
2,4-Dinitrophenol	<2890	µg/kg	4880	3158.8	<2890	21.5	10-100			U
2,4-Dinitrotoluene (2,4-DNT)	2160	µg/kg	483	3158.8	<257	68.5	62-105			
2,6-Dinitrotoluene (2,6-DNT)	2530	µg/kg	483	3158.8	<101	80.0	62-103			
2-Chloronaphthalene	2400	µg/kg	97.7	3158.8	<55.2	76.0	57-101			

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427640

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842647

**MS** CLIENT ID: Batch QC Lab ID: QC-2427640-005

**Method:** EPA 8270E **Dilution:** 5 **Analysis Date:** 01/26/26 19:28  
**Prep Date:** 01/23/26 13:35

Analyte	Result	Units	MRL	Spike	Spike Ref.	% Rec	% Rec	RPD	
				Amount	Amount	% Rec	Limits	RPD	Limit
2-Chlorophenol	2470	µg/kg	483	3158.8	<258	78.3	52-102		
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	1680	µg/kg	483	3158.8	<330	53.3	42-104		
2-Methylnaphthalene	2420	µg/kg	97.7	3158.8	<40.2	76.5	55-102		
2-Methylphenol (o-Cresol)	2210	µg/kg	483	3158.8	<107	70.0	54-103		
2-Nitroaniline	2840	µg/kg	483	3158.8	<219	90.0	57-103		
2-Nitrophenol	2840	µg/kg	483	3158.8	<113	90.0	52-102		
3&4-Methylphenol	2850	µg/kg	483	3158.8	<215	90.3	56-103		
3,3'-Dichlorobenzidine	<184	µg/kg	2440	3158.8	<184	67.0	41-91		U
3-Nitroaniline	1900	µg/kg	483	3158.8	<229	60.3	35-107		
4-Bromophenyl phenyl ether (BDE-3)	2850	µg/kg	483	3158.8	<216	90.3	63-104		
4-Chloro-3-methylphenol	2540	µg/kg	483	3158.8	<113	80.3	57-103		
4-Chloroaniline	1500	µg/kg	977	3158.8	<201	47.5	32-99		
4-Chlorophenyl phenylether	2310	µg/kg	483	3158.8	<109	73.0	62-100		
4-Nitroaniline	<613	µg/kg	2440	3158.8	<613	65.0	19-124		U
4-Nitrophenol	<925	µg/kg	4880	3158.8	<925	76.3	44-106		U
Acenaphthene	2560	µg/kg	97.7	3158.8	<57.1	81.0	60-101		
Acenaphthylene	2470	µg/kg	97.7	3158.8	<68.5	78.3	59-101		
Acetophenone	2350	µg/kg	483	3158.8	<61.8	74.5	54-102		
Anthracene	2570	µg/kg	97.7	3158.8	76.9	79.3	63-96		
Atrazine	2290	µg/kg	483	3158.8	<231	72.5	60-110		
Benzaldehyde	1320	µg/kg	977	3158.8	<607	41.8	10-143		
Benzo(a)anthracene	3140	µg/kg	97.7	3158.8	250	93.1	66-102		
Benzo(a)pyrene	3060	µg/kg	97.7	3158.8	231	90.9	66-105		
Benzo(b)fluoranthene	3070	µg/kg	97.7	3158.8	298	89.6	67-105		
Benzo(g,h,i)perylene	3060	µg/kg	97.7	3158.8	183	92.3	59-110		
Benzo(k)fluoranthene	2800	µg/kg	97.7	3158.8	106	85.8	68-106		
bis(2-Chloroethoxy)methane	2460	µg/kg	483	3158.8	<250	78.0	54-102		
bis(2-Chloroethyl) ether	2460	µg/kg	483	3158.8	<112	78.0	51-101		
Butyl benzyl phthalate	2740	µg/kg	977	3158.8	<494	86.8	59-107		
Caprolactam	2460	µg/kg	483	3158.8	<356	78.0	49-103		
Carbazole	2490	µg/kg	483	3158.8	<116	78.8	63-103		
Chrysene	3130	µg/kg	97.7	3158.8	163	94.8	66-105		
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	3140	µg/kg	483	3158.8	<327	99.3	63-101		
Dibenz(a,h) anthracene	2610	µg/kg	483	3158.8	<42.7	82.8	61-109		
Dibenzofuran	2460	µg/kg	483	3158.8	<58.1	77.8	61-101		
Diethyl phthalate	2450	µg/kg	483	3158.8	<134	77.5	63-105		
Dimethyl phthalate	2460	µg/kg	483	3158.8	<77.0	77.8	64-104		
Fluoranthene	3400	µg/kg	97.7	3158.8	442	96.2	66-105		
Fluorene	2400	µg/kg	97.7	3158.8	<57.3	76.0	62-101		
Hexachlorobenzene	2400	µg/kg	483	3158.8	<115	76.0	61-104		
Hexachlorobutadiene	2560	µg/kg	483	3158.8	<93.0	81.0	52-99		
Hexachlorocyclopentadiene	521	µg/kg	483	3158.8	<386	16.5	39-106		S
Hexachloroethane	2400	µg/kg	483	3158.8	<164	76.0	59-99		
Indeno(1,2,3-cd) pyrene	3200	µg/kg	97.7	3158.8	202	96.1	57-114		



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427640

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842647

**MS CLIENT ID: Batch QC Lab ID: QC-2427640-005**

**Method:** EPA 8270E **Dilution:** 5 **Analysis Date:** 01/26/26 19:28  
**Prep Date:** 01/23/26 13:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Isophorone	<77.1	µg/kg	2440	3158.8	<77.1	76.0	55-101			U
Methylphenol, Total	5060	µg/kg	483	6319.9	<107	80.1	54-103			
Naphthalene	2520	µg/kg	97.7	3158.8	<50.5	79.8	54-99			
Nitrobenzene	2730	µg/kg	2440	3158.8	<133	86.3	53-100			
n-Nitrosodi-n-propylamine	2500	µg/kg	483	3158.8	<65.2	79.3	52-104			
N-Nitrosodiphenylamine	2610	µg/kg	483	3158.8	<229	82.8	61-104			
Pentachlorophenol	2650	µg/kg	483	3158.8	<314	84.0	35-100			
Phenanthrene	2990	µg/kg	97.7	3158.8	183	89.8	64-101			
Phenol	2220	µg/kg	483	3158.8	<198	70.3	51-107			
Pyrene	3470	µg/kg	97.7	3158.8	394	99.7	52-114			
Pyridine	<777	µg/kg	2440	3158.8	<777	59.8	40-84			U
<i>Surr: 2,4,6-Tribromophenol</i>	<b>6710</b>	µg/kg		7898.1		85.0	48-94			
<i>Surr: 2-Fluorobiphenyl</i>	<b>6000</b>	µg/kg		7898.1		76.0	50-103			
<i>Surr: 2-Fluorophenol</i>	<b>6110</b>	µg/kg		7898.1		77.4	43-105			
<i>Surr: 4-Terphenyl-d14</i>	<b>6210</b>	µg/kg		7898.1		78.6	55-111			
<i>Surr: Nitrobenzene-d5</i>	<b>6340</b>	µg/kg		7898.1		80.3	47-100			
<i>Surr: Phenol-d6</i>	<b>5830</b>	µg/kg		7898.1		73.8	49-110			

**MSD CLIENT ID: Batch QC Lab ID: QC-2427640-006**

**Method:** EPA 8270E **Dilution:** 5 **Analysis Date:** 01/26/26 19:49  
**Prep Date:** 01/23/26 13:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	2540	µg/kg	483	3158.8	<64.1	80.5	57-101	4.77	30	
1,2,4,5-Tetrachlorobenzene	<91.1	µg/kg	4880	3158.8	<91.1	80.8	54-98	0		U
1-Methylnaphthalene	2520	µg/kg	97.7	3158.8	<56.9	79.8	56-100	1.58	30	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	2580	µg/kg	483	3158.8	<92.5	81.8	50-101	1.54	30	
2,3,4,6-Tetrachlorophenol	2880	µg/kg	977	3158.8	<289	91.0	48-103	10.7	30	
2,4,5-Trichlorophenol	2800	µg/kg	483	3158.8	<234	88.5	54-98	0.563	30	
2,4,6-Trichlorophenol	2420	µg/kg	483	3158.8	<105	76.8	56-97	2.25	30	
2,4-Dichlorophenol	2580	µg/kg	483	3158.8	<213	81.5	54-99	2.17	30	
2,4-Dimethylphenol	2200	µg/kg	483	3158.8	<203	69.5	47-102	11.5	30	
2,4-Dinitrophenol	<2890	µg/kg	4880	3158.8	<2890	18.5	10-100	0		U
2,4-Dinitrotoluene (2,4-DNT)	2310	µg/kg	483	3158.8	<257	73.0	62-105	6.36	30	
2,6-Dinitrotoluene (2,6-DNT)	2390	µg/kg	483	3158.8	<101	75.5	62-103	5.79	30	
2-Chloronaphthalene	2340	µg/kg	97.7	3158.8	<55.2	74.0	57-101	2.67	30	
2-Chlorophenol	2420	µg/kg	483	3158.8	<258	76.5	52-102	2.26	30	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	1590	µg/kg	483	3158.8	<330	50.3	42-104	5.80	30	
2-Methylnaphthalene	2580	µg/kg	97.7	3158.8	<40.2	81.8	55-102	6.64	30	
2-Methylphenol (o-Cresol)	2340	µg/kg	483	3158.8	<107	74.0	54-103	5.56	30	
2-Nitroaniline	2750	µg/kg	483	3158.8	<219	87.0	57-103	3.39	30	
2-Nitrophenol	2800	µg/kg	483	3158.8	<113	88.8	52-102	1.40	30	
3&4-Methylphenol	2620	µg/kg	483	3158.8	<215	83.0	56-103	8.37	30	
3,3'-Dichlorobenzidine	<184	µg/kg	2440	3158.8	<184	62.8	41-91	0.00	30	U



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427640

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842647

<b>MSD</b>	<b>CLIENT ID: Batch QC</b>	<b>Lab ID: QC-2427640-006</b>
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**Method:** EPA 8270E      **Dilution:** 5      **Analysis Date:** 01/26/26 19:49  
**Prep Date:** 01/23/26 13:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
3-Nitroaniline	2110	µg/kg	483	3158.8	<229	66.8	35-107	10.2	30	
4-Bromophenyl phenyl ether (BDE-3)	2580	µg/kg	483	3158.8	<216	81.8	63-104	9.88	30	
4-Chloro-3-methylphenol	2690	µg/kg	483	3158.8	<113	85.3	57-103	6.04	30	
4-Chloroaniline	1660	µg/kg	977	3158.8	<201	52.5	32-99	10.0	30	
4-Chlorophenyl phenylether	2240	µg/kg	483	3158.8	<109	70.8	62-100	3.13	30	
4-Nitroaniline	<613	µg/kg	2440	3158.8	<613	74.5	19-124	0.00	30	U
4-Nitrophenol	<925	µg/kg	4880	3158.8	<925	81.8	44-106	0		U
Acenaphthene	2440	µg/kg	97.7	3158.8	<57.1	77.3	60-101	4.74	30	
Acenaphthylene	2430	µg/kg	97.7	3158.8	<68.5	77.0	59-101	1.61	30	
Acetophenone	2430	µg/kg	483	3158.8	<61.8	77.0	54-102	3.30	30	
Anthracene	2480	µg/kg	97.7	3158.8	76.9	76.6	63-96	3.44	30	
Atrazine	2450	µg/kg	483	3158.8	<231	77.5	60-110	6.67	30	
Benzaldehyde	1130	µg/kg	977	3158.8	<607	35.8	10-143	15.5	30	
Benzo(a)anthracene	3160	µg/kg	97.7	3158.8	250	93.6	66-102	0.501	30	
Benzo(a)pyrene	3010	µg/kg	97.7	3158.8	231	89.4	66-105	1.56	30	
Benzo(b)fluoranthene	3040	µg/kg	97.7	3158.8	298	88.6	67-105	1.03	30	
Benzo(g,h,i)perylene	2910	µg/kg	97.7	3158.8	183	87.3	59-110	5.29	30	
Benzo(k)fluoranthene	2700	µg/kg	97.7	3158.8	106	82.8	68-106	3.45	30	
bis(2-Chloroethoxy)methane	2580	µg/kg	483	3158.8	<250	81.8	54-102	4.69	30	
bis(2-Chloroethyl) ether	2460	µg/kg	483	3158.8	<112	78.0	51-101	0.00	30	
Butyl benzyl phthalate	2900	µg/kg	977	3158.8	<494	91.8	59-107	5.60	30	
Caprolactam	2580	µg/kg	483	3158.8	<356	81.5	49-103	4.39	30	
Carbazole	2610	µg/kg	483	3158.8	<116	82.5	63-103	4.65	30	
Chrysene	3130	µg/kg	97.7	3158.8	163	94.8	66-105	0.00	30	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	3290	µg/kg	483	3158.8	<327	104	63-101	4.67	30	S
Dibenz(a,h) anthracene	2650	µg/kg	483	3158.8	<42.7	84.0	61-109	1.50	30	
Dibenzofuran	2380	µg/kg	483	3158.8	<58.1	75.3	61-101	3.27	30	
Diethyl phthalate	2480	µg/kg	483	3158.8	<134	78.5	63-105	1.28	30	
Dimethyl phthalate	2380	µg/kg	483	3158.8	<77.0	75.3	64-104	3.27	30	
Fluoranthene	3590	µg/kg	97.7	3158.8	442	102	66-105	5.43	30	
Fluorene	2330	µg/kg	97.7	3158.8	<57.3	73.8	62-101	3.01	30	
Hexachlorobenzene	2290	µg/kg	483	3158.8	<115	72.5	61-104	4.71	30	
Hexachlorobutadiene	2640	µg/kg	483	3158.8	<93.0	83.5	52-99	3.04	30	
Hexachlorocyclopentadiene	608	µg/kg	483	3158.8	<386	19.3	39-106	15.4	30	S
Hexachloroethane	2150	µg/kg	483	3158.8	<164	68.0	59-99	11.1	30	
Indeno(1,2,3-cd) pyrene	2990	µg/kg	97.7	3158.8	202	89.6	57-114	6.63	30	
Isophorone	2500	µg/kg	2440	3158.8	<77.1	79.3	55-101	2.51	30	
Methylphenol, Total	4960	µg/kg	483	6319.9	<107	78.5	54-103	2.05	30	
Naphthalene	2520	µg/kg	97.7	3158.8	<50.5	79.8	54-99	0.00	30	
Nitrobenzene	2570	µg/kg	2440	3158.8	<133	81.3	53-100	5.97	30	
n-Nitrosodi-n-propylamine	2600	µg/kg	483	3158.8	<65.2	82.3	52-104	3.72	30	
N-Nitrosodiphenylamine	2470	µg/kg	483	3158.8	<229	78.3	61-104	5.59	30	
Pentachlorophenol	2590	µg/kg	483	3158.8	<314	82.0	35-100	2.41	30	
Phenanthrene	2950	µg/kg	97.7	3158.8	183	88.8	64-101	1.06	30	
Phenol	2240	µg/kg	483	3158.8	<198	70.8	51-107	0.709	30	

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2427640

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3842647

**MSD** CLIENT ID: Batch QC Lab ID: QC-2427640-006

**Method:** EPA 8270E **Dilution:** 5 **Analysis Date:** 01/26/26 19:49  
**Prep Date:** 01/23/26 13:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Pyrene	3490	µg/kg	97.7	3158.8	394	100	52-114	0.681	30	
Pyridine	<777	µg/kg	2440	3158.8	<777	64.5	40-84	0.00	30	U
Surr: 2,4,6-Tribromophenol	<b>6740</b>	µg/kg		7898.1		85.3	48-94	0.352	30	
Surr: 2-Fluorobiphenyl	<b>5550</b>	µg/kg		7898.1		70.2	50-103	7.93	30	
Surr: 2-Fluorophenol	<b>5730</b>	µg/kg		7898.1		72.6	43-105	6.40	30	
Surr: 4-Terphenyl-d14	<b>6340</b>	µg/kg		7898.1		80.3	55-111	2.14	30	
Surr: Nitrobenzene-d5	<b>6940</b>	µg/kg		7898.1		87.8	47-100	8.92	30	
Surr: Phenol-d6	<b>5750</b>	µg/kg		7898.1		72.8	49-110	1.36	30	

The following samples were analyzed in this batch: HN2601026-001, HN2601026-002, HN2601026-003, HN2601026-004



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426227

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 14:27  
**Date Received:** 01/22/26 06:00  
**Run ID:** 3838611

**Volatile Organic Compounds by GC-MS**

**MS** CLIENT ID: Batch QC Lab ID: QC-2426227-005

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 07:39

**Prep Date:** 01/22/26 11:02

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1010	µg/kg	40.8	1028.8	<14.0	98.6	75-121			
1,1,2,2-Tetrachloroethane	598	µg/kg	40.8	1028.8	<13.6	58.2	79-125			S
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1120	µg/kg	40.8	1028.8	<19.5	109	62-129			
1,1,2-Trichloroethane	930	µg/kg	40.8	1028.8	<13.1	90.4	80-123			
1,1-Dichloroethane	980	µg/kg	40.8	1028.8	<11.3	95.3	74-124			
1,1-Dichloroethylene	1080	µg/kg	40.8	1028.8	<10.0	105	68-131			
1,2,3-Trichlorobenzene	844	µg/kg	136	1028.8	<37.0	82.0	60-135			
1,2,3-Trichloropropane	920	µg/kg	40.8	1028.8	<12.9	89.4	77-121			
1,2,4-Trichlorobenzene	882	µg/kg	136	1028.8	<35.0	85.7	63-130			
1,2,4-Trimethylbenzene	985	µg/kg	40.8	1028.8	<22.6	95.7	64-126			
1,2-Dibromo-3-chloropropane (DBCP)	751	µg/kg	136	1028.8	<28.4	73.0	55-135			
1,2-Dibromoethane (EDB, Ethylene dibromide)	965	µg/kg	40.8	1028.8	<18.1	93.8	63-155			
1,2-Dichlorobenzene (o-Dichlorobenzene)	952	µg/kg	40.8	1028.8	<11.7	92.5	77-122			
1,2-Dichloroethane (Ethylene dichloride)	982	µg/kg	136	1028.8	<27.1	95.4	70-130			
1,2-Dichloropropane	933	µg/kg	40.8	1028.8	<22.7	90.6	71-130			
1,3,5-Trimethylbenzene	1020	µg/kg	136	1028.8	<21.8	99.6	66-130			
1,3-Dichlorobenzene (m-Dichlorobenzene)	965	µg/kg	40.8	1028.8	<21.3	93.8	78-121			
1,3-Dichloropropene	1720	µg/kg	81.5	2057.6	<17.2	83.6	62-124			
1,4-Dichlorobenzene (p-Dichlorobenzene)	961	µg/kg	40.8	1028.8	<25.1	93.4	78-122			
2-Butanone (Methyl ethyl ketone, MEK)	1040	µg/kg	272	1028.8	<73.5	102	47-164			
2-Hexanone	1130	µg/kg	40.8	1028.8	<15.3	110	70-137			
4-Methyl-2-pentanone (MIBK)	1240	µg/kg	40.8	1028.8	<28.8	120	57-200			
Acetone	1540	µg/kg	136	1028.8	<91.6	150	52-190			
Benzene	1040	µg/kg	40.8	1028.8	<14.9	101	78-122			
Bromochloromethane	959	µg/kg	40.8	1028.8	<15.7	93.2	68-130			
Bromodichloromethane	949	µg/kg	40.8	1028.8	<17.3	92.2	75-125			
Bromoform	844	µg/kg	40.8	1028.8	<13.0	82.0	59-120			
Carbon disulfide	1180	µg/kg	40.8	1028.8	<16.0	115	60-163			
Carbon tetrachloride	998	µg/kg	40.8	1028.8	<12.1	97.0	69-123			
Chlorobenzene	978	µg/kg	40.8	1028.8	<10.2	95.0	79-120			
Chlorodibromomethane	922	µg/kg	40.8	1028.8	<17.3	89.6	57-123			
Chloroethane (Ethyl chloride)	<86.4	µg/kg	136	1028.8	<86.4	7.35	38-132			SU
Chloroform	961	µg/kg	40.8	1028.8	<11.3	93.4	72-122			
cis-1,2-Dichloroethylene	946	µg/kg	40.8	1028.8	<19.8	92.0	74-125			
cis-1,3-Dichloropropene	883	µg/kg	40.8	1028.8	<23.3	85.8	62-124			
Dichlorodifluoromethane (Freon-12)	664	µg/kg	136	1028.8	<37.4	64.6	28-137			
Ethylbenzene	1030	µg/kg	40.8	1028.8	<21.9	99.9	75-121			
Isopropylbenzene	1030	µg/kg	40.8	1028.8	<19.5	101	74-121			

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426227

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 14:27  
**Date Received:** 01/22/26 06:00  
**Run ID:** 3838611

**MS** CLIENT ID: Batch QC Lab ID: QC-2426227-005

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 07:39  
**Prep Date:** 01/22/26 11:02

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
m+p-Xylene	2110	µg/kg	81.5	2057.6	<41.2	102	67-129			
Methyl acetate	982	µg/kg	340	1028.8	<37.0	95.4	61-125			
Methyl bromide (Bromomethane)	407	µg/kg	136	1028.8	<59.0	39.6	31-169			
Methyl chloride (Chloromethane)	673	µg/kg	136	1028.8	<84.4	65.4	24-119			
Methyl tert-butyl ether (MTBE)	941	µg/kg	40.8	1028.8	<22.5	91.4	79-139			
Methylene chloride (Dichloromethane)	744	µg/kg	340	1028.8	<81.9	72.3	62-135			
o-Xylene	1020	µg/kg	40.8	1028.8	<11.9	99.4	75-120			
Styrene	992	µg/kg	40.8	1028.8	<12.2	96.4	74-126			
Tetrachloroethylene (Perchloroethylene)	1930	µg/kg	40.8	1028.8	<18.6	188	76-128			S
Toluene	1010	µg/kg	40.8	1028.8	<25.4	98.6	76-120			
Total Xylene	3130	µg/kg	122	3086.4	<11.9	101	67-129			
trans-1,2-Dichloroethylene	1010	µg/kg	40.8	1028.8	<25.5	98.6	72-127			
trans-1,3-Dichloropropylene	837	µg/kg	40.8	1028.8	<17.2	81.4	66-120			
Trichloroethene (Trichloroethylene)	1300	µg/kg	40.8	1028.8	<13.8	126	75-122			S
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	830	µg/kg	40.8	1028.8	<15.8	80.7	51-115			
Vinyl chloride (Chloroethene)	766	µg/kg	40.8	1028.8	<20.5	74.5	43-128			
Surr: 1,2-Dichloroethane-d4	1020	µg/kg		1028.8		98.8	80-120			
Surr: 4-Bromofluorobenzene	1040	µg/kg		1028.8		101	80-120			
Surr: Dibromofluoromethane	1000	µg/kg		1028.8		97.6	72-120			
Surr: Toluene-d8	995	µg/kg		1028.8		96.8	80-120			

**MSD** CLIENT ID: Batch QC Lab ID: QC-2426227-006

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 07:58  
**Prep Date:** 01/22/26 11:02

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1070	µg/kg	40.8	1028.8	<14.0	104	75-121	5.76	30	
1,1,2,2-Tetrachloroethane	588	µg/kg	40.8	1028.8	<13.6	57.2	79-125	1.65	30	S
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1120	µg/kg	40.8	1028.8	<19.5	109	62-129	0.0460	30	
1,1,2-Trichloroethane	925	µg/kg	40.8	1028.8	<13.1	90.0	80-123	0.499	30	
1,1-Dichloroethane	990	µg/kg	40.8	1028.8	<11.3	96.2	74-124	0.992	30	
1,1-Dichloroethylene	1050	µg/kg	40.8	1028.8	<10.0	102	68-131	3.58	30	
1,2,3-Trichlorobenzene	892	µg/kg	136	1028.8	<37.0	86.8	60-135	5.63	30	
1,2,3-Trichloropropane	896	µg/kg	40.8	1028.8	<12.9	87.1	77-121	2.61	30	
1,2,4-Trichlorobenzene	912	µg/kg	136	1028.8	<35.0	88.6	63-130	3.38	30	
1,2,4-Trimethylbenzene	979	µg/kg	40.8	1028.8	<22.6	95.2	64-126	0.524	30	
1,2-Dibromo-3-chloropropane (DBCP)	779	µg/kg	136	1028.8	<28.4	75.8	55-135	3.70	30	
1,2-Dibromoethane (EDB, Ethylene dibromide)	938	µg/kg	40.8	1028.8	<18.1	91.2	63-155	2.81	30	
1,2-Dichlorobenzene (o-Dichlorobenzene)	973	µg/kg	40.8	1028.8	<11.7	94.6	77-122	2.19	30	
1,2-Dichloroethane (Ethylene dichloride)	1010	µg/kg	136	1028.8	<27.1	98.4	70-130	3.09	30	

QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426227

**Work Order:** HN2601026  
**Date Collected:** 01/21/26 14:27  
**Date Received:** 01/22/26 06:00  
**Run ID:** 3838611

<b>MSD</b>	<b>CLIENT ID: Batch QC</b>	<b>Lab ID: QC-2426227-006</b>
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**Method:** EPA 8260D      **Dilution:** 1      **Analysis Date:** 01/23/26 07:58  
**Prep Date:** 01/22/26 11:02

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,2-Dichloropropane	965	µg/kg	40.8	1028.8	<22.7	93.8	71-130	3.42	30	
1,3,5-Trimethylbenzene	1020	µg/kg	136	1028.8	<21.8	99.0	66-130	0.554	30	
1,3-Dichlorobenzene (m-Dichlorobenzene)	975	µg/kg	40.8	1028.8	<21.3	94.8	78-121	1.06	30	
1,3-Dichloropropene	1730	µg/kg	81.5	2057.6	<17.2	84.2	62-124	0.775	30	
1,4-Dichlorobenzene (p-Dichlorobenzene)	967	µg/kg	40.8	1028.8	<25.1	94.0	78-122	0.640	30	
2-Butanone (Methyl ethyl ketone, MEK)	1090	µg/kg	272	1028.8	<73.5	106	47-164	4.53	30	
2-Hexanone	1160	µg/kg	40.8	1028.8	<15.3	113	70-137	3.01	30	
4-Methyl-2-pentanone (MIBK)	1200	µg/kg	40.8	1028.8	<28.8	116	57-200	3.55	30	
Acetone	1530	µg/kg	136	1028.8	<91.6	149	52-190	0.871	30	
Benzene	1090	µg/kg	40.8	1028.8	<14.9	106	78-122	4.48	30	
Bromochloromethane	934	µg/kg	40.8	1028.8	<15.7	90.8	68-130	2.72	30	
Bromodichloromethane	452	µg/kg	40.8	1028.8	<17.3	44.0	75-125	70.9	30	RS
Bromoform	845	µg/kg	40.8	1028.8	<13.0	82.2	59-120	0.122	30	
Carbon disulfide	1200	µg/kg	40.8	1028.8	<16.0	116	60-163	1.21	30	
Carbon tetrachloride	1020	µg/kg	40.8	1028.8	<12.1	99.4	69-123	2.34	30	
Chlorobenzene	981	µg/kg	40.8	1028.8	<10.2	95.4	79-120	0.368	30	
Chlorodibromomethane	903	µg/kg	40.8	1028.8	<17.3	87.8	57-123	2.14	30	
Chloroethane (Ethyl chloride)	<86.4	µg/kg	136	1028.8	<86.4	9.60	38-132	0		US
Chloroform	972	µg/kg	40.8	1028.8	<11.3	94.5	72-122	1.12	30	
cis-1,2-Dichloroethylene	981	µg/kg	40.8	1028.8	<19.8	95.4	74-125	3.63	30	
cis-1,3-Dichloropropene	916	µg/kg	40.8	1028.8	<23.3	89.0	62-124	3.66	30	
Dichlorodifluoromethane (Freon-12)	673	µg/kg	136	1028.8	<37.4	65.4	28-137	1.38	30	
Ethylbenzene	1040	µg/kg	40.8	1028.8	<21.9	101	75-121	0.996	30	
Isopropylbenzene	1050	µg/kg	40.8	1028.8	<19.5	102	74-121	1.28	30	
m+p-Xylene	2090	µg/kg	81.5	2057.6	<41.2	101	67-129	0.981	30	
Methyl acetate	1040	µg/kg	340	1028.8	<37.0	101	61-125	6.00	30	
Methyl bromide (Bromomethane)	417	µg/kg	136	1028.8	<59.0	40.5	31-169	2.37	30	
Methyl chloride (Chloromethane)	708	µg/kg	136	1028.8	<84.4	68.8	24-119	5.07	30	
Methyl tert-butyl ether (MTBE)	967	µg/kg	40.8	1028.8	<22.5	94.0	79-139	2.70	30	
Methylene chloride (Dichloromethane)	717	µg/kg	340	1028.8	<81.9	69.6	62-135	3.73	30	
o-Xylene	1020	µg/kg	40.8	1028.8	<11.9	99.0	75-120	0.504	30	
Styrene	993	µg/kg	40.8	1028.8	<12.2	96.6	74-126	0.104	30	
Tetrachloroethylene (Perchloroethylene)	1910	µg/kg	40.8	1028.8	<18.6	186	76-128	1.23	30	S
Toluene	999	µg/kg	40.8	1028.8	<25.4	97.1	76-120	1.53	30	
Total Xylene	3100	µg/kg	122	3086.4	<11.9	101	67-129	0.825	30	
trans-1,2-Dichloroethylene	1030	µg/kg	40.8	1028.8	<25.5	99.8	72-127	1.26	30	
trans-1,3-Dichloropropylene	818	µg/kg	40.8	1028.8	<17.2	79.5	66-120	2.36	30	
Trichloroethene (Trichloroethylene)	1330	µg/kg	40.8	1028.8	<13.8	129	75-122	1.80	30	S
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	846	µg/kg	40.8	1028.8	<15.8	82.2	51-115	1.90	30	
Vinyl chloride (Chloroethene)	767	µg/kg	40.8	1028.8	<20.5	74.6	43-128	0.134	30	
Surr: 1,2-Dichloroethane-d4	1040	µg/kg		1028.8		101	80-120	2.25	30	
Surr: 4-Bromofluorobenzene	1010	µg/kg		1028.8		98.1	80-120	3.06	30	





**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426227

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3838855

**Volatile Organic Compounds by GC-MS**

**MB** CLIENT ID: Method Blank Lab ID: QC-2426227-001

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 00:54  
**Prep Date:** 01/22/26 11:02

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:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426227

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3838855

**MB** CLIENT ID: Method Blank Lab ID: QC-2426227-001

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 00:54  
**Prep Date:** 01/22/26 11:02

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 (Fluorotrichloromethane, Freon 11)	<15.3	µg/kg	30.0							U
Vinyl chloride (Chloroethene)	<19.9	µg/kg	30.0							U
Surr: 1,2-Dichloroethane-d4	978	µg/kg		1000		97.8	80-120			
Surr: 4-Bromofluorobenzene	1020	µg/kg		1000		102	80-120			
Surr: Dibromofluoromethane	979	µg/kg		1000		97.9	72-120			
Surr: Toluene-d8	944	µg/kg		1000		94.4	80-120			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2426227-002

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/22/26 23:56  
**Prep Date:** 01/22/26 11:02

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	914	µg/kg	30.0	1000		91.4	75-121			
1,1,2,2-Tetrachloroethane	842	µg/kg	30.0	1000		84.2	79-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	938	µg/kg	30.0	1000		93.8	62-129			
1,1,2-Trichloroethane	842	µg/kg	30.0	1000		84.2	80-123			
1,1-Dichloroethane	882	µg/kg	30.0	1000		88.2	74-124			
1,1-Dichloroethylene	915	µg/kg	30.0	1000		91.5	68-131			
1,2,3-Trichlorobenzene	780	µg/kg	100	1000		78.0	60-135			
1,2,3-Trichloropropane	848	µg/kg	30.0	1000		84.8	77-121			
1,2,4-Trichlorobenzene	812	µg/kg	100	1000		81.2	63-130			
1,2,4-Trimethylbenzene	868	µg/kg	30.0	1000		86.8	64-126			
1,2-Dibromo-3-chloropropane (DBCP)	718	µg/kg	100	1000		71.8	55-135			
1,2-Dibromoethane (EDB, Ethylene dibromide)	882	µg/kg	30.0	1000		88.2	63-155			
1,2-Dichlorobenzene (o-Dichlorobenzene)	810	µg/kg	30.0	1000		81.0	77-122			



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426227

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3838855

**LCS**      **CLIENT ID: Laboratory Control Sample**      **Lab ID: QC-2426227-002**

**Method:** EPA 8260D

**Dilution:** 1

**Analysis Date:** 01/22/26 23:56

**Prep Date:** 01/22/26 11:02

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	
								RPD	Limit Qual
1,2-Dichloroethane (Ethylene dichloride)	892	µg/kg	100	1000		89.2	70-130		
1,2-Dichloropropane	849	µg/kg	30.0	1000		84.9	71-130		
1,3,5-Trimethylbenzene	912	µg/kg	100	1000		91.2	66-130		
1,3-Dichlorobenzene (m-Dichlorobenzene)	828	µg/kg	30.0	1000		82.8	78-121		
1,3-Dichloropropene	1630	µg/kg	60.0	2000		81.6	62-124		
1,4-Dichlorobenzene (p-Dichlorobenzene)	820	µg/kg	30.0	1000		82.0	78-122		
2-Butanone (Methyl ethyl ketone, MEK)	948	µg/kg	200	1000		94.8	47-164		
2-Hexanone	914	µg/kg	30.0	1000		91.4	70-137		
4-Methyl-2-pentanone (MIBK)	1390	µg/kg	30.0	1000		139	57-200		
Acetone	960	µg/kg	100	1000		96.0	52-190		
Benzene	942	µg/kg	30.0	1000		94.2	78-122		
Bromochloromethane	854	µg/kg	30.0	1000		85.4	68-130		
Bromodichloromethane	869	µg/kg	30.0	1000		86.9	75-125		
Bromoform	811	µg/kg	30.0	1000		81.1	59-120		
Carbon disulfide	1090	µg/kg	30.0	1000		109	60-163		
Carbon tetrachloride	894	µg/kg	30.0	1000		89.4	69-123		
Chlorobenzene	892	µg/kg	30.0	1000		89.2	79-120		
Chlorodibromomethane	836	µg/kg	30.0	1000		83.6	57-123		
Chloroethane (Ethyl chloride)	768	µg/kg	100	1000		76.8	38-132		
Chloroform	872	µg/kg	30.0	1000		87.2	72-122		
cis-1,2-Dichloroethylene	892	µg/kg	30.0	1000		89.2	74-125		
cis-1,3-Dichloropropene	846	µg/kg	30.0	1000		84.6	62-124		
Dichlorodifluoromethane (Freon-12)	582	µg/kg	100	1000		58.2	28-137		
Ethylbenzene	929	µg/kg	30.0	1000		92.9	75-121		
Isopropylbenzene	930	µg/kg	30.0	1000		93.0	74-121		
m+p-Xylene	1870	µg/kg	60.0	2000		93.7	67-129		
Methyl acetate	734	µg/kg	250	1000		73.4	61-125		
Methyl bromide (Bromomethane)	733	µg/kg	100	1000		73.3	31-169		
Methyl chloride (Chloromethane)	668	µg/kg	100	1000		66.8	24-119		
Methyl tert-butyl ether (MTBE)	886	µg/kg	30.0	1000		88.6	79-139		
Methylene chloride (Dichloromethane)	900	µg/kg	250	1000		90.0	62-135		
o-Xylene	919	µg/kg	30.0	1000		91.9	75-120		
Styrene	902	µg/kg	30.0	1000		90.2	74-126		
Tetrachloroethylene (Perchloroethylene)	1180	µg/kg	30.0	1000		118	76-128		
Toluene	908	µg/kg	30.0	1000		90.8	76-120		
Total Xylene	2790	µg/kg	90.0	3000		93.1	67-129		
trans-1,2-Dichloroethylene	906	µg/kg	30.0	1000		90.6	72-127		
trans-1,3-Dichloropropylene	784	µg/kg	30.0	1000		78.4	66-120		
Trichloroethene (Trichloroethylene)	934	µg/kg	30.0	1000		93.4	75-122		
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	726	µg/kg	30.0	1000		72.6	51-115		
Vinyl chloride (Chloroethene)	670	µg/kg	30.0	1000		67.0	43-128		





**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426924

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3841939

**Volatile Organic Compounds by GC-MS**

**MB** CLIENT ID: Method Blank Lab ID: QC-2426924-001

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 13:57  
**Prep Date:** 01/22/26 15:37

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:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426924

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3841939

**MB** CLIENT ID: Method Blank Lab ID: QC-2426924-001

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 13:57  
**Prep Date:** 01/22/26 15:37

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 (Fluorotrichloromethane, Freon 11)	<15.3	µg/kg	30.0							U
Vinyl chloride (Chloroethene)	<19.9	µg/kg	30.0							U
Surr: 1,2-Dichloroethane-d4	958	µg/kg		1000		95.8	80-120			
Surr: 4-Bromofluorobenzene	1030	µg/kg		1000		103	80-120			
Surr: Dibromofluoromethane	954	µg/kg		1000		95.4	72-120			
Surr: Toluene-d8	976	µg/kg		1000		97.6	80-120			

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2426924-002

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 12:59  
**Prep Date:** 01/22/26 15:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	941	µg/kg	30.0	1000		94.1	75-121			
1,1,2,2-Tetrachloroethane	884	µg/kg	30.0	1000		88.4	79-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	970	µg/kg	30.0	1000		97.0	62-129			
1,1,2-Trichloroethane	916	µg/kg	30.0	1000		91.6	80-123			
1,1-Dichloroethane	889	µg/kg	30.0	1000		88.9	74-124			
1,1-Dichloroethylene	920	µg/kg	30.0	1000		92.0	68-131			
1,2,3-Trichlorobenzene	840	µg/kg	100	1000		84.0	60-135			
1,2,3-Trichloropropane	894	µg/kg	30.0	1000		89.4	77-121			
1,2,4-Trichlorobenzene	884	µg/kg	100	1000		88.4	63-130			
1,2,4-Trimethylbenzene	931	µg/kg	30.0	1000		93.1	64-126			
1,2-Dibromo-3-chloropropane (DBCP)	732	µg/kg	100	1000		73.2	55-135			
1,2-Dibromoethane (EDB, Ethylene dibromide)	924	µg/kg	30.0	1000		92.4	63-155			
1,2-Dichlorobenzene (o-Dichlorobenzene)	874	µg/kg	30.0	1000		87.4	77-122			





**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426924

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3841939

**LCS** CLIENT ID: Laboratory Control Sample Lab ID: QC-2426924-002

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 12:59  
**Prep Date:** 01/22/26 15:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Surr: 1,2-Dichloroethane-d4	972	µg/kg		1000		97.2	80-120			
Surr: 4-Bromofluorobenzene	1020	µg/kg		1000		102	80-120			
Surr: Dibromofluoromethane	986	µg/kg		1000		98.6	72-120			
Surr: Toluene-d8	972	µg/kg		1000		97.2	80-120			

**MS** CLIENT ID: 4821 SB03 (5-6)\_20260121 Lab ID: QC-2426924-005

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 21:04  
**Prep Date:** 01/22/26 15:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1090	µg/kg	44.6	1035.2	<14.1	106	75-121			
1,1,2,2-Tetrachloroethane	845	µg/kg	44.6	1035.2	<13.7	81.6	79-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1250	µg/kg	44.6	1035.2	<19.7	121	62-129			
1,1,2-Trichloroethane	1010	µg/kg	44.6	1035.2	<13.2	97.6	80-123			
1,1-Dichloroethane	1060	µg/kg	44.6	1035.2	<11.3	102	74-124			
1,1-Dichloroethylene	1150	µg/kg	44.6	1035.2	<10.1	111	68-131			
1,2,3-Trichlorobenzene	833	µg/kg	149	1035.2	<37.3	80.4	60-135			
1,2,3-Trichloropropane	930	µg/kg	44.6	1035.2	<13.0	89.8	77-121			
1,2,4-Trichlorobenzene	866	µg/kg	149	1035.2	<35.2	83.6	63-130			
1,2,4-Trimethylbenzene	983	µg/kg	44.6	1035.2	<22.8	95.0	64-126			
1,2-Dibromo-3-chloropropane (DBCP)	753	µg/kg	149	1035.2	<28.6	72.7	55-135			
1,2-Dibromoethane (EDB, Ethylene dibromide)	1010	µg/kg	44.6	1035.2	<18.3	97.6	63-155			
1,2-Dichlorobenzene (o-Dichlorobenzene)	938	µg/kg	44.6	1035.2	<11.8	90.6	77-122			
1,2-Dichloroethane (Ethylene dichloride)	1010	µg/kg	149	1035.2	<27.2	97.3	70-130			
1,2-Dichloropropane	980	µg/kg	44.6	1035.2	<22.9	94.7	71-130			
1,3,5-Trimethylbenzene	1050	µg/kg	149	1035.2	<21.9	101	66-130			
1,3-Dichlorobenzene (m-Dichlorobenzene)	950	µg/kg	44.6	1035.2	<21.4	91.8	78-121			
1,3-Dichloropropene	1870	µg/kg	89.2	2070.4	<17.3	90.4	62-124			
1,4-Dichlorobenzene (p-Dichlorobenzene)	937	µg/kg	44.6	1035.2	<25.2	90.5	78-122			
2-Butanone (Methyl ethyl ketone, MEK)	1460	µg/kg	297	1035.2	<73.9	141	47-164			
2-Hexanone	1190	µg/kg	44.6	1035.2	<15.4	115	70-137			
4-Methyl-2-pentanone (MIBK)	1390	µg/kg	44.6	1035.2	<28.9	134	57-200			
Acetone	2040	µg/kg	149	1035.2	<92.2	197	52-190			
Benzene	1100	µg/kg	44.6	1035.2	<15.0	106	78-122			
Bromochloromethane	1020	µg/kg	44.6	1035.2	<15.8	98.6	68-130			
Bromodichloromethane	1020	µg/kg	44.6	1035.2	<17.4	98.4	75-125			
Bromoform	926	µg/kg	44.6	1035.2	<13.1	89.4	59-120			
Carbon disulfide	1310	µg/kg	44.6	1035.2	<16.1	127	60-163			
Carbon tetrachloride	1110	µg/kg	44.6	1035.2	<12.2	108	69-123			
Chlorobenzene	1020	µg/kg	44.6	1035.2	<10.3	98.2	79-120			

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QA/QC Report



**Client:** The Mannik & Smith Group, Inc.  
**Project:** 4821 Cooper  
**Matrix:** SOIL/SOLID  
**QC Lot:** 2426924

**Work Order:** HN2601026  
**Date Collected:** NA  
**Date Received:** NA  
**Run ID:** 3841939

**MS** CLIENT ID: 4821 SB03 (5-6')\_20260121 Lab ID: QC-2426924-005

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 21:04  
**Prep Date:** 01/22/26 15:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chlorodibromomethane	971	µg/kg	44.6	1035.2	<17.4	93.8	57-123			
Chloroethane (Ethyl chloride)	635	µg/kg	149	1035.2	<87.0	61.4	38-132			
Chloroform	1050	µg/kg	44.6	1035.2	<11.4	102	72-122			
cis-1,2-Dichloroethylene	1040	µg/kg	44.6	1035.2	<20.0	101	74-125			
cis-1,3-Dichloropropene	965	µg/kg	44.6	1035.2	<23.4	93.2	62-124			
Dichlorodifluoromethane (Freon-12)	736	µg/kg	149	1035.2	<37.6	71.0	28-137			
Ethylbenzene	1070	µg/kg	44.6	1035.2	<22.0	104	75-121			
Isopropylbenzene	1080	µg/kg	44.6	1035.2	<19.6	104	74-121			
m+p-Xylene	2170	µg/kg	89.2	2070.4	<41.4	105	67-129			
Methyl acetate	981	µg/kg	372	1035.2	<37.2	94.8	61-125			
Methyl bromide (Bromomethane)	1320	µg/kg	149	1035.2	<59.4	127	31-169			
Methyl chloride (Chloromethane)	804	µg/kg	149	1035.2	<84.9	77.7	24-119			
Methyl tert-butyl ether (MTBE)	1020	µg/kg	44.6	1035.2	<22.7	98.0	79-139			
Methylene chloride (Dichloromethane)	1020	µg/kg	372	1035.2	<82.4	98.3	62-135			
o-Xylene	1050	µg/kg	44.6	1035.2	<12.0	102	75-120			
Styrene	1020	µg/kg	44.6	1035.2	<12.3	99.0	74-126			
Tetrachloroethylene (Perchloroethylene)	2070	µg/kg	44.6	1035.2	<18.7	200	76-128			S
Toluene	1050	µg/kg	44.6	1035.2	<25.6	101	76-120			
Total Xylene	3220	µg/kg	134	3105.6	<12.0	104	67-129			
trans-1,2-Dichloroethylene	1090	µg/kg	44.6	1035.2	<25.6	106	72-127			
trans-1,3-Dichloropropylene	906	µg/kg	44.6	1035.2	<17.3	87.5	66-120			
Trichloroethene (Trichloroethylene)	1180	µg/kg	44.6	1035.2	<13.9	114	75-122			
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	954	µg/kg	44.6	1035.2	<15.9	92.2	51-115			
Vinyl chloride (Chloroethene)	886	µg/kg	44.6	1035.2	<20.6	85.6	43-128			
Surr: 1,2-Dichloroethane-d4	1020	µg/kg		1035.2		98.9	80-120			
Surr: 4-Bromofluorobenzene	1060	µg/kg		1035.2		102	80-120			
Surr: Dibromofluoromethane	1040	µg/kg		1035.2		100	72-120			
Surr: Toluene-d8	1020	µg/kg		1035.2		98.8	80-120			

**MSD** CLIENT ID: 4821 SB03 (5-6')\_20260121 Lab ID: QC-2426924-006

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 21:23  
**Prep Date:** 01/22/26 15:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1070	µg/kg	44.6	1035.2	<14.1	104	75-121	1.72	30	
1,1,2,2-Tetrachloroethane	843	µg/kg	44.6	1035.2	<13.7	81.4	79-125	0.307	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1190	µg/kg	44.6	1035.2	<19.7	115	62-129	5.09	30	
1,1,2-Trichloroethane	999	µg/kg	44.6	1035.2	<13.2	96.5	80-123	1.08	30	
1,1-Dichloroethane	1030	µg/kg	44.6	1035.2	<11.3	99.4	74-124	3.02	30	
1,1-Dichloroethylene	1110	µg/kg	44.6	1035.2	<10.1	108	68-131	3.20	30	
1,2,3-Trichlorobenzene	979	µg/kg	149	1035.2	<37.3	94.6	60-135	16.1	30	
1,2,3-Trichloropropane	921	µg/kg	44.6	1035.2	<13.0	89.0	77-121	1.01	30	
1,2,4-Trichlorobenzene	999	µg/kg	149	1035.2	<35.2	96.5	63-130	14.3	30	

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**Date Received:** NA  
**Run ID:** 3841939

**MSD** CLIENT ID: 4821 SB03 (5-6')\_20260121 Lab ID: QC-2426924-006

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 21:23  
**Prep Date:** 01/22/26 15:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	1030	µg/kg	44.6	1035.2	<22.8	99.2	64-126	4.28	30	
1,2-Dibromo-3-chloropropane (DBCP)	811	µg/kg	149	1035.2	<28.6	78.3	55-135	7.42	30	
1,2-Dibromoethane (EDB, Ethylene dibromide)	1020	µg/kg	44.6	1035.2	<18.3	98.7	63-155	1.17	30	
1,2-Dichlorobenzene (o-Dichlorobenzene)	1060	µg/kg	44.6	1035.2	<11.8	102	77-122	12.1	30	
1,2-Dichloroethane (Ethylene dichloride)	1000	µg/kg	149	1035.2	<27.2	97.0	70-130	0.257	30	
1,2-Dichloropropane	958	µg/kg	44.6	1035.2	<22.9	92.6	71-130	2.30	30	
1,3,5-Trimethylbenzene	1060	µg/kg	149	1035.2	<21.9	102	66-130	1.43	30	
1,3-Dichlorobenzene (m-Dichlorobenzene)	1060	µg/kg	44.6	1035.2	<21.4	102	78-121	10.9	30	
1,3-Dichloropropene	1900	µg/kg	89.2	2070.4	<17.3	91.8	62-124	1.54	30	
1,4-Dichlorobenzene (p-Dichlorobenzene)	1060	µg/kg	44.6	1035.2	<25.2	103	78-122	12.5	30	
2-Butanone (Methyl ethyl ketone, MEK)	1520	µg/kg	297	1035.2	<73.9	147	47-164	4.03	30	
2-Hexanone	1140	µg/kg	44.6	1035.2	<15.4	110	70-137	4.52	30	
4-Methyl-2-pentanone (MIBK)	1350	µg/kg	44.6	1035.2	<28.9	131	57-200	2.49	30	
Acetone	2250	µg/kg	149	1035.2	<92.2	217	52-190	9.70	30	S
Benzene	1090	µg/kg	44.6	1035.2	<15.0	106	78-122	0.236	30	
Bromochloromethane	994	µg/kg	44.6	1035.2	<15.8	96.0	68-130	2.67	30	
Bromodichloromethane	1000	µg/kg	44.6	1035.2	<17.4	96.6	75-125	1.85	30	
Bromoform	926	µg/kg	44.6	1035.2	<13.1	89.4	59-120	0.00	30	
Carbon disulfide	1260	µg/kg	44.6	1035.2	<16.1	122	60-163	4.14	30	
Carbon tetrachloride	1070	µg/kg	44.6	1035.2	<12.2	103	69-123	4.28	30	
Chlorobenzene	1040	µg/kg	44.6	1035.2	<10.3	101	79-120	2.71	30	
Chlorodibromomethane	997	µg/kg	44.6	1035.2	<17.4	96.4	57-123	2.68	30	
Chloroethane (Ethyl chloride)	631	µg/kg	149	1035.2	<87.0	61.0	38-132	0.654	30	
Chloroform	1030	µg/kg	44.6	1035.2	<11.4	99.1	72-122	2.49	30	
cis-1,2-Dichloroethylene	1010	µg/kg	44.6	1035.2	<20.0	97.6	74-125	3.12	30	
cis-1,3-Dichloropropene	977	µg/kg	44.6	1035.2	<23.4	94.4	62-124	1.17	30	
Dichlorodifluoromethane (Freon-12)	693	µg/kg	149	1035.2	<37.6	67.0	28-137	5.94	30	
Ethylbenzene	1080	µg/kg	44.6	1035.2	<22.0	104	75-121	0.626	30	
Isopropylbenzene	1100	µg/kg	44.6	1035.2	<19.6	106	74-121	1.66	30	
m+p-Xylene	2200	µg/kg	89.2	2070.4	<41.4	106	67-129	1.40	30	
Methyl acetate	930	µg/kg	372	1035.2	<37.2	89.8	61-125	5.36	30	
Methyl bromide (Bromomethane)	711	µg/kg	149	1035.2	<59.4	68.6	31-169	59.8	30	R
Methyl chloride (Chloromethane)	770	µg/kg	149	1035.2	<84.9	74.4	24-119	4.34	30	
Methyl tert-butyl ether (MTBE)	979	µg/kg	44.6	1035.2	<22.7	94.6	79-139	3.58	30	
Methylene chloride (Dichloromethane)	822	µg/kg	372	1035.2	<82.4	79.4	62-135	21.3	30	
o-Xylene	1070	µg/kg	44.6	1035.2	<12.0	104	75-120	2.24	30	
Styrene	1030	µg/kg	44.6	1035.2	<12.3	99.7	74-126	0.705	30	
Tetrachloroethylene (Perchloroethylene)	2080	µg/kg	44.6	1035.2	<18.7	201	76-128	0.349	30	S
Toluene	1060	µg/kg	44.6	1035.2	<25.6	102	76-120	0.984	30	
Total Xylene	3270	µg/kg	134	3105.6	<12.0	105	67-129	1.67	30	

QA/QC Report



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**MSD** CLIENT ID: 4821 SB03 (5-6')\_20260121 Lab ID: QC-2426924-006

**Method:** EPA 8260D **Dilution:** 1 **Analysis Date:** 01/23/26 21:23  
**Prep Date:** 01/22/26 15:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
trans-1,2-Dichloroethylene	1070	µg/kg	44.6	1035.2	<25.6	103	72-127	2.39	30	
trans-1,3-Dichloropropylene	923	µg/kg	44.6	1035.2	<17.3	89.2	66-120	1.92	30	
Trichloroethene (Trichloroethylene)	1170	µg/kg	44.6	1035.2	<13.9	114	75-122	0.659	30	
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	905	µg/kg	44.6	1035.2	<15.9	87.4	51-115	5.23	30	
Vinyl chloride (Chloroethene)	809	µg/kg	44.6	1035.2	<20.6	78.2	43-128	9.10	30	
Surr: 1,2-Dichloroethane-d4	<b>981</b>	µg/kg		1035.2		94.8	80-120	4.23	30	
Surr: 4-Bromofluorobenzene	<b>1030</b>	µg/kg		1035.2		99.1	80-120	3.18	30	
Surr: Dibromofluoromethane	<b>1010</b>	µg/kg		1035.2		97.4	72-120	2.78	30	
Surr: Toluene-d8	<b>1030</b>	µg/kg		1035.2		99.2	80-120	0.404	30	

The following samples were analyzed in this batch: HN2601026-001, HN2601026-002, HN2601026-003, HN2601026-004