

DRAFT

FILL MATERIAL SAMPLING REPORT

11117 WHITHORN STREET
DETROIT, WAYNE COUNTY, MICHIGAN 48205



NOVEMBER 19, 2025
REVISED DECEMBER 12, 2025

PREPARED FOR:
THE CITY OF DETROIT DEMOLITION DEPARTMENT
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DETROIT, MICHIGAN 48226



FILL MATERIAL SAMPLING REPORT

11117 WHITHORN STREET
DETROIT, WAYNE COUNTY, MICHIGAN 48205

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EXECUTIVE SUMMARY

The Mannik & Smith Group, Inc. (MSG) was retained by the City of Detroit (COD) to perform sampling and analysis of fill materials at the property commonly addressed as 11117 Whithorn Street, Detroit, Wayne County, Michigan (hereinafter, the "Site"). The Site location, as referenced to nearby roads and major geographic features, is shown on Figure 1, *Site Location Map*. Figure 2, *Site Layout*, depicts the current layout of the Site.

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

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

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

- The stratigraphy encountered during soil boring advancement of 11117 SB01, 11117 SB02, and 11117 SB03 generally consisted of four to six feet of brown to gray gravelly sand with a layer of brown sandy clay from four to five and a half feet in 11117 SB03, underlain by brown sand to six feet below ground surface (bgs), the maximum depth explored for this investigation. Field photoionization detector (PID) readings of the recovered soil cores ranged from 0.0 to 26.9 parts per million (ppm). There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities, however, concrete, asphalt, and/or brick debris were observed in all borings.
- Concentrations of arsenic, total chromium, benzo(a)pyrene, carbozole, fluoranthene, fluorene, and phenanthrene were detected in soil samples 11117 SB01 (1-2'), 11117 SB02 (3-4'), and/or 11117 SB03 (5-6') in excess of their respective Part 201 groundwater surface water interface protection criteria (GSIPC), drinking water protection criteria (DWPC), and/or direct contact criteria (DCC).
- Concentrations of 1,2,4-trimethylbenzene and phenanthrene were detected in soil sample 11117 SB02 (3-4') in excess of their respective soil volatilization to indoor air pathway criteria (SVIAP) and/or recommended interim action screening level (RIASL).
- Concentrations of 1,2,4-trimethylbenzene, 4,4-DDD, 4,4-DDE, 4,4-DDT, acetone, anthracene, barium, dieldrin, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chlordane, chloride, chrysene, indeno(1,2,3-cd)pyrene, lead, mercury, naphthalene, phenanthrene, pyrene, copper, total xylenes, and zinc were detected in soil samples 11117 SB01 (1-2'), 11117 SB02 (3-4'), 11117 SB03 (5-6'), and/or 11117 Whithorn SB02 (3-4')-R at concentrations above laboratory method detection limits; however, detected concentrations were below their respective Part 201 GRCC and/or Statewide Default Background Levels.
- Toxicity Characteristic Leaching Procedure (TCLP) laboratory analytical results revealed that concentrations of arsenic, chromium, SVOCs, and pesticides were not in excess of 40 C.F.R. § 261.24 Title 40 - *Protection of Environment, Chapter I - Environmental Protection Agency, Subchapter I - Solid Wastes, Part 261- Identification and Listing of Hazardous Waste, Subpart C - Characteristics of Hazardous Waste*.

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

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

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

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1.0 INTRODUCTION

The Mannik & Smith Group, Inc. (MSG) was retained by the City of Detroit (COD) to conduct sampling and analysis of fill materials at the property commonly addressed as 11117 Whithorn Street, Detroit, Wayne County, Michigan (hereinafter, the "Site"). The Site location as referenced to nearby roads and major geographic features is presented as *Figure 1, Site Location Map*. *Figure 2, Site Layout*, depicts the current layout of the Site.

The purpose of this work was to assist the COD's blight remediation efforts with the sampling and analysis of fill material at the Site through soil sample collection from pre-determined depths. The scope of work for this investigation was performed in general accordance with the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025. This report presents the findings of this investigation. Soil samples were collected by MSG on August 12, 2025, October 9, 2025, and October 28, 2025. The findings of this report are valid as of the report date, subject to the limitations presented in *Appendix A, Limitations*.

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

2.0 PURPOSE AND SCOPE OF WORK

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

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

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

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

3.0 SITE ASSESSMENT METHODOLOGY

The following subsections describe the methodologies employed by MSG at the Site during sampling activities that were conducted on August 12, 2025, October 9, 2025, and October 28, 2025. Daily field activity reports prepared by MSG are presented in *Appendix B, Daily Field Reports*.

3.1 Preliminary Site Work Activities

Prior to conducting subsurface soil sampling activities, MSG contacted the MISSDIG utility locating system to identify and physically mark underground utilities. If necessary, proposed soil boring locations were modified based on the results of the utility markings. Additionally, MSG reviewed readily available Site building records or documents to ensure that this scope of work was conducted on the correct property and in the areas of the former Site structure.

3.2 Soil Sample Collection

The sampling plan for the Site was based on the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025, and modified in the field (if necessary) based on encountered conditions and professional judgment of MSG's field personnel. MSG advanced three (3) initial soil borings, designated 11117 SB01, 11117 SB02, and 11117 SB03, using a direct push drill rig at the locations depicted on Figure 2. Photographs collected during completion of this work are provided in *Appendix C, Investigation Photographs*.

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

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

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

3.3 Toxicity Characteristic Leaching Procedure (TCLP) Soil Sample Collection

On October 9, 2025, MSG mobilized to the Site to collect an additional soil sample based on request from the COD. Sample location and analyte(s) were based on the laboratory results of the initial soil investigation. MSG personnel advanced one soil boring in the immediate vicinity of the soil boring location that exhibited the highest laboratory result(s) in excess of Part 201 GRCC. Soils were continuously profiled from the ground surface to the termination depth of six feet bgs using a direct push drill rig. These soils were homogenized in a stainless-steel bowl (or equivalent) to produce a single, composite soil sample. The composite soil sample was placed into unpreserved laboratory-supplied sample containers, as appropriate for the associated laboratory analyses.

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

On October 28, 2025, MSG mobilized to the Site to collect an additional soil sample based on request from the COD in order to fulfill waste characterization parameters required at a Type II landfill. Sample location and analyte(s) were based on the laboratory results of the initial soil sampling event, as compared to 40 C.F.R. § 261.24 Title 40 - *Protection of Environment, Chapter I - Environmental Protection Agency, Subchapter I - Solid Wastes, Part 261 - Identification and Listing of Hazardous Waste, Subpart C - Characteristics of Hazardous Waste*. Soils were continuously profiled at the supplemental soil boring locations from the ground surface to the termination depth using a 5-foot long, closed-piston Macro-Core® sampling device. When warranted, 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.

3.4 Decontamination

Before initiation of sampling and drilling activities and between each sampling/soil boring, equipment was cleaned to avoid the potential for cross-contamination during field activities. Pertinent equipment and tooling were thoroughly cleaned using a phosphate-free soap to remove chemical residue and caked-on soils. After sample collection was completed, each soil boring location was abandoned with the soil cuttings generated at each soil boring location and finished to match the original surface.

3.5 Analytical Methods

Five (5) soil samples, designated 11117 SB01 (1-2'), 11117 SB02 (3-4'), 11117 SB03 (5-6'), 11117 Whithorn SB02 (3-4')-R, and 11117 Whithorn SB01,2,3 TCLP, were collected as part of this investigation. These soil samples were submitted to ALS Environmental Laboratory (ALS) in Holland, Michigan for laboratory analysis of the following parameters per the requested parameters as described in the COD's *Sampling and Analysis of Fill Materials Scope of Services*, dated June 17, 2025, and individual TCLP analysis:

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

3.6 Quality Assurance/Quality Control

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

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

4.0 SUMMARY OF RESULTS

The following subsections include a discussion of the soil samples that were collected from the Site on August 12, 2025, October 9, 2025, and October 28, 2025.

4.1 Site Geology and Hydrogeology

The stratigraphy encountered during soil boring advancement of 11117 SB01, 11117 SB02, and 11117 SB03 generally consisted of four to six feet of brown to gray gravelly sand with a layer of brown sandy clay from four to five and a half feet in 11117 SB03, underlain by brown sand to six feet bgs, the maximum depth explored for this investigation. Field PID readings of the recovered soil cores ranged from 0.0 to 26.9 ppm. There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities, however, concrete, asphalt, and/or brick debris were observed in all borings.

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

4.2 Soil Sample Analytical Results

A total of four (4) soil samples, designated 11117 SB01 (1-2'), 11117 SB02 (3-4'), 11117 SB03 (5-6'), and 11117 Whithorn SB02 (3-4')-R, were collected from the Site and submitted to ALS for laboratory analysis of VOCs, SVOCs, PCBs, Michigan 10 Metals, chloride, herbicides, and/or pesticides.

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

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

Chemical	CAS Number	Soil Sample (feet bgs)	Part 201 GRCC Exceeded / Concentration (µg/kg ¹)	Maximum Detected Concentration (µg/kg)
Arsenic	7440-38-2	11117 SB01 (1-2') 11117 SB02 (3-4') 11117 SB03 (5-6')	DWPC ² / 4,600 GSIPC ³ / 4,600 DCC ⁴ / 7,600	10,600
Chromium (Total)	7440-47-3	11117 SB01 (1-2')	GSIPC / 3,300	19,900
Benzo(a)pyrene	50-32-8	11117 SB02 (3-4')	DCC / 2,000	10,000
Carbazole	86-74-8	11117 SB02 (3-4')	GSIPC / 1,100	3,800
Fluoranthene	206-44-0	11117 SB02 (3-4')	GSIPC / 5,500	32,000
Fluorene	86-73-7	11117 SB02 (3-4')	GSIPC / 5,300	5,600
Phenanthrene	85-01-8	11117 SB02 (3-4')	GSIPC / 2,100	32,000

¹µg/kg – micrograms per kilogram;

²DWPC – Drinking Water Protection Criteria

³GSIPC – Groundwater Surface Water Interface Protection Criteria

⁴DCC – Direct Contact Criteria

4.3 TCLP Analytical Results

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

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

4.4 Exposure Evaluation

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

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

5.0 FINDINGS

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

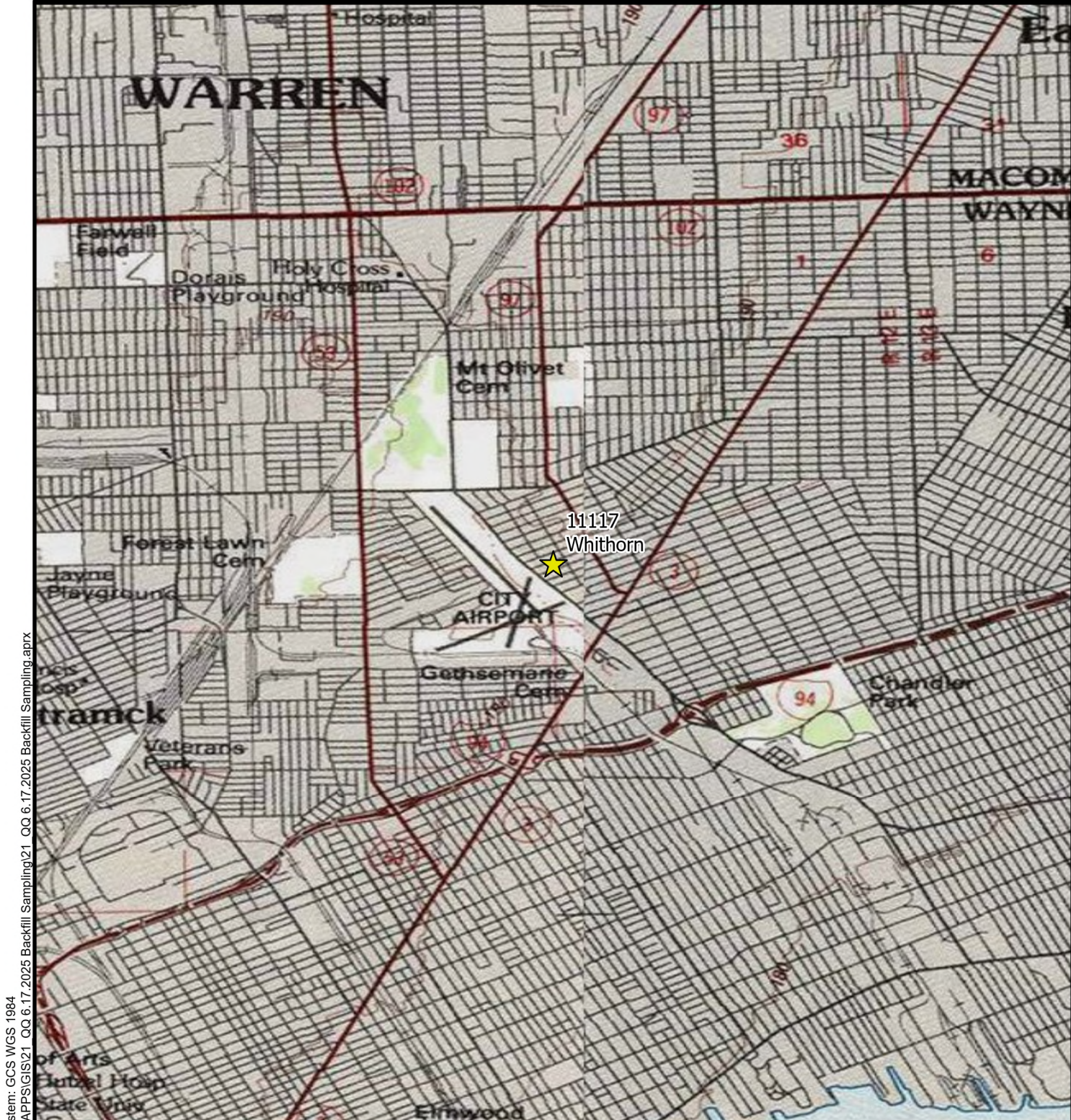
- The stratigraphy encountered during soil boring advancement of 11117 SB01, 11117 SB02, and 11117 SB03 generally consisted of four to six feet of brown to gray gravelly sand with a layer of brown sandy clay from four to five and a half feet in 11117 SB03, underlain by brown sand to six feet bgs, the maximum depth explored for this investigation. Field PID readings of the recovered soil cores ranged from 0.0 to 26.9 ppm. There were no visual (staining) and/or olfactory (e.g., petroleum-like odors) indications of contamination observed during soil sampling activities, however, concrete, asphalt, and/or brick debris were observed in all borings.
- Concentrations of arsenic, total chromium, benzo(a)pyrene, carbozole, fluoranthene, fluorene, and phenanthrene were detected in soil samples 11117 SB01 (1-2'), 11117 SB02 (3-4'), and/or 11117 SB03 (5-6') in excess of their respective Part 201 GSIPC, DWPC, and/or DCC.
- Concentrations of 1,2,4-trimethylbenzene and phenanthrene were detected in soil sample 11117 SB02 (3-4') in excess of their respective soil volatilization to indoor air pathway criteria (SVIAP) and/or recommended interim action screening level (RIASL).
- Concentrations of 1,2,4-trimethylbenzene, 4,4-DDD, 4,4-DDE, 4,4-DDT, acetone, anthracene, barium, dieldrin, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chlordane, chloride, chrysene, indeno(1,2,3-cd)pyrene, lead, mercury, naphthalene, phenanthrene, pyrene, copper, total xylenes, and zinc were detected in soil samples 11117 SB01 (1-2'), 11117 SB02 (3-4'), 11117 SB03 (5-6'), and/or 11117 Whithorn SB02 (3-4')-R at concentrations above laboratory method detection limits; however, detected concentrations were below their respective Part 201 GRCC and/or Statewide Default Background Levels.
- TCLP laboratory analytical results revealed that concentrations of arsenic, chromium, SVOCs, and pesticides were not in excess of 40 C.F.R. § 261.24 Title 40 - Protection of Environment, Chapter I - Environmental Protection Agency, Subchapter I - Solid Wastes, Part 261- Identification and Listing of Hazardous Waste, Subpart C - Characteristics of Hazardous Waste.
- PCBs were not detected above laboratory method detection reporting limits.
- Groundwater was not encountered during soil boring activities completed as part of this investigation. Groundwater is not utilized as drinking water at or near the Site, as municipal water is supplied via the COD, and the general geology of the Site and surrounding area consists of fill materials underlain by clay overlying bedrock. Therefore, the drinking water (DW) exposure pathway can be considered not applicable. Additionally, groundwater was not encountered during this investigation to transport contaminants to either storm sewers or surface water and the clay layer also inhibits migration, therefore, the groundwater surface water exposure pathway can be considered not applicable. Since the building on site has been razed, the recommended interim action screening level (RIASL) and/or soil volatilization to indoor air pathway (SVIAP) is not currently complete, however, consideration may need to be given to this pathway if future construction is planned. Given that the site is residential, exceedances of direct contact criteria may merit further consideration.

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

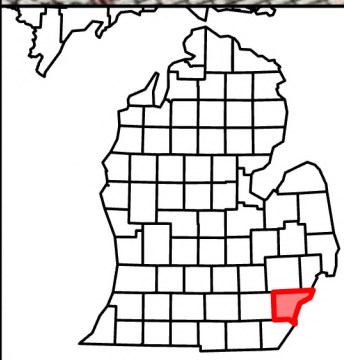
MSG warrants that no substantive information or documentation was deleted, omitted, or changed that would otherwise cause the MSG to reach a different conclusion. Furthermore, MSG understands that the COD and its agencies and authorities may rely upon the overall completeness, accuracy, and conclusions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

FIGURES





Date Saved: 9/22/2025 8:38 PM Coordinate System: GCS WGS 1984
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★ Site Location

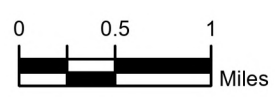
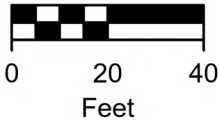


FIGURE 1
SITE LOCATION

11117 Whithorn, Detroit, MI

DATE 9/23/2025	DRAWN BY JWW	DESIGNED BY JWW	PROJECT NO. DETRO060
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- Sample Locations
- Parcels (Current)
- Subject Property

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



FIGURE 2
Site Layout

11117 Whithorn, Detroit, MI

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



Table 1
Soil Sample Analytical Detection Summary

Detroit Backfill Sampling
11117 Whithorn, Detroit, Michigan

SOIL: Part 201/213 Generic Residential Cleanup Criteria Revised October 12, 2023 Units: µg/kg	Volatile Organic Compounds (VOCs)			Semivolatile Organic Compounds (SVOCs)															
	Acetone	1,2,4-Trimethylbenzene	Total Xylenes	Anthracene	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Benzo(a)pyrene	Carbazole	Chrysene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene		
	CAS Number	67-64-1	95-63-6	1330-20-7	120-12-7	56-55-3	205-99-2	207-08-9	191-24-2	50-32-8	86-74-8	218-01-9	206-44-0	86-73-7	193-39-5	91-20-3	85-01-8	129-00-0	
	Statewide Default Background Levels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Drinking Water Protection Criteria (DWPC)	15,000	2,100	5,600	41,000	NLL	NLL	NLL	NLL	NLL	9,400	NLL	7.3E+05	3.9E+05	NLL	35,000	56,000	4.8E+05	
	Groundwater Surface Water Interface Protection Criteria (GSIPC)	34,000	570	980	ID	NLL	NLL	NLL	NLL	NLL	1,100	NLL	5,500	5,300	NLL	730	2,100	ID	
	Soil Volatilization to Indoor Air Inhalation (SVIIC)	2.9E+8 (C)	4.3E+6 (C)	6.3E+6 (C)	1.0E+09 (D)	NLV	ID	NLV	NLV	NLV	NLV	ID	1.0E+09 (D)	5.8E+08	NLV	2.5E+05	2.8E+06	1.0E+09 (D)	
	Soil Volatilization to Indoor Air Pathway (SVIAP)	2.6E+05 (EE)	150 (JT)	280 (J)	1.3E+07	1.6E+05 (MM)	NA	NA	NA	NA	NA	NA	NA	4.7E+05	NA	67 (M)	1,700	2.5E+07	
	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	1.3E+08	2.1E+07	4.6E+07	1.4E+09	NLV	ID	NLV	NLV	NLV	NLV	ID	7.4E+08	1.3E+08	NLV	3.0E+05	1.6E+05	6.5E+08	
	Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	1.3E+08	5.0E+08	6.1E+07	1.4E+09	NLV	ID	NLV	NLV	NLV	NLV	ID	7.4E+08	1.3E+08	NLV	3.0E+05	1.6E+05	6.5E+08	
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	1.9E+08	5.0E+08	1.3E+08	1.4E+09	NLV	ID	NLV	NLV	NLV	NLV	ID	7.4E+08	1.3E+08	NLV	3.0E+05	1.6E+05	6.5E+08		
Particulate Soil Inhalation Criteria (PSIC)	3.9E+11	8.2E+10	2.9E+11	6.7E+10	ID	ID	ID	8.0E+08	1.5E+06	6.2E+07	ID	9.3E+09	9.3E+09	ID	2.0E+08	6.7E+06	6.7E+09		
Direct Contact Criteria (DCC)	2.3E+07	3.2E+07 (C)	4.1E+08 (C)	2.3E+08	20,000	20,000	2.0E+05	2.5E+06	2,000	5.3E+05	2.0E+06	4.6E+07	2.7E+07	20,000	1.6E+07	1.6E+06	2.9E+07		
Soil Saturation Concentration Screening Levels (C _{sat})	1.1E+08	1.1E+05	1.5E+05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Recommended Interim Action Screening Level (RIASL)	2.6E+05	150	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SAMPLE ID	DEPTH	SAMPLE DATE																	
11117 SB01	1-2	8/12/2025	<118	<35.2	<106	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670		
11117 SB02	3-4	8/12/2025	146	215	39.3	11,000	11,000	10,000	4,200	4,900	10,000	3,800	10,000	32,000	5,600	5,700	<3800	32,000	23,000
11117 SB03	5-6	8/12/2025	<130	<38.9	<117	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	<660	
11117 Whithorn SB02 - R	3-4	10/28/2025	NS	NS	NS	597	1,620	2,080	640	1,140	1,510	<209	1,380	3,650	<103	1,250	171	1,980	3,240

Notes:
Bold indicates concentration above laboratory reporting limits.
Exceeds DWPC
Exceeds GSIPC
Exceeds Applicable Soil Vapor Inhalation screening level
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation screening levels
Exceeds PSIC, DCC, and/or Csat, likely exceeds others
ND = Not Detected above laboratory reporting limits
NS = Not Sampled or Not Analyzed
Notes in parentheses and standard abbreviations from Part 201 Rules 299.1 through 299.50, updated October 12, 2023
VIAP Screening Levels and notes from EGLE Guidance Document For The Vapor Intrusion Pathway, Appendix D.1 Vapor Intrusion Screening Values, May 2013, updated February 26, 2024

Table 1
Soil Sample Analytical Detection Summary

Detroit Backfill Sampling
11117 Whithorn, Detroit, Michigan

SOIL: Part 201/213 Generic Residential Cleanup Criteria Revised October 12, 2023 Units: µg/kg	Michigan 10 Metals										Pesticides/Herbicides								Polychlorinated Biphenyls (PCBs)	Inorganic Anions/Ions		
	Arsenic	Barium (B)	Cadmium (B)	Chromium (Total)	Copper (B)	Lead (B)	Mercury (B,Z)	Selenium (B)	Silver (B)	Zinc (B)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	alpha-Chlordane	gamma-Chlordane	Chlordane, Technical	Chloride				
CAS Number	7440-38-2	7440-39-3	7440-43-9	7440-47-3	7440-50-8	7439-92-1	7439-97-6	7782-49-2	7440-22-4	7440-66-6	72548	72559	50-29-3	60-57-1	NA	NA	12789-03-6	16887006				
Statewide Default Background Levels	5,800	75,000	1,200	18,000	32,000	21,000	130	410	1,000	47,000	NA	NA	NA	NA	NA	NA	NA	NA				
Drinking Water Protection Criteria (DWPC)	4,600	1.3E+06	6,000	30,000	5.8E+06	7.0E+05	1,700	4,000	4,500	2.4E+06	NLL	NLL	NLL	NLL	NA	NA	NA	5.00E+06				
Groundwater Surface Water Interface Protection Criteria (GSIPC)	4,600	(G)	(G,X)	3,300	(G)	(G,X)	50 (M); 1.2	400	100 (M); 27	(G)	NLL	NLL	NLL	NLL	NA	NA	NA	(X)				
Soil Volatilization to Indoor Air Inhalation (SVIIC)	NLV	NLV	NLV	NLV	NLV	NLV	48,000	NLV	NLV	NLV	NLV	NLV	NLV	1.40E+05	NA	NA	NA	NLV				
Soil Volatilization to Indoor Air Pathway (SVIAP)	NA	NA	NA	--	NA	NA	22 (M)	NA	NA	NA	NLV	NA	--	770	NA	NA	NA	--				
Infinite Source Volatile Soil Inhalation Criteria (VSIC)	NLV	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NLV	NLV	NLV	NLV	NLV	19000	NA	NA	NA	NLV				
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	NLV	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NLV	NLV	NLV	NLV	NLV	1900	NA	NA	NA	NLV				
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	NLV	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NLV	NLV	NLV	NLV	NLV	19000	NA	NA	NA	NLV				
Particulate Soil Inhalation Criteria (PSIC)	7.2E+05	3.3E+08	1.7E+06	2.6E+05	1.3E+08	1.0E+08	2.0E+07	1.3E+08	6.7E+06	ID	4.4E+07	3.20E+07	3.20E+07	6.8E+05	NA	NA	NA	ID				
Direct Contact Criteria (DCC)	7,600	3.7E+07	5.5E+05	2.5E+06	2.0E+07	4.0E+05	1.6E+05	2.6E+06	2.5E+06	1.7E+08	95,000	45,000	57,000	1,100	NA	NA	NA	5.0E+5 (F)				
Soil Saturation Concentration Screening Levels (C _{sat})	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Recommended Interim Action Screening Level (RIASL)	NA	NA	NA	NA	NA	NA	2.7E-02	NA	NA	NA	NA	NA	--	NA	NA	NA	NA	--				
SAMPLE ID	DEPTH	SAMPLE DATE																				
11117 SB01	1-2	8/12/2025	6,670	47,800	<1,310	19,900	17,000	42,500	34.2	<3,280	<3,280	79,000	26	93	93	<5.5	<5.5	6.0	6.0	ND	120,000	
11117 SB02	3-4	8/12/2025	6,840	38,600	<1,340	11,300	11,800	34,800	39.5	<3,350	<3,350	55,500	15	73	6.4	4.9	8.6	8.1	16.7	ND	62,900	
11117 SB03	5-6	8/12/2025	10,600	42,400	<1,220	7,320	12,800	80,400	30.8	<3,060	<3,060	82,600	<5.5	7.0	<5.5	<5.5	<5.5	<5.5	<27	ND	10,900	
11117 Whithorn SB02 - R	3-4	10/28/2025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<162	<167	<168	<177	<169	<168	<251	NS	NS	

Notes:
Bold indicates concentration above laboratory reporting limits.
Exceeds DWPC
Exceeds GSIPC
Exceeds Applicable Soil Vapor Inhalation screening level
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation screening levels
Exceeds PSIC, DCC, and/or Csat, likely exceeds others
ND = Not Detected above laboratory reporting limits
NS = Not Sampled or Not Analyzed
Notes in parentheses and standard abbreviations from Part 201 Rules 299.1 through 299.50, updated October 12, 2023
VIAP Screening Levels and notes from EGLE Guidance Document For The Vapor Intrusion Pathway, Appendix D.1 Vapor Intrusion Screening Values, May 2013, updated February 26, 2024

Table 2
TCLP Analytical Detection Summary

Detroit Backfill Sampling
11117 Whithorn, Detroit, Michigan

40 C.F.R. § 261.24 Code of Federal Regulations Title 40 - Protection of Environment Chapter I - Environmental Protection Agency Subchapter I - Solid Wastes Part 261- Identification and Listing of Hazardous Waste Subpart C - Characteristics of Hazardous Waste <i>Units: mg/L</i>		TCLP Metals		TCLP Semivolatile Organic Compounds (SVOCs)											
		Arsenic	Chromium	1,4-Dichlorobenzene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dinitrotoluene	2-Methylphenol	3&4-Methylphenol	Hexachlorobenzene	Hexachlorobutadiene	Hexachloroethane	Nitrobenzene	Pentachlorophenol	Pyridine
Maximum Concentration of Contaminants for the Toxicity Characteristic		5.00	5.00	7.5	400.0	2.0	10.0	-	-	0.13	0.5	3.0	2.0	100.0	5.0
SAMPLE ID	SAMPLE DATE														
11117 Whithorn SB01,2,3 TCLP	10/9/2025	<0.00190	<0.00610	<0.00444	<0.00670	<0.00920	<0.00444	<0.00438	<0.00660	<0.00408	<0.00452	<0.00615	<0.00424	<0.0368	<0.0129
11117 Whithorn SB02 (3-4)-R	10/28/2025	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

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

40 C.F.R. § 261.24 Code of Federal Regulations Title 40 - Protection of Environment Chapter I - Environmental Protection Agency Subchapter I - Solid Wastes Part 261- Identification and Listing of Hazardous Waste Subpart C - Characteristics of Hazardous Waste <i>Units: mg/L</i>		TCLP Pesticides						
		Chlordane, Technical	Endrin	Lindane	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
Maximum Concentration of Contaminants for the Toxicity Characteristic		-	0.002	0.4	0.008	0.008	10.0	0.5
SAMPLE ID	SAMPLE DATE							
11117 Whithorn SB01,2,3 TCLP	10/9/2025	NS	NS	NS	NS	NS	NS	NS
11117 Whithorn SB02 (3-4)-R	10/28/2025	0.0000341	0.00000854	0.00000834	0.00000762	0.00000796	0.00000992	0.000110

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

APPENDIX A

LIMITATIONS



LIMITATIONS

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

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

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

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

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

APPENDIX B

DAILY FIELD REPORTS





DAILY FIELD REPORT

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

Report No.: 1
Job No.: DETR0060

Date: <u>08/12/2025</u>	Day: <u>Tuesday</u>	Temp: <u>N/A</u> (AM) <u>80 ° F</u> (PM)
MSG Personnel: <u>SRK, BM</u>	Cloud Cover: <u>N/A</u> (AM) <u>60%</u> (PM)	Precip.: <u>N/A</u> (AM) <u>N/A</u> (PM)
Personnel: <u>MSG</u>		
MSG Hours On-Site: <u>~ 1 hours</u>		

Contractors Information		
Contractor: <u>MSG</u>	No. Men and Type: <u>2; Operator/Geologist</u>	Equipment Type: <u>Geoprobe 7822DT</u>

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

Field Notes:
1250 – SRK and BM onsite (11117 Whithorn Street) 1255 – Unloaded equipment and marked boring locations 1258 – Began drilling SB01 1300 – Finished drilling SB01 1302 – Began drilling SB02 1304 – Finished drilling SB02 1305 – Sampled 11117 SB01 (1-2') 1306 – Began drilling SB03 1308 – Finished drilling SB03 1315 – Sampled 11117 SB02 (3-4') 1335 – Sampled 11117 SB03 (5-6') 1345 – Packed up equipment 1350 – MSG off site

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



DAILY FIELD REPORT

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

Report No.: 2
Job No.: DETR0060

Date: 10/9/2025	Day: Thursday	Temp: N/A (AM) 50 ° F (PM)
MSG Personnel: SRK, JF		Cloud Cover: N/A (AM) 0% (PM)
		Precip.: N/A (AM) N/A (PM)
Personnel: MSG		
MSG Hours On-Site: ~ 1 hours		

Contractors Information		
Contractor: MSG	No. Men and Type: 2; Operator/Geologist	Equipment Type: Geoprobe 7822DT

Summary of Work Performed:
- Advanced three (3) onsite soil borings to a maximum depth of 6 feet below ground surface (bgs) - Collected TCLP of fill material from each soil boring (composite sample of each boring from zero to 6 feet bgs).

Field Notes:
1220 – MSG (SRK, JF) onsite (11117 Whithorn) 1222 – Attempted to locate previous boring locations. Marked out new boring locations. 1233 – Began drilling SB01 TCLP 1235 – Finished drilling SB01 TCLP 1239 – Began drilling SB02 TCLP 1241 – Finished drilling SB02 TCLP 1242 – Began drilling SB03 TCLP 1244 – Finished drilling SB03 TCLP 1300 – Sampled 11117 Whithorn SB01,2,3 TCLP 1312 – Collected GPS points 1318 – Packed up equipment 1323 – MSG off site

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



DAILY FIELD REPORT

Client: City of Detroit Demolition Department

Project: Sampling and Analysis of Fill Material

Report No.: 3

Job No.: DETR0060

Date: 10/28/2025	Day: Tuesday	Temp: 49 ° F	(AM)	N/A	(PM)
MSG Personnel: WRD, BSM		Cloud Cover: 0%	(AM)	N/A	(PM)
		Precip.: N/A	(AM)	N/A	(PM)
Personnel: MSG					
MSG Hours On-Site: ~ 0.5 hours					
Contractors Information					
Contractor: MSG		No. Men and Type: 2; Operator/Geologist		Equipment Type: Geoprobe 7822DT	
Summary of Work Performed:					
- Advanced one (1) onsite soil borings to a maximum depth of 4 feet below ground surface (bgs) - Collected soil sample from soil boring (from the interval 3-4' to analyze for Pesticides, Herbicides, & SVOCs).					
Field Notes:					
1012 – MSG (WRD, BSM) onsite (11117 Whithorn) 1016 – Attempted to locate previous boring locations. Marked out new boring location. 1019 – Began drilling SB02 (3-4')-R 1027 – Finished drilling SB02 (3-4')-R 1030 – Sampled 11117 Whithorn SB02 (3-4')-R 1038 – Packed up equipment 1040 – MSG off site					

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

APPENDIX C

INVESTIGATION PHOTOGRAPHS





Photo 1: View of Site at the time of initial soil boring activities



Photo 2: Viewing 11117 SB01 Drilling, Facing West.

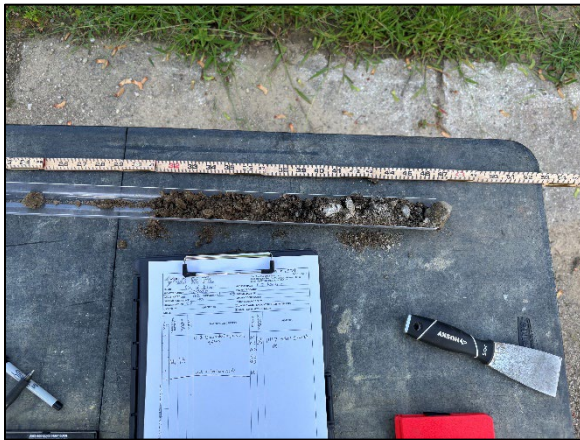


Photo 3: Viewing 11117 SB01 Soils, Facing Northwest.



Photo 4: Viewing 11117 SB02 Drilling, Facing West.



Photo 5: Viewing 11117 SB02 Soils, Facing Northwest.



Photo 6: Viewing 11117 SB03 Drilling, Facing West.



Photo 7: Viewing 11117 SB03 Soils, Facing Northwest.



Photo 8: View of Site at the time of TCLP soil boring activities



Photo 9: View of TCLP soil boring location



Photo 10: View of TCLP soil boring location



Photo 11: View of TCLP soil boring location



Photo 12: View of Site at the time of supplemental soil sampling activities



Photo 13: Viewing soil recovery at the time of supplemental soil sampling activities



Photo 14: View of supplemental soil boring location

APPENDIX D

SOIL BORING LOGS





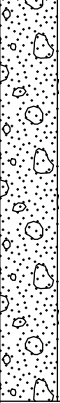
The Mannik & Smith Group, Inc.
2365 Haggerty Rd South Canton, MI 48188
ph: 734-397-3100 fax: 734-397-3131
www.manniksmithgroup.com

BORING ID: SB01

PAGE 1 OF 1

CLIENT <u>City of Detroit</u>	PROJECT NAME <u>11117 Whithorn</u>
PROJECT NUMBER <u>DETR0060</u>	PROJECT LOCATION <u>11117 Whithorn St, Detroit, Michigan</u>
DATE STARTED <u>8/12/25</u> COMPLETED <u>8/12/25</u>	BORING DIAMETER: <u>3.25 inches</u>
DRILLING CONTRACTOR <u>MSG</u>	SURVEY COORDINATES: <u>N/A</u>
DRILLING METHOD <u>Direct Push</u>	GROUND SURFACE ELEV.: <u>N/A</u>
LOGGED BY <u>SRK</u> CHECKED BY <u>PDH</u>	GROUND WATER ENCOUNTERED DURING DRILLING: <u>Not Encountered</u>
NOTES	WATER LEVEL AFTER DRILLING: <u>N/A</u>

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 8/20/25 09:33 - W:\PROJECTS\PROJECTS A-EDETR0060\ADMIN\23_QQ 7.25.2025 BACKFILL SAMPLING (48 SITES)\11117 WHITHORN BORING LOGS\DETR0060_11117.GPJ

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
1.5	MC 1	1.5		6.0	Brown to Gray Gravelly SAND Some concrete debris at 4 feet bgs Bottom of borehole at 6.0 feet.	0.0 0.2 0.6 4.0 4.0 1.8		Collected soil sample 11117 SB01 (1-2) at 13:05



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BORING ID: SB02

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CLIENT	City of Detroit	PROJECT NAME	11117 Whithorn
PROJECT NUMBER	DETR0060	PROJECT LOCATION	11117 Whithorn St, Detroit, Michigan
DATE STARTED	8/12/25	COMPLETED	8/12/25
DRILLING CONTRACTOR	MSG	BORING DIAMETER:	3.25 inches
DRILLING METHOD	Direct Push	SURVEY COORDINATES:	N/A
LOGGED BY	SRK	CHECKED BY	PDH
NOTES	GROUND WATER ENCOUNTERED DURING DRILLING: Not Encountered		
		WATER LEVEL AFTER DRILLING: N/A	

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 8/20/25 09:33 - W:\PROJECTS\PROJECTS A-EDETR0060\ADMIN\23_QQ 7.25 2025 BACKFILL SAMPLING (48 SITES)\11117 WHITHORNBORING LOGS\DETR0060_11117.GPJ

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
					Brown to Gray Gravelly SAND, some clay, dry	0.6		
					Some concrete debris from 2 - 5 feet bgs	6.9		
	MC 1	2.5				10.3		
						11.0		Collected soil sample 11117 SB02 (3-4) at 13:15
5					Some asphalt debris at 5 feet bgs	26.9		
				5.5	Brown SAND, some gravel, moist			
				6.0	Bottom of borehole at 6.0 feet.	1.8		



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www.manniksmithgroup.com

BORING ID: SB03

PAGE 1 OF 1

CLIENT <u>City of Detroit</u>	PROJECT NAME <u>11117 Whithorn</u>
PROJECT NUMBER <u>DETR0060</u>	PROJECT LOCATION <u>11117 Whithorn St, Detroit, Michigan</u>
DATE STARTED <u>8/12/25</u> COMPLETED <u>8/12/25</u>	BORING DIAMETER: <u>3.25 inches</u>
DRILLING CONTRACTOR <u>MSG</u>	SURVEY COORDINATES: <u>N/A</u>
DRILLING METHOD <u>Direct Push</u>	GROUND SURFACE ELEV.: <u>N/A</u>
LOGGED BY <u>SRK</u> CHECKED BY <u>PDH</u>	GROUND WATER ENCOUNTERED DURING DRILLING: <u>Not Encountered</u>
NOTES	WATER LEVEL AFTER DRILLING: <u>N/A</u>

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 8/20/25 09:33 - W:\PROJECTS\PROJECTS A-EDETR0060\ADMIN\23_QQ 7.25.2025 BACKFILL SAMPLING (48 SITES)\11117 WHITHORNBORING LOGS\DETR0060_11117.GPJ

DEPTH (FEET)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	DEPTH (FEET)	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0								
					Brown to Gray Gravelly SAND, some clay, dry	0.0		
					Some concrete debris at 2 feet bgs	0.4		
						2.7		
				4.0	Some brick debris at 4 feet bgs	10.5		
					Brown Sandy CLAY, some gravel, dry			
5				5.5		1.1		
				6.0	Brown SAND, little gravel, moist	0.6		
					Bottom of borehole at 6.0 feet.			

Collected soil sample 11117 SB03 (5-6) at 13:35

APPENDIX E
LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY FORMS





right solutions.
right partner.

CERTIFICATE OF ANALYSIS

Work Order

HN2511321

Client

The Mannik & Smith Group, Inc.

Project

11117_Whithorn

Project Date

August 13, 2025

Reporting Contact

Ryan Montri



right solutions.
right partner.

September 11, 2025

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

Work Order: **HN2511321**

Re: **11117_Whithorn**

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

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

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

If you have any questions regarding this report, please feel free to contact me:
ADDRESS: 3352 128th Avenue, Holland, MI, USA PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Bill Carey
/S/ **BILL CAREY**
Project Manager



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn

Work Order: HN2511321
Date Received: 13-Aug-2025

CASE NARRATIVE

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

Sample Receipt

3 soil/solid samples were received for analysis at ALS Environmental on 13-Aug-2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Inorganics

EPA 9056A-S (High)

Run ID: 3405747

Matrix spike value was outside upper limit of calibration. Processed at equivalent dilution level as the parent. C,S
Matrix spike duplicate value was outside upper limit of calibration. Processed at equivalent dilution level as the parent. C,S

Metals

EPA 6020B-3050B-S

Run ID: 3410807

The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ca, Fe, Mn Batch 2165859
The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: Ba Batch 2165859
The MSD recovery was outside of the control limit. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: Cr, K, Sr, Zn Batch 2165859
The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Ba Batch 2165859
The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: Ag batch 2165859
The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ca, Fe, Mn Batch 2165859
HN2511321-001: Cadmium - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. Cd, Se, Ag
HN2511321-001: Selenium - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. Cd, Se, Ag
HN2511321-001: Silver - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. Cd, Se, Ag
HN2511321-002: Cadmium - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. Cd, Se, Ag
HN2511321-002: Silver - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. Cd, Se, Ag
HN2511321-002: Selenium - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. Cd, Se, Ag



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn

Work Order: HN2511321
Date Received: 13-Aug-2025

CASE NARRATIVE

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

Run ID: 3410807

HN2511321-003: Cadmium - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. Cd, Se, Ag
HN2511321-003: Silver - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. Cd, Se, Ag
HN2511321-003: Selenium - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. Cd, Se, Ag

Run ID: 3413394

The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Mg, Ag Batch 2165868
The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Se Batch 2165868
The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Mg Batch 2165859
The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Cr, Ni, Zn Batch 2165868
The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Mg, Si Batch 2165868
The MSD recovery was outside of the control limit. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: Na Batch 2165868
The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Si Batch 2165859
The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: As, Cr, Ni, Zn Batch 2165868
The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for the following analyte(s): Se, Si Batch 2165868
The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Si Batch 2165859
The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Mg Batch 2165859
The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: Se, Ag Batch 2165868

Organics

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

Run ID: 3411029

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

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

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

Run ID: 3404198

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: 1,1-Dichloroethylene, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113), 1,2,3-Trichlorobenzene

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: 11117 SB01 (1-2)	Lab ID: HN2511321-001
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Analyte	Results	Flag	MRL	Units	Method
Arsenic	6.67		3.28	mg/kg	EPA 6020B
Barium	47.8		3.28	mg/kg	EPA 6020B
Chloride	120		10.9	mg/kg	EPA 9056A
Chromium	19.9		3.28	mg/kg	EPA 6020B
Copper	17.0		3.28	mg/kg	EPA 6020B
Lead	42.5		3.28	mg/kg	EPA 6020B
Mercury	0.0342		0.0200	mg/kg	EPA 7471B
Percent Moisture	6.8		0.1	%	EPA 3550C
Subcontract Analysis	See attached.			-	EPA 8151A
Subcontract Analysis	See attached.			-	EPA 8081B
Subcontract Analysis	See attached.			-	EPA 8082A
Subcontract Analysis	See attached.			-	EPA 8270E
Zinc	79.0		6.55	mg/kg	EPA 6020B

CLIENT ID: 11117 SB02 (3-4)	Lab ID: HN2511321-002
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Analyte	Results	Flag	MRL	Units	Method
1,2,4-Trimethylbenzene	215		37.4	µg/kg	EPA 8260D
Acetone	146		125	µg/kg	EPA 8260D
Arsenic	6.84		3.35	mg/kg	EPA 6020B
Barium	38.6		3.35	mg/kg	EPA 6020B
Chloride	62.9		10.8	mg/kg	EPA 9056A
Chromium	11.3		3.35	mg/kg	EPA 6020B
Copper	11.8		3.35	mg/kg	EPA 6020B
Lead	34.8		3.35	mg/kg	EPA 6020B
Mercury	0.0395		0.0200	mg/kg	EPA 7471B
o-Xylene	39.3		37.4	µg/kg	EPA 8260D
Percent Moisture	9.6		0.1	%	EPA 3550C
Subcontract Analysis	See attached.			-	EPA 8151A
Subcontract Analysis	See attached.			-	EPA 8081B
Subcontract Analysis	See attached.			-	EPA 8082A
Subcontract Analysis	See attached.			-	EPA 8270E
Zinc	55.5		6.70	mg/kg	EPA 6020B

CLIENT ID: 11117 SB03 (5-6)	Lab ID: HN2511321-003
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Analyte	Results	Flag	MRL	Units	Method
Arsenic	10.6		3.06	mg/kg	EPA 6020B
Barium	42.4		3.06	mg/kg	EPA 6020B
Chloride	10.9		10.9	mg/kg	EPA 9056A
Chromium	7.32		3.06	mg/kg	EPA 6020B
Copper	12.8		3.06	mg/kg	EPA 6020B
Lead	80.4		3.06	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: 11117 SB03 (5-6)		Lab ID: HN2511321-003			
Analyte	Results	Flag	MRL	Units	Method
Mercury	0.0308		0.0200	mg/kg	EPA 7471B
Percent Moisture	11.9		0.1	%	EPA 3550C
Subcontract Analysis	See attached.			-	EPA 8151A
Subcontract Analysis	See attached.			-	EPA 8081B
Subcontract Analysis	See attached.			-	EPA 8082A
Subcontract Analysis	See attached.			-	EPA 8270E
Zinc	82.6		6.13	mg/kg	EPA 6020B

SAMPLE SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Workorder: HN2511321

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2511321-001	11117 SB01 (1-2)	SOIL/SOLID	08/12/25 13:05	08/13/25 08:00
HN2511321-002	11117 SB02 (3-4)	SOIL/SOLID	08/12/25 13:15	08/13/25 08:00
HN2511321-003	11117 SB03 (5-6)	SOIL/SOLID	08/12/25 13:35	08/13/25 08:00



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1

Customer Information		Project Information		Parameter/Method Request for Analysis													
Purchase Order		Project Name	11117_Whithorn	A VOCs (U.S. EPA Method 8260C (or Method 8260))													
Work Order		Project Number	DETR0060	B SVOCs (U.S. EPA Method 8270D (or Method 8270))													
Company Name	The Mannik and Smith Group	Bill To Company	The Mannik and Smith Group	C PCBs (U.S. EPA Method 8082)													
Send Report To	Ryan Montri	Invoice Attn.		D Mi 10 Metals (U.S. EPA 6000/7000 Series Methods)													
Address	2365 Haggerty Rd South Suite 100	Address	2365 Haggerty Rd South Suite 100	E Chiorides (U.S. EPA Method 9056A)													
City/State/Zip	Canton, MI 48188	City/State/Zip	Canton, MI 48188	F Pesticides (U.S. EPA Method 8081B (or Method 8081))													
Phone	734-397-3100	Phone	734-397-3100	G Herbicides (U.S. EPA Method 8151A (or Method 8151))													
Fax		Fax		H													
e-Mail Address	RMontri@manniksmithgroup.com	e-Mail Address:		I													
				J													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	11117 SB01 (1-2)	8/12/25	1305	Soil	7	3	X	X	X	X	X	X	X				
2	11117 SB02 (3-4)	↓	1315	Soil	7	3	↓	↓	↓	↓	↓	↓	↓				
3	11117 SB03 (5-6)	↓	1335	Soil	7	3	↓	↓	↓	↓	↓	↓	↓				
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign <i>Shannon Kaczmarek</i>		Shipment Method:		Required Turnaround Time: ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour		Results Due Date:	
Relinquished by: <i>Shannon Kaczmarek</i>	Date: 8/12/25	Time: 2:27pm	Received by: <i>Colin</i>		Notes: Quote# HN-061825-M&S-MA		
Relinquished by: <i>Colin</i>	Date: 8/12/25	Time: 17:00	Received by (Laboratory): <i>QS</i>		Cooler Temp. 5.0°C ±0.6		
Logged by (Laboratory): <i>BC</i>	Date: 8/13/25	Time: 09:19	Checked by (Laboratory):		QC Package: (Check Box Below)		
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035				Level II: Standard QC TRRP-Checklist			
				Level III: Std QC + Raw Data TRRP Level IV			
				Level IV: SW846 CLP-Like			
				Other: _____			

Environmental Division
Holland
Work Order Reference
HN2511321

Telephone : +1 616 399 6070

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
Signature denotes acceptance of ALS Group USA, Corp. Terms and Conditions - Please click the link below for detailed Terms & Conditions:

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

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ALS Holland Sample Receiving Checklist

Received by: BC

Date/Time: 8/13/25 0800

Carrier Name: QS

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

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

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

Chain of Custody present? Yes / No

COC signed when relinquished and received? Yes / No

COC agrees with sample labels? Yes / No

Samples in proper container/bottle? Yes / No

Sample containers intact? Yes / No

Sufficient sample volume for indicated test? Yes / No

All samples received within holding time? Yes / No

Container/Temp Blank temperature in compliance? Yes / No

Temperature(s) (°C): 5.6°C I

Thermometer(s): IR6

Sample(s) received on ice? Yes / No

Matrix/Matrices: W. Soil

Cooler(s)/Kit(s): _____

Date/Time sample(s) sent to storage: 8/13/25 09:15

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

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

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

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

pH adjusted by: _____

Login Notes:

REPORT QUALIFIERS AND DEFINITIONS

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

Holland Laboratory Certifications¹

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

¹ - Scope available upon request

ANALYST SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn

Work Order: HN2511321

Sample Name: 11117 SB01 (1-2)
Laboratory Code: HN2511321-001
Sample Matrix: SOIL/SOLID

Date Collected: 08/12/25
Date Received: 08/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		001-AC	2162233		3403230	Everett Chudy
EPA 6020B	EPA 3050B	001-AC	2165859	Weston Kotecki	3410807	Hunter Johnson
EPA 6020B	EPA 3050B	001-AC	2165859	Weston Kotecki	3413394	Hunter Johnson
EPA 7471B	Method	001-AC	2162145	Maxx Richey	3405106	Maxx Richey
EPA 8081B		001-AD			3484453	Bill Carey
EPA 8082A		001-AD			3484453	Bill Carey
EPA 8151A		001-AD			3484453	Bill Carey
EPA 8260D	EPA 5035A	001-AA	2157395	Jonathan Vazquez	3404198	John Garvale
EPA 8260D	EPA 5035A	001-AA	2157395	Jonathan Vazquez	3404740	Sean Bradfield
EPA 8260D	EPA 5035A	001-AA	2166541	Jonathan Vazquez	3411029	Ali Cook
EPA 8260D	EPA 5035A	001-AA	2166541	Jonathan Vazquez	3413518	Ali Cook
EPA 8270E		001-AD			3484453	Bill Carey
EPA 9056A	EPA 9056A	001-AC	2163170	Sage Hansen	3405747	Katrina Grassel

Sample Name: 11117 SB02 (3-4)
Laboratory Code: HN2511321-002
Sample Matrix: SOIL/SOLID

Date Collected: 08/12/25
Date Received: 08/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		002-AC	2162233		3403230	Everett Chudy
EPA 6020B	EPA 3050B	002-AC	2165859	Weston Kotecki	3410807	Hunter Johnson
EPA 6020B	EPA 3050B	002-AC	2165859	Weston Kotecki	3413394	Hunter Johnson
EPA 7471B	Method	002-AC	2162145	Maxx Richey	3405106	Maxx Richey
EPA 8081B		002-AD			3484453	Bill Carey
EPA 8082A		002-AD			3484453	Bill Carey
EPA 8151A		002-AD			3484453	Bill Carey
EPA 8260D	EPA 5035A	002-AA	2157395	Jonathan Vazquez	3404198	John Garvale
EPA 8260D	EPA 5035A	002-AA	2157395	Jonathan Vazquez	3404740	Sean Bradfield
EPA 8260D	EPA 5035A	002-AA	2166541	Jonathan Vazquez	3411029	Ali Cook
EPA 8260D	EPA 5035A	002-AA	2166541	Jonathan Vazquez	3413518	Ali Cook
EPA 8270E		002-AD			3484453	Bill Carey
EPA 9056A	EPA 9056A	002-AC	2163170	Sage Hansen	3405747	Katrina Grassel

ANALYST SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn

Work Order: HN2511321

Sample Name: 11117 SB03 (5-6)
Laboratory Code: HN2511321-003
Sample Matrix: SOIL/SOLID

Date Collected: 08/12/25
Date Received: 08/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		003-AC	2162233		3403230	Everett Chudy
EPA 6020B	EPA 3050B	003-AC	2165859	Weston Kotecki	3410807	Hunter Johnson
EPA 6020B	EPA 3050B	003-AC	2165859	Weston Kotecki	3413394	Hunter Johnson
EPA 7471B	Method	003-AC	2162145	Maxx Richey	3405106	Maxx Richey
EPA 8081B		003-AD			3484453	Bill Carey
EPA 8082A		003-AD			3484453	Bill Carey
EPA 8151A		003-AD			3484453	Bill Carey
EPA 8260D	EPA 5035A	003-AA	2157395	Jonathan Vazquez	3404198	John Garvale
EPA 8260D	EPA 5035A	003-AA	2157395	Jonathan Vazquez	3404740	Sean Bradfield
EPA 8260D	EPA 5035A	003-AA	2166541	Jonathan Vazquez	3411029	Ali Cook
EPA 8270E		003-AD			3484453	Bill Carey
EPA 9056A	EPA 9056A	003-AC	2163170	Sage Hansen	3405747	Katrina Grassel

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Matrix: SOIL/SOLID

Work Order: HN2511321
Date Collected: 08/12/25 13:05
Date Received: 08/13/25 08:00

CLIENT ID: 11117 SB01 (1-2)	Lab ID: HN2511321-001
------------------------------------	------------------------------

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters								
Percent Moisture	EPA 3550C	6.8		%	0.1	1	08/15/25 15:24	NA
Chloride	EPA 9056A	120		mg/kg	10.9	1	08/15/25 18:52	08/15/25 15:56
Metals								
Arsenic	EPA 6020B	6.67		mg/kg	3.28	10	08/18/25 20:51	08/18/25 09:54
Barium	EPA 6020B	47.8		mg/kg	3.28	10	08/18/25 20:51	08/18/25 09:54
Cadmium	EPA 6020B	ND		mg/kg	1.31	10	08/18/25 20:51	08/18/25 09:54
Chromium	EPA 6020B	19.9		mg/kg	3.28	10	08/18/25 20:51	08/18/25 09:54
Copper	EPA 6020B	17.0		mg/kg	3.28	10	08/19/25 17:13	08/18/25 09:54
Lead	EPA 6020B	42.5		mg/kg	3.28	10	08/18/25 20:51	08/18/25 09:54
Selenium	EPA 6020B	ND		mg/kg	3.28	10	08/18/25 20:51	08/18/25 09:54
Silver	EPA 6020B	ND		mg/kg	3.28	10	08/18/25 20:51	08/18/25 09:54
Zinc	EPA 6020B	79.0		mg/kg	6.55	10	08/18/25 20:51	08/18/25 09:54
Mercury	EPA 7471B	0.0342		mg/kg	0.0200	1	08/18/25 11:09	08/15/25 14:35
Subcontracted Parameters								
Subcontract Analysis	EPA 8081B	See attached.		-		1	09/11/25 10:38	NA
Subcontract Analysis	EPA 8082A	See attached.		-		1	09/11/25 10:38	NA
Subcontract Analysis	EPA 8151A	See attached.		-		1	09/11/25 10:38	NA
Subcontract Analysis	EPA 8270E	See attached.		-		1	09/11/25 10:38	NA
Volatile Organic Compounds by GC-MS								
1,1,1-Trichloroethane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,1,2,2-Tetrachloroethane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,1,2-Trichloroethane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,1-Dichloroethane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,1-Dichloroethylene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,2,3-Trichlorobenzene	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
1,2,3-Trichloropropane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,2,4-Trichlorobenzene	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
1,2,4-Trimethylbenzene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Matrix: SOIL/SOLID

Work Order: HN2511321
Date Collected: 08/12/25 13:05
Date Received: 08/13/25 08:00

CLIENT ID: 11117 SB01 (1-2) **Lab ID: HN2511321-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
1,2-Dichloropropane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,3,5-Trimethylbenzene	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
1,3-Dichloropropene	EPA 8260D	ND		µg/kg	70.5	1	08/18/25 16:27	08/18/25 14:26
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	ND		µg/kg	235	1	08/18/25 16:27	08/18/25 14:26
2-Hexanone	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
4-Methyl-2-pentanone (MIBK)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Acetone	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
Benzene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Bromochloromethane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Bromodichloromethane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Bromoform	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Carbon disulfide	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Carbon tetrachloride	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Chlorobenzene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Chlorodibromomethane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Chloroethane (Ethyl chloride)	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
Chloroform	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
cis & trans-1,2-Dichloroethene	EPA 8260D	ND		µg/kg	70.5	1	08/18/25 16:27	08/18/25 14:26
cis-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
cis-1,3-Dichloropropene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Cyclohexane	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
Dichlorodifluoromethane (Freon-12)	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
Ethylbenzene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Isopropylbenzene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Matrix: SOIL/SOLID

Work Order: HN2511321
Date Collected: 08/12/25 13:05
Date Received: 08/13/25 08:00

CLIENT ID: 11117 SB01 (1-2) **Lab ID: HN2511321-001**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
m+p-Xylene	EPA 8260D	ND		µg/kg	70.5	1	08/18/25 16:27	08/18/25 14:26
Methyl acetate	EPA 8260D	ND		µg/kg	294	1	08/18/25 16:27	08/18/25 14:26
Methyl bromide (Bromomethane)	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
Methyl chloride (Chloromethane)	EPA 8260D	ND		µg/kg	118	1	08/18/25 16:27	08/18/25 14:26
Methyl tert-butyl ether (MTBE)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Methylcyclohexane	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Methylene chloride (Dichloromethane)	EPA 8260D	ND		µg/kg	294	1	08/18/25 16:27	08/18/25 14:26
o-Xylene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Styrene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Toluene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Total Xylene	EPA 8260D	ND		µg/kg	106	1	08/18/25 16:27	08/18/25 14:26
trans-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
trans-1,3-Dichloropropylene	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Trichloroethene (Trichloroethylene)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
Vinyl chloride (Chloroethene)	EPA 8260D	ND		µg/kg	35.2	1	08/18/25 16:27	08/18/25 14:26
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	96.2		%REC	80-120	1	08/15/25 10:54	08/13/25 11:17
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	100		%REC	80-120	1	08/15/25 10:54	08/13/25 11:17
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	87.6		%REC	80-120	1	08/18/25 16:27	08/18/25 14:26
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	103		%REC	80-120	1	08/15/25 10:54	08/13/25 11:17

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Matrix: SOIL/SOLID

Work Order: HN2511321
Date Collected: 08/12/25 13:15
Date Received: 08/13/25 08:00

CLIENT ID: 11117 SB02 (3-4)	Lab ID: HN2511321-002
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters								
Percent Moisture	EPA 3550C	9.6		%	0.1	1	08/15/25 15:24	NA
Chloride	EPA 9056A	62.9		mg/kg	10.8	1	08/15/25 19:01	08/15/25 15:56
Metals								
Arsenic	EPA 6020B	6.84		mg/kg	3.35	10	08/18/25 20:53	08/18/25 09:54
Barium	EPA 6020B	38.6		mg/kg	3.35	10	08/18/25 20:53	08/18/25 09:54
Cadmium	EPA 6020B	ND		mg/kg	1.34	10	08/18/25 20:53	08/18/25 09:54
Chromium	EPA 6020B	11.3		mg/kg	3.35	10	08/18/25 20:53	08/18/25 09:54
Copper	EPA 6020B	11.8		mg/kg	3.35	10	08/19/25 17:14	08/18/25 09:54
Lead	EPA 6020B	34.8		mg/kg	3.35	10	08/18/25 20:53	08/18/25 09:54
Selenium	EPA 6020B	ND		mg/kg	3.35	10	08/18/25 20:53	08/18/25 09:54
Silver	EPA 6020B	ND		mg/kg	3.35	10	08/18/25 20:53	08/18/25 09:54
Zinc	EPA 6020B	55.5		mg/kg	6.70	10	08/18/25 20:53	08/18/25 09:54
Mercury	EPA 7471B	0.0395		mg/kg	0.0200	1	08/18/25 11:11	08/15/25 14:35
Subcontracted Parameters								
Subcontract Analysis	EPA 8081B	See attached.		-		1	09/11/25 10:38	NA
Subcontract Analysis	EPA 8082A	See attached.		-		1	09/11/25 10:38	NA
Subcontract Analysis	EPA 8151A	See attached.		-		1	09/11/25 10:38	NA
Subcontract Analysis	EPA 8270E	See attached.		-		1	09/11/25 10:38	NA
Volatile Organic Compounds by GC-MS								
1,1,1-Trichloroethane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,1,2,2-Tetrachloroethane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,1,2-Trichloroethane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,1-Dichloroethane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,1-Dichloroethylene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,2,3-Trichlorobenzene	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26
1,2,3-Trichloropropane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,2,4-Trichlorobenzene	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26
1,2,4-Trimethylbenzene	EPA 8260D	215		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Matrix: SOIL/SOLID

Work Order: HN2511321
Date Collected: 08/12/25 13:15
Date Received: 08/13/25 08:00

CLIENT ID: 11117 SB02 (3-4) **Lab ID: HN2511321-002**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26
1,2-Dichloropropane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,3,5-Trimethylbenzene	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
1,3-Dichloropropene	EPA 8260D	ND		µg/kg	74.9	1	08/18/25 16:27	08/18/25 14:26
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	ND		µg/kg	250	1	08/18/25 16:27	08/18/25 14:26
2-Hexanone	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
4-Methyl-2-pentanone (MIBK)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Acetone	EPA 8260D	146		µg/kg	125	1	08/15/25 11:10	08/13/25 11:17
Benzene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Bromochloromethane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Bromodichloromethane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Bromoform	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Carbon disulfide	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Carbon tetrachloride	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Chlorobenzene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Chlorodibromomethane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Chloroethane (Ethyl chloride)	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26
Chloroform	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
cis & trans-1,2-Dichloroethene	EPA 8260D	ND		µg/kg	74.9	1	08/18/25 16:27	08/18/25 14:26
cis-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
cis-1,3-Dichloropropene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Cyclohexane	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26
Dichlorodifluoromethane (Freon-12)	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26
Ethylbenzene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Isopropylbenzene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Matrix: SOIL/SOLID

Work Order: HN2511321
Date Collected: 08/12/25 13:15
Date Received: 08/13/25 08:00

CLIENT ID: 11117 SB02 (3-4)

Lab ID: HN2511321-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
m+p-Xylene	EPA 8260D	ND		µg/kg	74.9	1	08/18/25 16:27	08/18/25 14:26
Methyl acetate	EPA 8260D	ND		µg/kg	312	1	08/18/25 16:27	08/18/25 14:26
Methyl bromide (Bromomethane)	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26
Methyl chloride (Chloromethane)	EPA 8260D	ND		µg/kg	125	1	08/18/25 16:27	08/18/25 14:26
Methyl tert-butyl ether (MTBE)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Methylcyclohexane	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Methylene chloride (Dichloromethane)	EPA 8260D	ND		µg/kg	312	1	08/18/25 16:27	08/18/25 14:26
o-Xylene	EPA 8260D	39.3		µg/kg	37.4	1	08/15/25 11:10	08/13/25 11:17
Styrene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Toluene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Total Xylene	EPA 8260D	ND		µg/kg	112	1	08/18/25 16:27	08/18/25 14:26
trans-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
trans-1,3-Dichloropropylene	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Trichloroethene (Trichloroethylene)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
Vinyl chloride (Chloroethene)	EPA 8260D	ND		µg/kg	37.4	1	08/18/25 16:27	08/18/25 14:26
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	98.9		%REC	80-120	1	08/18/25 16:27	08/18/25 14:26
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	97.6		%REC	80-120	1	08/15/25 11:10	08/13/25 11:17
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	88.0		%REC	80-120	1	08/18/25 16:27	08/18/25 14:26
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	99.1		%REC	80-120	1	08/18/25 16:27	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Matrix: SOIL/SOLID

Work Order: HN2511321
Date Collected: 08/12/25 13:35
Date Received: 08/13/25 08:00

CLIENT ID: 11117 SB03 (5-6)	Lab ID: HN2511321-003
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Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters								
Percent Moisture	EPA 3550C	11.9		%	0.1	1	08/15/25 15:24	NA
Chloride	EPA 9056A	10.9		mg/kg	10.9	1	08/15/25 19:11	08/15/25 15:56
Metals								
Arsenic	EPA 6020B	10.6		mg/kg	3.06	10	08/18/25 20:55	08/18/25 09:54
Barium	EPA 6020B	42.4		mg/kg	3.06	10	08/18/25 20:55	08/18/25 09:54
Cadmium	EPA 6020B	ND		mg/kg	1.22	10	08/18/25 20:55	08/18/25 09:54
Chromium	EPA 6020B	7.32		mg/kg	3.06	10	08/18/25 20:55	08/18/25 09:54
Copper	EPA 6020B	12.8		mg/kg	3.06	10	08/19/25 17:16	08/18/25 09:54
Lead	EPA 6020B	80.4		mg/kg	3.06	10	08/18/25 20:55	08/18/25 09:54
Selenium	EPA 6020B	ND		mg/kg	3.06	10	08/18/25 20:55	08/18/25 09:54
Silver	EPA 6020B	ND		mg/kg	3.06	10	08/18/25 20:55	08/18/25 09:54
Zinc	EPA 6020B	82.6		mg/kg	6.13	10	08/18/25 20:55	08/18/25 09:54
Mercury	EPA 7471B	0.0308		mg/kg	0.0200	1	08/18/25 11:13	08/15/25 14:35
Subcontracted Parameters								
Subcontract Analysis	EPA 8081B	See attached.		-		1	09/11/25 10:38	NA
Subcontract Analysis	EPA 8082A	See attached.		-		1	09/11/25 10:38	NA
Subcontract Analysis	EPA 8151A	See attached.		-		1	09/11/25 10:38	NA
Subcontract Analysis	EPA 8270E	See attached.		-		1	09/11/25 10:38	NA
Volatile Organic Compounds by GC-MS								
1,1,1-Trichloroethane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,1,2,2-Tetrachloroethane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,1,2-Trichloroethane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,1-Dichloroethane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,1-Dichloroethylene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,2,3-Trichlorobenzene	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
1,2,3-Trichloropropane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,2,4-Trichlorobenzene	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
1,2,4-Trimethylbenzene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Matrix: SOIL/SOLID

Work Order: HN2511321
Date Collected: 08/12/25 13:35
Date Received: 08/13/25 08:00

CLIENT ID: 11117 SB03 (5-6) **Lab ID: HN2511321-003**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
1,2-Dichloropropane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,3,5-Trimethylbenzene	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
1,3-Dichloropropene	EPA 8260D	ND		µg/kg	77.8	1	08/18/25 16:27	08/18/25 14:26
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	ND		µg/kg	259	1	08/15/25 11:26	08/13/25 11:17
2-Hexanone	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
4-Methyl-2-pentanone (MIBK)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Acetone	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
Benzene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Bromochloromethane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Bromodichloromethane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Bromoform	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Carbon disulfide	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Carbon tetrachloride	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Chlorobenzene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Chlorodibromomethane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Chloroethane (Ethyl chloride)	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
Chloroform	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
cis & trans-1,2-Dichloroethene	EPA 8260D	ND		µg/kg	77.8	1	08/18/25 16:27	08/18/25 14:26
cis-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
cis-1,3-Dichloropropene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Cyclohexane	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
Dichlorodifluoromethane (Freon-12)	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
Ethylbenzene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Isopropylbenzene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26

Analytical Report



Client: The Mannik & Smith Group, Inc.
Project: 11117_Whithorn
Matrix: SOIL/SOLID

Work Order: HN2511321
Date Collected: 08/12/25 13:35
Date Received: 08/13/25 08:00

CLIENT ID: 11117 SB03 (5-6) **Lab ID: HN2511321-003**

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
m+p-Xylene	EPA 8260D	ND		µg/kg	77.8	1	08/18/25 16:27	08/18/25 14:26
Methyl acetate	EPA 8260D	ND		µg/kg	324	1	08/18/25 16:27	08/18/25 14:26
Methyl bromide (Bromomethane)	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
Methyl chloride (Chloromethane)	EPA 8260D	ND		µg/kg	130	1	08/18/25 16:27	08/18/25 14:26
Methyl tert-butyl ether (MTBE)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Methylcyclohexane	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Methylene chloride (Dichloromethane)	EPA 8260D	ND		µg/kg	324	1	08/18/25 16:27	08/18/25 14:26
o-Xylene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Styrene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Toluene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Total Xylene	EPA 8260D	ND		µg/kg	117	1	08/18/25 16:27	08/18/25 14:26
trans-1,2-Dichloroethylene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
trans-1,3-Dichloropropylene	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Trichloroethene (Trichloroethylene)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
Vinyl chloride (Chloroethene)	EPA 8260D	ND		µg/kg	38.9	1	08/18/25 16:27	08/18/25 14:26
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	102		%REC	80-120	1	08/15/25 11:26	08/13/25 11:17
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	90.6		%REC	80-120	1	08/18/25 16:27	08/18/25 14:26
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	91.4		%REC	80-120	1	08/18/25 16:27	08/18/25 14:26
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	101		%REC	80-120	1	08/18/25 16:27	08/18/25 14:26



November 20, 2025

Service Request No:R2510155

Bill Carey
ALS Environmental - Holland
3352 128th Avenue
Holland, MI 49424

Laboratory Results for: 11117_Whithorn

Dear Bill,

Enclosed are the results of the sample(s) submitted to our laboratory August 20, 2025
For your reference, these analyses have been assigned our service request number **R2510155**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7476. You may also contact me via email at Chris.Leavy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Christopher Leavy
Project Manager

ADDRESS

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE

+1 585 288 5380

FAX

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ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Received: 08/20/2025

CASE NARRATIVE

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

Sample Receipt:

Three soil samples were received for analysis at ALS Environmental on 08/20/2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270E: The Method Reporting Limit (MRL) was elevated due to less than optimal sample mass (15g) used in the microwave preparation process. The nature of the sample necessitated using less mass of sample to avoid overheating. Overheating causes the extraction solvent to vent out of the vessel and may cause damage to the microwave vessels.

Method 8270E, 890799: The reporting limit is elevated for one or more analytes. The sample extract was diluted prior to instrumental analysis due to relatively high levels of non-target background components. The extract was highly colored and viscous, which indicated the need to perform a dilution prior to injection into the instrument. The result(s) are flagged to indicate the matrix interference.

Method 8270E, 08/25/2025: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Semivolatile GC:

Method 8081B, 09/08/2025: The control limits were exceeded for analytes in the Continuing Calibration Verification (CCV). The QC failure was most likely due to the composition of the sample(s) immediately preceding the failing CCV. In order to protect the integrity of the instrument, no further corrective action was taken. Results should be considered estimated.

Method 8082A, 08/25/2025: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

General Chemistry:

No significant anomalies were noted with this analysis.



Approved by _____

Date 11/20/2025

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: 11117 SB02 (3-4)			Lab ID: R2510155-002			
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Analyte	Results	Flag	MDL	MRL	Units	Method
1-Methylnaphthalene	810	J	710	3800	ug/Kg	8270E
4,4'-DDD	15		1.5	2.9	ug/Kg	8081B
4,4'-DDE	73		1.5	2.9	ug/Kg	8081B
4,4'-DDT	6.4		1.5	2.9	ug/Kg	8081B
Acenaphthene	3600	J	730	3800	ug/Kg	8270E
alpha-Chlordane	8.6	P	1.5	2.9	ug/Kg	8081B
Anthracene	11000		640	3800	ug/Kg	8270E
Benz(a)anthracene	11000		570	3800	ug/Kg	8270E
Benzo(a)pyrene	10000		1100	3800	ug/Kg	8270E
Benzo(b)fluoranthene	10000		640	3800	ug/Kg	8270E
Benzo(g,h,i)perylene	4900		880	3800	ug/Kg	8270E
Benzo(k)fluoranthene	4200		620	3800	ug/Kg	8270E
Carbazole	3800		620	3800	ug/Kg	8270E
Chrysene	10000		570	3800	ug/Kg	8270E
Dibenz(a,h)anthracene	1100	J	830	3800	ug/Kg	8270E
Dibenzofuran	3700	J	700	3800	ug/Kg	8270E
Dieldrin	4.9		1.5	2.9	ug/Kg	8081B
Fluoranthene	32000		960	3800	ug/Kg	8270E
Fluorene	5600		720	3800	ug/Kg	8270E
gamma-Chlordane	8.1		1.5	2.9	ug/Kg	8081B
Indeno(1,2,3-cd)pyrene	5700		1300	3800	ug/Kg	8270E
Naphthalene	1600	J	720	3800	ug/Kg	8270E
Phenanthrene	32000		540	3800	ug/Kg	8270E
Pyrene	23000		640	3800	ug/Kg	8270E
Total Solids	85.8				Percent	ALS SOP

CLIENT ID: 11117 SB01 (1-2)			Lab ID: R2510155-001			
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Analyte	Results	Flag	MDL	MRL	Units	Method
4,4'-DDD	26		2.8	5.5	ug/Kg	8081B
4,4'-DDE	93		2.8	5.5	ug/Kg	8081B
4,4'-DDT	93		2.8	5.5	ug/Kg	8081B
alpha-Chlordane	5.0	J	2.8	5.5	ug/Kg	8081B
Benz(a)anthracene	110	J	100	670	ug/Kg	8270E
Benzo(b)fluoranthene	170	J	120	670	ug/Kg	8270E
Chrysene	140	J	99	670	ug/Kg	8270E
Fluoranthene	250	J	170	670	ug/Kg	8270E
gamma-Chlordane	6.0		2.8	5.5	ug/Kg	8081B
Pyrene	210	J	120	670	ug/Kg	8270E
Total Solids	89.2				Percent	ALS SOP



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: 11117 SB03 (5-6)			Lab ID: R2510155-003			
Analyte	Results	Flag	MDL	MRL	Units	Method
4,4'-DDE	7.0		2.8	5.5	ug/Kg	8081B
alpha-Chlordane	4.4	J	2.8	5.5	ug/Kg	8081B
gamma-Chlordane	3.6	J	2.8	5.5	ug/Kg	8081B
Total Solids	88.4				Percent	ALS SOP



Sample Receipt Information

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

Client: ALS Environmental - US
Project: 11117_Whithorn

Service Request:R2510155

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2510155-001	11117 SB01 (1-2)	8/12/2025	1305
R2510155-002	11117 SB02 (3-4)	8/12/2025	1315
R2510155-003	11117 SB03 (5-6)	8/12/2025	1335

ALS Group USA, Corp.

3352 128th Ave Holland Michigan 49424 United States
T+1 616 399 6070 | F



right solutions.
right partner.

Subcontract Chain of Custody

SAMPLING STATE:

COC ID: HN2511321

Subcontract To: Rochester - Environmental TEL: +1 585 288 5380 1565 Jefferson Road, Building 300, Suite 360 FAX: Rochester New York 14623				Due Date: 08/22/2025 Analysis Report Format: ALS Standard – Level II Electronic Data Deliverable:			
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Customer Information		Project Information		Parameter/Method Request for Analysis												
Purchase Order		Project Name	11117_Whithorn	A	EPA 8081B-3546-S (INT SUB)											
Work Order	HN2511321			B	EPA 8082A-3546-S (INT SUB)											
Company Name	Holland - Environmental	Bill To Company	Holland - Environmental	C	EPA 8151A-S (INT SUB)											
Send Report To	Bill Carey	Inv Attn	Accounts Payable	D	EPA 8270E-TCL-3546-S (INT SUB)											
Address	3352 128th Ave	Address	3352 128th Ave	E												
				F												
City/State/Zip	Holland Michigan 49424	City/State/Zip	Holland Michigan 49424	G												
Phone	+1 616 399 6070	Phone	+1 616 399 6070	H												
Fax		Fax		I												
Email Address	bill.carey@alsglobal.com			J												

ALS Sample ID	Client Sample ID	Matrix	Collection Date	Bottle	A	B	C	D	E	F	G	H	I	J
HN2511321-001	11117 SB01 (1-2)	Soil/Solid	08/12/2025 13:05	001-AD	x	x	x	x						
HN2511321-002	11117 SB02 (3-4)	Soil/Solid	08/12/2025 13:15	002-AD	x	x	x	x						
HN2511321-003	11117 SB03 (5-6)	Soil/Solid	08/12/2025 13:35	003-AD	x	x	x	x						

Relinquished by	Date Time	Received by <i>Yam</i>	Date Time <i>8/20/25 9:30</i>	Cooler ID's _____ _____ _____
Relinquished by	Date Time	Received by	Date Time	
Sampled by				





Cooler Receipt and Preservation Check Form

R2510155
ALS Environmental - Holland
11117 Whithorn

5



Project/Client _____ Folder Number _____

Cooler received on 8/20/25 by: RMCOURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>N</u>
2	Custody papers properly completed (ink, signed)?	<u>Y</u> N
3	Did all bottles arrive in good condition (unbroken)?	<u>Y</u> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<u>Y</u> N

5a	Did VOA vials have sig* bubbles?	Y N <u>NA</u>
5b	Sig* bubbles: Alk? Y N <u>NA</u> Sulfide? Y N <u>NA</u>	
6	Where did the bottles originate?	ALS/ROC <u>CLIENT</u>
7	Soil VOA received as: Bulk Encore 5035set	<u>NA</u>

8. Temperature Readings Date: 8/20/25 Time: 10:01 ID: IR#12 IR#11 From: Temp Blank Sample Bottle

Temp (°C)	<u>4.2</u>	<u>4.5</u>	<u>5.5</u>				
Within 0-6°C?	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: SMO by RM on 8/20 at 12:16

5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 8/20/25 Time: 15:15 by: MM9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO10. Did all bottle labels and tags agree with custody papers? YES NO11. Were correct containers used for the tests indicated? YES NO12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A13. Were dissolved metals filtered in the field? YES NO N/A14. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 062325-1SR

Explain all Discrepancies/ Other Comments: _____

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: MM

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed ($\geq 100\%$ Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Accreditations¹



NELAP States
Florida ID # E87674
New Hampshire ID # 2941
New York ID # 10145
Pennsylvania ID# 68-786
Texas ID#T104704581
Virginia #460167

Non-NELAP States
Connecticut ID #PH0556
Delaware Approved
Maine ID #NY01587
North Carolina #36701
North Carolina #676
Rhode Island LAO00333

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory. To verify NH accredited analytes, go to <https://www4.des.state.nh.us/CertifiedLabs/Certified-Method.aspx>.

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Analyst Summary report

Client: ALS Environmental - US
Project: 11117_Whithorn/

Service Request: R2510155

Sample Name: 11117 SB01 (1-2)
Lab Code: R2510155-001
Sample Matrix: Soil

Date Collected: 08/12/25
Date Received: 08/20/25

Analysis Method	Extracted/Digested By	Analyzed By
8081B	JVANHEYNINGEN	AFELSER
8082A	JVANHEYNINGEN	AFELSER
8151A	JVANHEYNINGEN	AFELSER
8270E	JVANHEYNINGEN	AMOSSES
ALS SOP		CKUTZER

Sample Name: 11117 SB02 (3-4)
Lab Code: R2510155-002
Sample Matrix: Soil

Date Collected: 08/12/25
Date Received: 08/20/25

Analysis Method	Extracted/Digested By	Analyzed By
8081B	JVANHEYNINGEN	AFELSER
8082A	JVANHEYNINGEN	AFELSER
8151A	JVANHEYNINGEN	AFELSER
8270E	JVANHEYNINGEN	AMOSSES
ALS SOP		CKUTZER

Sample Name: 11117 SB03 (5-6)
Lab Code: R2510155-003
Sample Matrix: Soil

Date Collected: 08/12/25
Date Received: 08/20/25

Analysis Method	Extracted/Digested By	Analyzed By
8081B	JVANHEYNINGEN	AFELSER
8082A	JVANHEYNINGEN	AFELSER
8151A	JVANHEYNINGEN	AFELSER
8270E	JVANHEYNINGEN	AMOSSES
ALS SOP		CKUTZER



PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

INORGANIC

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7 / 200.8	200.2
6010D	3005A/3010A
6020B	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-N-2016 Amenable and Residual Cyanide	SM 4500-CN-G and SM 4500-CN-B,C-2016
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010D	3050B
6010D TCLP (1311) extract	3005A/3010A
6010D SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

ORGANIC

Preparation Methods for Organic methods are listed in the header of the Results pages.

Regarding "Bulk/5035A":

For soil/solid samples submitted in soil jars for Volatiles analysis, the prep method is listed as "Bulk/5035A". The lab follows the closed-system EPA 5035A protocols once the sample is transferred to a sealed vial, but collection in bulk in soil jars does not follow the collection protocols listed in EPA 5035A. In accordance with the NYSDOH technical notice of October 2012, all results or reporting limits <200 ug/kg are to be considered estimated due to potential low bias.



Sample Results

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:05
Date Received: 08/20/25 09:30

Sample Name: 11117 SB01 (1-2)
Lab Code: R2510155-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1-Methylnaphthalene	130 U	670	130	1	08/21/25 18:35	8/21/25	
1,2,4,5-Tetrachlorobenzene	150 U	670	150	1	08/21/25 18:35	8/21/25	
2-Methylnaphthalene	240 U	670	240	1	08/21/25 18:35	8/21/25	
Acenaphthene	130 U	670	130	1	08/21/25 18:35	8/21/25	
Acenaphthylene	140 U	670	140	1	08/21/25 18:35	8/21/25	
Anthracene	120 U	670	120	1	08/21/25 18:35	8/21/25	
Benz(a)anthracene	110 J	670	100	1	08/21/25 18:35	8/21/25	
Benzo(a)pyrene	180 U	670	180	1	08/21/25 18:35	8/21/25	
Benzo(b)fluoranthene	170 J	670	120	1	08/21/25 18:35	8/21/25	
Benzo(g,h,i)perylene	160 U	670	160	1	08/21/25 18:35	8/21/25	
1,4-Dichlorobenzene	120 U	670	120	1	08/21/25 18:35	8/21/25	
Benzo(k)fluoranthene	110 U	670	110	1	08/21/25 18:35	8/21/25	
Biphenyl	200 U	670	200	1	08/21/25 18:35	8/21/25	
Chrysene	140 J	670	99	1	08/21/25 18:35	8/21/25	
Dibenz(a,h)anthracene	150 U	670	150	1	08/21/25 18:35	8/21/25	
1,4-Dioxane	66 U	140	66	1	08/21/25 18:35	8/21/25	
Dibenzofuran	130 U	670	130	1	08/21/25 18:35	8/21/25	
Fluoranthene	250 J	670	170	1	08/21/25 18:35	8/21/25	
Fluorene	130 U	670	130	1	08/21/25 18:35	8/21/25	
Indeno(1,2,3-cd)pyrene	220 U	670	220	1	08/21/25 18:35	8/21/25	
Naphthalene	130 U	670	130	1	08/21/25 18:35	8/21/25	
Phenanthrene	95 U	670	95	1	08/21/25 18:35	8/21/25	
Pyrene	210 J	670	120	1	08/21/25 18:35	8/21/25	
2,3,4,6-Tetrachlorophenol	240 U	670	240	1	08/21/25 18:35	8/21/25	
2,4,5-Trichlorophenol	170 U	670	170	1	08/21/25 18:35	8/21/25	
2,4,6-Trichlorophenol	150 U	670	150	1	08/21/25 18:35	8/21/25	
2,4-Dichlorophenol	130 U	670	130	1	08/21/25 18:35	8/21/25	
2,4-Dimethylphenol	120 U	670	120	1	08/21/25 18:35	8/21/25	
2,4-Dinitrophenol	1200 U	3500	1200	1	08/21/25 18:35	8/21/25	
2,4-Dinitrotoluene	260 U	670	260	1	08/21/25 18:35	8/21/25	
2,6-Dinitrotoluene	150 U	670	150	1	08/21/25 18:35	8/21/25	
2-Chloronaphthalene	140 U	670	140	1	08/21/25 18:35	8/21/25	
2-Chlorophenol	120 U	670	120	1	08/21/25 18:35	8/21/25	
2-Methylphenol	140 U	670	140	1	08/21/25 18:35	8/21/25	
2-Nitroaniline	160 U	3500	160	1	08/21/25 18:35	8/21/25	
2-Nitrophenol	160 U	670	160	1	08/21/25 18:35	8/21/25	
3,3'-Dichlorobenzidine	250 U	670	250	1	08/21/25 18:35	8/21/25	
3- and 4-Methylphenol Coelution	130 U	670	130	1	08/21/25 18:35	8/21/25	
3-Nitroaniline	140 U	3500	140	1	08/21/25 18:35	8/21/25	
4,6-Dinitro-2-methylphenol	380 U	3500	380	1	08/21/25 18:35	8/21/25	
4-Bromophenyl Phenyl Ether	180 U	670	180	1	08/21/25 18:35	8/21/25	
4-Chloro-3-methylphenol	140 U	670	140	1	08/21/25 18:35	8/21/25	
4-Chloroaniline	250 U	670	250	1	08/21/25 18:35	8/21/25	

ALS Group USA, Corp.
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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:05
Date Received: 08/20/25 09:30

Sample Name: 11117 SB01 (1-2)
Lab Code: R2510155-001

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4-Chlorophenyl Phenyl Ether	150 U	670	150	1	08/21/25 18:35	8/21/25	
4-Nitroaniline	150 U	3500	150	1	08/21/25 18:35	8/21/25	
4-Nitrophenol	350 U	3500	350	1	08/21/25 18:35	8/21/25	
Acetophenone	200 U	670	200	1	08/21/25 18:35	8/21/25	
Atrazine	200 U	670	200	1	08/21/25 18:35	8/21/25	
Benzaldehyde	170 U	3500	170	1	08/21/25 18:35	8/21/25	
Benzoic Acid	1100 U	3500	1100	1	08/21/25 18:35	8/21/25	
Bis(1-chloroisopropyl) Ether	140 U	670	140	1	08/21/25 18:35	8/21/25	
Bis(2-chloroethoxy)methane	170 U	670	170	1	08/21/25 18:35	8/21/25	
Bis(2-chloroethyl) Ether	140 U	670	140	1	08/21/25 18:35	8/21/25	
Bis(2-ethylhexyl) Phthalate	130 U	1000	130	1	08/21/25 18:35	8/21/25	
Butyl Benzyl Phthalate	200 U	670	200	1	08/21/25 18:35	8/21/25	
Caprolactam	150 U	670	150	1	08/21/25 18:35	8/21/25	
Carbazole	110 U	670	110	1	08/21/25 18:35	8/21/25	
Di-n-butyl Phthalate	110 U	670	110	1	08/21/25 18:35	8/21/25	
Di-n-octyl Phthalate	240 U	670	240	1	08/21/25 18:35	8/21/25	
Diethyl Phthalate	120 U	670	120	1	08/21/25 18:35	8/21/25	
Dimethyl Phthalate	130 U	670	130	1	08/21/25 18:35	8/21/25	
Hexachlorobenzene	170 U	670	170	1	08/21/25 18:35	8/21/25	
Hexachlorobutadiene	240 U	670	240	1	08/21/25 18:35	8/21/25	
Hexachlorocyclopentadiene	220 U	670	220	1	08/21/25 18:35	8/21/25	
Hexachloroethane	130 U	670	130	1	08/21/25 18:35	8/21/25	
Isophorone	140 U	670	140	1	08/21/25 18:35	8/21/25	
N-Nitrosodi-n-propylamine	210 U	670	210	1	08/21/25 18:35	8/21/25	
N-Nitrosodiphenylamine	420 U	670	420	1	08/21/25 18:35	8/21/25	
Nitrobenzene	120 U	670	120	1	08/21/25 18:35	8/21/25	
Pentachlorophenol (PCP)	670 U	3500	670	1	08/21/25 18:35	8/21/25	
Phenol	140 U	670	140	1	08/21/25 18:35	8/21/25	
Pyridine	90 U	3500	90	1	08/21/25 18:35	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	22	18 - 104	08/21/25 18:35	
Nitrobenzene-d5	21	12 - 98	08/21/25 18:35	
p-Terphenyl-d14	29	26 - 134	08/21/25 18:35	

ALS Group USA, Corp.
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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:15
Date Received: 08/20/25 09:30

Sample Name: 11117 SB02 (3-4)
Lab Code: R2510155-002

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	850 U	3800	850	10	08/25/25 11:02	8/21/25	
1-Methylnaphthalene	810 J	3800	710	10	08/25/25 11:02	8/21/25	
2-Methylnaphthalene	1400 U	3800	1400	10	08/25/25 11:02	8/21/25	
Acenaphthene	3600 J	3800	730	10	08/25/25 11:02	8/21/25	
Acenaphthylene	780 U	3800	780	10	08/25/25 11:02	8/21/25	
Anthracene	11000	3800	640	10	08/25/25 11:02	8/21/25	
Benz(a)anthracene	11000	3800	570	10	08/25/25 11:02	8/21/25	
Benzo(a)pyrene	10000	3800	1100	10	08/25/25 11:02	8/21/25	
Benzo(b)fluoranthene	10000	3800	640	10	08/25/25 11:02	8/21/25	
Benzo(g,h,i)perylene	4900	3800	880	10	08/25/25 11:02	8/21/25	
1,4-Dichlorobenzene	640 U	3800	640	10	08/25/25 11:02	8/21/25	
Benzo(k)fluoranthene	4200	3800	620	10	08/25/25 11:02	8/21/25	
Biphenyl	1200 U	3800	1200	10	08/25/25 11:02	8/21/25	
Chrysene	10000	3800	570	10	08/25/25 11:02	8/21/25	
1,4-Dioxane	380 U	780	380	10	08/25/25 11:02	8/21/25	
Dibenz(a,h)anthracene	1100 J	3800	830	10	08/25/25 11:02	8/21/25	
Dibenzofuran	3700 J	3800	700	10	08/25/25 11:02	8/21/25	
Fluoranthene	32000	3800	960	10	08/25/25 11:02	8/21/25	
Fluorene	5600	3800	720	10	08/25/25 11:02	8/21/25	
Indeno(1,2,3-cd)pyrene	5700	3800	1300	10	08/25/25 11:02	8/21/25	
Naphthalene	1600 J	3800	720	10	08/25/25 11:02	8/21/25	
Phenanthrene	32000	3800	540	10	08/25/25 11:02	8/21/25	
Pyrene	23000	3800	640	10	08/25/25 11:02	8/21/25	
2,3,4,6-Tetrachlorophenol	1400 U	3800	1400	10	08/25/25 11:02	8/21/25	
2,4,5-Trichlorophenol	950 U	3800	950	10	08/25/25 11:02	8/21/25	
2,4,6-Trichlorophenol	850 U	3800	850	10	08/25/25 11:02	8/21/25	
2,4-Dichlorophenol	740 U	3800	740	10	08/25/25 11:02	8/21/25	
2,4-Dimethylphenol	690 U	3800	690	10	08/25/25 11:02	8/21/25	
2,4-Dinitrophenol	6500 U	20000	6500	10	08/25/25 11:02	8/21/25	
2,4-Dinitrotoluene	1500 U	3800	1500	10	08/25/25 11:02	8/21/25	
2,6-Dinitrotoluene	840 U	3800	840	10	08/25/25 11:02	8/21/25	
2-Chloronaphthalene	770 U	3800	770	10	08/25/25 11:02	8/21/25	
2-Chlorophenol	640 U	3800	640	10	08/25/25 11:02	8/21/25	
2-Methylphenol	790 U	3800	790	10	08/25/25 11:02	8/21/25	
2-Nitroaniline	910 U	20000	910	10	08/25/25 11:02	8/21/25	
2-Nitrophenol	890 U	3800	890	10	08/25/25 11:02	8/21/25	
3,3'-Dichlorobenzidine	1400 U	3800	1400	10	08/25/25 11:02	8/21/25	
3- and 4-Methylphenol Coelution	730 U	3800	730	10	08/25/25 11:02	8/21/25	
3-Nitroaniline	770 U	20000	770	10	08/25/25 11:02	8/21/25	
4,6-Dinitro-2-methylphenol	2200 U	20000	2200	10	08/25/25 11:02	8/21/25	
4-Bromophenyl Phenyl Ether	1100 U	3800	1100	10	08/25/25 11:02	8/21/25	
4-Chloro-3-methylphenol	770 U	3800	770	10	08/25/25 11:02	8/21/25	
4-Chloroaniline	1400 U	3800	1400	10	08/25/25 11:02	8/21/25	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:15
Date Received: 08/20/25 09:30

Sample Name: 11117 SB02 (3-4)
Lab Code: R2510155-002

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4-Chlorophenyl Phenyl Ether	820 U	3800	820	10	08/25/25 11:02	8/21/25	
4-Nitroaniline	830 U	20000	830	10	08/25/25 11:02	8/21/25	
4-Nitrophenol	2000 U	20000	2000	10	08/25/25 11:02	8/21/25	
Acetophenone	1100 U	3800	1100	10	08/25/25 11:02	8/21/25	
Atrazine	1200 U	3800	1200	10	08/25/25 11:02	8/21/25	
Benzaldehyde	930 U	20000	930	10	08/25/25 11:02	8/21/25	
Benzoic Acid	6000 U	20000	6000	10	08/25/25 11:02	8/21/25	
Bis(1-chloroisopropyl) Ether	790 U	3800	790	10	08/25/25 11:02	8/21/25	
Bis(2-chloroethoxy)methane	940 U	3800	940	10	08/25/25 11:02	8/21/25	
Bis(2-chloroethyl) Ether	760 U	3800	760	10	08/25/25 11:02	8/21/25	
Bis(2-ethylhexyl) Phthalate	700 U	5800	700	10	08/25/25 11:02	8/21/25	
Butyl Benzyl Phthalate	1200 U	3800	1200	10	08/25/25 11:02	8/21/25	
Caprolactam	840 U	3800	840	10	08/25/25 11:02	8/21/25	
Carbazole	3800	3800	620	10	08/25/25 11:02	8/21/25	
Di-n-butyl Phthalate	620 U	3800	620	10	08/25/25 11:02	8/21/25	
Di-n-octyl Phthalate	1400 U	3800	1400	10	08/25/25 11:02	8/21/25	
Diethyl Phthalate	680 U	3800	680	10	08/25/25 11:02	8/21/25	
Dimethyl Phthalate	730 U	3800	730	10	08/25/25 11:02	8/21/25	
Hexachlorobenzene	920 U	3800	920	10	08/25/25 11:02	8/21/25	
Hexachlorobutadiene	1400 U	3800	1400	10	08/25/25 11:02	8/21/25	
Hexachlorocyclopentadiene	1300 U	3800	1300	10	08/25/25 11:02	8/21/25	
Hexachloroethane	720 U	3800	720	10	08/25/25 11:02	8/21/25	
Isophorone	800 U	3800	800	10	08/25/25 11:02	8/21/25	
N-Nitrosodi-n-propylamine	1200 U	3800	1200	10	08/25/25 11:02	8/21/25	
N-Nitrosodiphenylamine	2400 U	3800	2400	10	08/25/25 11:02	8/21/25	
Nitrobenzene	690 U	3800	690	10	08/25/25 11:02	8/21/25	
Pentachlorophenol (PCP)	3800 U	20000	3800	10	08/25/25 11:02	8/21/25	
Phenol	770 U	3800	770	10	08/25/25 11:02	8/21/25	
Pyridine	520 U	20000	520	10	08/25/25 11:02	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	68	18 - 104	08/25/25 11:02	
Nitrobenzene-d5	65	12 - 98	08/25/25 11:02	
p-Terphenyl-d14	82	26 - 134	08/25/25 11:02	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:35
Date Received: 08/20/25 09:30

Sample Name: 11117 SB03 (5-6)
Lab Code: R2510155-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	150 U	660	150	1	08/21/25 19:22	8/21/25	
1-Methylnaphthalene	130 U	660	130	1	08/21/25 19:22	8/21/25	
2-Methylnaphthalene	240 U	660	240	1	08/21/25 19:22	8/21/25	
Acenaphthene	130 U	660	130	1	08/21/25 19:22	8/21/25	
Acenaphthylene	140 U	660	140	1	08/21/25 19:22	8/21/25	
Anthracene	120 U	660	120	1	08/21/25 19:22	8/21/25	
Benz(a)anthracene	99 U	660	99	1	08/21/25 19:22	8/21/25	
Benzo(a)pyrene	180 U	660	180	1	08/21/25 19:22	8/21/25	
Benzo(b)fluoranthene	120 U	660	120	1	08/21/25 19:22	8/21/25	
Benzo(g,h,i)perylene	160 U	660	160	1	08/21/25 19:22	8/21/25	
1,4-Dichlorobenzene	120 U	660	120	1	08/21/25 19:22	8/21/25	
Benzo(k)fluoranthene	110 U	660	110	1	08/21/25 19:22	8/21/25	
Biphenyl	200 U	660	200	1	08/21/25 19:22	8/21/25	
Chrysene	98 U	660	98	1	08/21/25 19:22	8/21/25	
Dibenz(a,h)anthracene	150 U	660	150	1	08/21/25 19:22	8/21/25	
1,4-Dioxane	65 U	130	65	1	08/21/25 19:22	8/21/25	
Dibenzofuran	130 U	660	130	1	08/21/25 19:22	8/21/25	
Fluoranthene	170 U	660	170	1	08/21/25 19:22	8/21/25	
Fluorene	130 U	660	130	1	08/21/25 19:22	8/21/25	
Indeno(1,2,3-cd)pyrene	220 U	660	220	1	08/21/25 19:22	8/21/25	
Naphthalene	130 U	660	130	1	08/21/25 19:22	8/21/25	
Phenanthrene	94 U	660	94	1	08/21/25 19:22	8/21/25	
Pyrene	120 U	660	120	1	08/21/25 19:22	8/21/25	
2,3,4,6-Tetrachlorophenol	240 U	660	240	1	08/21/25 19:22	8/21/25	
2,4,5-Trichlorophenol	170 U	660	170	1	08/21/25 19:22	8/21/25	
2,4,6-Trichlorophenol	150 U	660	150	1	08/21/25 19:22	8/21/25	
2,4-Dichlorophenol	130 U	660	130	1	08/21/25 19:22	8/21/25	
2,4-Dimethylphenol	120 U	660	120	1	08/21/25 19:22	8/21/25	
2,4-Dinitrophenol	1200 U	3400	1200	1	08/21/25 19:22	8/21/25	
2,4-Dinitrotoluene	260 U	660	260	1	08/21/25 19:22	8/21/25	
2,6-Dinitrotoluene	150 U	660	150	1	08/21/25 19:22	8/21/25	
2-Chloronaphthalene	140 U	660	140	1	08/21/25 19:22	8/21/25	
2-Chlorophenol	120 U	660	120	1	08/21/25 19:22	8/21/25	
2-Methylphenol	140 U	660	140	1	08/21/25 19:22	8/21/25	
2-Nitroaniline	160 U	3400	160	1	08/21/25 19:22	8/21/25	
2-Nitrophenol	160 U	660	160	1	08/21/25 19:22	8/21/25	
3,3'-Dichlorobenzidine	250 U	660	250	1	08/21/25 19:22	8/21/25	
3- and 4-Methylphenol Coelution	130 U	660	130	1	08/21/25 19:22	8/21/25	
3-Nitroaniline	140 U	3400	140	1	08/21/25 19:22	8/21/25	
4,6-Dinitro-2-methylphenol	380 U	3400	380	1	08/21/25 19:22	8/21/25	
4-Bromophenyl Phenyl Ether	180 U	660	180	1	08/21/25 19:22	8/21/25	
4-Chloro-3-methylphenol	140 U	660	140	1	08/21/25 19:22	8/21/25	
4-Chloroaniline	250 U	660	250	1	08/21/25 19:22	8/21/25	

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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:35
Date Received: 08/20/25 09:30

Sample Name: 11117 SB03 (5-6)
Lab Code: R2510155-003

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4-Chlorophenyl Phenyl Ether	150 U	660	150	1	08/21/25 19:22	8/21/25	
4-Nitroaniline	150 U	3400	150	1	08/21/25 19:22	8/21/25	
4-Nitrophenol	350 U	3400	350	1	08/21/25 19:22	8/21/25	
Acetophenone	200 U	660	200	1	08/21/25 19:22	8/21/25	
Atrazine	200 U	660	200	1	08/21/25 19:22	8/21/25	
Benzaldehyde	170 U	3400	170	1	08/21/25 19:22	8/21/25	
Benzoic Acid	1100 U	3400	1100	1	08/21/25 19:22	8/21/25	
Bis(1-chloroisopropyl) Ether	140 U	660	140	1	08/21/25 19:22	8/21/25	
Bis(2-chloroethoxy)methane	170 U	660	170	1	08/21/25 19:22	8/21/25	
Bis(2-chloroethyl) Ether	140 U	660	140	1	08/21/25 19:22	8/21/25	
Bis(2-ethylhexyl) Phthalate	130 U	1000	130	1	08/21/25 19:22	8/21/25	
Butyl Benzyl Phthalate	200 U	660	200	1	08/21/25 19:22	8/21/25	
Caprolactam	150 U	660	150	1	08/21/25 19:22	8/21/25	
Carbazole	110 U	660	110	1	08/21/25 19:22	8/21/25	
Di-n-butyl Phthalate	110 U	660	110	1	08/21/25 19:22	8/21/25	
Di-n-octyl Phthalate	240 U	660	240	1	08/21/25 19:22	8/21/25	
Diethyl Phthalate	120 U	660	120	1	08/21/25 19:22	8/21/25	
Dimethyl Phthalate	130 U	660	130	1	08/21/25 19:22	8/21/25	
Hexachlorobenzene	160 U	660	160	1	08/21/25 19:22	8/21/25	
Hexachlorobutadiene	240 U	660	240	1	08/21/25 19:22	8/21/25	
Hexachlorocyclopentadiene	220 U	660	220	1	08/21/25 19:22	8/21/25	
Hexachloroethane	130 U	660	130	1	08/21/25 19:22	8/21/25	
Isophorone	140 U	660	140	1	08/21/25 19:22	8/21/25	
N-Nitrosodi-n-propylamine	210 U	660	210	1	08/21/25 19:22	8/21/25	
N-Nitrosodiphenylamine	420 U	660	420	1	08/21/25 19:22	8/21/25	
Nitrobenzene	120 U	660	120	1	08/21/25 19:22	8/21/25	
Pentachlorophenol (PCP)	660 U	3400	660	1	08/21/25 19:22	8/21/25	
Phenol	140 U	660	140	1	08/21/25 19:22	8/21/25	
Pyridine	90 U	3400	90	1	08/21/25 19:22	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	71	18 - 104	08/21/25 19:22	
Nitrobenzene-d5	66	12 - 98	08/21/25 19:22	
p-Terphenyl-d14	87	26 - 134	08/21/25 19:22	



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:05
Date Received: 08/20/25 09:30

Sample Name: 11117 SB01 (1-2)
Lab Code: R2510155-001

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	26	5.5	2.8	1	09/08/25 23:22	8/21/25	
4,4'-DDE	93	5.5	2.8	1	09/08/25 23:22	8/21/25	
4,4'-DDT	93	5.5	2.8	1	09/08/25 23:22	8/21/25	
Aldrin	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Chlordane	14 U	27	14	1	09/08/25 23:22	8/21/25	
Dieldrin	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Endosulfan I	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Endosulfan II	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Endosulfan Sulfate	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Endrin	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Endrin Aldehyde	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Endrin Ketone	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Heptachlor	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Heptachlor Epoxide	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Methoxychlor	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
Toxaphene	62 U	110	62	1	09/08/25 23:22	8/21/25	
alpha-BHC	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
alpha-Chlordane	5.0 J	5.5	2.8	1	09/08/25 23:22	8/21/25	
beta-BHC	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
delta-BHC	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
gamma-BHC (Lindane)	2.8 U	5.5	2.8	1	09/08/25 23:22	8/21/25	
gamma-Chlordane	6.0	5.5	2.8	1	09/08/25 23:22	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	87	10 - 159	09/08/25 23:22	
Tetrachloro-m-xylene	60	10 - 132	09/08/25 23:22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:15
Date Received: 08/20/25 09:30

Sample Name: 11117 SB02 (3-4)
Lab Code: R2510155-002

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	15	2.9	1.5	1	09/08/25 23:40	8/21/25	
4,4'-DDE	73	2.9	1.5	1	09/08/25 23:40	8/21/25	
4,4'-DDT	6.4	2.9	1.5	1	09/08/25 23:40	8/21/25	
Aldrin	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Chlordane	7.2 U	14	7.2	1	09/08/25 23:40	8/21/25	
Dieldrin	4.9	2.9	1.5	1	09/08/25 23:40	8/21/25	
Endosulfan I	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Endosulfan II	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Endosulfan Sulfate	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Endrin	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Endrin Aldehyde	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Endrin Ketone	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Heptachlor	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Heptachlor Epoxide	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Methoxychlor	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
Toxaphene	33 U	56	33	1	09/08/25 23:40	8/21/25	
alpha-BHC	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
alpha-Chlordane	8.6 P	2.9	1.5	1	09/08/25 23:40	8/21/25	
beta-BHC	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
delta-BHC	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
gamma-BHC (Lindane)	1.5 U	2.9	1.5	1	09/08/25 23:40	8/21/25	
gamma-Chlordane	8.1	2.9	1.5	1	09/08/25 23:40	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	61	10 - 159	09/08/25 23:40	
Tetrachloro-m-xylene	53	10 - 132	09/08/25 23:40	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:35
Date Received: 08/20/25 09:30

Sample Name: 11117 SB03 (5-6)
Lab Code: R2510155-003

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
4,4'-DDE	7.0	5.5	2.8	1	09/08/25 23:58	8/21/25	
4,4'-DDT	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Aldrin	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Chlordane	14 U	27	14	1	09/08/25 23:58	8/21/25	
Dieldrin	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Endosulfan I	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Endosulfan II	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Endosulfan Sulfate	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Endrin	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Endrin Aldehyde	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Endrin Ketone	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Heptachlor	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Heptachlor Epoxide	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Methoxychlor	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
Toxaphene	62 U	110	62	1	09/08/25 23:58	8/21/25	
alpha-BHC	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
alpha-Chlordane	4.4 J	5.5	2.8	1	09/08/25 23:58	8/21/25	
beta-BHC	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
delta-BHC	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
gamma-BHC (Lindane)	2.8 U	5.5	2.8	1	09/08/25 23:58	8/21/25	
gamma-Chlordane	3.6 J	5.5	2.8	1	09/08/25 23:58	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	86	10 - 159	09/08/25 23:58	
Tetrachloro-m-xylene	67	10 - 132	09/08/25 23:58	

ALS Group USA, Corp.
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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:05
Date Received: 08/20/25 09:30

Sample Name: 11117 SB01 (1-2)
Lab Code: R2510155-001

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	55 U	110	55	1	08/25/25 02:59	8/21/25	
Aroclor 1221	84 U	220	84	1	08/25/25 02:59	8/21/25	
Aroclor 1232	62 U	110	62	1	08/25/25 02:59	8/21/25	
Aroclor 1242	55 U	110	55	1	08/25/25 02:59	8/21/25	
Aroclor 1248	58 U	110	58	1	08/25/25 02:59	8/21/25	
Aroclor 1254	55 U	110	55	1	08/25/25 02:59	8/21/25	
Aroclor 1260	55 U	110	55	1	08/25/25 02:59	8/21/25	
Aroclor 1262	55 U	110	55	1	08/25/25 02:59	8/21/25	
Aroclor 1268	55 U	110	55	1	08/25/25 02:59	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	82	10 - 138	08/25/25 02:59	
Tetrachloro-m-xylene	61	11 - 122	08/25/25 02:59	

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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:15
Date Received: 08/20/25 09:30

Sample Name: 11117 SB02 (3-4)
Lab Code: R2510155-002

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	29 U	56	29	1	08/25/25 03:12	8/21/25	
Aroclor 1221	45 U	110	45	1	08/25/25 03:12	8/21/25	
Aroclor 1232	33 U	56	33	1	08/25/25 03:12	8/21/25	
Aroclor 1242	29 U	56	29	1	08/25/25 03:12	8/21/25	
Aroclor 1248	31 U	56	31	1	08/25/25 03:12	8/21/25	
Aroclor 1254	29 U	56	29	1	08/25/25 03:12	8/21/25	
Aroclor 1260	29 U	56	29	1	08/25/25 03:12	8/21/25	
Aroclor 1262	29 U	56	29	1	08/25/25 03:12	8/21/25	
Aroclor 1268	29 U	56	29	1	08/25/25 03:12	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	60	10 - 138	08/25/25 03:12	
Tetrachloro-m-xylene	48	11 - 122	08/25/25 03:12	

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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:35
Date Received: 08/20/25 09:30

Sample Name: 11117 SB03 (5-6)
Lab Code: R2510155-003

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	56 U	110	56	1	08/25/25 03:26	8/21/25	
Aroclor 1221	85 U	220	85	1	08/25/25 03:26	8/21/25	
Aroclor 1232	62 U	110	62	1	08/25/25 03:26	8/21/25	
Aroclor 1242	56 U	110	56	1	08/25/25 03:26	8/21/25	
Aroclor 1248	59 U	110	59	1	08/25/25 03:26	8/21/25	
Aroclor 1254	56 U	110	56	1	08/25/25 03:26	8/21/25	
Aroclor 1260	56 U	110	56	1	08/25/25 03:26	8/21/25	
Aroclor 1262	56 U	110	56	1	08/25/25 03:26	8/21/25	
Aroclor 1268	56 U	110	56	1	08/25/25 03:26	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	79	10 - 138	08/25/25 03:26	
Tetrachloro-m-xylene	63	11 - 122	08/25/25 03:26	

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dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:05
Date Received: 08/20/25 09:30

Sample Name: 11117 SB01 (1-2)
Lab Code: R2510155-001

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	14 U	28	14	1	08/26/25 23:14	8/22/25	
2,4,5-TP	13 U	28	13	1	08/26/25 23:14	8/22/25	
2,4-D	18 U	28	18	1	08/26/25 23:14	8/22/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	42	10 - 151	08/26/25 23:14	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:15
Date Received: 08/20/25 09:30

Sample Name: 11117 SB02 (3-4)
Lab Code: R2510155-002

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	5.8 U	12	5.8	1	08/26/25 23:32	8/22/25	
2,4,5-TP	5.2 U	12	5.2	1	08/26/25 23:32	8/22/25	
2,4-D	7.5 U	12	7.5	1	08/26/25 23:32	8/22/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	121	10 - 151	08/26/25 23:32	

ALS Group USA, Corp.
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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: 08/12/25 13:35
Date Received: 08/20/25 09:30

Sample Name: 11117 SB03 (5-6)
Lab Code: R2510155-003

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	5.6 U	11	5.6	1	08/26/25 23:51	8/22/25	
2,4,5-TP	5.1 U	11	5.1	1	08/26/25 23:51	8/22/25	
2,4-D	7.3 U	11	7.3	1	08/26/25 23:51	8/22/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	46	10 - 151	08/26/25 23:51	



General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Sample Name: 11117 SB01 (1-2)
Lab Code: R2510155-001

Service Request: R2510155
Date Collected: 08/12/25 13:05
Date Received: 08/20/25 09:30

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	89.2	Percent	-	-	1	08/29/25 10:00	

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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Sample Name: 11117 SB02 (3-4)
Lab Code: R2510155-002

Service Request: R2510155
Date Collected: 08/12/25 13:15
Date Received: 08/20/25 09:30

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	85.8	Percent	-	-	1	08/29/25 10:00	

ALS Group USA, Corp.
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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Sample Name: 11117 SB03 (5-6)
Lab Code: R2510155-003

Service Request: R2510155
Date Collected: 08/12/25 13:35
Date Received: 08/20/25 09:30

Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	88.4	Percent	-	-	1	08/29/25 10:00	



QC Summary Forms

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Semivolatile Organic Compounds by GC/MS

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QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155

SURROGATE RECOVERY SUMMARY

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Extraction Method: EPA 3546

Sample Name	Lab Code	2-Fluorobiphenyl	Nitrobenzene-d5	p-Terphenyl-d14
		18 - 104	12 - 98	26 - 134
11117 SB01 (1-2)	R2510155-001	22	21	29
11117 SB02 (3-4)	R2510155-002	68	65	82
11117 SB03 (5-6)	R2510155-003	71	66	87
Method Blank	RQ2511066-01	54	51	70
Lab Control Sample	RQ2511066-02	61	52	75
Duplicate Lab Control Sample	RQ2511066-03	58	50	74

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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2511066-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	74 U	330	74	1	08/21/25 13:25	8/21/25	
1-Methylnaphthalene	61 U	330	61	1	08/21/25 13:25	8/21/25	
2-Methylnaphthalene	120 U	330	120	1	08/21/25 13:25	8/21/25	
Acenaphthene	63 U	330	63	1	08/21/25 13:25	8/21/25	
Acenaphthylene	67 U	330	67	1	08/21/25 13:25	8/21/25	
Anthracene	55 U	330	55	1	08/21/25 13:25	8/21/25	
Benz(a)anthracene	49 U	330	49	1	08/21/25 13:25	8/21/25	
Benzo(a)pyrene	88 U	330	88	1	08/21/25 13:25	8/21/25	
Benzo(b)fluoranthene	55 U	330	55	1	08/21/25 13:25	8/21/25	
Benzo(g,h,i)perylene	76 U	330	76	1	08/21/25 13:25	8/21/25	
Benzo(k)fluoranthene	54 U	330	54	1	08/21/25 13:25	8/21/25	
1,4-Dichlorobenzene	55 U	330	55	1	08/21/25 13:25	8/21/25	
Biphenyl	98 U	330	98	1	08/21/25 13:25	8/21/25	
Chrysene	49 U	330	49	1	08/21/25 13:25	8/21/25	
Dibenz(a,h)anthracene	72 U	330	72	1	08/21/25 13:25	8/21/25	
1,4-Dioxane	32 U	67	32	1	08/21/25 13:25	8/21/25	
Dibenzofuran	60 U	330	60	1	08/21/25 13:25	8/21/25	
Fluoranthene	83 U	330	83	1	08/21/25 13:25	8/21/25	
Fluorene	62 U	330	62	1	08/21/25 13:25	8/21/25	
Indeno(1,2,3-cd)pyrene	110 U	330	110	1	08/21/25 13:25	8/21/25	
Naphthalene	62 U	330	62	1	08/21/25 13:25	8/21/25	
Phenanthrene	47 U	330	47	1	08/21/25 13:25	8/21/25	
Pyrene	55 U	330	55	1	08/21/25 13:25	8/21/25	
2,3,4,6-Tetrachlorophenol	120 U	330	120	1	08/21/25 13:25	8/21/25	
2,4,5-Trichlorophenol	82 U	330	82	1	08/21/25 13:25	8/21/25	
2,4,6-Trichlorophenol	74 U	330	74	1	08/21/25 13:25	8/21/25	
2,4-Dichlorophenol	64 U	330	64	1	08/21/25 13:25	8/21/25	
2,4-Dimethylphenol	59 U	330	59	1	08/21/25 13:25	8/21/25	
2,4-Dinitrophenol	560 U	1700	560	1	08/21/25 13:25	8/21/25	
2,4-Dinitrotoluene	130 U	330	130	1	08/21/25 13:25	8/21/25	
2,6-Dinitrotoluene	72 U	330	72	1	08/21/25 13:25	8/21/25	
2-Chloronaphthalene	66 U	330	66	1	08/21/25 13:25	8/21/25	
2-Chlorophenol	55 U	330	55	1	08/21/25 13:25	8/21/25	
2-Methylphenol	69 U	330	69	1	08/21/25 13:25	8/21/25	
2-Nitroaniline	78 U	1700	78	1	08/21/25 13:25	8/21/25	
2-Nitrophenol	77 U	330	77	1	08/21/25 13:25	8/21/25	
3,3'-Dichlorobenzidine	120 U	330	120	1	08/21/25 13:25	8/21/25	
3- and 4-Methylphenol Coelution	63 U	330	63	1	08/21/25 13:25	8/21/25	
3-Nitroaniline	67 U	1700	67	1	08/21/25 13:25	8/21/25	
4,6-Dinitro-2-methylphenol	190 U	1700	190	1	08/21/25 13:25	8/21/25	
4-Bromophenyl Phenyl Ether	87 U	330	87	1	08/21/25 13:25	8/21/25	
4-Chloro-3-methylphenol	67 U	330	67	1	08/21/25 13:25	8/21/25	
4-Chloroaniline	120 U	330	120	1	08/21/25 13:25	8/21/25	

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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2511066-01

Units: ug/Kg
Basis: Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4-Chlorophenyl Phenyl Ether	71 U	330	71	1	08/21/25 13:25	8/21/25	
4-Nitroaniline	71 U	1700	71	1	08/21/25 13:25	8/21/25	
4-Nitrophenol	170 U	1700	170	1	08/21/25 13:25	8/21/25	
Acetophenone	95 U	330	95	1	08/21/25 13:25	8/21/25	
Atrazine	98 U	330	98	1	08/21/25 13:25	8/21/25	
Benzaldehyde	80 U	1700	80	1	08/21/25 13:25	8/21/25	
Benzoic Acid	520 U	1700	520	1	08/21/25 13:25	8/21/25	
Bis(1-chloroisopropyl) Ether	68 U	330	68	1	08/21/25 13:25	8/21/25	
Bis(2-chloroethoxy)methane	81 U	330	81	1	08/21/25 13:25	8/21/25	
Bis(2-chloroethyl) Ether	65 U	330	65	1	08/21/25 13:25	8/21/25	
Bis(2-ethylhexyl) Phthalate	61 U	500	61	1	08/21/25 13:25	8/21/25	
Butyl Benzyl Phthalate	96 U	330	96	1	08/21/25 13:25	8/21/25	
Caprolactam	73 U	330	73	1	08/21/25 13:25	8/21/25	
Carbazole	54 U	330	54	1	08/21/25 13:25	8/21/25	
Di-n-butyl Phthalate	54 U	330	54	1	08/21/25 13:25	8/21/25	
Di-n-octyl Phthalate	120 U	330	120	1	08/21/25 13:25	8/21/25	
Diethyl Phthalate	59 U	330	59	1	08/21/25 13:25	8/21/25	
Dimethyl Phthalate	63 U	330	63	1	08/21/25 13:25	8/21/25	
Hexachlorobenzene	79 U	330	79	1	08/21/25 13:25	8/21/25	
Hexachlorobutadiene	120 U	330	120	1	08/21/25 13:25	8/21/25	
Hexachlorocyclopentadiene	110 U	330	110	1	08/21/25 13:25	8/21/25	
Hexachloroethane	62 U	330	62	1	08/21/25 13:25	8/21/25	
Isophorone	69 U	330	69	1	08/21/25 13:25	8/21/25	
N-Nitrosodi-n-propylamine	110 U	330	110	1	08/21/25 13:25	8/21/25	
N-Nitrosodiphenylamine	210 U	330	210	1	08/21/25 13:25	8/21/25	
Nitrobenzene	59 U	330	59	1	08/21/25 13:25	8/21/25	
Pentachlorophenol (PCP)	330 U	1700	330	1	08/21/25 13:25	8/21/25	
Phenol	67 U	330	67	1	08/21/25 13:25	8/21/25	
Pyridine	45 U	1700	45	1	08/21/25 13:25	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	54	18 - 104	08/21/25 13:25	
Nitrobenzene-d5	51	12 - 98	08/21/25 13:25	
p-Terphenyl-d14	70	26 - 134	08/21/25 13:25	

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QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Analyzed: 08/21/25

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2511066-02					Duplicate Lab Control Sample RQ2511066-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	8270E	1630	3320	49	1740	3330	52	29-100	6	30
1,2,4,5-Tetrachlorobenzene	8270E	1830	3320	55	1650	3330	49	20-126	10	30
2-Methylnaphthalene	8270E	1540	3320	46	1660	3330	50	29-99	7	30
Acenaphthene	8270E	1850	3320	56	1990	3330	60	41-110	7	30
Acenaphthylene	8270E	2090	3320	63	2230	3330	67	44-122	6	30
Anthracene	8270E	1950	3320	59	2070	3330	62	41-123	6	30
Benz(a)anthracene	8270E	1990	3320	60	2140	3330	64	44-116	8	30
Benzo(a)pyrene	8270E	2270	3320	68	2420	3330	73	56-146	7	30
Benzo(b)fluoranthene	8270E	1860	3320	56	2000	3330	60	47-120	7	30
Benzo(g,h,i)perylene	8270E	1920	3320	58	2060	3330	62	41-129	7	30
Benzo(k)fluoranthene	8270E	2020	3320	61	2170	3330	65	49-124	7	30
1,4-Dichlorobenzene	8270E	1430	3320	43	1610	3330	48	16-83	12	30
Biphenyl	8270E	1920	3320	58	1720	3330	52	24-112	11	30
Chrysene	8270E	2030	3320	61	2180	3330	65	44-119	7	30
1,4-Dioxane	8270E	1070	3320	32	1050	3330	32	10-58	2	30
Dibenz(a,h)anthracene	8270E	2030	3320	61	2160	3330	65	18-146	6	30
Dibenzofuran	8270E	1940	3320	58	2070	3330	62	43-113	7	30
Fluoranthene	8270E	2000	3320	60	2140	3330	64	39-128	6	30
Fluorene	8270E	1960	3320	59	2070	3330	62	40-117	5	30
Indeno(1,2,3-cd)pyrene	8270E	2120	3320	64	2290	3330	69	43-129	8	30
Naphthalene	8270E	1550	3320	47	1660	3330	50	31-93	7	30
Phenanthrene	8270E	1810	3320	54	1920	3330	58	39-120	6	30
Pyrene	8270E	1960	3320	59	2130	3330	64	45-125	8	30
2,3,4,6-Tetrachlorophenol	8270E	2300	3320	69	2440	3330	73	42-117	6	30
2,4,5-Trichlorophenol	8270E	2080	3320	63	2180	3330	66	40-114	5	30
2,4,6-Trichlorophenol	8270E	1970	3320	59	2130	3330	64	33-108	8	30
2,4-Dichlorophenol	8270E	1820	3320	55	1930	3330	58	30-103	6	30
2,4-Dimethylphenol	8270E	1810	3320	54	1900	3330	57	32-100	5	30
2,4-Dinitrophenol	8270E	1540 J	3320	46	1700 J	3330	51	10-97	9	30
2,4-Dinitrotoluene	8270E	2060	3320	62	2210	3330	67	53-120	7	30
2,6-Dinitrotoluene	8270E	2060	3320	62	2220	3330	67	48-119	7	30
2-Chloronaphthalene	8270E	1850	3320	56	1980	3330	60	33-103	7	30
2-Chlorophenol	8270E	1780	3320	53	1910	3330	57	26-90	7	30

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QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Analyzed: 08/21/25

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2511066-02					Duplicate Lab Control Sample RQ2511066-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2-Methylphenol	8270E	1950	3320	59	2080	3330	63	33-99	7	30
2-Nitroaniline	8270E	1970	3320	59	2110	3330	63	41-119	7	30
2-Nitrophenol	8270E	1660	3320	50	1780	3330	53	24-98	7	30
3- and 4-Methylphenol Coelution	8270E	2030	3320	61	2210	3330	66	32-100	9	30
3-Nitroaniline	8270E	1700	3320	51	1750	3330	53	29-105	3	30
4,6-Dinitro-2-methylphenol	8270E	1960	3320	59	2110	3330	64	20-105	7	30
4-Bromophenyl Phenyl Ether	8270E	2000	3320	60	2130	3330	64	37-116	7	30
4-Chloro-3-methylphenol	8270E	1900	3320	57	2000	3330	60	40-116	5	30
4-Chloroaniline	8270E	1330	3320	40	1230	3330	37	10-87	8	30
4-Chlorophenyl Phenyl Ether	8270E	1920	3320	58	2050	3330	62	42-111	6	30
4-Nitroaniline	8270E	1600 J	3320	48	1880	3330	57	43-120	16	30
4-Nitrophenol	8270E	1760	3320	53	1810	3330	54	34-116	2	30
Acetophenone	8270E	1830	3320	55	1640	3330	49	23-87	11	30
Benzoic Acid	8270E	1960	3320	59	2120	3330	64	10-126	8	30
Bis(1-chloroisopropyl) Ether	8270E	1760	3320	53	1930	3330	58	22-99	9	30
Bis(2-chloroethoxy)methane	8270E	1820	3320	55	1930	3330	58	38-119	6	30
Bis(2-chloroethyl) Ether	8270E	1630	3320	49	1780	3330	53	23-94	9	30
Bis(2-ethylhexyl) Phthalate	8270E	2190	3320	66	2370	3330	71	38-139	8	30
Butyl Benzyl Phthalate	8270E	2080	3320	63	2240	3330	67	40-134	8	30
Caprolactam	8270E	1890	3320	57	1630	3330	49	21-128	15	30
Carbazole	8270E	1960	3320	59	2140	3330	64	42-131	9	30
Di-n-butyl Phthalate	8270E	2170	3320	65	2340	3330	70	42-141	8	30
Di-n-octyl Phthalate	8270E	2290	3320	69	2470	3330	74	38-143	8	30
Diethyl Phthalate	8270E	1980	3320	60	2100	3330	63	43-118	6	30
Dimethyl Phthalate	8270E	1990	3320	60	2140	3330	64	40-118	7	30
Hexachlorobenzene	8270E	1940	3320	59	2070	3330	62	35-122	6	30
Hexachlorobutadiene	8270E	1510	3320	45	1650	3330	49	28-96	9	30
Hexachlorocyclopentadiene	8270E	1670	3320	50	1850	3330	55	10-111	10	30
Hexachloroethane	8270E	1460	3320	44	1660	3330	50	18-85	13	30
Isophorone	8270E	1800	3320	54	1920	3330	58	39-104	6	30
N-Nitrosodi-n-propylamine	8270E	1790	3320	54	1910	3330	57	30-98	7	30
N-Nitrosodiphenylamine	8270E	2220	3320	67	2380	3330	72	43-130	7	30
Nitrobenzene	8270E	1640	3320	49	1760	3330	53	31-99	7	30

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QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Analyzed: 08/21/25

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis:Dry

Analyte Name	Lab Control Sample				Duplicate Lab Control Sample					
	RQ2511066-02				RQ2511066-03					
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Pentachlorophenol (PCP)	8270E	1680 J	3320	51	1770	3330	53	36-138	5	30
Phenol	8270E	1850	3320	56	1980	3330	60	31-100	7	30
Pyridine	8270E	2760	6640	42	2910	6660	44	12-80	5	30



Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory

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QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155

SURROGATE RECOVERY SUMMARY

Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10 - 159	10 - 132
11117 SB01 (1-2)	R2510155-001	87	60
11117 SB02 (3-4)	R2510155-002	61	53
11117 SB03 (5-6)	R2510155-003	86	67
Method Blank	RQ2511079-01	64	54
Lab Control Sample	RQ2511079-02	68	61
Duplicate Lab Control Sample	RQ2511079-03	69	58

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Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2511079-01

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
4,4'-DDD	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
4,4'-DDE	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
4,4'-DDT	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Aldrin	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Chlordane	4.2 U	8.3	4.2	1	08/25/25 12:41	8/21/25	
Dieldrin	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Endosulfan I	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Endosulfan II	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Endosulfan Sulfate	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Endrin	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Endrin Aldehyde	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Endrin Ketone	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Heptachlor	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Heptachlor Epoxide	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Methoxychlor	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
Toxaphene	19 U	33	19	1	08/25/25 12:41	8/21/25	
alpha-BHC	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
alpha-Chlordane	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
beta-BHC	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
delta-BHC	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
gamma-BHC (Lindane)	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	
gamma-Chlordane	0.84 U	1.7	0.84	1	08/25/25 12:41	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	64	10 - 159	08/25/25 12:41	
Tetrachloro-m-xylene	54	10 - 132	08/25/25 12:41	

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dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Analyzed: 08/25/25

Duplicate Lab Control Sample Summary
Organochlorine Pesticides by Gas Chromatography using Microwave Extraction

Units:ug/Kg
Basis:Dry

Lab Control Sample RQ2511079-02					Duplicate Lab Control Sample RQ2511079-03					
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
4,4'-DDD	8081B	5.86	6.57	89	5.89	6.64	89	48-121	<1	30
4,4'-DDE	8081B	5.52	6.57	84	5.24	6.64	79	51-119	5	30
4,4'-DDT	8081B	6.01	6.57	92	6.09	6.64	92	51-126	1	30
Aldrin	8081B	4.95	6.57	75	4.64	6.64	70	45-109	6	30
Dieldrin	8081B	5.28	6.57	80	5.11	6.64	77	56-111	3	30
Endosulfan I	8081B	4.60	6.57	70	4.55	6.64	68	54-109	1	30
Endosulfan II	8081B	5.12	6.57	78	5.16	6.64	78	50-116	<1	30
Endosulfan Sulfate	8081B	5.30	6.57	81	5.31	6.64	80	55-115	<1	30
Endrin	8081B	5.41	6.57	82	5.24	6.64	79	49-124	3	30
Endrin Aldehyde	8081B	5.42	6.57	83	5.44	6.64	82	21-139	<1	30
Endrin Ketone	8081B	5.52	6.57	84	5.44	6.64	82	50-124	1	30
Heptachlor	8081B	5.17	6.57	79	4.88	6.64	73	43-115	6	30
Heptachlor Epoxide	8081B	5.38	6.57	82	5.07	6.64	76	53-113	6	30
Methoxychlor	8081B	6.41	6.57	98	6.17	6.64	93	47-141	4	30
alpha-BHC	8081B	5.00	6.57	76	4.55	6.64	68	44-109	10	30
alpha-Chlordane	8081B	5.23	6.57	80	5.09	6.64	77	52-114	3	30
beta-BHC	8081B	5.76	6.57	88	5.22	6.64	79	49-119	10	30
delta-BHC	8081B	5.50	6.57	84	5.32	6.64	80	49-113	3	30
gamma-BHC (Lindane)	8081B	4.88	6.57	74	4.55	6.64	69	43-112	7	30
gamma-Chlordane	8081B	5.37	6.57	82	5.12	6.64	77	51-117	5	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Analysis Method: 8082A
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10 - 138	11 - 122
11117 SB01 (1-2)	R2510155-001	82	61
11117 SB02 (3-4)	R2510155-002	60	48
11117 SB03 (5-6)	R2510155-003	79	63
Method Blank	RQ2511079-01	71	54
Lab Control Sample	RQ2511079-04	77	65
Duplicate Lab Control Sample	RQ2511079-05	84	62

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2511079-01

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	17 U	32	17	1	08/24/25 23:50	8/21/25	
Aroclor 1221	26 U	66	26	1	08/24/25 23:50	8/21/25	
Aroclor 1232	19 U	32	19	1	08/24/25 23:50	8/21/25	
Aroclor 1242	17 U	32	17	1	08/24/25 23:50	8/21/25	
Aroclor 1248	18 U	32	18	1	08/24/25 23:50	8/21/25	
Aroclor 1254	17 U	32	17	1	08/24/25 23:50	8/21/25	
Aroclor 1260	17 U	32	17	1	08/24/25 23:50	8/21/25	
Aroclor 1262	17 U	32	17	1	08/24/25 23:50	8/21/25	
Aroclor 1268	17 U	32	17	1	08/24/25 23:50	8/21/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	71	10 - 138	08/24/25 23:50	
Tetrachloro-m-xylene	54	11 - 122	08/24/25 23:50	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Analyzed: 08/25/25

Duplicate Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs) by GC using Microwave Extraction

Units:ug/Kg
Basis:Dry

			Lab Control Sample			Duplicate Lab Control Sample				
			RQ2511079-04			RQ2511079-05				
Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aroclor 1016	8082A	131	166	79	126	166	76	34-141	4	30
Aroclor 1260	8082A	140	166	85	144	166	87	30-158	3	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	DCAA
		10 - 151
11117 SB01 (1-2)	R2510155-001	42
11117 SB02 (3-4)	R2510155-002	121 P
11117 SB03 (5-6)	R2510155-003	46
Method Blank	RQ2511152-01	63
Lab Control Sample	RQ2511152-02	59
Duplicate Lab Control Sample	RQ2511152-03	65

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2511152-01

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	5.0 U	9.9	5.0	1	08/26/25 19:16	8/22/25	
2,4,5-TP	4.5 U	9.9	4.5	1	08/26/25 19:16	8/22/25	
2,4-D	6.5 U	9.9	6.5	1	08/26/25 19:16	8/22/25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	63	10 - 151	08/26/25 19:16	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: 11117_Whithorn
Sample Matrix: Soil

Service Request: R2510155
Date Analyzed: 08/26/25

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Units:ug/Kg
Basis:Dry

Lab Control Sample
RQ2511152-02

Duplicate Lab Control Sample
RQ2511152-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-T	8151A	16.3	25.0	65	19.0	25.2	75	19-127	15	30
2,4,5-TP	8151A	13.9	25.0	56	16.4	25.2	65	18-122	16	30
2,4-D	8151A	12.7	25.0	51	14.7	25.2	58	31-119	15	30



right solutions.
right partner.

October 20, 2025

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

Re: **DETR0060**

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

Work Order: **HN2515069**

Dear Ryan,

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

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

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

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

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

Dale Schipper

/S/ DALE SCHIPPER

Project Manager



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

Work Order: HN2515069
Date Received: 10-Oct-2025

CASE NARRATIVE

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

Sample Receipt

1 soil/solid sample was received for analysis at ALS Environmental on 10-Oct-2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Organics

EPA 8270E-3510LV-TCLP

Run ID: 3605330

The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: 3&4-Methylphenol.

SAMPLE SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Workorder: HN2515069

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2515069-001	11117 Whithorn SB01,2,3 TCLP	SOIL/SOLID	10/09/25 13:00	10/10/25 07:00

REPORT QUALIFIERS AND DEFINITIONS

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

Holland Laboratory Certifications¹

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

¹ - Scope available upon request

Analytical Report



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

Work Order: HN2515069
Date Collected: 10/09/25 13:00
Date Received: 10/10/25 07:00

CLIENT ID: 11117 Whithorn SB01,2,3 TCLP

Lab ID: HN2515069-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
TCLP Metals								
Arsenic	EPA 6020B	<0.00190	U	mg/L	0.0499	1	10/17/25 00:33	10/16/25 10:34
Chromium	EPA 6020B	<0.00610	U	mg/L	0.0499	1	10/17/25 00:33	10/16/25 10:34
TCLP Semivolatile Organic Compounds by GC-MS								
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8270E	<4.44	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
2,4,5-Trichlorophenol	EPA 8270E	<6.70	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
2,4,6-Trichlorophenol	EPA 8270E	<9.20	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<4.44	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
2-Methylphenol (o-Cresol)	EPA 8270E	<4.38	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
3&4-Methylphenol	EPA 8270E	<6.60	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
Hexachlorobenzene	EPA 8270E	<4.08	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
Hexachlorobutadiene	EPA 8270E	<4.52	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
Hexachloroethane	EPA 8270E	<6.15	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
Nitrobenzene	EPA 8270E	<4.24	U	µg/L	20.0	1	10/18/25 08:30	10/16/25 10:48
Pentachlorophenol	EPA 8270E	<36.8	U	µg/L	50.0	1	10/18/25 08:30	10/16/25 10:48
Pyridine	EPA 8270E	<12.9	U	µg/L	100	1	10/18/25 08:30	10/16/25 10:48
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	60.4		%REC	38-116	1	10/18/25 08:30	10/16/25 10:48
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	50.8		%REC	30-101	1	10/18/25 08:30	10/16/25 10:48
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	53.0		%REC	22-78	1	10/18/25 08:30	10/16/25 10:48
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	64.3		%REC	37-99	1	10/18/25 08:30	10/16/25 10:48
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	61.6		%REC	28-102	1	10/18/25 08:30	10/16/25 10:48
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	41.6		%REC	18-55	1	10/18/25 08:30	10/16/25 10:48



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2278706

Work Order: HN2515069
Date Collected: NA
Date Received: NA
Run ID: 3595179

TCLP Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2278706-001
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Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 10/17/25 00:06
Prep Date: 10/16/25 10:35

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

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2278706-002
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Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 10/17/25 00:08
Prep Date: 10/16/25 10:35

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	Rec Limits	RPD	RPD Limit	Qual
Arsenic	1.05	mg/L	0.0499	1		105	80-120			
Chromium	1.01	mg/L	0.0499	1		101	80-120			

The following samples were analyzed in this batch: HN2515069-001



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2278925

Work Order: HN2515069
Date Collected: NA
Date Received: NA
Run ID: 3604331

TCLP Semivolatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-MRG2-2278925001
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/17/25 14:51

Prep Date: 10/16/25 10:49

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,4-Dichlorobenzene (p-Dichlorobenzene)	<0.889	µg/L	4.00							U
2,4,5-Trichlorophenol	<1.34	µg/L	4.00							U
2,4,6-Trichlorophenol	<1.84	µg/L	4.00							U
2,4-Dinitrotoluene (2,4-DNT)	<0.889	µg/L	4.00							U
2-Methylphenol (o-Cresol)	<0.877	µg/L	4.00							U
3&4-Methylphenol	<1.32	µg/L	4.00							U
Hexachlorobenzene	<0.816	µg/L	4.00							U
Hexachlorobutadiene	<0.903	µg/L	4.00							U
Hexachloroethane	<1.23	µg/L	4.00							U
Nitrobenzene	<0.847	µg/L	4.00							U
Pentachlorophenol	<7.37	µg/L	10.0							U
Pyridine	<2.58	µg/L	20.0							U
Surr: 2,4,6-Tribromophenol	124	µg/L		200		62.0	38-116			
Surr: 2-Fluorobiphenyl	112	µg/L		200		56.2	30-101			
Surr: 2-Fluorophenol	120	µg/L		200		60.0	22-78			
Surr: 4-Terphenyl-d14	139	µg/L		200		69.4	37-99			
Surr: Nitrobenzene-d5	141	µg/L		200		70.6	28-102			
Surr: Phenol-d6	89.1	µg/L		200		44.5	18-55			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-MRG2-2278925002
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/17/25 15:18

Prep Date: 10/16/25 10:49

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,4-Dichlorobenzene (p-Dichlorobenzene)	51.1	µg/L	4.00	80		63.9	21-108			
2,4,5-Trichlorophenol	66.1	µg/L	4.00	80		82.6	38-112			
2,4,6-Trichlorophenol	61.5	µg/L	4.00	80		76.9	32-118			
2,4-Dinitrotoluene (2,4-DNT)	70.3	µg/L	4.00	80		87.9	35-132			
2-Methylphenol (o-Cresol)	70.9	µg/L	4.00	80		88.6	31-101			
3&4-Methylphenol	67.9	µg/L	4.00	80		84.8	30-96			
Hexachlorobenzene	63.2	µg/L	4.00	80		79.0	36-119			
Hexachlorobutadiene	48.4	µg/L	4.00	80		60.4	17-116			
Hexachloroethane	49.7	µg/L	4.00	80		62.1	18-108			
Nitrobenzene	66.8	µg/L	4.00	80		83.6	35-112			
Pentachlorophenol	60.9	µg/L	10.0	80		76.2	23-116			
Pyridine	55.7	µg/L	20.0	80		69.6	18-78			
Surr: 2,4,6-Tribromophenol	145	µg/L		200		72.6	38-116			
Surr: 2-Fluorobiphenyl	110	µg/L		200		55.2	30-101			
Surr: 2-Fluorophenol	120	µg/L		200		60.1	22-78			
Surr: 4-Terphenyl-d14	152	µg/L		200		75.9	37-99			
Surr: Nitrobenzene-d5	142	µg/L		200		71.1	28-102			
Surr: Phenol-d6	92.7	µg/L		200		46.4	18-55			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2278925

Work Order: HN2515069
Date Collected: NA
Date Received: NA
Run ID: 3604331

The following samples were analyzed in this batch: HN2515069-001



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1

Customer Information			Project Information				Parameter/Method Request for Analysis					
Purchase Order		Project Name	11117 Whithorn				A	TCLP Arsenic				
Work Order	Quote ID - 11631	Project Number	DETR0060				B	TCLP Chromium				
Company Name	Mannik Smith Group	Bill To Company	Mannik Smith Group				C	TCLP SVOCs				
Send Report To	Ryan Montri	Invoice Attn.					D					
Address	2365 South Haggerty Road	Address	2365 South Haggerty Road				E					
City/State/Zip	Canton, Mi 48188	City/State/Zip	Canton, Mi 48188				F					
Phone	734-397-3100	Phone	734-397-3100				G					
Fax		Fax					H					
e-Mail Address	rmontri@manniksmithgroup.com	e-Mail Address					I					
							J					
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	
1	11117 Whithorn SBO1,2,3 TCLP	10/9/25	13:00	Soil		2	X	X	X			
2												
3												
4												
5												
6												
7												
8												
9												
10												
Sampler(s): Please Print & Sign <i>Shannon Kaczmarek</i>			Shipment Method:		Required Turnaround Time: ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour			Results Due Date:				
Relinquished by: <i>[Signature]</i>		Date: 10/9/25	Time: 1601	Received by: <i>[Signature]</i>			Notes: 10/10/25 QS to Bunting H 0700					
Relinquished by: <i>[Signature]</i>		Date: 10/9/25	Time: 1700	Received by (Laboratory): QS			QC Packages (Check Box Below)					
Logged by (Laboratory): BH		Date: 10/10/25	Time: 1503	Checked by (Laboratory):			Cooler Temp. 18.7 1.9C	Level II: Standard QC Level III: Std QC + Raw Data Level IV: SW846 CLP-Like Other:				
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035												

Environmental Division
Holland
Work Order Reference
HN2515069

Telephone : +1 616 399 6070



ALS Holland Sample Receiving Checklist

Received by: Brittany H

Date/Time: 10/10/25 0700

Carrier Name: QS

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

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

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

Chain of Custody present? (Yes) / No

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

COC agrees with sample labels? (Yes) / No

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

Sample containers intact? (Yes) / No

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

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

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

Temperature(s) (°C): 1.9/1.9C

Thermometer(s): 1B7

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

Matrix/Matrices: Soil

Cooler(s)/Kit(s): 1

Date/Time sample(s) sent to storage: 10/10/25 1505

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:

ANALYST SUMMARY



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

Work Order: HN2515069

Sample Name: 11117 Whithorn SB01,2,3 TCLP
Laboratory Code: HN2515069-001
Sample Matrix: SOIL/SOLID

Date Collected: 10/09/25
Date Received: 10/10/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 6020B	EPA 3015A	001-AD	2278706	Chloe Patrick	3595179	Hunter Johnson
EPA 8270E	EPA 3510C	001-AE	2278925	Danielle Maleski	3605330	Alexa Montague



right solutions.
right partner.

November 17, 2025

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

Re: **DETR0060**

Date Received: **10/29/2025**
Work Order: **HN2516147**
Revision: **1**

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: DETR0060

Work Order: HN2516147
Date Received: 29-Oct-2025

CASE NARRATIVE

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

Sample Receipt

1 soil/solid sample was received for analysis at ALS Environmental on 29-Oct-2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

WorkOrder: HN2516147

Analytical report amended to include the additional analysis requested. This replaces report dated 11/7/25.

Organics

EPA 8270E-FULL HN-3546-S

Run ID: 3655130

The LCS result for Atrazine is unavailable due to exceeding the calibration range. The associated samples are non-detect; therefore, no qualification is necessary.

EPA 8081B-3546-S (High)

Run ID: 3641348

HN2516147-001: The reporting limit is elevated due to dilution needed to eliminate matrix-related interference.

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: 11117 Whithorn SB02(3-4')-R

Lab ID: HN2516147-001

Analyte	Results	Flag	MRL	Units	Method
Anthracene	597		142	µg/kg	EPA 8270E
Benzo(a)anthracene	1620		142	µg/kg	EPA 8270E
Benzo(a)pyrene	1510		142	µg/kg	EPA 8270E
Benzo(b)fluoranthene	2080		142	µg/kg	EPA 8270E
Benzo(g,h,i)perylene	1140		142	µg/kg	EPA 8270E
Benzo(k)fluoranthene	640		142	µg/kg	EPA 8270E
Chrysene	1380		142	µg/kg	EPA 8270E
Fluoranthene	3650		142	µg/kg	EPA 8270E
Indeno(1,2,3-cd) pyrene	1250		142	µg/kg	EPA 8270E
Naphthalene	171		142	µg/kg	EPA 8270E
Percent Moisture	8.2		0.1	%	EPA 3550C
Phenanthrene	1980		142	µg/kg	EPA 8270E
Pyrene	3240		142	µg/kg	EPA 8270E

SAMPLE SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Workorder: HN2516147

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2516147-001	11117 Whithorn SB02(3-4')-R	SOIL/SOLID	10/28/25 10:30	10/29/25 08:00



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1

Customer Information			Project Information				Parameter/Method Request for Analysis													
Purchase Order		Project Name	11117 Whithorn				A	Pesticides (U.S. EPA Method 8081B (or Method 8081))												
Work Order		Project Number	DETR0060				B	Herbicides (U.S. EPA Method 8151A (or Method 8151))												
Company Name	The Mannik and Smith Group		Bill To Company	The Mannik and Smith Group				C	SVOCs (U.S. EPA Method 8270D (or Method 8270))											
Send Report To	Ryan Montri		Invoice Attn.					D												
Address	2365 Haggerty Rd South Suite 100		Address	2365 Haggerty Rd South Suite 100				E												
								F												
City/State/Zip	Canton, MI 48188		City/State/Zip	Canton, MI 48188				G												
Phone	734-397-3100		Phone	734-397-3100				H												
Fax			Fax					I												
e-Mail Address	RMontri@manniksmithgroup.com		e-Mail Address					J												
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold			
1	11117 Whithorn SB02(3-4')-R	10/28/25	1030	Soil	None	1	X	X	X											
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
Sampler(s): Please Print & Sign WILEY DAVENPORT			Shipment Method:		Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☒ Other: 72 hrs				Results Due Date:											
Relinquished by: WILEY DAVENPORT		Date: 10/28/25	Time: 1617	Received by: [Signature]			Notes: Quote# HN-061825-M&S-MA													
Relinquished by: [Signature]		Date: 10/28	Time: 1617	Received by (Laboratory): [Signature]			Cooler Temp. 3.4/16		QC Package: (Check Box Below)											
Logged by (Laboratory): [Signature]		Date: 10-29-25	Time: [Signature]	Checked by (Laboratory): [Signature]					Level II: Standard QC		TRRP-Checklist									
									Level III: Std QC + Raw Data		TRRP Level IV									
									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 128th Ave., Holland MI 49424

ALS Holland Sample Receiving Checklist

Received by:

Date/Time:

Carrier Name:

Shipping container/cooler in good condition?

Custody seals intact on shipping container/cooler?

Custody seals intact on sample bottles?

Chain of Custody present?

COC signed when relinquished and received?

COC agrees with sample labels?

Samples in proper container/bottle?

Sample containers intact?

Sufficient sample volume for indicated test?

All samples received within holding time?

Container/Temp Blank temperature in compliance?

Temperature(s) (°C):

Thermometer(s):

Sample(s) received on ice?

Matrix/Matrices:

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

Water – VOA vials have zero headspace?

Water – pH acceptable upon receipt?

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

pH adjusted (note adjustments below)?

pH adjusted by:

Login Notes:

JD
10-29-25 800

QS
Yes / No / Not Present

Yes / No / Not Present

Yes / No / Not Present

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

Yes / No

54/54
TAL

Yes / No

SOIL

10.29.25

Yes / No / No Vials

Yes / No / N/A

Yes / No / N/A

REPORT QUALIFIERS AND DEFINITIONS

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

Holland Laboratory Certifications¹

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

¹ - Scope available upon request

ANALYST SUMMARY



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

Work Order: HN2516147

Sample Name: 11117 Whithorn SB02(3-4')-R
Laboratory Code: HN2516147-001
Sample Matrix: SOIL/SOLID

Date Collected: 10/28/25
Date Received: 10/29/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C		001-AA	2305586		3636414	Nicole Maleski
EPA 8081B	EPA 3546	001-AA	2305050	Mya Harmer	3641348	Madison VandenBer
EPA 8081B	EPA 3511	001-AC	2334132	Mac Peterson	3686395	Madison VandenBer
EPA 8151A	Method	001-AA	2309163	Sam Bruzan	3642247	Kathy Malmyga
EPA 8270E	EPA 3546	001-AA	2305039	Erin Wall	3655130	Erin Wall

Analytical Report



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

Work Order: HN2516147
Date Collected: 10/28/25 10:30
Date Received: 10/29/25 08:00

CLIENT ID: 11117 Whithorn SB02(3-4')-R

Lab ID: HN2516147-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Chlorinated Herbicides by GC/ECD								
2,4,5-T	EPA 8151A	<2.50	U	µg/kg	13.6	1	10/30/25 19:37	10/29/25 10:50
2,4,5-TP (Silvex)	EPA 8151A	<4.46	U	µg/kg	13.6	1	10/30/25 19:37	10/29/25 10:50
2,4-D	EPA 8151A	<7.26	U	µg/kg	27.2	1	10/30/25 19:37	10/29/25 10:50
Surr: DCAA	EPA 8151A	62.0		%REC	10-116	1	10/30/25 19:37	10/29/25 10:50
General Chemistry Parameters								
Percent Moisture	EPA 3550C	8.2		%	0.1	1	10/29/25 13:57	NA
Organochlorine Pesticides by GC/ECD								
4,4'-DDD	EPA 8081B	<162	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
4,4'-DDE	EPA 8081B	<167	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
4,4'-DDT	EPA 8081B	<168	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Aldrin	EPA 8081B	<165	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
alpha-BHC	EPA 8081B	<167	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
beta-BHC	EPA 8081B	<166	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Chlordane, Technical	EPA 8081B	<251	U	µg/kg	633	10	10/30/25 02:29	10/29/25 11:36
cis-Chlordane	EPA 8081B	<169	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
delta-BHC	EPA 8081B	<166	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Dieldrin	EPA 8081B	<177	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Endosulfan I	EPA 8081B	<170	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Endosulfan II	EPA 8081B	<168	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Endosulfan sulfate	EPA 8081B	<156	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Endrin	EPA 8081B	<205	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Endrin aldehyde	EPA 8081B	<161	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Endrin ketone	EPA 8081B	<154	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
gamma-BHC (Lindane)	EPA 8081B	<166	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Heptachlor	EPA 8081B	<164	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Heptachlor epoxide	EPA 8081B	<168	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Methoxychlor	EPA 8081B	<169	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36
Toxaphene	EPA 8081B	<274	U	µg/kg	1520	10	10/30/25 02:29	10/29/25 11:36
trans-Chlordane	EPA 8081B	<168	U	µg/kg	253	10	10/30/25 02:29	10/29/25 11:36

Analytical Report



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

Work Order: HN2516147
Date Collected: 10/28/25 10:30
Date Received: 10/29/25 08:00

CLIENT ID: 11117 Whithorn SB02(3-4')-R

Lab ID: HN2516147-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
<i>Surr: Decachlorobiphenyl</i>	EPA 8081B	87.0		%REC	53-151	10	10/30/25 02:29	10/29/25 11:36
<i>Surr: Tetrachloro-m-xylene</i>	EPA 8081B	69.0		%REC	67-127	10	10/30/25 02:29	10/29/25 11:36

Semivolatile Organic Compounds by GC-MS

1,1'-Biphenyl (BZ-0)	EPA 8270E	<115	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<164	U	µg/kg	7100	20	10/31/25 21:09	10/29/25 13:49
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<510	U	µg/kg	3550	20	10/31/25 21:09	10/29/25 13:49
1-Methylnaphthalene	EPA 8270E	<102	U	µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl) ether	EPA 8270E	<167	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2,3,4,6-Tetrachlorophenol	EPA 8270E	<520	U	µg/kg	1420	20	10/31/25 21:09	10/29/25 13:49
2,4,5-Trichlorophenol	EPA 8270E	<421	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2,4,6-Trichlorophenol	EPA 8270E	<189	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2,4-Dichlorophenol	EPA 8270E	<383	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2,4-Dimethylphenol	EPA 8270E	<365	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2,4-Dinitrophenol	EPA 8270E	<5200	U	µg/kg	7100	20	10/31/25 21:09	10/29/25 13:49
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<462	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<181	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2-Chloronaphthalene	EPA 8270E	<99.4	U	µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
2-Chlorophenol	EPA 8270E	<465	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<594	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2-Methylnaphthalene	EPA 8270E	<72.3	U	µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
2-Methylphenol (o-Cresol)	EPA 8270E	<192	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2-Nitroaniline	EPA 8270E	<395	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
2-Nitrophenol	EPA 8270E	<203	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
3&4-Methylphenol	EPA 8270E	<387	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
3,3'-Dichlorobenzidine	EPA 8270E	<332	U	µg/kg	3550	20	10/31/25 21:09	10/29/25 13:49
3-Nitroaniline	EPA 8270E	<413	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<389	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49

Analytical Report



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

Work Order: HN2516147
Date Collected: 10/28/25 10:30
Date Received: 10/29/25 08:00

CLIENT ID: 11117 Whithorn SB02(3-4')-R

Lab ID: HN2516147-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
4-Chloro-3-methylphenol	EPA 8270E	<203	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
4-Chloroaniline	EPA 8270E	<361	U	µg/kg	1420	20	10/31/25 21:09	10/29/25 13:49
4-Chlorophenyl phenylether	EPA 8270E	<196	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
4-Nitroaniline	EPA 8270E	<1100	U	µg/kg	3550	20	10/31/25 21:09	10/29/25 13:49
4-Nitrophenol	EPA 8270E	<1660	U	µg/kg	7100	20	10/31/25 21:09	10/29/25 13:49
Acenaphthene	EPA 8270E	<103	U	µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Acenaphthylene	EPA 8270E	<123	U	µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Acetophenone	EPA 8270E	<111	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Anthracene	EPA 8270E	597		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Atrazine	EPA 8270E	<416	SU	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Benzaldehyde	EPA 8270E	<1090	U	µg/kg	1420	20	10/31/25 21:09	10/29/25 13:49
Benzo(a)anthracene	EPA 8270E	1620		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Benzo(a)pyrene	EPA 8270E	1510		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Benzo(b)fluoranthene	EPA 8270E	2080		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Benzo(g,h,i)perylene	EPA 8270E	1140		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Benzo(k)fluoranthene	EPA 8270E	640		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
bis(2-Chloroethoxy) methane	EPA 8270E	<450	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
bis(2-Chloroethyl) ether	EPA 8270E	<201	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Butyl benzyl phthalate	EPA 8270E	<890	U	µg/kg	1420	20	10/31/25 21:09	10/29/25 13:49
Caprolactam	EPA 8270E	<641	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Carbazole	EPA 8270E	<209	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Chrysene	EPA 8270E	1380		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	EPA 8270E	<588	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Dibenz(a,h) anthracene	EPA 8270E	<76.8	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Dibenzofuran	EPA 8270E	<104	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Diethyl phthalate	EPA 8270E	<242	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Dimethyl phthalate	EPA 8270E	<139	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Fluoranthene	EPA 8270E	3650		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Fluorene	EPA 8270E	<103	U	µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Hexachlorobenzene	EPA 8270E	<207	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49

Analytical Report



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

Work Order: HN2516147
Date Collected: 10/28/25 10:30
Date Received: 10/29/25 08:00

CLIENT ID: 11117 Whithorn SB02(3-4')-R

Lab ID: HN2516147-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Hexachlorobutadiene	EPA 8270E	<167	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Hexachlorocyclopentadiene	EPA 8270E	<674	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Hexachloroethane	EPA 8270E	<294	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Indeno(1,2,3-cd) pyrene	EPA 8270E	1250		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Isophorone	EPA 8270E	<139	U	µg/kg	3550	20	10/31/25 21:09	10/29/25 13:49
Methylphenol, Total	EPA 8270E	<192	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Naphthalene	EPA 8270E	171		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Nitrobenzene	EPA 8270E	<239	U	µg/kg	3550	20	10/31/25 21:09	10/29/25 13:49
n-Nitrosodi-n-propylamine	EPA 8270E	<117	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
N-Nitrosodiphenylamine	EPA 8270E	<412	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Pentachlorophenol	EPA 8270E	<565	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Phenanthrene	EPA 8270E	1980		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Phenol	EPA 8270E	<357	U	µg/kg	704	20	10/31/25 21:09	10/29/25 13:49
Pyrene	EPA 8270E	3240		µg/kg	142	20	10/31/25 21:09	10/29/25 13:49
Pyridine	EPA 8270E	<1400	U	µg/kg	3550	20	10/31/25 21:09	10/29/25 13:49
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	74.8		%REC	48-94	20	10/31/25 21:09	10/29/25 13:49
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	74.8		%REC	50-103	20	10/31/25 21:09	10/29/25 13:49
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	66.8		%REC	43-105	20	10/31/25 21:09	10/29/25 13:49
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	85.6		%REC	55-111	20	10/31/25 21:09	10/29/25 13:49
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	60.8		%REC	47-100	20	10/31/25 21:09	10/29/25 13:49
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	67.6		%REC	49-110	20	10/31/25 21:09	10/29/25 13:49

TCLP Organochlorine Pesticides by GC/ECD

Chlordane, Technical	EPA 8081B	<0.0341	U	µg/L	0.502	1	11/13/25 19:57	11/13/25 12:24
Endrin	EPA 8081B	<0.00854	U	µg/L	0.0100	1	11/13/25 19:57	11/13/25 12:24
gamma-BHC (Lindane)	EPA 8081B	<0.00834	U	µg/L	0.0100	1	11/13/25 19:57	11/13/25 12:24
Heptachlor	EPA 8081B	<0.00762	U	µg/L	0.0100	1	11/13/25 19:57	11/13/25 12:24
Heptachlor epoxide	EPA 8081B	<0.00796	U	µg/L	0.0100	1	11/13/25 19:57	11/13/25 12:24
Methoxychlor	EPA 8081B	<0.00992	U	µg/L	0.0100	1	11/13/25 19:57	11/13/25 12:24
Toxaphene	EPA 8081B	<0.110	U	µg/L	2.01	1	11/13/25 19:57	11/13/25 12:24
<i>Surr: Decachlorobiphenyl</i>	<i>EPA 8081B</i>	77.8		%REC	42-148	1	11/13/25 19:57	11/13/25 12:24
<i>Surr: Tetrachloro-m-xylene</i>	<i>EPA 8081B</i>	73.0		%REC	57-141	1	11/13/25 19:57	11/13/25 12:24



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2309163

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3642247

Chlorinated Herbicides by GC/ECD

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2309163-002
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Method: EPA 8151A **Dilution:** 1 **Analysis Date:** 10/30/25 16:49
Prep Date: 10/29/25 10:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	30.0	µg/kg	5.00	50		60.0	10-119			
2,4,5-TP (Silvex)	29.0	µg/kg	5.00	50		58.0	10-101			
2,4-D	26.0	µg/kg	10.0	50		52.0	10-128			
Surr: DCAA	27.0	µg/kg		50		54.0	10-116			

MS	CLIENT ID: Batch QC	Lab ID: QC-2309163-005
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Method: EPA 8151A **Dilution:** 1 **Analysis Date:** 10/30/25 17:02
Prep Date: 10/29/25 10:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	74.5	µg/kg	14.5	124.22	<2.29	60.0	10-119			
2,4,5-TP (Silvex)	72.0	µg/kg	14.5	124.22	<4.07	58.0	10-101			
2,4-D	72.0	µg/kg	29.0	124.22	<6.63	58.0	10-128			
Surr: DCAA	77.0	µg/kg		124.22		62.0	10-116			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2309163-006
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Method: EPA 8151A **Dilution:** 1 **Analysis Date:** 10/30/25 17:15
Prep Date: 10/29/25 10:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-T	67.3	µg/kg	14.6	124.69	<2.29	54.0	10-119	10.2	30	
2,4,5-TP (Silvex)	64.8	µg/kg	14.6	124.69	<4.09	52.0	10-101	10.5	30	
2,4-D	67.3	µg/kg	29.1	124.69	<6.66	54.0	10-128	6.77	30	
Surr: DCAA	67.3	µg/kg		124.69		54.0	10-116	13.4	30	

MB	CLIENT ID: Method Blank	Lab ID: QC-MRG2-2309163001
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Method: EPA 8151A **Dilution:** 1 **Analysis Date:** 10/30/25 16:36
Prep Date: 10/29/25 10:50

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	30.0	µg/kg		50		60.0	10-116			

The following samples were analyzed in this batch: HN2516147-001



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305586

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3636414

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2305586-001
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Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 10/29/25 13:57
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-2305586-002
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Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 10/29/25 13:57
Prep Date: NA

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

DUP	CLIENT ID: Batch QC	Lab ID: QC-2305586-004
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Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 10/29/25 13:57
Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	18.3	%	0.1		17.3			6.01	10	

The following samples were analyzed in this batch: HN2516147-001



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305050

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3641348

Organochlorine Pesticides by GC/ECD

MB	CLIENT ID: Method Blank	Lab ID: QC-2305050-001
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Method: EPA 8081B

Dilution: 1

Analysis Date: 10/29/25 23:02

Prep Date: 10/29/25 11:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	<6.39	µg/kg	10.0							U
4,4'-DDE	<6.59	µg/kg	10.0							U
4,4'-DDT	<6.65	µg/kg	10.0							U
Aldrin	<6.50	µg/kg	10.0							U
alpha-BHC	<6.58	µg/kg	10.0							U
beta-BHC	<6.57	µg/kg	10.0							U
Chlordane, Technical	<9.92	µg/kg	25.0							U
cis-Chlordane	<6.68	µg/kg	10.0							U
delta-BHC	<6.55	µg/kg	10.0							U
Dieldrin	<6.99	µg/kg	10.0							U
Endosulfan I	<6.72	µg/kg	10.0							U
Endosulfan II	<6.62	µg/kg	10.0							U
Endosulfan sulfate	<6.15	µg/kg	10.0							U
Endrin	<8.09	µg/kg	10.0							U
Endrin aldehyde	<6.34	µg/kg	10.0							U
Endrin ketone	<6.08	µg/kg	10.0							U
gamma-BHC (Lindane)	<6.56	µg/kg	10.0							U
Heptachlor	<6.45	µg/kg	10.0							U
Heptachlor epoxide	<6.62	µg/kg	10.0							U
Methoxychlor	<6.69	µg/kg	10.0							U
Toxaphene	<10.8	µg/kg	60.0							U
trans-Chlordane	<6.64	µg/kg	10.0							U
Surr: Decachlorobiphenyl	35.8	µg/kg		33.33		107	53-151			
Surr: Tetrachloro-m-xylene	28.7	µg/kg		33.33		86.2	67-127			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2305050-002
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Method: EPA 8081B

Dilution: 1

Analysis Date: 10/29/25 23:14

Prep Date: 10/29/25 11:37

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,4'-DDD	27.5	µg/kg	10.0	33.33		82.6	55-141			
4,4'-DDE	29.8	µg/kg	10.0	33.33		89.5	55-143			
4,4'-DDT	34.7	µg/kg	10.0	33.33		104	50-144			
Aldrin	30.6	µg/kg	10.0	33.33		91.7	57-141			
alpha-BHC	30.4	µg/kg	10.0	33.33		91.2	58-144			
beta-BHC	30.4	µg/kg	10.0	33.33		91.2	55-147			
cis-Chlordane	30.0	µg/kg	10.0	33.33		90.2	58-142			
delta-BHC	24.8	µg/kg	10.0	33.33		74.4	59-142			
Dieldrin	30.7	µg/kg	10.0	33.33		92.1	59-142			
Endosulfan I	29.2	µg/kg	10.0	33.33		87.8	57-145			
Endosulfan II	29.2	µg/kg	10.0	33.33		87.8	58-138			
Endosulfan sulfate	28.3	µg/kg	10.0	33.33		85.0	54-136			
Endrin	34.8	µg/kg	10.0	33.33		104	45-150			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305050

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3641348

LCS		CLIENT ID: Laboratory Control Sample				Lab ID: QC-2305050-002			
Method: EPA 8081B		Dilution: 1		Analysis Date: 10/29/25 23:14		Prep Date: 10/29/25 11:37			
Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit Qual
Endrin aldehyde	36.8	µg/kg	10.0	33.33		111	41-147		
Endrin ketone	27.6	µg/kg	10.0	33.33		82.7	54-146		
gamma-BHC (Lindane)	30.6	µg/kg	10.0	33.33		91.9	58-145		
Heptachlor	31.8	µg/kg	10.0	33.33		95.3	51-145		
Heptachlor epoxide	30.7	µg/kg	10.0	33.33		92.1	59-143		
Methoxychlor	33.4	µg/kg	10.0	33.33		100	43-144		
trans-Chlordane	30.0	µg/kg	10.0	33.33		90.0	56-145		
Surr: Decachlorobiphenyl	29.8	µg/kg		33.33		89.3	51-151		
Surr: Tetrachloro-m-xylene	25.8	µg/kg		33.33		77.4	67-127		

The following samples were analyzed in this batch: HN2516147-001



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305039

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3655130

Semivolatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2305039-001
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Method: EPA 8270E**Dilution:** 1**Analysis Date:** 10/31/25 11:24**Prep Date:** 10/29/25 13:50

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

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305039

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3655130

MB	CLIENT ID: Method Blank	Lab ID: QC-2305039-001
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/31/25 11:24

Prep Date: 10/29/25 13:50

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	2610	µg/kg		3333		78.4	48-94			
Surr: 2-Fluorobiphenyl	2550	µg/kg		3333		76.6	50-103			
Surr: 2-Fluorophenol	2670	µg/kg		3333		80.0	43-105			
Surr: 4-Terphenyl-d14	2660	µg/kg		3333		79.9	55-111			
Surr: Nitrobenzene-d5	2260	µg/kg		3333		67.8	47-100			
Surr: Phenol-d6	2670	µg/kg		3333		80.1	49-110			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2305039-002
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/31/25 11:45

Prep Date: 10/29/25 13:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	1100	µg/kg	33.0	1333		82.9	57-101			
1,2,4,5-Tetrachlorobenzene	1090	µg/kg	33.0	1333		81.4	54-98			
1-Methylnaphthalene	1100	µg/kg	6.67	1333		82.5	56-100			
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	1010	µg/kg	33.0	1333		75.5	50-101			
2,3,4,6-Tetrachlorophenol	1150	µg/kg	67.0	1333		86.0	48-103			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305039

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3655130

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2305039-002
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/31/25 11:45

Prep Date: 10/29/25 13:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1130	µg/kg	33.0	1333		84.8	54-98			
2,4,6-Trichlorophenol	1140	µg/kg	33.0	1333		85.5	56-97			
2,4-Dichlorophenol	1070	µg/kg	33.0	1333		80.6	54-99			
2,4-Dimethylphenol	919	µg/kg	33.0	1333		68.9	47-102			
2,4-Dinitrophenol	967	µg/kg	333	1333		72.6	10-100			
2,4-Dinitrotoluene (2,4-DNT)	1140	µg/kg	33.0	1333		85.5	62-105			
2,6-Dinitrotoluene (2,6-DNT)	1150	µg/kg	33.0	1333		86.5	62-103			
2-Chloronaphthalene	1100	µg/kg	6.67	1333		82.9	57-101			
2-Chlorophenol	1100	µg/kg	33.0	1333		82.3	52-102			
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	1090	µg/kg	33.0	1333		82.0	42-104			
2-Methylnaphthalene	1090	µg/kg	6.67	1333		81.8	55-102			
2-Methylphenol (o-Cresol)	1090	µg/kg	33.0	1333		82.1	54-103			
2-Nitroaniline	1110	µg/kg	33.0	1333		83.6	57-103			
2-Nitrophenol	1140	µg/kg	33.0	1333		85.5	52-102			
3&4-Methylphenol	1090	µg/kg	33.0	1333		82.1	56-103			
3,3'-Dichlorobenzidine	825	µg/kg	167	1333		61.9	41-91			
3-Nitroaniline	837	µg/kg	33.0	1333		62.8	35-107			
4-Bromophenyl phenyl ether (BDE-3)	1120	µg/kg	33.0	1333		84.3	63-104			
4-Chloro-3-methylphenol	1110	µg/kg	33.0	1333		83.0	57-103			
4-Chloroaniline	1150	µg/kg	67.0	1333		86.0	32-99			
4-Chlorophenyl phenylether	1160	µg/kg	33.0	1333		86.8	62-100			
4-Nitroaniline	657	µg/kg	167	1333		49.3	19-124			
4-Nitrophenol	1030	µg/kg	333	1333		77.6	44-106			
Acenaphthene	1120	µg/kg	6.67	1333		84.3	60-101			
Acenaphthylene	1130	µg/kg	6.67	1333		84.9	59-101			
Acetophenone	1090	µg/kg	33.0	1333		82.0	54-102			
Anthracene	1130	µg/kg	6.67	1333		85.0	63-96			
Atrazine	<19.5	µg/kg	33.0	1333		0.00	60-110			SU
Benzaldehyde	245	µg/kg	67.0	1333		18.4	10-143			
Benzo(a)anthracene	1120	µg/kg	6.67	1333		84.3	66-102			
Benzo(a)pyrene	1180	µg/kg	6.67	1333		88.6	66-105			
Benzo(b)fluoranthene	1180	µg/kg	6.67	1333		88.7	67-105			
Benzo(g,h,i)perylene	1160	µg/kg	6.67	1333		87.1	59-110			
Benzo(k)fluoranthene	1120	µg/kg	6.67	1333		83.9	68-106			
bis(2-Chloroethoxy)methane	1050	µg/kg	33.0	1333		78.6	54-102			
bis(2-Chloroethyl) ether	1090	µg/kg	33.0	1333		81.5	51-101			
Butyl benzyl phthalate	1150	µg/kg	67.0	1333		86.3	59-107			
Caprolactam	1060	µg/kg	33.0	1333		79.6	49-103			
Carbazole	1120	µg/kg	33.0	1333		84.0	63-103			
Chrysene	1130	µg/kg	6.67	1333		85.0	66-105			
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1200	µg/kg	33.0	1333		89.7	63-101			
Dibenz(a,h) anthracene	1210	µg/kg	33.0	1333		90.7	61-109			
Dibenzofuran	1140	µg/kg	33.0	1333		85.4	61-101			
Diethyl phthalate	1140	µg/kg	33.0	1333		85.9	63-105			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305039

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3655130

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2305039-002
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Method: EPA 8270E

Dilution: 1

Analysis Date: 10/31/25 11:45

Prep Date: 10/29/25 13:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dimethyl phthalate	1140	µg/kg	33.0	1333		85.7	64-104			
Fluoranthene	1130	µg/kg	6.67	1333		84.9	66-105			
Fluorene	1150	µg/kg	6.67	1333		86.2	62-101			
Hexachlorobenzene	1120	µg/kg	33.0	1333		83.9	61-104			
Hexachlorobutadiene	1040	µg/kg	33.0	1333		78.0	52-99			
Hexachlorocyclopentadiene	884	µg/kg	33.0	1333		66.3	39-106			
Hexachloroethane	1080	µg/kg	33.0	1333		81.2	59-99			
Indeno(1,2,3-cd) pyrene	1320	µg/kg	6.67	1333		98.7	57-114			
Isophorone	1070	µg/kg	167	1333		79.9	55-101			
Methylphenol, Total	2190	µg/kg	67.0	2667		82.1	54-103			
Naphthalene	1050	µg/kg	6.67	1333		79.0	54-99			
Nitrobenzene	1040	µg/kg	167	1333		78.0	53-100			
n-Nitrosodi-n-propylamine	1100	µg/kg	33.0	1333		82.8	52-104			
N-Nitrosodiphenylamine	1120	µg/kg	33.0	1333		83.9	61-104			
Pentachlorophenol	1050	µg/kg	33.0	1333		78.5	35-100			
Phenanthrene	1120	µg/kg	6.67	1333		84.2	64-101			
Phenol	1080	µg/kg	33.0	1333		80.9	51-107			
Pyrene	1160	µg/kg	6.67	1333		87.3	62-114			
Pyridine	829	µg/kg	167	1333		62.2	40-84			
Surr: 2,4,6-Tribromophenol	2930	µg/kg		3333		87.8	48-94			
Surr: 2-Fluorobiphenyl	2740	µg/kg		3333		82.2	50-103			
Surr: 2-Fluorophenol	2690	µg/kg		3333		80.7	43-105			
Surr: 4-Terphenyl-d14	2810	µg/kg		3333		84.4	55-111			
Surr: Nitrobenzene-d5	2410	µg/kg		3333		72.2	47-100			
Surr: Phenol-d6	2770	µg/kg		3333		83.1	49-110			

MS	CLIENT ID: Batch QC	Lab ID: QC-2305039-005
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Method: EPA 8270E

Dilution: 20

Analysis Date: 10/31/25 16:38

Prep Date: 10/29/25 13:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	1160	µg/kg	724	1306.8	<106	89.0	57-101			
1,2,4,5-Tetrachlorobenzene	<151	µg/kg	7310	1306.8	<151	79.0	54-98			U
1-Methylnaphthalene	1290	µg/kg	146	1306.8	<94.1	99.0	56-100			
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	1010	µg/kg	724	1306.8	<153	77.0	50-101			
2,3,4,6-Tetrachlorophenol	<479	µg/kg	1460	1306.8	<479	35.0	48-103			SU
2,4,5-Trichlorophenol	993	µg/kg	724	1306.8	<387	76.0	54-98			
2,4,6-Trichlorophenol	<174	µg/kg	724	1306.8	<174	52.0	56-97			SU
2,4-Dichlorophenol	1100	µg/kg	724	1306.8	<352	84.0	54-99			
2,4-Dimethylphenol	1760	µg/kg	724	1306.8	<336	135	47-102			S
2,4-Dinitrophenol	<4780	µg/kg	7310	1306.8	<4780	0.00	10-100			SU
2,4-Dinitrotoluene (2,4-DNT)	1590	µg/kg	724	1306.8	<424	122	62-105			S
2,6-Dinitrotoluene (2,6-DNT)	1280	µg/kg	724	1306.8	<167	98.0	62-103			
2-Chloronaphthalene	1110	µg/kg	146	1306.8	<91.4	85.0	57-101			

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305039

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3655130

MS	CLIENT ID: Batch QC	Lab ID: QC-2305039-005
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Method: EPA 8270E

Dilution: 20

Analysis Date: 10/31/25 16:38

Prep Date: 10/29/25 13:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2-Chlorophenol	1050	µg/kg	724	1306.8	<428	80.0	52-102			
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	<546	µg/kg	724	1306.8	<546	55.0	42-104			U
2-Methylnaphthalene	1330	µg/kg	146	1306.8	<66.5	102	55-102			
2-Methylphenol (o-Cresol)	1230	µg/kg	724	1306.8	<177	94.0	54-103			
2-Nitroaniline	1280	µg/kg	724	1306.8	<363	98.0	57-103			
2-Nitrophenol	1220	µg/kg	724	1306.8	<186	93.0	52-102			
3&4-Methylphenol	1690	µg/kg	724	1306.8	<356	129	56-103			S
3,3'-Dichlorobenzidine	<305	µg/kg	3660	1306.8	<305	98.0	41-91			SU
3-Nitroaniline	1150	µg/kg	724	1306.8	<379	88.0	35-107			
4-Bromophenyl phenyl ether (BDE-3)	1280	µg/kg	724	1306.8	<358	98.0	63-104			
4-Chloro-3-methylphenol	1240	µg/kg	724	1306.8	<186	95.0	57-103			
4-Chloroaniline	<332	µg/kg	1460	1306.8	<332	57.0	32-99			U
4-Chlorophenyl phenylether	1200	µg/kg	724	1306.8	<181	92.0	62-100			
4-Nitroaniline	<1010	µg/kg	3660	1306.8	<1010	82.0	19-124			U
4-Nitrophenol	<1530	µg/kg	7310	1306.8	<1530	0.00	44-106			SU
Acenaphthene	1400	µg/kg	146	1306.8	<94.5	101	60-101			
Acenaphthylene	1120	µg/kg	146	1306.8	<113	86.0	59-101			
Acetophenone	1110	µg/kg	724	1306.8	<102	85.0	54-102			
Anthracene	1930	µg/kg	146	1306.8	470	116	63-96			S
Atrazine	1460	µg/kg	724	1306.8	<383	112	60-110			S
Benzaldehyde	<1000	µg/kg	1460	1306.8	<1000	17.0	10-143			U
Benzo(a)anthracene	2640	µg/kg	146	1306.8	1150	124	66-102			S
Benzo(a)pyrene	2630	µg/kg	146	1306.8	1160	122	66-105			S
Benzo(b)fluoranthene	2980	µg/kg	146	1306.8	1480	127	67-105			S
Benzo(g,h,i)perylene	2240	µg/kg	146	1306.8	881	111	59-110			S
Benzo(k)fluoranthene	1930	µg/kg	146	1306.8	455	117	68-106			S
bis(2-Chloroethoxy)methane	1010	µg/kg	724	1306.8	<414	77.0	54-102			
bis(2-Chloroethyl) ether	1150	µg/kg	724	1306.8	<185	88.0	51-101			
Butyl benzyl phthalate	<818	µg/kg	1460	1306.8	<818	111	59-107			SU
Caprolactam	<590	µg/kg	724	1306.8	<590	0.00	49-103			SU
Carbazole	1400	µg/kg	724	1306.8	323	84.9	63-103			
Chrysene	2480	µg/kg	146	1306.8	910	128	66-105			S
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1540	µg/kg	724	1306.8	<541	118	63-101			S
Dibenz(a,h) anthracene	1370	µg/kg	724	1306.8	250	88.0	61-109			
Dibenzofuran	1370	µg/kg	724	1306.8	<96.1	105	61-101			S
Diethyl phthalate	1150	µg/kg	724	1306.8	<222	88.0	63-105			
Dimethyl phthalate	1140	µg/kg	724	1306.8	<127	87.0	64-104			
Fluoranthene	4880	µg/kg	146	1306.8	2440	206	66-105			S
Fluorene	1500	µg/kg	146	1306.8	132	106	62-101			S
Hexachlorobenzene	1160	µg/kg	724	1306.8	<190	89.0	61-104			
Hexachlorobutadiene	1120	µg/kg	724	1306.8	<154	86.0	52-99			
Hexachlorocyclopentadiene	<639	µg/kg	724	1306.8	<639	0.00	39-106			SU
Hexachloroethane	1330	µg/kg	724	1306.8	<271	102	59-99			S
Indeno(1,2,3-cd) pyrene	2540	µg/kg	146	1306.8	998	126	57-114			S

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305039

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3655130

MS	CLIENT ID: Batch QC				Lab ID: QC-2305039-005					
Method: EPA 8270E			Dilution: 20		Analysis Date: 10/31/25 16:38					
Prep Date: 10/29/25 13:50										
Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Isophorone	<128	µg/kg	3660	1306.8	<128	88.0	55-101			U
Methylphenol, Total	2910	µg/kg	724	2614.6	<177	111	54-103			S
Naphthalene	1180	µg/kg	146	1306.8	<83.5	90.0	54-99			
Nitrobenzene	<220	µg/kg	3660	1306.8	<220	89.0	53-100			U
n-Nitrosodi-n-propylamine	993	µg/kg	724	1306.8	<108	76.0	52-104			
N-Nitrosodiphenylamine	2070	µg/kg	724	1306.8	<378	158	61-104			S
Pentachlorophenol	941	µg/kg	724	1306.8	<519	72.0	35-100			
Phenanthrene	3880	µg/kg	146	1306.8	1440	199	64-101			S
Phenol	1080	µg/kg	724	1306.8	<328	83.0	51-107			
Pyrene	4350	µg/kg	146	1306.8	2080	191	52-114			S
Pyridine	<1290	µg/kg	3660	1306.8	<1290	65.0	40-84			U
Surr: 2,4,6-Tribromophenol	1450	µg/kg		3267.6		44.4	48-94			S
Surr: 2-Fluorobiphenyl	2580	µg/kg		3267.6		78.8	50-103			
Surr: 2-Fluorophenol	1840	µg/kg		3267.6		56.4	43-105			
Surr: 4-Terphenyl-d14	2760	µg/kg		3267.6		84.4	55-111			
Surr: Nitrobenzene-d5	2210	µg/kg		3267.6		67.6	47-100			
Surr: Phenol-d6	2240	µg/kg		3267.6		68.4	49-110			

MSD		CLIENT ID: Batch QC				Lab ID: QC-2305039-006				
Method: EPA 8270E			Dilution: 20			Analysis Date: 10/31/25 16:59				
						Prep Date: 10/29/25 13:50				
Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	1170	µg/kg	737	1329.3	<108	88.0	57-101	0.573	30	
1,2,4,5-Tetrachlorobenzene	<153	µg/kg	7430	1329.3	<153	79.0	54-98	NC		U
1-Methylnaphthalene	1140	µg/kg	149	1329.3	<95.7	86.0	56-100	12.4	30	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	1050	µg/kg	737	1329.3	<156	79.0	50-101	4.27	30	
2,3,4,6-Tetrachlorophenol	<487	µg/kg	1490	1329.3	<487	49.0	48-103	NC		U
2,4,5-Trichlorophenol	1140	µg/kg	737	1329.3	<394	86.0	54-98	14.0	30	
2,4,6-Trichlorophenol	824	µg/kg	737	1329.3	<177	62.0	56-97	12.9	30	
2,4-Dichlorophenol	1160	µg/kg	737	1329.3	<358	87.0	54-99	5.21	30	
2,4-Dimethylphenol	1780	µg/kg	737	1329.3	<342	134	47-102	0.959	30	S
2,4-Dinitrophenol	<4860	µg/kg	7430	1329.3	<4860	0.00	10-100	NC		US
2,4-Dinitrotoluene (2,4-DNT)	1410	µg/kg	737	1329.3	<432	106	62-105	12.3	30	S
2,6-Dinitrotoluene (2,6-DNT)	1330	µg/kg	737	1329.3	<170	100	62-103	3.72	30	
2-Chloronaphthalene	1180	µg/kg	149	1329.3	<92.9	89.0	57-101	6.30	30	
2-Chlorophenol	1170	µg/kg	737	1329.3	<435	88.0	52-102	11.2	30	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	<555	µg/kg	737	1329.3	<555	0.00	42-104	NC		US
2-Methylnaphthalene	1180	µg/kg	149	1329.3	<67.6	89.0	55-102	11.9	30	
2-Methylphenol (o-Cresol)	1400	µg/kg	737	1329.3	<180	105	54-103	12.8	30	S
2-Nitroaniline	1170	µg/kg	737	1329.3	<369	88.0	57-103	9.05	30	
2-Nitrophenol	1090	µg/kg	737	1329.3	<189	82.0	52-102	10.9	30	
3&4-Methylphenol	1330	µg/kg	737	1329.3	<362	100	56-103	23.7	30	
3,3'-Dichlorobenzidine	<310	µg/kg	3720	1329.3	<310	116	41-91	NC		US

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305039

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3655130

MSD	CLIENT ID: Batch QC	Lab ID: QC-2305039-006
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Method: EPA 8270E

Dilution: 20

Analysis Date: 10/31/25 16:59

Prep Date: 10/29/25 13:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
3-Nitroaniline	1340	µg/kg	737	1329.3	<386	101	35-107	15.5	30	
4-Bromophenyl phenyl ether (BDE-3)	1250	µg/kg	737	1329.3	<364	94.0	63-104	2.46	30	
4-Chloro-3-methylphenol	1330	µg/kg	737	1329.3	<189	100	57-103	6.83	30	
4-Chloroaniline	<338	µg/kg	1490	1329.3	<338	62.0	32-99	NC		U
4-Chlorophenyl phenylether	1250	µg/kg	737	1329.3	<184	94.0	62-100	3.85	30	
4-Nitroaniline	<1030	µg/kg	3720	1329.3	<1030	99.0	19-124	NC		U
4-Nitrophenol	<1560	µg/kg	7430	1329.3	<1560	0.00	44-106	NC		US
Acenaphthene	1300	µg/kg	149	1329.3	<96.1	92.1	60-101	7.08	30	
Acenaphthylene	1200	µg/kg	149	1329.3	<115	90.0	59-101	6.25	30	
Acetophenone	1090	µg/kg	737	1329.3	<104	82.0	54-102	1.89	30	
Anthracene	1650	µg/kg	149	1329.3	470	92.5	63-96	16.0	30	
Atrazine	1330	µg/kg	737	1329.3	<390	100	60-110	9.62	30	
Benzaldehyde	<1020	µg/kg	1490	1329.3	<1020	13.0	10-143	NC		U
Benzo(a)anthracene	2170	µg/kg	149	1329.3	1150	86.1	66-102	19.7	30	
Benzo(a)pyrene	2150	µg/kg	149	1329.3	1160	84.1	66-105	19.8	30	
Benzo(b)fluoranthene	2370	µg/kg	149	1329.3	1480	78.4	67-105	23.0	30	
Benzo(g,h,i)perylene	1940	µg/kg	149	1329.3	881	86.8	59-110	14.1	30	
Benzo(k)fluoranthene	1650	µg/kg	149	1329.3	455	93.4	68-106	16.0	30	
bis(2-Chloroethoxy)methane	1080	µg/kg	737	1329.3	<421	81.0	54-102	6.76	30	
bis(2-Chloroethyl) ether	1050	µg/kg	737	1329.3	<188	79.0	51-101	9.08	30	
Butyl benzyl phthalate	1620	µg/kg	1490	1329.3	<832	122	59-107	10.3	30	S
Caprolactam	1530	µg/kg	737	1329.3	<600	115	49-103	71.4	30	RS
Carbazole	1410	µg/kg	737	1329.3	323	84.3	63-103	0.764	30	
Chrysene	1990	µg/kg	149	1329.3	910	88.9	66-105	21.8	30	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1640	µg/kg	737	1329.3	<550	123	63-101	5.85	30	S
Dibenz(a,h) anthracene	1400	µg/kg	737	1329.3	250	88.3	61-109	1.70	30	
Dibenzofuran	1300	µg/kg	737	1329.3	<97.7	98.0	61-101	5.20	30	
Diethyl phthalate	1240	µg/kg	737	1329.3	<226	93.0	63-105	7.23	30	
Dimethyl phthalate	1160	µg/kg	737	1329.3	<130	87.0	64-104	1.70	30	
Fluoranthene	3260	µg/kg	149	1329.3	2440	81.3	66-105	39.8	30	R
Fluorene	1280	µg/kg	149	1329.3	132	87.1	62-101	16.3	30	
Hexachlorobenzene	1180	µg/kg	737	1329.3	<193	89.0	61-104	1.70	30	
Hexachlorobutadiene	1170	µg/kg	737	1329.3	<157	88.0	52-99	4.00	30	
Hexachlorocyclopentadiene	<650	µg/kg	737	1329.3	<650	0.00	39-106	NC		US
Hexachloroethane	1180	µg/kg	737	1329.3	<275	89.0	59-99	11.9	30	
Indeno(1,2,3-cd) pyrene	2220	µg/kg	149	1329.3	998	99.9	57-114	13.3	30	
Isophorone	<130	µg/kg	3720	1329.3	<130	77.0	55-101	NC		U
Methylphenol, Total	2730	µg/kg	737	2659.5	<180	102	54-103	6.71	30	
Naphthalene	1120	µg/kg	149	1329.3	<85.0	84.0	54-99	5.20	30	
Nitrobenzene	<223	µg/kg	3720	1329.3	<223	99.0	53-100	NC		U
n-Nitrosodi-n-propylamine	1100	µg/kg	737	1329.3	<110	83.0	52-104	10.5	30	
N-Nitrosodiphenylamine	1490	µg/kg	737	1329.3	<385	112	61-104	32.4	30	RS
Pentachlorophenol	824	µg/kg	737	1329.3	<528	62.0	35-100	13.2	30	
Phenanthrene	2470	µg/kg	149	1329.3	1440	89.3	64-101	44.3	30	R
Phenol	1020	µg/kg	737	1329.3	<334	77.0	51-107	5.80	30	

QA/QC Report



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2305039

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3655130

MSD	CLIENT ID: Batch QC	Lab ID: QC-2305039-006
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Method: EPA 8270E **Dilution:** 20 **Analysis Date:** 10/31/25 16:59

Prep Date: 10/29/25 13:50

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Pyrene	3030	µg/kg	149	1329.3	2080	87.9	52-114	35.8	30	R
Pyridine	<1310	µg/kg	3720	1329.3	<1310	74.0	40-84	NC		U
Surr: 2,4,6-Tribromophenol	2020	µg/kg		3323.7		60.8	48-94	32.8	30	R
Surr: 2-Fluorobiphenyl	2770	µg/kg		3323.7		83.2	50-103	7.13	30	
Surr: 2-Fluorophenol	2300	µg/kg		3323.7		69.2	43-105	22.1	30	
Surr: 4-Terphenyl-d14	3020	µg/kg		3323.7		90.8	55-111	9.01	30	
Surr: Nitrobenzene-d5	2370	µg/kg		3323.7		71.2	47-100	6.89	30	
Surr: Phenol-d6	2550	µg/kg		3323.7		76.8	49-110	13.3	30	

The following samples were analyzed in this batch: HN2516147-001



Client: The Mannik & Smith Group, Inc.
Project: DETR0060
Matrix: SOIL/SOLID
QC Lot: 2334132

Work Order: HN2516147
Date Collected: NA
Date Received: NA
Run ID: 3686395

TCLP Organochlorine Pesticides by GC/ECD

MB	CLIENT ID: Method Blank	Lab ID: QC-2334132-001
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Method: EPA 8081B

Dilution: 1

Analysis Date: 11/13/25 16:53

Prep Date: 11/13/25 12:25

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chlordane, Technical	<0.0340	µg/L	0.500							U
Endrin	<0.00851	µg/L	0.0100							U
gamma-BHC (Lindane)	<0.00832	µg/L	0.0100							U
Heptachlor	<0.00760	µg/L	0.0100							U
Heptachlor epoxide	<0.00796	µg/L	0.0100							U
Methoxychlor	<0.00989	µg/L	0.0100							U
Toxaphene	<0.110	µg/L	2.00							U
Surr: Decachlorobiphenyl	0.281	µg/L		0.25		112	0.42-148			
Surr: Tetrachloro-m-xylene	0.137	µg/L		0.25		54.8	57-141			S

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2334132-002
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Method: EPA 8081B

Dilution: 1

Analysis Date: 11/13/25 17:05

Prep Date: 11/13/25 12:25

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Endrin	0.195	µg/L	0.0100	0.2		97.5	43-176			
gamma-BHC (Lindane)	0.199	µg/L	0.0100	0.2		99.4	63-158			
Heptachlor	0.168	µg/L	0.0100	0.2		84.2	47-166			
Heptachlor epoxide	0.202	µg/L	0.0100	0.2		101	63-164			
Methoxychlor	0.169	µg/L	0.0100	0.2		84.3	36-176			
Surr: Decachlorobiphenyl	0.275	µg/L		0.25		110	42-148			
Surr: Tetrachloro-m-xylene	0.201	µg/L		0.25		80.6	57-141			

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2334132-003
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Method: EPA 8081B

Dilution: 1

Analysis Date: 11/13/25 17:16

Prep Date: 11/13/25 12:25

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Endrin	0.197	µg/L	0.0100	0.2		98.4	43-176	0.919	20	
gamma-BHC (Lindane)	0.197	µg/L	0.0100	0.2		98.6	63-158	0.808	20	
Heptachlor	0.174	µg/L	0.0100	0.2		87.1	47-166	3.39	20	
Heptachlor epoxide	0.202	µg/L	0.0100	0.2		101	63-164	0.00	20	
Methoxychlor	0.169	µg/L	0.0100	0.2		84.7	36-176	0.473	20	
Surr: Decachlorobiphenyl	0.267	µg/L		0.25		107	42-148	3.10	30	
Surr: Tetrachloro-m-xylene	0.178	µg/L		0.25		71.4	57-141	12.1	30	

The following samples were analyzed in this batch: HN2516147-001