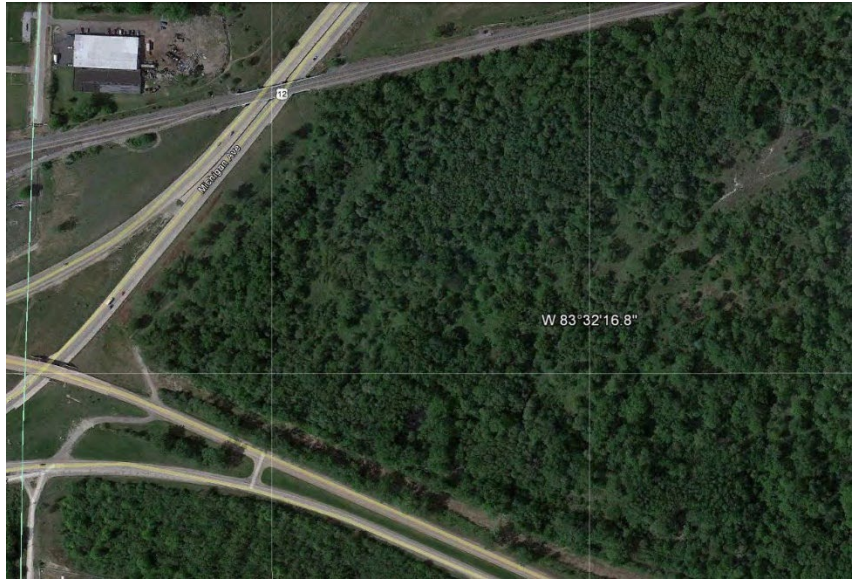


SOIL INVESTIGATION REPORT

VAN BUREN TOWNSHIP LANDFILL SITE
RACER SITE NO. 11070
VAN BUREN TOWNSHIP, MICHIGAN 48111



FEBRUARY 7, 2025

PREPARED FOR:

DETROIT REGIONAL PARTNERSHIP

1001 WOODWARD AVENUE, SUITE 800

DETROIT, MICHIGAN 48226



TABLE OF CONTENTS

1.0	Introduction.....	1
2.0	Site Description	1
2.1	Site Location and Property Usage.....	1
2.2	Current Property Ownership.....	2
3.0	Physical Setting	2
3.1	Topography	2
3.2	Hydrogeologic Setting	3
4.0	Objectives and Scope of Work.....	3
5.0	Methodologies	3
5.1	Soil Sample Collection.....	3
6.0	Investigation Activities and Results	4
6.1	Geology	4
6.2	Soil Sample Results	4
6.2.1	VOC in Soil.....	4
6.2.2	SVOC in Soil	4
6.2.3	Metals in Soil.....	4
6.2.4	PCB in Soil.....	5
6.2.5	PFAS in Soil	5

Figures

Figure 1	Subject Property Location Map
Figure 2	Subject Property Schematic
Figure 3	Soil Sample Analytical Results

Table

Table 1	Laboratory Analytical Results
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Appendices

Appendix A	Daily Field Reports
Appendix B	Laboratory Report and COCs
Appendix C	Photolog

1.0 INTRODUCTION

The Mannik & Smith Group, Inc. (MSG) was retained by the Detroit Regional Partnership (DRP) through the Verified Industrial Properties (VIP) program. This program assists site owners to cover the costs associated with due diligence and promotion. To further market the site, a site investigation of the Van Buren Landfill Property was conducted in correspondence with the property owner, Revitalizing Auto Communities Environmental Response (RACER) Trust. The site is located northeast of the Ecorse Road / Michigan Avenue intersection in Van Buren Township, Wayne County, Michigan (Site). Figure 1, Site Location Map, depicts the location of the Site relative to nearby roads and major topographic features.

The purpose of this investigation was to provide a preliminary understanding of the geologic conditions within the developable areas of the Site. The scope of work for this site investigation consisted of excavation test pits near the geotechnical boring locations and collection of soil samples for analytical testing.

2.0 SITE DESCRIPTION

In preparation for this project, MSG conducted a review of file information provided by RACER and obtained copies of pertinent reports and records. The following reports were obtained during the file review:

- Draft Current Conditions Report (CCR), dated September 2011, prepared by Conestoga-Rovers & Associates (CRA) including Appendices A through D (which provide a summary of recent activities associated with the site).
- Phase IA Site Characterization Report, dated December 2012, prepared by MSG, including Appendices A through F

The following subsections summarize information obtained about the Site location and property use from the RACER project file.

2.1 Site Location and Property Usage

The Site is located northeast of the Ecorse Road / Michigan Avenue (US-12) intersection in Van Buren Township, Wayne County, Michigan (Site). Figure 1 depicts the location of the Site relative to nearby roads and major topographic features. The Site is zoned for general industrial use and located in an area bounded by mixed commercial, agricultural, industrial, residential, and airport properties. The Site is bounded to the north by railroad tracks (operated by Norfolk Southern Railway), to the east by the former General Motors Corporation Service Parts Operations Warehouse, to the south by a Wayne County Utilities Easement and Ecorse Road and to the west by Michigan Avenue (US-12). The Site does not currently have an address associated with the Site. However, historical documentation referred to the Site being located at 5070 and/or 50700 Ecorse Road, Belleville, Michigan 48111.

Through a search of governmental records to support a potential sale of a portion of the former GMC Property, GMC became aware of the closed Van Buren Development Company landfill Site in August 1987. A Limited Phase I Environmental Site Assessment (ESA) was conducted by Encore Environmental Consortium, LLC (EEC) in 2002 and updated in 2007.

Results of the Phase I ESA indicated historical use of the Site remained undeveloped and cultivated for agricultural purposes as early as 1940. The Site remained vacant and undeveloped until approximately 1966 when it was occupied by Van Buren Development Company from approximately 1966 to 1969, where the Site was used to mine sand and subsequently operated as a landfill. The Site has been vacant since the closure of the Van Buren Development Company landfill in 1969 when the Site was purchased by the General Motors Corporation (GMC).

The Phase I ESA identified one Recognized Environmental Condition (REC) at the Site related to the historical landfill. A geophysical survey was conducted at the Site in July 2003 by Blasland, Bouck & Lee, Inc. (BBL), which identified numerous potential disposal trenches / areas at the Site. The Phase I ESA describes the results the geophysical investigation, which revealed that landfilled waste may exist across approximately 30 to 40 acres in the western, northern and central portions of the Site. These areas potentially include four landfill trench cells (identified as Areas of Interest AOI-1 through AOI-4) in the northeastern portion of the Site, a landfill trench or fill area in the center of the Site (AOI-6), an additional potential landfill cell in the northwest corner of the Site (AOI-5) and several other smaller isolated potential landfill pocket areas across the western portion and center of the Site (AOI-7).

Historical records identified in the Phase I ESA indicate that various wastes were landfilled at the Site, including:

- Incinerator ash generated from the City of Detroit;
- Demolition waste and domestic refuse generated from the City of Dearborn;
- Waste Paper generated from the Ford Motor Company;
- Crankcase oil sludge (approximately 1,500 to 1,800 gallons) generated from Dearborn Refinery; and
- Liquid waste stored in 55-gallon drums.

Historical records from the Phase I ESA indicate that the crankcase oil sludge potentially had high levels of sulfuric acid, heavy metals, polychlorinated biphenyls (PCBs) and other organic chemicals. Additional evidence of aboveground waste discarded throughout the Site observed during the Phase I ESA, include general municipal waste, building construction materials, household appliances, furniture, piping, transportation equipment, electrical components, hazardous material containers, scrap metals, batteries and numerous unidentifiable items.

2.2 Current Property Ownership

The most recent Site ownership changes are due to GMC filing for bankruptcy under Chapter 11 of the United States Bankruptcy Code on June 1, 2009. Pursuant to a bankruptcy court order on July 10, 2009, Motors Liquidation Company (MLC) (formerly GMC) retained ownership of the Site and on October 20, 2010, entered into a settlement agreement with federal and state governmental authorities regarding MLC's environmental obligations at its remaining properties. According to the settlement agreement, Revitalizing Auto Communities Environmental Response (RACER) Trust became effective March 31, 2011 and interests in the Site were then transferred to RACER. The Site is currently owned by RACER Properties, LLC, a wholly owned subsidiary of RACER Trust, and remains comprised of vacant land.

3.0 PHYSICAL SETTING

MSG reviewed available soils information and geological resource information to determine the physical setting of the Site and surrounding area. This information was reviewed to assess the topographic and subsurface characteristics of the Site and surrounding area, and how those characteristics may ultimately influence potential environmental conditions at and surrounding the Site.

3.1 Topography

The United States Geological Survey (USGS) Ypsilanti East, Michigan 7.5 Minute Quadrangle map, dated 1967, photo revised 1983, and the Denton, Michigan 7.5 Minute Quadrangle map, dated 1969, photo revised 1973 and 1980, were reviewed for topographical information in the vicinity of the Site (Figure 1). Figure 1 depicts a majority of the surface topography in the vicinity of the Site gradually sloping to the south-southeast with the ground surface elevation ranging between approximately 715 feet above mean sea level (msl) to approximately 710 feet above msl. A section of divided highway (Michigan Avenue / US-12) lies adjacent west of the Site in a roadway cut at an elevation of

approximately 700 to 705 feet above msl and the western edge of the property grades steeply down to the Michigan Avenue / US-12 roadway.

3.2 Hydrogeologic Setting

A United States Geological Survey (USGS) 7.5-minute topographical maps titled Ypsilanti East, Michigan and Denton, Michigan were reviewed for the Site and surrounding area (Figure 1). The nearest surface water bodies to the Site are Sines Drain, located approximately 2,000 feet north of the Site, an unnamed intermittent drain located approximately 4,000 feet west of the Site and an unnamed drain approximately 3,800 feet east of the Site. Based on the area topography and the presence of nearby wetland areas, the estimated depth to groundwater in the vicinity of the Site is approximately less than 10 feet below ground surface (bgs). As noted in the Phase I ESA, groundwater was previously encountered at the Site at depths ranging from 4.5 to 5.5 feet bgs. Based on the area topography and proximity of the drains, the inferred localized groundwater flow direction is likely to the east. In addition, during a subsurface investigation at the adjacent GM Warehouse, the groundwater flow direction was determined to be towards the east. However, localized groundwater flow direction may vary based on several factors, especially due to the roadway cut for Michigan Avenue / US-12 located adjacent west of the Site.

Based on the map of the Quaternary Geology of Southern Michigan, compiled in 1982 by W.R. Farrand and published by the Michigan Geological Survey in Lansing, Michigan, the Site is located in an area that consists of lacustrine sand and gravel. Typically, these deposits contain pale brown to pale reddish brown fine to medium grained sand, occurring chiefly as former beach and near-offshore littoral deposits of the glacial Great Lakes.

According to the map titled Bedrock Geology of Southern Michigan, compiled in 1987 by Randall L. Milstein and published by the Michigan Department of Natural Resources, the bedrock beneath the site consists of the late Devonian-aged Antrim Shale formation. A review of historical water supply well logs from the surrounding area indicates bedrock lays approximately 90 to 97 feet bgs and approximately 70 to 80 feet of lacustrine clay deposits overlie bedrock in the site vicinity.

4.0 OBJECTIVES AND SCOPE OF WORK

The overall project objective is to evaluate the subsurface conditions present at the Site for marketing purposes. MSG performed the following scope of work:

- Advanced seven (7) shallow excavations to a depth of five (5)-feet bgs.
- Collected seven (7) soil samples.
- Prepared this summary report.

5.0 METHODOLOGIES

The investigative methodologies employed the advancement of soil borings for soil sample collection and laboratory sample analysis. The proposed soil boring locations were selected based on the requirements of the Geotechnical investigation and located by MSG geotechnical personnel. Soil sample collection was completed utilizing the Takeuchi TB240 excavator. A summary of the daily work performed is present in *Appendix A, Daily Field Reports*.

5.1 Soil Sample Collection

On November 8, 2024, MSG advanced seven (7) shallow excavations near geotechnical soil borings. The soil sample locations were identified by the geotechnical boring identification, depth and date, SB-1_4-5_20241108, SB-3_4-5_20241108, SB-4_4-5_20241108, SB-6_4-5_20241108, SB-10_4-5_20241108, SB-11_4-5_20241108, and SB-

13_4-5_20241108. The shallow excavations were made adjacent to the geotechnical soil borings using a Takeuchi TB240 excavator. MSG staff excavated a small pit to a depth of five (5) feet bgs. Prior to each excavation, the excavator bucket was washed with a water Alconox® solution and thoroughly rinsed with water. During the excavation, soil conditions were observed and recorded in soil boring logs by field personnel. Soil sample locations are illustrated on *Figure 2, Site Map*.

A total of seven (7) soil samples were collected during soil sampling activities. In addition, one soil sample (FD-1_20241108) was collected for quality control with SB-1_4-5_20241108. Soil samples were preserved using United States Environmental Protection Agency (USEPA) Method 5035 and analyzed for Volatile Organic Compounds (VOC) using USEPA Method 8260, Semivolatile Organic Compounds (SVOC) using USEPA Method 8270, Polychlorinated Biphenyls (PCBs) using USEPA Method 8082A, Metals using USEPA Method 6020, mercury using USEPA Method 7471B and Polyfluoroalkyl Substances (PFAS) using USEPA using method 537 Modified. Samples were placed on ice and delivered to ALS Environmental under chain of custody protocols. Analytical results are located in *Appendix B, Laboratory Report and COCs*.

6.0 INVESTIGATION ACTIVITIES AND RESULTS

The following section describes the observed subsurface soil conditions and soil analytical results. Photographs of the site investigation are provided in *Appendix C, Photolog*.

6.1 Geology

A total of seven (7) excavations were conducted to analyze the subsurface condition. Their locations are illustrated in *Figure 3 Soil Analytical Results*. The maximum depth of exploration reached five feet below ground surface (bgs). Generally, the soil profiles consisted of topsoil and organic matter from 0.0 to 1.0 feet bgs, transitioning to sand from 1.0 feet bgs to 5.0 feet bgs.

6.2 Soil Sample Results

Seven (7) soil samples were collected to gain an understanding subsurface conditions. The detected compounds in the soil samples were compared to Michigan Part 201 Generic Nonresidential Cleanup. Sample locations and results are depicted on *Figure 3, Soil Analytical Results*. Laboratory analytical results for VOCs, SVOC, Metals, PCBs and PFAS are presented in the following sections.

6.2.1 VOC in Soil

Soil samples collected at each of the seven locations were below laboratory detection limits and Part 201 nonresidential cleanup criteria for VOCs. The soil sampling results are summarized in *Table 1, Soil Sample Analytical Results*, and illustrated in *Figure 3, Soil Analytical Results*.

6.2.2 SVOC in Soil

Soil samples collected at each of the seven locations were below Part 201 nonresidential cleanup criteria for SVOCs. The soil sampling results are summarized in *Table 1, Soil Sample Analytical Results*, and illustrated in *Figure 3, Soil Analytical Results*.

6.2.3 Metals in Soil

Soil samples collected at each of the seven locations were below Part 201 nonresidential cleanup criteria for metals. The soil sampling results are summarized in *Table 1, Soil Sample Analytical Results*, and illustrated in *Figure 3, Soil Analytical Results*.

Chromium was detected in all seven soil samples at levels below the statewide default background. Statewide background, as defined in R 299.49.1(B), may be substituted if higher than the calculated cleanup criterion.

Mercury was detected in four of the seven soil samples at levels below the analytical target detection limit (50 ug/kg), therefore, as defined in Rule 299.49.1(M), the target detection limit may be substituted if it is higher than the calculated cleanup criterion. EGLE recognizes that mercury is a common contaminant in soil and urban fill and may exist in the environment as multiple chemical species, many of which are not volatile. The presence of mercury in soil and urban fill is not considered a release of elemental mercury; and there is no known or suspected release of elemental mercury at a site. Further evaluation of the VIAP for mercury is not required by EGLE. (EGLE VIAP - EVALUATION OF A DISPERSED VAPOR SOURCE UNDER PART 201, Issued: October 10, 2023, Revised: September 24, 2024)

6.2.4 PCB in Soil

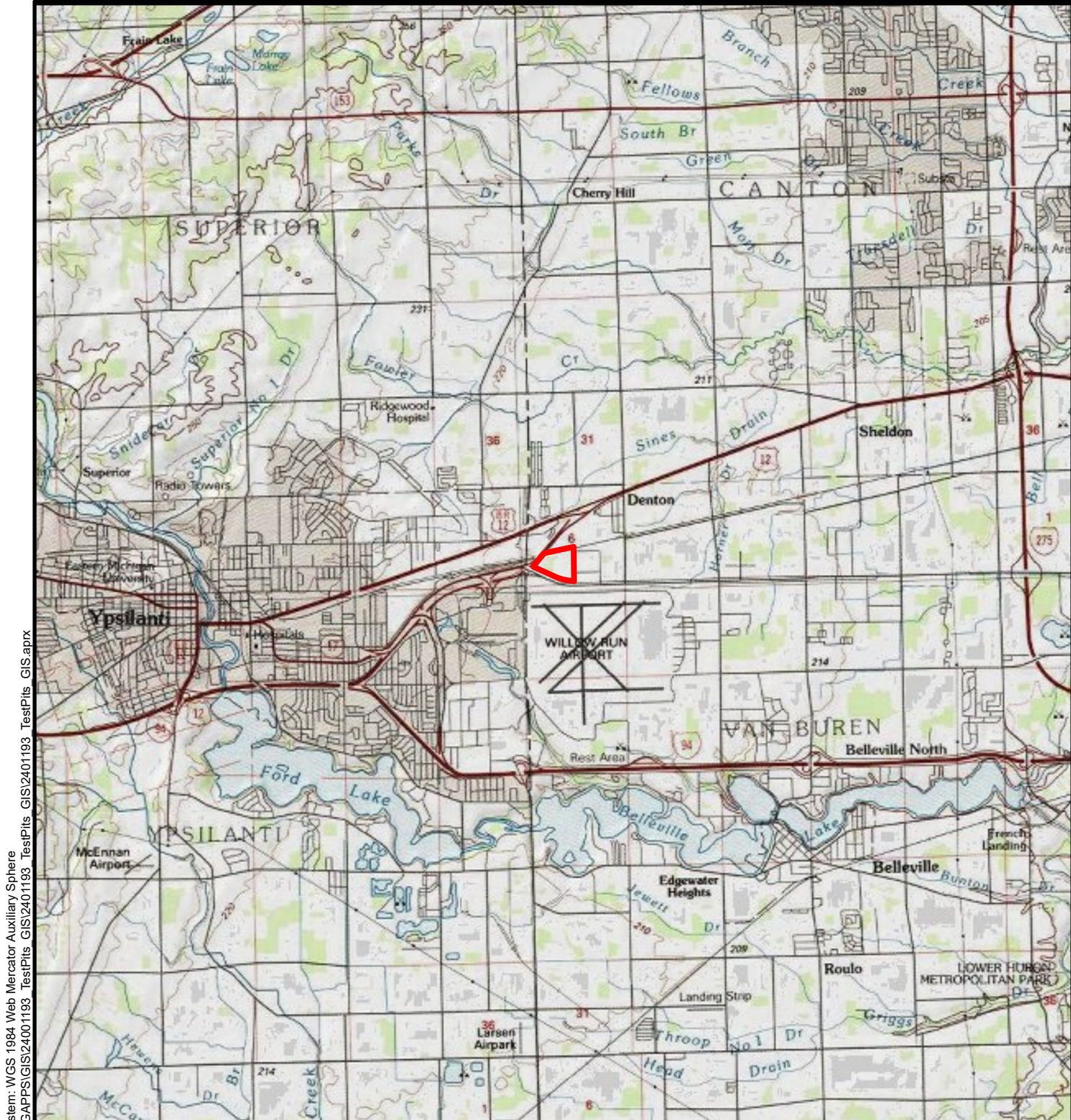
Soil samples collected at seven locations were below laboratory detection levels for PCBs. The soil sampling results are summarized in *Table 1, Soil Sample Analytical Results*, and illustrated in *Figure 3, Soil Analytical Results*.

6.2.5 PFAS in Soil

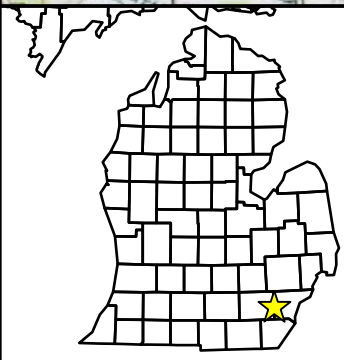
Soil samples collected at six of the seven locations were below laboratory detection levels, and one of the seven soil samples detected Perfluorooctanoic acid (PFOA) in soil at SB-4_4-5_20241108, below Part 201 nonresidential cleanup criteria. The soil sampling results are summarized in *Table 1, Soil Sample Analytical Results*, and illustrated in *Figure 3, Soil Analytical Results*.

FIGURES





Date Saved: 1/28/2025 2:27 PM Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
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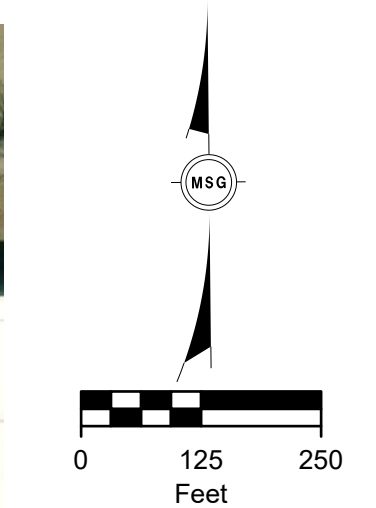
- ★ Site Location
- ▭ Site Boundary



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FIGURE 1 SITE LOCATION			
RACER: Van Buren Landfill Site Michigan Ave & Ecorse Rd Van Buren Twp, Wayne County, Michigan			
DATE 1/28/2025	DRAWN BY JWW	DESIGNED BY JWW	PROJECT NO. 401.2401193.000

Date Saved: 1/30/2025 4:12 PM
Path: W:\Projects\2024\1000-1199\2401193\ENGAPPS\GIS\24001193_TestPits_GIS\2401193_TestPits_GIS.aprx



- Soil Borings
- 2012 Test Pits
- 2024 Test Pits
- Debris Delineation Line
- Site Boundary

Notes:
• Basemap Source: ESRI World Imagery Service

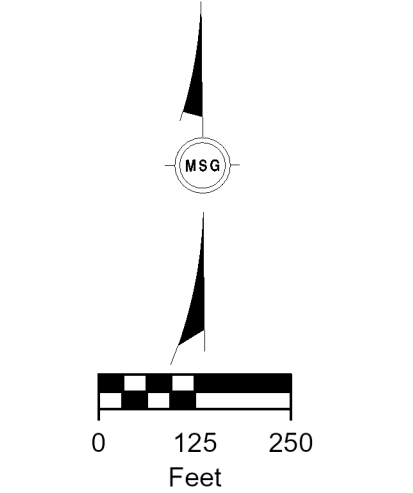
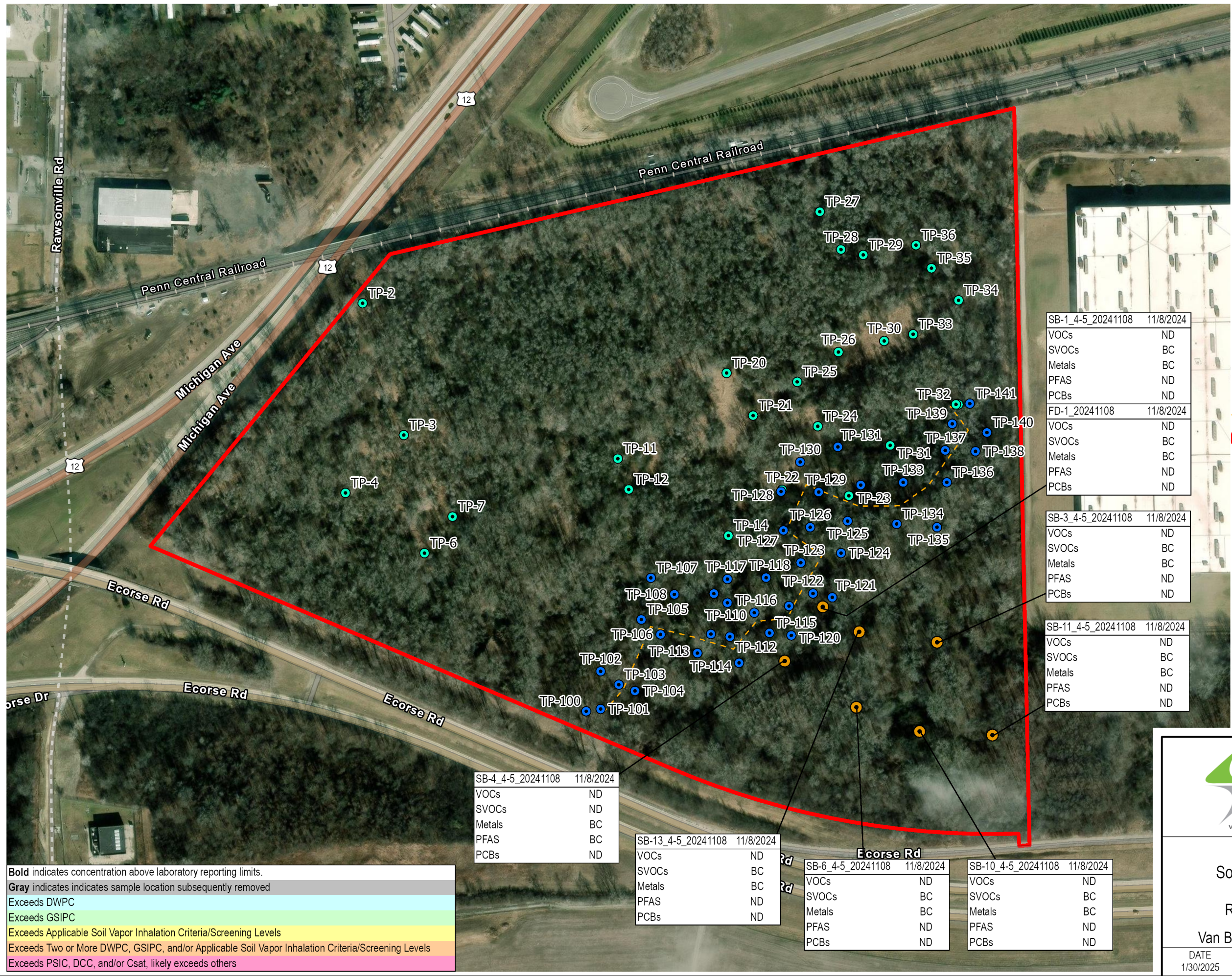


FIGURE 2
Site Map

RACER: Van Buren Landfill Site
Michigan Ave & Ecorse Rd
Van Buren Twp, Wayne County, Michigan

DATE 1/30/2025	DRAWN BY JWW	DESIGNED BY KRB	PROJECT NO. 401.2401193.000
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Date Saved: 1/30/2025 4:12 PM
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- Soil Borings
- 2012 Test Pits
- 2024 Test Pits
- Debris Delineation Line
- Site Boundary

Chemical Abbreviations
VOC = Volatile Organic Compound
SVOC = Semi-Volatile Organic Compound
PFAS = Per- and Polyfluoroalkyl Substances
PCB = Polychlorinated biphenyls
ND = Not Detected
BC = Below Criteria

Notes:
• Basemap Source: ESRI World Imagery Service



FIGURE 3
Soil Analytical Results Summary

RACER: Van Buren Landfill Site
Michigan Ave & Ecorse Rd
Van Buren Twp, Wayne County, Michigan

DATE	DRAWN BY	DESIGNED BY	PROJECT NO.
1/30/2025	JWW	KRB	401.2401193.000

Bold indicates concentration above laboratory reporting limits.
Gray indicates indicates sample location subsequently removed
Exceeds DWPC
Exceeds GSIPC
Exceeds Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds PSIC, DCC, and/or Csat, likely exceeds others

SB-4_4-5_20241108	11/8/2024
VOCs	ND
SVOCs	ND
Metals	BC
PFAS	BC
PCBs	ND

SB-13_4-5_20241108	11/8/2024
VOCs	ND
SVOCs	BC
Metals	BC
PFAS	ND
PCBs	ND

SB-6_4-5_20241108	11/8/2024
VOCs	ND
SVOCs	BC
Metals	BC
PFAS	ND
PCBs	ND

SB-10_4-5_20241108	11/8/2024
VOCs	ND
SVOCs	BC
Metals	BC
PFAS	ND
PCBs	ND

SB-1_4-5_20241108	11/8/2024
VOCs	ND
SVOCs	BC
Metals	BC
PFAS	ND
PCBs	ND

FD-1_20241108	11/8/2024
VOCs	ND
SVOCs	BC
Metals	BC
PFAS	ND
PCBs	ND

SB-3_4-5_20241108	11/8/2024
VOCs	ND
SVOCs	BC
Metals	BC
PFAS	ND
PCBs	ND

SB-11_4-5_20241108	11/8/2024
VOCs	ND
SVOCs	BC
Metals	BC
PFAS	ND
PCBs	ND

TABLE



Table 1
Soil Sample Analytical Summary
Van Buren Township Landfill
RACER Site No. 11070
Van Buren Township, Michigan

SOIL: Part 201/213 Generic Non-Residential Cleanup Criteria Revised October 12, 2023 Units: µg/kg	Volatile Organic Compounds (VOCs)																			
	Acetone	Acetophenone	Benzene	bis(2-Ethylhexyl)phthalate	Bromodichloromethane (Dichlorobromomethane)	Bromoform	Bromomethane	2-Butanone (MEK)	Butyl benzy phthalate	Carbon Disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cyclohexane	Di-n-butyl phthalate	Di-n-octyl phthalate	1,2-Dichlorobenzene	1,3-Dichlorobenzene
CAS Number	67-64-1	98-86-2	71-43-2	117-81-7	75-27-4	75-25-2	74-83-9	78-93-3	85-68-7	75-15-0	56-23-5	108-90-7	75-00-3	67-66-3	74-87-3	110-82-7	84-74-2	117-84-0	95-50-1	541-73-1
Statewide Default Background Levels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Drinking Water Protection Criteria (DWPC)	42,000	88,000	100	NILL	1,600 (W)	1,600 (W)	580	7.6E+05	5.0E+06 (C)	46,000	100	2,000	34,000	1,600 (W)	22,000	NA	2.7E+06 (C)	2.9E+08	14,000	480
Groundwater Surface Water Interface Protection Criteria (GSIPC)	34,000	ID	4,000 (X)	NILL	ID	ID	100	44,000	1.2E+05(X)	ID	760 (X)	500	22,000 (X)	7,000	ID	NA	11,000	ID	280	680
Soil Volatilization to Indoor Air Inhalation (SVIIC)	5.4E+8 (C)	2.1E+08 (C)	8,400	NLV	6,400	7.7E+05	1,600	9.9E+07 (C)	NLV	1.4E+05	990	2.2E+05 (C)	5.3E+6 (C)	3.8E+04	10,000	NA	NLV	NLV	2.0E+7 (C)	48,000
Soil Volatilization to Indoor Air Pathway, 12-Hour Nonresidential (SVIAP)	3.1E+06 (EE)	1.5E+07 (C)	94	NA	31 (M)	2,500	32 (M)	7.4E+05 (DD)	NA	1,800	17 (M)	2,900	12,000	15 (M)	240 (M)	11,000	NA	DATA	52,000	360
Infinite Source Volatile Soil Inhalation Criteria (VSIC)	1.6E+08	5.2E+07	45,000	NLV	31,000	3.1E+06	13,000	3.5E+07	NLV	1.6E+06	12,000	9.2E+05	3.6E+07	1.5E+05	1.2E+05	NA	NLV	NLV	4.6E+07	94,000
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	1.6E+08	5.2E+07	99,000	NLV	31,000	3.1E+06	57,000	3.5E+07	NLV	8.0E+06	34,000	1.1E+06	1.2E+08	3.4E+05	1.0E+06	NA	NLV	NLV	4.6E+07	94,000
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	2.0E+08	5.2E+07	2.3E+05	NLV	57,000	3.1E+06	1.4E+05	3.6E+07	NLV	1.9E+07	79,000	2.1E+06	2.8E+08	7.9E+05	2.5E+06	NA	NLV	NLV	5.5E+07	1.1E+05
Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs)	7.8E+05	NA	12 (M)	NA	NA	NA	NA	NA	NA	NA	NA	3.6E+02	1,500	1.9 (M)	31 (M)	NA	NA	NA	NA	45 (M)
Particulate Soil Inhalation Criteria (PSIC)	1.7E+11	1.4E+10	4.7E+08	8.9E+08	1.1E+08	3.6E+09	1.5E+08	2.9E+10	2.1E+10	2.1E+10	1.7E+08	2.1E+09	2.9E+10	1.6E+09	2.6E+09	NA	1.5E+09	1.4E+10	4.4E+10	8.8E+07
Direct Contact Criteria (DCC)	7.3E+07	1.5E+08 (C)	8.4E+05(C)	1.2E+07 (C)	4.9E+05	3.8E+06 (C)	1.0E+06	7.0E+08(C,DD)	1.2E+08	4.3E+07 (C,DD)	4.4E+05 (C)	1.4E+7 (C)	1.2E+07 (C)	5.5E+06 (C)	7.4E+06 (C)	NA	8.7E+07 (C)	20,000,000	6.3E+07 (C)	6.6E+05 (C)
Soil Saturation Concentration Screening Levels (C _{sat})	1.1E+08	1.1E+06	4.0E+05	1.0E+07	1.5E+06	8.7E+05	2.2E+06	2.7E+07	3.1E+05	2.8E+05	3.9E+05	2.6E+05	9.5E+05	1.5E+06	1.1E+06	NA	760,000	140,000,000	2.1E+05	1.7E+05
SAMPLE ID	DEPTH	SAMPLE DATE																		
SB-1_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-3_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-4_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-6_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-10_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-11_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-13_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FD-1_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
Bold indicates concentration above laboratory reporting limits.
Gray indicates indicates sample location subsequently removed
Exceeds DWPC
Exceeds GSIPC
Exceeds Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds PSIC, DCC, and/or Csat, likely exceeds others
ND = Not Detected above laboratory reporting limits
NS = Not Sampled or Not Analyzed
NR = Not Reported (Data missing from provided report)
Notes in parentheses and standard abbreviations from Part 201 Rules 299.1 through 299.50, updated October 12, 2023
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
RIASLs from EGLE *Volatilization to Indoor Air Recommendations for Interim Action Screening Levels and Time-Sensitive Interim Action Screening Levels* , dated January 2017
Footnote DATA: Insufficient physical chemical parameters to calculate a VIAP screening level for specified media. If detections are present in specified media, health-based soil vapor value should be used to evaluate risk.
FOOTNOTES FOR GENERIC CLEANUP CRITERIA TABLES Cleanup Criteria Requirements for Response Activity
Updated June 25, 2018 Groundwater Criteria Updated August 3, 2020 Groundwater Criteria Updated December 21, 2020 GSI Criteria Updated October 12, 2023

Table 1
Soil Sample Analytical Summary
Van Buren Township Landfill
RACER Site No. 11070
Van Buren Township, Michigan

SOIL: Part 201/213 Generic Non-Residential Cleanup Criteria Revised October 12, 2023 Units: µg/kg	Volatile Organic Compounds (VOCs)																											
	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	2,4-Dichlorophenol	1,2-Dichloropropane	1,3-Dichloropropene	Diethyl phthalate	Dimethyl phthalate	Ethylbenzene	Ethylene Dibromide (EDB, 1,2-Dibromoethane)	Hexachlorobutadiene (C-46)	Hexachlorocyclopentadiene (C-56)	Hexachloroethane	2-Hexanone	Isophorone	Isopropylbenzene (Cumene)	4-Methyl-2-Pentanone (MIBK)	2-Methylnaphthalene	Methyl acetate	Methyl-tert-butyl ether (MTBE)	Methylcyclohexane	Methylene Chloride	Naphthalene	
CAS Number	106-46-7	75-71-8	75-34-3	107-06-2	75-35-4	156-59-2	156-60-5	120-83-2	78-87-5	542-75-6	84-66-2	131-11-3	100-41-4	106-93-4	87-68-3	77-47-4	67-72-1	591-78-6	78-59-1	98-82-8	108-10-1	91-57-6	79-20-9	1634-04-4	108-87-2	75-09-2	91-20-3	
Statewide Default Background Levels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Drinking Water Protection Criteria (DWPC)	1,700	2.70E+05	50,000	100	140	1,400	2,000	4,200	100	700	3.2E+05	4.2E+06 (C)	1,500	20 (M); 1.0	72,000	320,000	430	58,000	62,000	2.6E+05	1.0E+05	1.7E+05	NA	800	NA	100	1.0E+05	
Groundwater Surface Water Interface Protection Criteria (GSI/PC)	360	ID	15,000	7,200 (X)	2,600	12,000	30,000 (X)	330(M); 220	4,600 (X)	180 (X)	2,200	NA	360	110 (X)	91	ID	1,800 (X)	ID	26,000 (X)	3,200	ID	4,200	NA	1.4E+05 (X)	NA	30,000 (X)	730	
Soil Volatilization to Indoor Air Inhalation (SVIIC)	1.0E+05	1.7E+06	4.3E+05	11,000	330	41,000	43,000	NLV	7,400	5,400	NLV	NLV	4.6E+05 (C)	3,600	7.1E+05(C)	56,000	79,000	1.8E+06	NLV	7.3E+05 (C)	6.9E+7 (C)	4.9E+06	NA	1.8E+7 (C)	NA	2.4E+05	4.7E+05	
Soil Volatilization to Indoor Air Pathway, 12-Hour Nonresidential (SVIAP)	1,300	440	150	46 (M)	430	74	420	NA	74	170 (J)	NA	NA	680	4.2 (M)	140	11 (M)	180 (M)	7,600	NA	210 (M)	40,000 (EE)	60,000	--	4,200	--	4,600	3,800	
Infinite Source Volatile Soil Inhalation Criteria (VSIC)	2.6E+05	6.3E+07	2.5E+06	21,000	3,700	2.1E+05	3.3E+05	NLV	30,000	60,000	NLV	NLV	2.4E+06	5,800	460,000	60,000	5.5E+05	1.3E+06	NLV	2.0E+06	5.3E+07	1.8E+06	NA	3.0E+07	NA	7.0E+05	3.5E+05	
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	2.6E+05	5.5E+08	6.0E+06	33,000	15,000	4.3E+05	8.4E+05	NLV	51,000	2.0E+05	NLV	NLV	3.1E+06	5,800	460,000	60,000	9.3E+05	1.3E+06	NLV	2.0E+06	5.3E+07	1.8E+06	NA	4.1E+07	NA	1.7E+06	3.5E+05	
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	3.4E+05	1.4E+09	1.4E+07	74,000	37,000	1.0E+06	2.0E+06	NLV	1.2E+05	4.7E+05	NLV	NLV	6.5E+06	9,800	460,000	60,000	9.3E+05	1.5E+06	NLV	3.0E+06	7.0E+07	1.8E+06	NA	8.9E+07	NA	4.0E+06	3.5E+05	
Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs)	160	NA	19 (M)	NA	54	9.2 (M)	340	NA	NA	NA	NA	NA	86	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	520	NA	570	NA	
Particulate Soil Inhalation Criteria (PSIC)	5.7E+08	1.5E+12	1.5E+10	1.5E+08	7.8E+07	1.0E+09	2.1E+09	2.3E+09	1.2E+08	5.9E+08	1.5E+09	1.5E+09	1.3E+10	1.8E+07	1.8E+08	5.9E+06	2.3E+08	1.2E+09	8.2E+09	2.6E+09	6.0E+10	2.9E+08	NA	8.8E+10	NA	8.3E+09	8.8E+07	
Direct Contact Criteria (DCC)	1.9E+06	1.7E+08 (C)	8.7E+07 (C)	4.2E+05	6.6E+05 (C)	8.0E+06 (C)	1.2E+7 (C)	3.9E+06 (C,DD)	6.6E+05 (C)	2.4E+05	5.5E+08 (C)	1.0E+09 (C,DD)	7.1E+07 (C)	430	4.7E+05 (C)	6.7E+06 (C)	2.3E+05	1.0E+08 (C)	2.2E+07 (C)	8.0E+07 (C)	1.8E+08 (C)	2.6E+07	NA	7.1E+6 (C)	NA	5.8E+06 (C)	5.2E+07	
Soil Saturation Concentration Screening Levels (C _{sat})	NA	1.0E+06	8.9E+05	1.2E+06	5.7E+05	6.4E+05	1.4E+06	1.8E+06	5.5E+05	6.2E+05	7.4E+05	7.9E+05	1.4E+05	8.9E+05	3.5E+05	7.2E+05	NA	2.5E+06	2.4E+06	3.9E+05	2.7E+06	NA	NA	5.9E+06	NA	2.3E+06	NA	
SAMPLE ID		DEPTH	SAMPLE DATE																									
SB-1_4-5_20241108		4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SB-3_4-5_20241108		4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SB-4_4-5_20241108		4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SB-6_4-5_20241108		4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SB-10_4-5_20241108		4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SB-11_4-5_20241108		4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SB-13_4-5_20241108		4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
FD-1_20241108		4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:
Bold indicates concentration above laboratory reporting limits.
Gray indicates indicates sample location subsequently removed
Exceeds DWPC
Exceeds GSI PC
Exceeds Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds Two or More DWPC, GSI PC, and/or Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds PSIC, DCC, and/or Csat, likely exceeds others
ND = Not Detected above laboratory reporting limits
NS = Not Sampled or Not Analyzed
NR = Not Reported (Data missing from provided report)
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Footnote DATA: Insufficient physical chemical parameters to calculate a VIAP screening level for specified media. If detections are present in specified media, health-based soil vapor value should be used to evaluate risk.
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Table 1
Soil Sample Analytical Summary
Van Buren Township Landfill
RACER Site No. 11070
Van Buren Township, Michigan

SOIL: Part 201/213 Generic Non-Residential Cleanup Criteria Revised October 12, 2023 Units: µg/kg	Volatile Organic Compounds (VOCs)																			
	Phenol	Pyridine	Styrene	1,1,2,2-Tetrachloroethane	Tetrachloroethylene	Toluene	Triallate	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Trichlorofluoromethane	1,2,3-Trichloropropane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Total Xylenes	
CAS Number	108-95-2	110-86-1	100-42-5	79-34-5	127-18-4	108-88-3	2303-17-5	87-61-6	120-82-1	71-55-6	79-00-5	79-01-6	75-69-4	96-18-4	76-13-1	95-63-6	108-67-8	75-01-4	1330-20-7	
Statewide Default Background Levels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Drinking Water Protection Criteria (DWPC)	260,000	420	2,700	700	100	16,000	2.7E+05 (C)	NA	4,200	4,000	100	100	1.50E+05	2,400	9.0E+06 (C)	2,100	1,800	40	5,600	
Groundwater Surface Water Interface Protection Criteria (GSIPC)	9,000	NA	2,100 (X)	1,600 (X)	1,200 (X)	5,400	NA	NA	5,900 (X)	1,800	6,600 (X)	4,000 (X)	NA	NA	1,700	570	1,100	260 (X)	980	
Soil Volatilization to Indoor Air Inhalation (SVIIC)	NLV	2,000	1.3E+6 (C)	23,000	21,000	6.1E+5 (C)	ID	NA	1.8E+7 (C)	4.6E+05	24,000	1,900	5.1E+06 (C)	7,500	9.3E+06 (C)	8.0E+06 (C)	4.8E+06 (C)	2,800	1.2E+07 (C)	
Soil Volatilization to Indoor Air Pathway, 12-Hour Nonresidential (SVIAP)	NA	19,000	8,600	150	150 (EE)	64,000 (EE)	DATA	29,000	1,900	7,500 (EE)	13 (M)	8.0 (M)	670	91 (M)	30,000	5,200 (JT)	3,600 (JT)	16 (M)	9,900 (J)	
Infinite Source Volatile Soil Inhalation Criteria (VSIC)	NLV	9,800	3.3E+06	34,000	2.1E+05	3.3E+06	ID	NA	3.4E+07	4.5E+06	57,000	14,000	1.1E+08	11,000	2.1E+08	2.5E+07	1.9E+07	29,000	5.4E+07	
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	NLV	40,000	3.3E+06	34,000	4.9E+05	3.6E+07	ID	NA	3.4E+07	1.5E+07	57,000	25,000	1.4E+11	11,000	8.9E+08	6.0E+08	4.6E+08	1.7E+05	6.5E+07	
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	NLV	97,000	4.2E+06	34,000	1.1E+06	3.6E+07	ID	NA	3.4E+07	3.1E+07	1.2E+05	58,000	1.4E+11	12,000	2.1E+09	6.0E+08	4.6E+08	4.2E+05	1.3E+08	
Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs)	NA	NA	NA	NA	19 (M)	16,000	NA	NA	230 (M)	NA	NA	1.0 (M)	NA	NA	NA	650	450	2.0 (M)	1,200	
Particulate Soil Inhalation Criteria (PSIC)	1.8E+10	1.0E+08	6.9E+09	6.8E+07	1.2E+09	1.2E+10	ID	NA	1.1E+10	2.9E+10	2.5E+08	5.9E+07	1.7E+12	8.8E+06	2.3E+12	3.6E+10	3.6E+10	8.9E+08	1.3E+11	
Direct Contact Criteria (DCC)	2.3E+08 (C,DD)	7.3E+05 (C)	1.9E+06 (C)	2.4E+05	9.3E+05 (C)	1.6E+08 (C)	9.5E+06 (C)	NA	5.8E+6 (C,DD)	1.0E+9 (C,D)	8.4E+05	6.6E+5 (C,DD)	2.6E+08 (C)	4.2E+06 (C)	1.0E+09 (C,D)	1.0E+08 (C)	1.0E+08 (C)	34,000	1.0E+09 (C)	
Soil Saturation Concentration Screening Levels (C _{sat})	1.2E+07	3.7E+04	5.2E+05	8.7E+05	88,000	2.5E+05	2.5E+05	NA	1.1E+06	4.6E+05	9.2E+05	5.0E+05	5.6E+05	8.3E+05	5.5E+05	1.1E+05	94,000	4.9E+05	1.5E+05	
SAMPLE ID	DEPTH	SAMPLE DATE																		
SB-1_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-3_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-4_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-6_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-10_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-11_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-13_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FD-1_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
Bold indicates concentration above laboratory reporting limits.
Gray indicates indicates sample location subsequently removed
Exceeds DWPC
Exceeds GSIPC
Exceeds Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation Criteria/Screening Levels
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Van Buren Township Landfill
RACER Site No. 11070
Van Buren Township, Michigan

SOIL: Part 201/213 Generic Non-Residential Cleanup Criteria Revised October 12, 2023 Units: µg/kg	Semi-Volatile Organic Compounds (SVOCs)																											
	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Butyl Benzyl Phthalate	Caprolactam	Carbazole	Chrysene	Dibenzo(a,h)anthracene	Dibenzofuran	Diethyl Phthalate	Di-n-butyl Phthalate	Di-n-octyl Phthalate	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Isophorone	2-Methylnaphthalene	Naphthalene	Phenanthrene	Phenol	Pyrene		
CAS Number	83-32-9	208-96-8	120-12-7	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	85-68-7	105-60-2	86-74-8	218-01-9	53-70-3	132-64-9	84-66-2	84-74-2	117-84-0	206-44-0	86-73-7	193-39-5	78-59-1	91-57-6	91-20-3	85-01-8	108-95-2	129-00-0		
Statewide Default Background Levels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Drinking Water Protection Criteria (DWPC)	8.8E+05	17,000	41,000	NLL	NLL	NLL	NLL	NLL	3.1E+05 (C)	3.4E+05	39,000	NLL	NLL	ID	3.2E+05	7.6E+05 (C)	1.4E+08 (C)	7.3E+05	8.9E+05	NLL	62,000	1.7E+05	1.0E+05	1.6E+05	2.6E+05	4.8E+05		
Groundwater Surface Water Interface Protection Criteria (GSIPC)	8,700	ID	ID	NLL	NLL	NLL	NLL	NLL	1.2E+05 (X)	NA	1,100	NLL	NLL	1,700	2,200	11,000	ID	5,500	5,300	NLL	26,000 (X)	4,200	730	2,100	9,000	ID		
Soil Volatilization to Indoor Air Inhalation (SVIIC)	3.5E+08	3.0E+06	1.0E+09 (D)	NLV	NLV	ID	NLV	NLV	NLV	NLV	NLV	ID	NLV	3.6E+06	NLV	NLV	NLV	1.0E+09 (D)	1.0E+9 (D)	NLV	NLV	4.9E+06	4.7E+05	5.1E+06	NLV	1.0E+09 (D)		
Soil Volatilization to Indoor Air Pathway, 12-Hour Nonresidential (SVIAP)	7.20E+06	DATA	4.40E+08	2.20E+07	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.50E+08	NA	NA	DATA	NA	1.70E+07	NA	NA	60,000	3,800	58,000	NA	8.80E+08		
Infinite Source Volatile Soil Inhalation Criteria (VSIC)	9.7E+07	2.7E+06	1.6E+09	NLV	NLV	ID	NLV	NLV	NLV	NLV	NLV	ID	NLV	1.6E+05	NLV	NLV	NLV	8.9E+08	1.5E+08	NLV	NLV	1.8E+06	3.5E+05	1.9E+05	NLV	7.8E+08		
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	9.7E+07	2.7E+06	1.6E+09	NLV	NLV	ID	NLV	NLV	NLV	NLV	NLV	ID	NLV	1.6E+05	NLV	NLV	NLV	8.8E+08	1.5E+08	NLV	NLV	1.8E+06	3.5E+05	1.9E+05	NLV	7.8E+08		
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	9.7E+07	2.7E+06	1.6E+09	NLV	NLV	ID	NLV	NLV	NLV	NLV	NLV	ID	NLV	1.6E+05	NLV	NLV	NLV	8.8E+08	1.5E+08	NLV	NLV	1.8E+06	3.5E+05	1.9E+05	NLV	7.8E+08		
Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Particulate Soil Inhalation Criteria (PSIC)	6.2E+09	1.0E+09	2.9E+10	ID	1.9E+06	ID	3.5E+08	ID	2.1E+10	2.9E+08	7.8E+07	ID	ID	2.9E+06	1.5E+09	1.5E+09	1.4E+10	4.1E+09	4.1E+09	ID	8.2E+09	2.9E+08	8.8E+07	2.9E+06	1.8E+10	2.9E+09		
Direct Contact Criteria (DCC)	1.3E+08	5.2E+06	7.3E+08	80,000	8,000	80,000	7.0E+06	8.0E+05	3.1E+05 (C)	3.1E+08 (DD)	2.4E+06	8.0E+06	8,000	ID	7.4E+05 (C)	7.6E+05 (C)	2.0E+07	1.3E+08	8.7E+07	80,000	2.4E+06 (C)	2.6E+07	5.2E+07	5.2E+06	1.2E+07 (C, DD)	8.4E+07		
Soil Saturation Concentration Screening Levels (C _{sat})	NA	NA	NA	NA	NA	NA	NA	NA	3.1E+05	NA	NA	NA	NA	NA	7.4E+05	7.6E+05	1.4E+08	NA	NA	NA	2.4E+06	NA	NA	NA	1.2E+07	NA		
SAMPLE ID	DEPTH	SAMPLE DATE																										
SB-1_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	12.00	13.40	17.60	8.45	7.04	ND	ND	ND	11.30	ND	ND	ND	ND	ND	23.90	ND	8.45	ND	ND	ND	10.60	ND	18.30
SB-3_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18.80	ND	ND	ND	ND	ND	ND	ND	
SB-4_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
SB-6_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.72	
SB-10_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	6.49	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.94	ND	ND	ND	ND	ND	5.05	ND	7.21
SB-11_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	10.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.90	
SB-13_4-5_20241108	4' - 5'	11/8/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.02	ND	ND	ND	ND	ND	ND	ND	
FD-1_20241108	4' - 5'	11/8/2024	ND	ND	ND	10.20	13.00	14.30	8.86	8.18	ND	ND	ND	8.86	ND	ND	ND	ND	ND	19.10	ND	9.55	ND	ND	ND	9.55	ND	15.70

Notes:
Bold indicates concentration above laboratory reporting limits.
Gray indicates indicates sample location subsequently removed
Exceeds DWPC
Exceeds GSIPC
Exceeds Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds PSIC, DCC, and/or Csat, likely exceeds others
ND = Not Detected above laboratory reporting limits
NS = Not Sampled or Not Analyzed
NR = Not Reported (Data missing from provided report)
Notes in parentheses and standard abbreviations from Part 201 Rules 299.1 through 299.50, updated October 12, 2023
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
RIASLs from EGLE *Volatilization to Indoor Air Recommendations for Interim Action Screening Levels and Time-Sensitive Interim Action Screening Levels* , dated January 2017
Footnote DATA: Insufficient physical chemical parameters to calculate a VIAP screening level for specified media. If detections are present in specified media, health-based soil vapor value should be used to evaluate risk.
FOOTNOTES FOR GENERIC CLEANUP CRITERIA TABLES Cleanup Criteria Requirements for Response Activity
Updated June 25, 2018 Groundwater Criteria Updated August 3, 2020 Groundwater Criteria Updated December 21, 2020 GSI Criteria Updated October 12, 2023

Table 1
Soil Sample Analytical Summary
Van Buren Township Landfill
RACER Site No. 11070
Van Buren Township, Michigan

SOIL: Part 201/213 Generic Non-Residential Cleanup Criteria Revised October 12, 2023 Units: µg/kg	Metals								Perfluoroalkyl / Polyfluoroalkyl Substances (PFAS)		Polychlorinated Biphenyls (PCBs)									
	Arsenic (B)	Barium (B)	Cadmium (B)	Chromium (Total)	Lead (B)	Mercury (B,Z)	Selenium (B)	Silver (B)	Perfluorooctanoic acid (PFOA)	Perfluorooctane Sulfonic Acid (PFOS)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs		
CAS Number	7440-38-2	7440-39-3	7440-43-9	7440-47-3	7439-92-1	7439-97-6	7782-49-2	7440-22-4	335-67-1	1763-23-1	12674-11-2	11104-28-2	11141-16-5	53469-21-9	12672-29-6	11097-69-1	11096-82-5	1336-36-3		
Statewide Default Background Levels	5,800	75,000	1,200	18,000	21,000	130	410	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Drinking Water Protection Criteria (DWPC)	4,600	1.3E+06	6,000	30,000	7.0E+05	1,700	4,000	13,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NLL		
Groundwater Surface Water Interface Protection Criteria (GSIPC)	4,600	(G)	(G,X) 2,600	3,300	(G,X)	50 (M); 1.2	400	100 (M); 27	10,000 (X)	0.24 (X)	NA	NA	NA	NA	NA	NA	NA	NLL		
Soil Volatilization to Indoor Air Inhalation (SVIIC)	NLV	NLV	NLV	NLV	NLV	89,000	NLV	NLV	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.6E+07		
Soil Volatilization to Indoor Air Pathway, 12-Hour Nonresidential (SVIAP)	NA	NA	NA	--	NA	790	NA	NA	TX	NA	--	--	--	--	--	--	--	DATA		
Infinite Source Volatile Soil Inhalation Criteria (VSIC)	NLV	NLV	NLV	NLV	NLV	62,000	NLV	NLV	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.1E+05		
Finite Source Volatile Soil Inhalation Criteria (5 m) (VSIC 5m)	NLV	NLV	NLV	NLV	NLV	62,000	NLV	NLV	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.8E+07		
Finite Source Volatile Soil Inhalation Criteria (2 m) (VSIC 2m)	NLV	NLV	NLV	NLV	NLV	62,000	NLV	NLV	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.8E+07		
Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs)	NA	NA	NA	NA	NA	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Particulate Soil Inhalation Criteria (PSIC)	9.1E+05	1.5E+08	2.2E+06	2.4E+05	4.4E+07	8.8E+06	5.9E+07	2.9E+06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Direct Contact Criteria (DCC)	37,000	1.3E+08	2.1E+06	9.2E+06	9.0E+05 (DD)	5.8E+05	9.6E+06	9.0E+06	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.5E+06		
Soil Saturation Concentration Screening Levels (C _{sat})	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	(T)		
SAMPLE ID	DEPTH	SAMPLE DATE																		
SB-1_4-5_20241108	4' - 5'	11/8/2024	3,380	30,100	126.0	6,940	7,330	23.3	<263	<37.8	<0.175	<0.202	<23.9	<23.9	<23.9	<23.9	<23.9	<19.4	<19.4	<19.4
SB-3_4-5_20241108	4' - 5'	11/8/2024	1,430	13,500	35.3	5,730	3,650	<13.6	<299	<39.5	<0.197	<0.228	<62.3	<62.3	<62.3	<62.3	<62.3	<50.7	<50.7	<50.7
SB-4_4-5_20241108	4' - 5'	11/8/2024	2,940	6,800	65.9	3,970	3,820	<15.2	<268	<38.5	0.218	<0.221	<61.7	<61.7	<61.7	<61.7	<61.7	<50.2	<50.2	<50.2
SB-6_4-5_20241108	4' - 5'	11/8/2024	2,370	9,300	<16.8	5,100	6,010	<13.9	<258	<37.0	<0.183	<0.212	<25.1	<25.1	<25.1	<25.1	<25.1	<20.4	<20.4	<20.4
SB-10_4-5_20241108	4' - 5'	11/8/2024	840	9,140	<19.7	8,270	4,700	15.4	<302	<43.3	<0.179	<0.207	<23.9	<23.9	<23.9	<23.9	<23.9	<19.4	<19.4	<19.4
SB-11_4-5_20241108	4' - 5'	11/8/2024	849	3,820	<18.8	4,480	3,540	<13.6	<288	<41.4	<0.179	<0.207	<24.4	<24.4	<24.4	<24.4	<24.4	<19.8	<19.8	<19.8
SB-13_4-5_20241108	4' - 5'	11/8/2024	2,910	2,230	67.5	5,870	4,950	25.6	<311	<44.6	<0.182	<0.221	<24.0	<24.0	<24.0	<24.0	<24.0	<19.6	<19.6	<19.6
FD-1_20241108	4' - 5'	11/8/2024	2,460	20,800	108.0	5,170	5,680	19.8	<270	<38.7	<0.175	<0.203	<24.2	<24.2	<24.2	<24.2	<24.2	<19.7	<19.7	<19.7

Notes:
Bold indicates concentration above laboratory reporting limits.
Gray indicates indicates sample location subsequently removed
Exceeds DWPC
Exceeds GSIPC
Exceeds Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds Two or More DWPC, GSIPC, and/or Applicable Soil Vapor Inhalation Criteria/Screening Levels
Exceeds PSIC, DCC, and/or Csat, likely exceeds others
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FOOTNOTES FOR GENERIC CLEANUP CRITERIA TABLES Cleanup Criteria Requirements for Response Activity
Updated June 25, 2018 Groundwater Criteria Updated August 3, 2020 Groundwater Criteria Updated December 21, 2020 GSI Criteria Updated October 12, 2023

APPENDIX A

DAILY FIELD REPORTS



**DAILY FIELD REPORT**

Client: RACER
Project: Debris Delineation Test Pits

Report No.: 11.08.2024
Job No.: 401.240193.000

Date: <u>11/08/2024</u>	Day: <u>Friday</u>	Temp: <u>45° F</u> (AM) <u>60° F</u> (PM)
MSG Personnel: <u>EMB/ZDK</u>	Cloud Cover: <u>0%</u> (AM) <u>0%</u> (PM)	Precip.: <u>N/A</u> (AM) <u>N/A</u> (PM)
Personnel: <u>NA</u>		
MSG Hours On-Site: <u>~6.0 hours</u>		
Contractors Information		
Contractor: <u>MSG</u>	No. Men and Type: <u>2: Operator & Laborer/Spotter</u>	Equipment Type: <u>Takeuchi TB240 Excavator</u>
		<u>Trimble GPS, PID</u>
Summary of Work Performed:		
- Excavate two (2) test pits to approximately 2'-4' bgs to find the edge of a debris field and track it across the site. - GPS all test pits and walk the delineation line - Soil sample collection at Geotechnical sample locations SB-1, SB-3, SB-4, SB-6, SB-10, SB-11, SB-13		
Field Notes:		
0800: MSG onsite - Conduct daily safety/kickoff meeting - Inspect the equipment before use. 0810 – 0930: Excavated two (2) test pits 0930 – 1030: GPS all test pits and walk the delineation line 1030: Started soil collection collected 7 samples and 1 Duplicate, Sample for VOC, SVOC, PFAS, PCB, metals. 1300 – Collected the last soil sample 1400 – Off site 1550 - Deliver samples to ALS Laboratory		

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

APPENDIX B
LABORATORY ANALYTICAL RESULTS





right solutions.
right partner.

CERTIFICATE OF ANALYSIS

Work Order

HN2409094

Client

The Mannik & Smith Group, Inc.

Project

Van Buren Industrial

Project Date

November 09, 2024

Reporting Contact

Accounts Payable



right solutions.
right partner.

November 25, 2024

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

Work Order: **HN2409094**

Re: **Van Buren Industrial**

Dear Accounts ,

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

The analytical data provided relates to the samples received by ALS Environmental and for the analysis requested.

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



Narrative Documents



Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial

Work Order: HN2409094
Date Received: 09-Nov-2024

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

8 soil/solid samples were received for analysis at ALS Environmental on 09-Nov-2024. 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-FULL HN-3546-S

Batch ID: 2772682

The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See QC report.

The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for the following analyte(s): See QC report.

Batch ID: 2757722

The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for the following analyte(s): See QC report.

The MS recovery was outside of the control limit. However, the MSD recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte. See QC report.

The concentration in the Method Blank was greater than the Method Detection Limit. Positive results in the batch may be biased high for this analyte: See QC report.

The LCS recovery was below the lower control limit. The sample results for this batch may be biased low for this analyte: Benzo(k)fluoranthene.

The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See QC report.

EPA 537 Mod-S

Batch ID: 2764111

HN2409094-004: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2409094-004: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

Metals

EPA 6020B-3050B-S

Batch ID: 2757455

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: Zn batch 1766336

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: Zn batch 1766336

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: Zn batch 1765802

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: Zn batch 1765802

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting limits.

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



CLIENT ID: SB-1_4-5_20241108	Lab ID: HN2409094-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	3.38		0.0343	0.286	mg/kg	EPA 6020B
Barium	30.1		0.263	0.286	mg/kg	EPA 6020B
Benzo(a)anthracene	12.0		6.08	7.04	µg/kg	EPA 8270E
Benzo(a)pyrene	13.4		4.32	7.04	µg/kg	EPA 8270E
Benzo(b)fluoranthene	17.6	S	5.25	7.04	µg/kg	EPA 8270E
Benzo(g,h,i)perylene	8.45		5.40	7.04	µg/kg	EPA 8270E
Benzo(k)fluoranthene	7.04		5.33	7.04	µg/kg	EPA 8270E
Cadmium	0.126		0.0172	0.114	mg/kg	EPA 6020B
Chromium	6.94		0.126	0.286	mg/kg	EPA 6020B
Chrysene	11.3		5.69	7.04	µg/kg	EPA 8270E
Fluoranthene	23.9		3.38	7.04	µg/kg	EPA 8270E
Indeno(1,2,3-cd) pyrene	8.45		4.90	7.04	µg/kg	EPA 8270E
Lead	7.33		0.137	0.286	mg/kg	EPA 6020B
Mercury	0.0233		0.0136	0.0200	mg/kg	EPA 7471B
Percent Moisture	5.9		0.1	0.1	%	EPA 3550C
Phenanthrene	10.6		3.27	7.04	µg/kg	EPA 8270E
Pyrene	18.3		3.51	7.04	µg/kg	EPA 8270E

CLIENT ID: SB-3_4-5_20241108	Lab ID: HN2409094-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	1.43		0.0359	0.299	mg/kg	EPA 6020B
Barium	13.5		0.275	0.299	mg/kg	EPA 6020B
Cadmium	0.0353	J	0.0179	0.120	mg/kg	EPA 6020B
Chromium	5.73		0.132	0.299	mg/kg	EPA 6020B
Fluoranthene	18.8		9.02	18.8	µg/kg	EPA 8270E
Lead	3.65		0.144	0.299	mg/kg	EPA 6020B
Percent Moisture	14.9		0.1	0.1	%	EPA 3550C

CLIENT ID: SB-6_4-5_20241108	Lab ID: HN2409094-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	2.37		0.0337	0.280	mg/kg	EPA 6020B
Barium	9.30		0.258	0.280	mg/kg	EPA 6020B
Chromium	5.10		0.123	0.280	mg/kg	EPA 6020B
Lead	6.01		0.135	0.280	mg/kg	EPA 6020B
Percent Moisture	9.8		0.1	0.1	%	EPA 3550C
Pyrene	8.72		3.62	7.26	µg/kg	EPA 8270E

CLIENT ID: SB-4_4-5_20241108	Lab ID: HN2409094-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	2.94		0.0350	0.292	mg/kg	EPA 6020B
Barium	6.80		0.268	0.292	mg/kg	EPA 6020B
Cadmium	0.0659	J	0.0175	0.117	mg/kg	EPA 6020B

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting limits.

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



CLIENT ID: SB-4_4-5_20241108	Lab ID: HN2409094-004
-------------------------------------	------------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Chromium	3.97		0.128	0.292	mg/kg	EPA 6020B
Lead	3.82		0.140	0.292	mg/kg	EPA 6020B
Percent Moisture	12.6		0.1	0.1	%	EPA 3550C
Perfluorooctanoic acid (PFOA)	0.218	J	0.191	1.15	µg/kg	EPA 537Mod

CLIENT ID: SB-10_4-5_20241108	Lab ID: HN2409094-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	0.840		0.0394	0.328	mg/kg	EPA 6020B
Barium	9.14		0.302	0.328	mg/kg	EPA 6020B
Benzo(b)fluoranthene	6.49	J	5.38	7.21	µg/kg	EPA 8270E
Chromium	8.27		0.144	0.328	mg/kg	EPA 6020B
Fluoranthene	7.94		3.46	7.21	µg/kg	EPA 8270E
Lead	4.70		0.158	0.328	mg/kg	EPA 6020B
Mercury	0.0154	J	0.0136	0.0200	mg/kg	EPA 7471B
Percent Moisture	7.6		0.1	0.1	%	EPA 3550C
Phenanthrene	5.05	J	3.35	7.21	µg/kg	EPA 8270E
Pyrene	7.21		3.60	7.21	µg/kg	EPA 8270E

CLIENT ID: SB-11_4-5_20241108	Lab ID: HN2409094-006
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	0.849		0.0376	0.314	mg/kg	EPA 6020B
Barium	3.82		0.288	0.314	mg/kg	EPA 6020B
Benzo(a)anthracene	10.1		6.23	7.21	µg/kg	EPA 8270E
Chromium	4.48		0.138	0.314	mg/kg	EPA 6020B
Lead	3.54		0.150	0.314	mg/kg	EPA 6020B
Percent Moisture	8.3		0.1	0.1	%	EPA 3550C
Pyrene	15.9		3.60	7.21	µg/kg	EPA 8270E

CLIENT ID: SB-13_4-5_20241108	Lab ID: HN2409094-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	2.91		0.0405	0.338	mg/kg	EPA 6020B
Barium	22.3		0.311	0.338	mg/kg	EPA 6020B
Cadmium	0.0675	J	0.0203	0.135	mg/kg	EPA 6020B
Chromium	5.87		0.149	0.338	mg/kg	EPA 6020B
Fluoranthene	5.02	J	3.44	7.17	µg/kg	EPA 8270E
Lead	4.95		0.162	0.338	mg/kg	EPA 6020B
Mercury	0.0256		0.0136	0.0200	mg/kg	EPA 7471B
Percent Moisture	8.4		0.1	0.1	%	EPA 3550C

CLIENT ID: FD-1_20241108	Lab ID: HN2409094-008
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Analyte	Results	Flag	MDL	MRL	Units	Method
2,4-Dimethylphenol	37.5		17.5	34.1	µg/kg	EPA 8270E

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting limits.

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



CLIENT ID: FD-1_20241108

Lab ID: HN2409094-008

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	2.46		0.0352	0.293	mg/kg	EPA 6020B
Barium	20.8		0.270	0.293	mg/kg	EPA 6020B
Benzo(a)anthracene	10.2		5.89	6.82	µg/kg	EPA 8270E
Benzo(a)pyrene	13.0		4.18	6.82	µg/kg	EPA 8270E
Benzo(b)fluoranthene	14.3		5.08	6.82	µg/kg	EPA 8270E
Benzo(g,h,i)perylene	8.86		5.23	6.82	µg/kg	EPA 8270E
Benzo(k)fluoranthene	8.18		5.16	6.82	µg/kg	EPA 8270E
Cadmium	0.108	J	0.0176	0.117	mg/kg	EPA 6020B
Chromium	5.17		0.129	0.293	mg/kg	EPA 6020B
Chrysene	8.86		5.51	6.82	µg/kg	EPA 8270E
Fluoranthene	19.1		3.27	6.82	µg/kg	EPA 8270E
Indeno(1,2,3-cd) pyrene	9.55		4.74	6.82	µg/kg	EPA 8270E
Lead	5.68		0.141	0.293	mg/kg	EPA 6020B
Mercury	0.0198	J	0.0136	0.0200	mg/kg	EPA 7471B
Percent Moisture	5.7		0.1	0.1	%	EPA 3550C
Phenanthrene	9.55		3.17	6.82	µg/kg	EPA 8270E
Pyrene	15.7		3.40	6.82	µg/kg	EPA 8270E



Sample Receipt Information

SAMPLE SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Workorder: HN2409094

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2409094-001	SB-1_4-5_20241108	SOIL/SOLID	11/08/24 12:15	11/09/24 08:00
HN2409094-002	SB-3_4-5_20241108	SOIL/SOLID	11/08/24 13:00	11/09/24 08:00
HN2409094-003	SB-6_4-5_20241108	SOIL/SOLID	11/08/24 11:30	11/09/24 08:00
HN2409094-004	SB-4_4-5_20241108	SOIL/SOLID	11/08/24 11:00	11/09/24 08:00
HN2409094-005	SB-10_4-5_20241108	SOIL/SOLID	11/08/24 11:50	11/09/24 08:00
HN2409094-006	SB-11_4-5_20241108	SOIL/SOLID	11/08/24 13:20	11/09/24 08:00
HN2409094-007	SB-13_4-5_20241108	SOIL/SOLID	11/08/24 12:30	11/09/24 08:00
HN2409094-008	FD-1_20241108	SOIL/SOLID	11/08/24	11/09/24 08:00



Simi Valley, CA
+1 805 526 7161

Kelso, WA
+1 360 577 7222

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: **070639**

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Valparaiso, IN
+1 219 299 8127

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

Rochester, NY
+1 585 288 5380

Customer Information			Project Information				Parameter/Method Request for Analysis													
Purchase Order	51986	Project Name	401.240/193				A	PFAS EPA 537 Method Soil												
Quote #	10016	Project Number	VAN Buren Industrial				B	Volatile Organic Compound Soil												
Company Name	MANNIK & Smith Group	Bill To Company	MSG				C	SVOC, PCBs, Metals by ICP Soil												
Send Report To		Invoice Attn	Alyssa Cisneros				D													
Address	2365 Haggerty Road	Address	SAME				E													
City/State/Zip	CANTON, MI, 48188	City/State/Zip					F													
Phone	571-719-9948	Phone					G													
Fax		Fax					H													
e-Mail Address		e-Mail Address	ACISNEROS@MANNIKSMITHGROUP.COM				I													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold			
1	SB-145-20241108	11/08/2024	1215	Soil	7	4	X	X	X											
2	SB-3-4-5-20241108	11/08/2024	1300	Soil	7	4	X	X	X											
3	SB-6-4-5-20241108	11/08/2024	1130	Soil	7	4	X	X	X											
4	SB-4-4-5-20241108	11/08/2024	1100	Soil	7	4	X	X	X											
5	SB-10-4-5-20241108	11/08/2024	1150	Soil	7	4	X	X	X											
6	SB-11-4-5-20241108	11/08/2024	1320	Soil	7	4	X	X	X											
7	SB-13-4-5-20241108	11/08/2024	1230	Soil	7	4	X	X	X											
8	FD-1-20241108	11/08/2024	-	Soil	7	4	X	X	X											
9																				
10																				
Sampler(s) Please Print & Sign Zack Kippe			Shipment Method		Turnaround Time in Business Days (BD) ☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD				Results Due Date:											
Relinquished by: Zack Kippe		Date: 11/08/2024	Time: 3:50 PM	Received by: Dominic Hawk		Notes: Rec'd 11/9/24 0800		Cooler ID: DF2		Cooler Temp.: 2.4°C		QC Package: (Check One Box Below)								
Relinquished by: [Signature]		Date: 11/8/24	Time: 1700	Received by (Laboratory): [Signature]		11/8/24 1200						☐ Level II Std QC ☐ TRAP Checklist ☐ Level III Std QC/Raw Date ☐ TRAP Level IV ☐ Level IV SW846/CLP ☐ Other								
Logged by (Laboratory): DES		Date: 11/12/24	Time: 1330	Checked by (Laboratory):																
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035																				

Environmental Division
Holland
Work Order Reference
HN2409094



Telephone : +1 616 399 6070

- Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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ALS-COC-2022-R00



ALS Holland Sample Receiving Checklist

Received by: Diane F. Shaw

Date/Time: 11/19/24 0800

Carrier Name: QS

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

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

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

Chain of Custody present? (Yes) / No

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

COC agrees with sample labels? (Yes) / No

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

Sample containers intact? (Yes) / No

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

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

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

Temperature(s) (°C): 2.4 / 2.4 °C

Thermometer(s): DF 2

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

Matrix/Matrices: Soil

Cooler(s)/Kit(s): 1

Date/Time sample(s) sent to storage: 11/12/24 1330

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:



Miscellaneous Forms

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
n	Analyte accreditation is not offered
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	1/1/2024	12/31/2024
Colorado	UST		6/21/2024	6/30/2025
Connecticut	Drinking Water (Secondary)	PH-0155	1/23/2023	12/31/2024
Florida	NELAP (Primary)	E871106	7/1/2024	6/30/2025
Illinois	NELAP (Secondary)	200076	12/14/2023	12/31/2024
Indiana	Drinking Water (Secondary)	C-MI-08	4/4/2024	9/4/2026
Iowa	State Specific	403	9/18/2023	9/1/2025
Kansas	NELAP (Secondary)	E-10411	7/09/2024	7/31/2025
Kentucky	Waste Water	KY98004	12/5/2023	12/31/2024
Kentucky	UST	120474	6/24/24	6/30/2025
Michigan	Drinking Water (Primary)	0022	12/19/2023	9/4/2026
Minnesota	NELAP (Secondary)	026-999-449	12/29/2023	12/31/2024
New Jersey	NELAP (Secondary)	MI015	7/1/2024	6/30/2025
New York	Drinking Water (Secondary)	12128	3/29/2024	4/1/2025
North Dakota	State Specific	R-192	9/12/2023	6/30/2024
Ohio	Drinking Water (Secondary)	87783	7/1/2024	6/30/2025
Pennsylvania	NELAP (Secondary)	68-03827	6/14/2024	7/31/2025
Texas	NELAP (Secondary)	T104704494	2/1/2024	1/31/2025
USDA	Domestic CA	Soil-MI-007	8/21/2023	2/18/2025
USDA	Soil Import	P330-19-00039	3/3/2023	3/3/2026
West Virginia	State Specific	355	6/24/2024	8/31/2025
Wisconsin	State Specific	399084510	8/15/2024	8/31/2025

¹ - Scope available upon request

ANALYST SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial

Work Order: HN2409094

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1763277		2748405	Jeffrey Blakeman
EPA 537Mod	1765887	Clayton Rzepka	2764111	Michelle McClendon
EPA 6020B	1765802	Chloe Patrick	2757455	Matthew Kiel
EPA 7471B	1763264	Hunter Johnson	2749459	Hunter Johnson
EPA 8082A	1767675	Gwen Pickering	2764313	Sam Bruzan
EPA 8260D	1765574	Jonathan Vazquez	2767421	Caroline Cox
EPA 8270E	1770905	Gwen Pickering	2772682	Sam Marcotte
SM 4500-Cl E-2011	1768515	Sage Hansen	2757664	Sage Hansen

Sample Name: SB-3_4-5_20241108
Laboratory Code: HN2409094-002
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1763277		2748405	Jeffrey Blakeman
EPA 537Mod	1765887	Clayton Rzepka	2764111	Michelle McClendon
EPA 6020B	1765802	Chloe Patrick	2757455	Matthew Kiel
EPA 7471B	1763264	Hunter Johnson	2749459	Hunter Johnson
EPA 8082A	1763092	Gwen Pickering	2754066	Sam Bruzan
EPA 8260D	1765574	Jonathan Vazquez	2767421	Caroline Cox
EPA 8270E	1770905	Gwen Pickering	2776996	Erin Wall
SM 4500-Cl E-2011	1768515	Sage Hansen	2757664	Sage Hansen

Sample Name: SB-6_4-5_20241108
Laboratory Code: HN2409094-003
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1763277		2748405	Jeffrey Blakeman
EPA 537Mod	1765887	Clayton Rzepka	2764111	Michelle McClendon
EPA 6020B	1765802	Chloe Patrick	2757455	Matthew Kiel

ANALYST SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial

Work Order: HN2409094

Sample Name: SB-6_4-5_20241108
Laboratory Code: HN2409094-003
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 7471B	1763264	Hunter Johnson	2749459	Hunter Johnson
EPA 8082A	1763092	Gwen Pickering	2754066	Sam Bruzan
EPA 8260D	1765574	Jonathan Vazquez	2767421	Caroline Cox
EPA 8270E	1770905	Gwen Pickering	2776996	Erin Wall
SM 4500-Cl E-2011	1768515	Sage Hansen	2757664	Sage Hansen

Sample Name: SB-4_4-5_20241108
Laboratory Code: HN2409094-004
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1763277		2748405	Jeffrey Blakeman
EPA 537Mod	1765887	Clayton Rzepka	2764111	Michelle McClendon
EPA 6020B	1765802	Chloe Patrick	2757455	Matthew Kiel
EPA 7471B	1763264	Hunter Johnson	2749459	Hunter Johnson
EPA 8082A	1763092	Gwen Pickering	2754066	Sam Bruzan
EPA 8260D	1765574	Jonathan Vazquez	2767421	Caroline Cox
EPA 8270E	1770905	Gwen Pickering	2776996	Erin Wall
SM 4500-Cl E-2011	1768515	Sage Hansen	2757664	Sage Hansen

Sample Name: SB-10_4-5_20241108
Laboratory Code: HN2409094-005
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1763281		2748412	Jeffrey Blakeman
EPA 537Mod	1765887	Clayton Rzepka	2764111	Michelle McClendon
EPA 6020B	1765802	Chloe Patrick	2757455	Matthew Kiel
EPA 7471B	1763264	Hunter Johnson	2749459	Hunter Johnson
EPA 8082A	1763092	Gwen Pickering	2754066	Sam Bruzan
EPA 8260D	1765574	Jonathan Vazquez	2767421	Caroline Cox

ANALYST SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial

Work Order: HN2409094

Sample Name: SB-10_4-5_20241108
Laboratory Code: HN2409094-005
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 8270E	1770905	Gwen Pickering	2776996	Erin Wall
SM 4500-Cl E-2011	1768515	Sage Hansen	2757664	Sage Hansen

Sample Name: SB-11_4-5_20241108
Laboratory Code: HN2409094-006
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1763281		2748412	Jeffrey Blakeman
EPA 537Mod	1765887	Clayton Rzepka	2764111	Michelle McClendon
EPA 6020B	1765802	Chloe Patrick	2757455	Matthew Kiel
EPA 7471B	1763264	Hunter Johnson	2749459	Hunter Johnson
EPA 8082A	1763092	Gwen Pickering	2754066	Sam Bruzan
EPA 8260D	1765574	Jonathan Vazquez	2767421	Caroline Cox
EPA 8270E	1770905	Gwen Pickering	2775985	Trevor Beardsley
SM 4500-Cl E-2011	1768515	Sage Hansen	2757664	Sage Hansen

Sample Name: SB-13_4-5_20241108
Laboratory Code: HN2409094-007
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1763281		2748412	Jeffrey Blakeman
EPA 537Mod	1765887	Clayton Rzepka	2764111	Michelle McClendon
EPA 6020B	1765802	Chloe Patrick	2757455	Matthew Kiel
EPA 7471B	1763264	Hunter Johnson	2749459	Hunter Johnson
EPA 8082A	1763092	Gwen Pickering	2754066	Sam Bruzan
EPA 8260D	1765574	Jonathan Vazquez	2767421	Caroline Cox
EPA 8270E	1770905	Gwen Pickering	2775985	Trevor Beardsley
SM 4500-Cl E-2011	1768515	Sage Hansen	2757664	Sage Hansen

ANALYST SUMMARY



Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial

Work Order: HN2409094

Sample Name: FD-1_20241108
Laboratory Code: HN2409094-008
Sample Matrix: SOIL/SOLID

Date Collected: 11/08/24
Date Received: 11/09/24

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1763281		2748412	Jeffrey Blakeman
EPA 537Mod	1765887	Clayton Rzepka	2764111	Michelle McClendon
EPA 6020B	1765802	Chloe Patrick	2757455	Matthew Kiel
EPA 7471B	1763264	Hunter Johnson	2749459	Hunter Johnson
EPA 8082A	1767675	Gwen Pickering	2764313	Sam Bruzan
EPA 8260D	1765574	Jonathan Vazquez	2767421	Caroline Cox
EPA 8270E	1770905	Gwen Pickering	2775985	Trevor Beardsley



Sample Results



Organics

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-1_4-5_20241108
Lab Code: HN2409094-001

Work Order: HN2409094
Date Collected: 11/08/24 12:15
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND U	0.991	0.249	1	11/15/24 21:26	11/14/24	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND U	1.01	0.548	1	11/15/24 21:26	11/14/24	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND U	0.982	0.303	1	11/15/24 21:26	11/14/24	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND U	0.997	0.292	1	11/15/24 21:26	11/14/24	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND U	1.05	0.467	1	11/15/24 21:26	11/14/24	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND U	1.05	0.300	1	11/15/24 21:26	11/14/24	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND U	1.05	0.246	1	11/15/24 21:26	11/14/24	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND U	0.991	0.626	1	11/15/24 21:26	11/14/24	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND U	0.980	0.151	1	11/15/24 21:26	11/14/24	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND U	1.05	0.367	1	11/15/24 21:26	11/14/24	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND U	1.05	0.670	1	11/15/24 21:26	11/14/24	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND U	1.05	0.679	1	11/15/24 21:26	11/14/24	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND U	1.05	0.0894	1	11/15/24 21:26	11/14/24	
Perfluorobutane sulfonic acid (PFBS)	ND U	0.930	0.128	1	11/15/24 21:26	11/14/24	
Perfluorobutanoic acid (PFBA)	ND U	1.05	0.285	1	11/15/24 21:26	11/14/24	
Perfluorobutylsulfonamide (PFBSA)	ND U	1.05	0.592	1	11/15/24 21:26	11/14/24	
Perfluorodecane sulfonic acid (PFDS)	ND U	1.01	0.592	1	11/15/24 21:26	11/14/24	
Perfluorodecanoic acid (PFDA)	ND U	1.05	0.172	1	11/15/24 21:26	11/14/24	
Perfluorododecanoic acid (PFDOA)	ND U	1.05	0.327	1	11/15/24 21:26	11/14/24	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	1.00	0.563	1	11/15/24 21:26	11/14/24	
Perfluoroheptanoic acid (PFHpA)	ND U	1.05	0.241	1	11/15/24 21:26	11/14/24	
Perfluorohexane sulfonic acid (PFHxS)	ND U	1.05	0.223	1	11/15/24 21:26	11/14/24	
Perfluorohexanesulfonamide (PFHxSA)	ND U	1.05	0.225	1	11/15/24 21:26	11/14/24	
Perfluorohexanoic acid (PFHxA)	ND U	1.05	0.158	1	11/15/24 21:26	11/14/24	
Perfluorononane sulfonic acid (PFNS)	ND U	1.05	0.176	1	11/15/24 21:26	11/14/24	
Perfluorononanoic acid (PFNA)	ND U	1.05	0.152	1	11/15/24 21:26	11/14/24	
Perfluorooctane sulfonamide (PFOSAm)	ND U	1.05	0.250	1	11/15/24 21:26	11/14/24	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.05	0.202	1	11/15/24 21:26	11/14/24	
Perfluorooctanoic acid (PFOA)	ND U	1.05	0.175	1	11/15/24 21:26	11/14/24	
Perfluoropentane sulfonic acid (PFPeS)	ND U	1.05	0.438	1	11/15/24 21:26	11/14/24	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-1_4-5_20241108

Lab Code:

HN2409094-001

Work Order:

HN2409094

Date Collected:

11/08/24 12:15

Date Received:

11/09/24 08:00

Units:

µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method:

EPA 537Mod

Prep Method:

EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoropentanoic acid (PFPeA)	ND U	1.05	0.124	1	11/15/24 21:26	11/14/24	
Perfluorotetradecanoic acid (PFTDA)	ND U	1.05	0.228	1	11/15/24 21:26	11/14/24	
Perfluorotridecanoic acid (PFTrDA)	ND U	1.05	0.690	1	11/15/24 21:26	11/14/24	
Perfluoroundecanoic acid (PFUnDA)	ND U	1.05	0.319	1	11/15/24 21:26	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-1_4-5_20241108
Lab Code: HN2409094-001

Work Order: HN2409094
Date Collected: 11/08/24 12:15
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 4:2	88.7	50 - 150	11/15/24 21:26	
13C2-FtS 6:2	147	50 - 150	11/15/24 21:26	
13C2-FtS 8:2	92.1	50 - 150	11/15/24 21:26	
13C2-PFDA	83.3	50 - 150	11/15/24 21:26	
13C2-PFDoA	81.8	50 - 150	11/15/24 21:26	
13C2-PFHxA	80.5	50 - 150	11/15/24 21:26	
13C2-PFTeA	81.6	21 - 170	11/15/24 21:26	
13C2-PFUnA	87.2	50 - 150	11/15/24 21:26	
13C3-HFPO-DA	81.8	50 - 150	11/15/24 21:26	
13C3-PFBS	76.6	50 - 150	11/15/24 21:26	
13C4-PFBA	80.4	50 - 150	11/15/24 21:26	
13C4-PFHpA	79.8	50 - 150	11/15/24 21:26	
13C4-PFOA	83.3	50 - 150	11/15/24 21:26	
13C4-PFOS	76.7	50 - 150	11/15/24 21:26	
13C5-PFNA	80.9	50 - 150	11/15/24 21:26	
13C5-PFPeA	79.4	50 - 150	11/15/24 21:26	
13C8-FOSA	80.3	50 - 150	11/15/24 21:26	
18O2-PFHxS	79.6	50 - 150	11/15/24 21:26	
d3-N-MeFOSAA	86.5	50 - 150	11/15/24 21:26	
d5-N-EtFOSAA	84.8	50 - 150	11/15/24 21:26	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-3_4-5_20241108
Lab Code: HN2409094-002

Work Order: HN2409094
Date Collected: 11/08/24 13:00
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND U	1.12	0.281	1	11/15/24 22:24	11/14/24	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND U	1.14	0.618	1	11/15/24 22:24	11/14/24	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND U	1.11	0.342	1	11/15/24 22:24	11/14/24	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND U	1.12	0.330	1	11/15/24 22:24	11/14/24	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND U	1.19	0.527	1	11/15/24 22:24	11/14/24	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND U	1.19	0.338	1	11/15/24 22:24	11/14/24	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND U	1.19	0.278	1	11/15/24 22:24	11/14/24	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND U	1.12	0.706	1	11/15/24 22:24	11/14/24	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND U	1.11	0.171	1	11/15/24 22:24	11/14/24	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND U	1.19	0.414	1	11/15/24 22:24	11/14/24	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND U	1.19	0.756	1	11/15/24 22:24	11/14/24	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND U	1.19	0.767	1	11/15/24 22:24	11/14/24	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND U	1.19	0.101	1	11/15/24 22:24	11/14/24	
Perfluorobutane sulfonic acid (PFBS)	ND U	1.05	0.145	1	11/15/24 22:24	11/14/24	
Perfluorobutanoic acid (PFBA)	ND U	1.19	0.322	1	11/15/24 22:24	11/14/24	
Perfluorobutylsulfonamide (PFBSA)	ND U	1.19	0.668	1	11/15/24 22:24	11/14/24	
Perfluorodecane sulfonic acid (PFDS)	ND U	1.14	0.668	1	11/15/24 22:24	11/14/24	
Perfluorodecanoic acid (PFDA)	ND U	1.19	0.195	1	11/15/24 22:24	11/14/24	
Perfluorododecanoic acid (PFDOA)	ND U	1.19	0.369	1	11/15/24 22:24	11/14/24	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	1.13	0.635	1	11/15/24 22:24	11/14/24	
Perfluoroheptanoic acid (PFHpA)	ND U	1.19	0.272	1	11/15/24 22:24	11/14/24	
Perfluorohexane sulfonic acid (PFHxS)	ND U	1.19	0.252	1	11/15/24 22:24	11/14/24	
Perfluorohexanesulfonamide (PFHxSA)	ND U	1.19	0.254	1	11/15/24 22:24	11/14/24	
Perfluorohexanoic acid (PFHxA)	ND U	1.19	0.178	1	11/15/24 22:24	11/14/24	
Perfluorononane sulfonic acid (PFNS)	ND U	1.19	0.198	1	11/15/24 22:24	11/14/24	
Perfluorononanoic acid (PFNA)	ND U	1.19	0.172	1	11/15/24 22:24	11/14/24	
Perfluorooctane sulfonamide (PFOSAm)	ND U	1.19	0.282	1	11/15/24 22:24	11/14/24	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.19	0.228	1	11/15/24 22:24	11/14/24	
Perfluorooctanoic acid (PFOA)	ND U	1.19	0.197	1	11/15/24 22:24	11/14/24	
Perfluoropentane sulfonic acid (PFPeS)	ND U	1.19	0.494	1	11/15/24 22:24	11/14/24	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-3_4-5_20241108

Lab Code:

HN2409094-002

Work Order:

HN2409094

Date Collected:

11/08/24 13:00

Date Received:

11/09/24 08:00

Units:

µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method:

EPA 537Mod

Prep Method:

EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoropentanoic acid (PFPeA)	ND U	1.19	0.140	1	11/15/24 22:24	11/14/24	
Perfluorotetradecanoic acid (PFTDA)	ND U	1.19	0.258	1	11/15/24 22:24	11/14/24	
Perfluorotridecanoic acid (PFTrDA)	ND U	1.19	0.779	1	11/15/24 22:24	11/14/24	
Perfluoroundecanoic acid (PFUnDA)	ND U	1.19	0.360	1	11/15/24 22:24	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-3_4-5_20241108
Lab Code: HN2409094-002

Work Order: HN2409094
Date Collected: 11/08/24 13:00
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 4:2	83.6	50 - 150	11/15/24 22:24	
13C2-FtS 6:2	120	50 - 150	11/15/24 22:24	
13C2-FtS 8:2	87.5	50 - 150	11/15/24 22:24	
13C2-PFDA	81.5	50 - 150	11/15/24 22:24	
13C2-PFDoA	85.8	50 - 150	11/15/24 22:24	
13C2-PFHxA	83.2	50 - 150	11/15/24 22:24	
13C2-PFTeA	84.2	21 - 170	11/15/24 22:24	
13C2-PFUnA	93.1	50 - 150	11/15/24 22:24	
13C3-HFPO-DA	83.4	50 - 150	11/15/24 22:24	
13C3-PFBS	77.4	50 - 150	11/15/24 22:24	
13C4-PFBA	81.7	50 - 150	11/15/24 22:24	
13C4-PFHpA	76.7	50 - 150	11/15/24 22:24	
13C4-PFOA	88.8	50 - 150	11/15/24 22:24	
13C4-PFOS	80.7	50 - 150	11/15/24 22:24	
13C5-PFNA	81.5	50 - 150	11/15/24 22:24	
13C5-PFPeA	80.0	50 - 150	11/15/24 22:24	
13C8-FOSA	83.2	50 - 150	11/15/24 22:24	
18O2-PFHxS	81.7	50 - 150	11/15/24 22:24	
d3-N-MeFOSAA	79.8	50 - 150	11/15/24 22:24	
d5-N-EtFOSAA	85.5	50 - 150	11/15/24 22:24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-6_4-5_20241108
Lab Code: HN2409094-003

Work Order: HN2409094
Date Collected: 11/08/24 11:30
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND U	1.04	0.261	1	11/15/24 22:38	11/14/24	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND U	1.06	0.575	1	11/15/24 22:38	11/14/24	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND U	1.03	0.318	1	11/15/24 22:38	11/14/24	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND U	1.04	0.307	1	11/15/24 22:38	11/14/24	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND U	1.10	0.490	1	11/15/24 22:38	11/14/24	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND U	1.10	0.314	1	11/15/24 22:38	11/14/24	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND U	1.10	0.258	1	11/15/24 22:38	11/14/24	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND U	1.04	0.656	1	11/15/24 22:38	11/14/24	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND U	1.03	0.159	1	11/15/24 22:38	11/14/24	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND U	1.10	0.385	1	11/15/24 22:38	11/14/24	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND U	1.10	0.703	1	11/15/24 22:38	11/14/24	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND U	1.10	0.713	1	11/15/24 22:38	11/14/24	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND U	1.10	0.0938	1	11/15/24 22:38	11/14/24	
Perfluorobutane sulfonic acid (PFBS)	ND U	0.975	0.134	1	11/15/24 22:38	11/14/24	
Perfluorobutanoic acid (PFBA)	ND U	1.10	0.299	1	11/15/24 22:38	11/14/24	
Perfluorobutylsulfonamide (PFBSA)	ND U	1.10	0.621	1	11/15/24 22:38	11/14/24	
Perfluorodecane sulfonic acid (PFDS)	ND U	1.06	0.621	1	11/15/24 22:38	11/14/24	
Perfluorodecanoic acid (PFDA)	ND U	1.10	0.181	1	11/15/24 22:38	11/14/24	
Perfluorododecanoic acid (PFDOA)	ND U	1.10	0.343	1	11/15/24 22:38	11/14/24	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	1.05	0.590	1	11/15/24 22:38	11/14/24	
Perfluoroheptanoic acid (PFHpA)	ND U	1.10	0.253	1	11/15/24 22:38	11/14/24	
Perfluorohexane sulfonic acid (PFHxS)	ND U	1.10	0.234	1	11/15/24 22:38	11/14/24	
Perfluorohexanesulfonamide (PFHxSA)	ND U	1.10	0.236	1	11/15/24 22:38	11/14/24	
Perfluorohexanoic acid (PFHxA)	ND U	1.10	0.165	1	11/15/24 22:38	11/14/24	
Perfluorononane sulfonic acid (PFNS)	ND U	1.10	0.184	1	11/15/24 22:38	11/14/24	
Perfluorononanoic acid (PFNA)	ND U	1.10	0.160	1	11/15/24 22:38	11/14/24	
Perfluorooctane sulfonamide (PFOSAm)	ND U	1.10	0.262	1	11/15/24 22:38	11/14/24	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.10	0.212	1	11/15/24 22:38	11/14/24	
Perfluorooctanoic acid (PFOA)	ND U	1.10	0.183	1	11/15/24 22:38	11/14/24	
Perfluoropentane sulfonic acid (PFPeS)	ND U	1.10	0.459	1	11/15/24 22:38	11/14/24	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-6_4-5_20241108

Lab Code:

HN2409094-003

Work Order:

HN2409094

Date Collected:

11/08/24 11:30

Date Received:

11/09/24 08:00

Units:

µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method:

EPA 537Mod

Prep Method:

EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoropentanoic acid (PFPeA)	ND U	1.10	0.130	1	11/15/24 22:38	11/14/24	
Perfluorotetradecanoic acid (PFTDA)	ND U	1.10	0.239	1	11/15/24 22:38	11/14/24	
Perfluorotridecanoic acid (PFTrDA)	ND U	1.10	0.724	1	11/15/24 22:38	11/14/24	
Perfluoroundecanoic acid (PFUnDA)	ND U	1.10	0.334	1	11/15/24 22:38	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-6_4-5_20241108
Lab Code: HN2409094-003

Work Order: HN2409094
Date Collected: 11/08/24 11:30
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 4:2	82.9	50 - 150	11/15/24 22:38	
13C2-FtS 6:2	119	50 - 150	11/15/24 22:38	
13C2-FtS 8:2	84.7	50 - 150	11/15/24 22:38	
13C2-PFDA	79.1	50 - 150	11/15/24 22:38	
13C2-PFDoA	81.5	50 - 150	11/15/24 22:38	
13C2-PFHxA	80.2	50 - 150	11/15/24 22:38	
13C2-PFTeA	84.2	21 - 170	11/15/24 22:38	
13C2-PFUnA	94.7	50 - 150	11/15/24 22:38	
13C3-HFPO-DA	76.7	50 - 150	11/15/24 22:38	
13C3-PFBS	76.0	50 - 150	11/15/24 22:38	
13C4-PFBA	78.2	50 - 150	11/15/24 22:38	
13C4-PFHpA	75.5	50 - 150	11/15/24 22:38	
13C4-PFOA	80.0	50 - 150	11/15/24 22:38	
13C4-PFOS	78.3	50 - 150	11/15/24 22:38	
13C5-PFNA	80.4	50 - 150	11/15/24 22:38	
13C5-PFPeA	76.0	50 - 150	11/15/24 22:38	
13C8-FOSA	79.1	50 - 150	11/15/24 22:38	
18O2-PFHxS	77.6	50 - 150	11/15/24 22:38	
d3-N-MeFOSAA	79.9	50 - 150	11/15/24 22:38	
d5-N-EtFOSAA	94.2	50 - 150	11/15/24 22:38	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-4_4-5_20241108
Lab Code: HN2409094-004

Work Order: HN2409094
Date Collected: 11/08/24 11:00
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND U	1.08	0.272	1	11/16/24 00:08	11/14/24	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND U	1.10	0.599	1	11/16/24 00:08	11/14/24	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND U	1.07	0.331	1	11/16/24 00:08	11/14/24	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND U	1.09	0.320	1	11/16/24 00:08	11/14/24	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND U	1.15	0.511	1	11/16/24 00:08	11/14/24	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND U	1.15	0.328	1	11/16/24 00:08	11/14/24	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND U	1.15	0.269	1	11/16/24 00:08	11/14/24	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND U	1.08	0.684	1	11/16/24 00:08	11/14/24	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND U	1.07	0.166	1	11/16/24 00:08	11/14/24	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND U	1.15	0.401	1	11/16/24 00:08	11/14/24	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND U	1.15	0.732	1	11/16/24 00:08	11/14/24	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND U	1.15	0.743	1	11/16/24 00:08	11/14/24	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND U	1.15	0.0978	1	11/16/24 00:08	11/14/24	
Perfluorobutane sulfonic acid (PFBS)	ND U	1.02	0.140	1	11/16/24 00:08	11/14/24	
Perfluorobutanoic acid (PFBA)	ND U	1.15	0.312	1	11/16/24 00:08	11/14/24	
Perfluorobutylsulfonamide (PFBSA)	ND U	1.15	0.647	1	11/16/24 00:08	11/14/24	
Perfluorodecane sulfonic acid (PFDS)	ND U	1.11	0.647	1	11/16/24 00:08	11/14/24	
Perfluorodecanoic acid (PFDA)	ND U	1.15	0.189	1	11/16/24 00:08	11/14/24	
Perfluorododecanoic acid (PFDOA)	ND U	1.15	0.358	1	11/16/24 00:08	11/14/24	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	1.09	0.615	1	11/16/24 00:08	11/14/24	
Perfluoroheptanoic acid (PFHpA)	ND U	1.15	0.263	1	11/16/24 00:08	11/14/24	
Perfluorohexane sulfonic acid (PFHxS)	ND U	1.15	0.244	1	11/16/24 00:08	11/14/24	
Perfluorohexanesulfonamide (PFHxSA)	ND U	1.15	0.246	1	11/16/24 00:08	11/14/24	
Perfluorohexanoic acid (PFHxA)	ND U	1.15	0.172	1	11/16/24 00:08	11/14/24	
Perfluorononane sulfonic acid (PFNS)	ND U	1.15	0.192	1	11/16/24 00:08	11/14/24	
Perfluorononanoic acid (PFNA)	ND U	1.15	0.167	1	11/16/24 00:08	11/14/24	
Perfluorooctane sulfonamide (PFOSAm)	ND U	1.15	0.274	1	11/16/24 00:08	11/14/24	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.15	0.221	1	11/16/24 00:08	11/14/24	
Perfluorooctanoic acid (PFOA)	0.218 J	1.15	0.191	1	11/16/24 00:08	11/14/24	
Perfluoropentane sulfonic acid (PFPeS)	ND U	1.15	0.478	1	11/16/24 00:08	11/14/24	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-4_4-5_20241108

Lab Code:

HN2409094-004

Work Order:

HN2409094

Date Collected:

11/08/24 11:00

Date Received:

11/09/24 08:00

Units:

µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method:

EPA 537Mod

Prep Method:

EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoropentanoic acid (PFPeA)	ND U	1.15	0.136	1	11/16/24 00:08	11/14/24	
Perfluorotetradecanoic acid (PFTDA)	ND U	1.15	0.250	1	11/16/24 00:08	11/14/24	
Perfluorotridecanoic acid (PFTrDA)	ND U	1.15	0.754	1	11/16/24 00:08	11/14/24	
Perfluoroundecanoic acid (PFUnDA)	ND U	1.15	0.348	1	11/16/24 00:08	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-4_4-5_20241108
Lab Code: HN2409094-004

Work Order: HN2409094
Date Collected: 11/08/24 11:00
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Surrogate Name		% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 4:2		76.6	50 - 150	11/16/24 00:08	
13C2-FtS 6:2	S	190	50 - 150	11/16/24 00:08	S
13C2-FtS 8:2	S	251	50 - 150	11/16/24 00:08	S
13C2-PFDA		80.7	50 - 150	11/16/24 00:08	
13C2-PFDoA		78.9	50 - 150	11/16/24 00:08	
13C2-PFHxA		65.2	50 - 150	11/16/24 00:08	
13C2-PFTeA		67.1	21 - 170	11/16/24 00:08	
13C2-PFUnA		94.2	50 - 150	11/16/24 00:08	
13C3-HFPO-DA		66.4	50 - 150	11/16/24 00:08	
13C3-PFBS		60.7	50 - 150	11/16/24 00:08	
13C4-PFBA		64.2	50 - 150	11/16/24 00:08	
13C4-PFHpA		64.0	50 - 150	11/16/24 00:08	
13C4-PFOA		72.5	50 - 150	11/16/24 00:08	
13C4-PFOS		61.8	50 - 150	11/16/24 00:08	
13C5-PFNA		75.5	50 - 150	11/16/24 00:08	
13C5-PFPeA		62.4	50 - 150	11/16/24 00:08	
13C8-FOSA		63.6	50 - 150	11/16/24 00:08	
18O2-PFHxS		59.5	50 - 150	11/16/24 00:08	
d3-N-MeFOSAA		108	50 - 150	11/16/24 00:08	
d5-N-EtFOSAA		126	50 - 150	11/16/24 00:08	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-10_4-5_20241108
Lab Code: HN2409094-005

Work Order: HN2409094
Date Collected: 11/08/24 11:50
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND U	1.01	0.255	1	11/16/24 00:22	11/14/24	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND U	1.03	0.561	1	11/16/24 00:22	11/14/24	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND U	1.00	0.310	1	11/16/24 00:22	11/14/24	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND U	1.02	0.299	1	11/16/24 00:22	11/14/24	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND U	1.08	0.478	1	11/16/24 00:22	11/14/24	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND U	1.08	0.307	1	11/16/24 00:22	11/14/24	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND U	1.08	0.252	1	11/16/24 00:22	11/14/24	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND U	1.01	0.641	1	11/16/24 00:22	11/14/24	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND U	1.00	0.155	1	11/16/24 00:22	11/14/24	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND U	1.08	0.376	1	11/16/24 00:22	11/14/24	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND U	1.08	0.686	1	11/16/24 00:22	11/14/24	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND U	1.08	0.696	1	11/16/24 00:22	11/14/24	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND U	1.08	0.0915	1	11/16/24 00:22	11/14/24	
Perfluorobutane sulfonic acid (PFBS)	ND U	0.952	0.131	1	11/16/24 00:22	11/14/24	
Perfluorobutanoic acid (PFBA)	ND U	1.08	0.292	1	11/16/24 00:22	11/14/24	
Perfluorobutylsulfonamide (PFBSA)	ND U	1.08	0.606	1	11/16/24 00:22	11/14/24	
Perfluorodecane sulfonic acid (PFDS)	ND U	1.04	0.606	1	11/16/24 00:22	11/14/24	
Perfluorodecanoic acid (PFDA)	ND U	1.08	0.177	1	11/16/24 00:22	11/14/24	
Perfluorododecanoic acid (PFDOA)	ND U	1.08	0.335	1	11/16/24 00:22	11/14/24	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	1.02	0.576	1	11/16/24 00:22	11/14/24	
Perfluoroheptanoic acid (PFHpA)	ND U	1.08	0.247	1	11/16/24 00:22	11/14/24	
Perfluorohexane sulfonic acid (PFHxS)	ND U	1.08	0.228	1	11/16/24 00:22	11/14/24	
Perfluorohexanesulfonamide (PFHxSA)	ND U	1.08	0.230	1	11/16/24 00:22	11/14/24	
Perfluorohexanoic acid (PFHxA)	ND U	1.08	0.162	1	11/16/24 00:22	11/14/24	
Perfluorononane sulfonic acid (PFNS)	ND U	1.08	0.180	1	11/16/24 00:22	11/14/24	
Perfluorononanoic acid (PFNA)	ND U	1.08	0.156	1	11/16/24 00:22	11/14/24	
Perfluorooctane sulfonamide (PFOSAm)	ND U	1.08	0.256	1	11/16/24 00:22	11/14/24	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.08	0.207	1	11/16/24 00:22	11/14/24	
Perfluorooctanoic acid (PFOA)	ND U	1.08	0.179	1	11/16/24 00:22	11/14/24	
Perfluoropentane sulfonic acid (PFPeS)	ND U	1.08	0.448	1	11/16/24 00:22	11/14/24	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-10_4-5_20241108

Lab Code:

HN2409094-005

Work Order:

HN2409094

Date Collected:

11/08/24 11:50

Date Received:

11/09/24 08:00

Units:

µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method:

EPA 537Mod

Prep Method:

EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoropentanoic acid (PFPeA)	ND U	1.08	0.127	1	11/16/24 00:22	11/14/24	
Perfluorotetradecanoic acid (PFTDA)	ND U	1.08	0.234	1	11/16/24 00:22	11/14/24	
Perfluorotridecanoic acid (PFTrDA)	ND U	1.08	0.706	1	11/16/24 00:22	11/14/24	
Perfluoroundecanoic acid (PFUnDA)	ND U	1.08	0.326	1	11/16/24 00:22	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-10_4-5_20241108
Lab Code: HN2409094-005

Work Order: HN2409094
Date Collected: 11/08/24 11:50
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 4:2	71.7	50 - 150	11/16/24 00:22	
13C2-FtS 6:2	143	50 - 150	11/16/24 00:22	
13C2-FtS 8:2	113	50 - 150	11/16/24 00:22	
13C2-PFDA	68.2	50 - 150	11/16/24 00:22	
13C2-PFDoA	72.6	50 - 150	11/16/24 00:22	
13C2-PFHxA	60.1	50 - 150	11/16/24 00:22	
13C2-PFTeA	73.3	21 - 170	11/16/24 00:22	
13C2-PFUnA	81.6	50 - 150	11/16/24 00:22	
13C3-HFPO-DA	59.8	50 - 150	11/16/24 00:22	
13C3-PFBS	59.1	50 - 150	11/16/24 00:22	
13C4-PFBA	59.4	50 - 150	11/16/24 00:22	
13C4-PFHpA	59.5	50 - 150	11/16/24 00:22	
13C4-PFOA	63.4	50 - 150	11/16/24 00:22	
13C4-PFOS	57.9	50 - 150	11/16/24 00:22	
13C5-PFNA	62.1	50 - 150	11/16/24 00:22	
13C5-PFPeA	61.0	50 - 150	11/16/24 00:22	
13C8-FOSA	66.6	50 - 150	11/16/24 00:22	
18O2-PFHxS	58.9	50 - 150	11/16/24 00:22	
d3-N-MeFOSAA	87.0	50 - 150	11/16/24 00:22	
d5-N-EtFOSAA	107	50 - 150	11/16/24 00:22	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-11_4-5_20241108
Lab Code: HN2409094-006

Work Order: HN2409094
Date Collected: 11/08/24 13:20
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND U	1.02	0.256	1	11/16/24 00:36	11/14/24	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND U	1.03	0.562	1	11/16/24 00:36	11/14/24	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND U	1.01	0.311	1	11/16/24 00:36	11/14/24	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND U	1.02	0.300	1	11/16/24 00:36	11/14/24	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND U	1.08	0.479	1	11/16/24 00:36	11/14/24	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND U	1.08	0.308	1	11/16/24 00:36	11/14/24	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND U	1.08	0.252	1	11/16/24 00:36	11/14/24	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND U	1.02	0.642	1	11/16/24 00:36	11/14/24	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND U	1.00	0.155	1	11/16/24 00:36	11/14/24	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND U	1.08	0.377	1	11/16/24 00:36	11/14/24	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND U	1.08	0.687	1	11/16/24 00:36	11/14/24	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND U	1.08	0.697	1	11/16/24 00:36	11/14/24	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND U	1.08	0.0917	1	11/16/24 00:36	11/14/24	
Perfluorobutane sulfonic acid (PFBS)	ND U	0.954	0.132	1	11/16/24 00:36	11/14/24	
Perfluorobutanoic acid (PFBA)	ND U	1.08	0.292	1	11/16/24 00:36	11/14/24	
Perfluorobutylsulfonamide (PFBSA)	ND U	1.08	0.608	1	11/16/24 00:36	11/14/24	
Perfluorodecane sulfonic acid (PFDS)	ND U	1.04	0.608	1	11/16/24 00:36	11/14/24	
Perfluorodecanoic acid (PFDA)	ND U	1.08	0.177	1	11/16/24 00:36	11/14/24	
Perfluorododecanoic acid (PFDOA)	ND U	1.08	0.336	1	11/16/24 00:36	11/14/24	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	1.03	0.577	1	11/16/24 00:36	11/14/24	
Perfluoroheptanoic acid (PFHpA)	ND U	1.08	0.247	1	11/16/24 00:36	11/14/24	
Perfluorohexane sulfonic acid (PFHxS)	ND U	1.08	0.229	1	11/16/24 00:36	11/14/24	
Perfluorohexanesulfonamide (PFHxSA)	ND U	1.08	0.231	1	11/16/24 00:36	11/14/24	
Perfluorohexanoic acid (PFHxA)	ND U	1.08	0.162	1	11/16/24 00:36	11/14/24	
Perfluorononane sulfonic acid (PFNS)	ND U	1.08	0.180	1	11/16/24 00:36	11/14/24	
Perfluorononanoic acid (PFNA)	ND U	1.08	0.156	1	11/16/24 00:36	11/14/24	
Perfluorooctane sulfonamide (PFOSAm)	ND U	1.08	0.257	1	11/16/24 00:36	11/14/24	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.08	0.207	1	11/16/24 00:36	11/14/24	
Perfluorooctanoic acid (PFOA)	ND U	1.08	0.179	1	11/16/24 00:36	11/14/24	
Perfluoropentane sulfonic acid (PFPeS)	ND U	1.08	0.449	1	11/16/24 00:36	11/14/24	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-11_4-5_20241108

Lab Code:

HN2409094-006

Work Order:

HN2409094

Date Collected:

11/08/24 13:20

Date Received:

11/09/24 08:00

Units:

µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method:

EPA 537Mod

Prep Method:

EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoropentanoic acid (PFPeA)	ND U	1.08	0.127	1	11/16/24 00:36	11/14/24	
Perfluorotetradecanoic acid (PFTDA)	ND U	1.08	0.234	1	11/16/24 00:36	11/14/24	
Perfluorotridecanoic acid (PFTrDA)	ND U	1.08	0.708	1	11/16/24 00:36	11/14/24	
Perfluoroundecanoic acid (PFUnDA)	ND U	1.08	0.327	1	11/16/24 00:36	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-11_4-5_20241108
Lab Code: HN2409094-006

Work Order: HN2409094
Date Collected: 11/08/24 13:20
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 4:2	79.7	50 - 150	11/16/24 00:36	
13C2-FtS 6:2	121	50 - 150	11/16/24 00:36	
13C2-FtS 8:2	100	50 - 150	11/16/24 00:36	
13C2-PFDA	81.6	50 - 150	11/16/24 00:36	
13C2-PFDoA	88.4	50 - 150	11/16/24 00:36	
13C2-PFHxA	73.8	50 - 150	11/16/24 00:36	
13C2-PFTeA	87.2	21 - 170	11/16/24 00:36	
13C2-PFUnA	93.9	50 - 150	11/16/24 00:36	
13C3-HFPO-DA	71.8	50 - 150	11/16/24 00:36	
13C3-PFBS	68.8	50 - 150	11/16/24 00:36	
13C4-PFBA	73.9	50 - 150	11/16/24 00:36	
13C4-PFHpA	67.7	50 - 150	11/16/24 00:36	
13C4-PFOA	78.0	50 - 150	11/16/24 00:36	
13C4-PFOS	72.1	50 - 150	11/16/24 00:36	
13C5-PFNA	76.6	50 - 150	11/16/24 00:36	
13C5-PFPeA	70.3	50 - 150	11/16/24 00:36	
13C8-FOSA	77.9	50 - 150	11/16/24 00:36	
18O2-PFHxS	71.4	50 - 150	11/16/24 00:36	
d3-N-MeFOSAA	89.1	50 - 150	11/16/24 00:36	
d5-N-EtFOSAA	108	50 - 150	11/16/24 00:36	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-13_4-5_20241108
Lab Code: HN2409094-007

Work Order: HN2409094
Date Collected: 11/08/24 12:30
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND U	1.03	0.260	1	11/16/24 00:51	11/14/24	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND U	1.05	0.572	1	11/16/24 00:51	11/14/24	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND U	1.02	0.316	1	11/16/24 00:51	11/14/24	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND U	1.04	0.305	1	11/16/24 00:51	11/14/24	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND U	1.10	0.487	1	11/16/24 00:51	11/14/24	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND U	1.10	0.313	1	11/16/24 00:51	11/14/24	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND U	1.10	0.257	1	11/16/24 00:51	11/14/24	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND U	1.03	0.653	1	11/16/24 00:51	11/14/24	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND U	1.02	0.158	1	11/16/24 00:51	11/14/24	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND U	1.10	0.383	1	11/16/24 00:51	11/14/24	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND U	1.10	0.699	1	11/16/24 00:51	11/14/24	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND U	1.10	0.709	1	11/16/24 00:51	11/14/24	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND U	1.10	0.0932	1	11/16/24 00:51	11/14/24	
Perfluorobutane sulfonic acid (PFBS)	ND U	0.970	0.134	1	11/16/24 00:51	11/14/24	
Perfluorobutanoic acid (PFBA)	ND U	1.10	0.297	1	11/16/24 00:51	11/14/24	
Perfluorobutylsulfonamide (PFBSA)	ND U	1.10	0.618	1	11/16/24 00:51	11/14/24	
Perfluorodecane sulfonic acid (PFDS)	ND U	1.06	0.618	1	11/16/24 00:51	11/14/24	
Perfluorodecanoic acid (PFDA)	ND U	1.10	0.180	1	11/16/24 00:51	11/14/24	
Perfluorododecanoic acid (PFDOA)	ND U	1.10	0.341	1	11/16/24 00:51	11/14/24	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	1.04	0.587	1	11/16/24 00:51	11/14/24	
Perfluoroheptanoic acid (PFHpA)	ND U	1.10	0.251	1	11/16/24 00:51	11/14/24	
Perfluorohexane sulfonic acid (PFHxS)	ND U	1.10	0.232	1	11/16/24 00:51	11/14/24	
Perfluorohexanesulfonamide (PFHxSA)	ND U	1.10	0.235	1	11/16/24 00:51	11/14/24	
Perfluorohexanoic acid (PFHxA)	ND U	1.10	0.164	1	11/16/24 00:51	11/14/24	
Perfluorononane sulfonic acid (PFNS)	ND U	1.10	0.183	1	11/16/24 00:51	11/14/24	
Perfluorononanoic acid (PFNA)	ND U	1.10	0.159	1	11/16/24 00:51	11/14/24	
Perfluorooctane sulfonamide (PFOSAm)	ND U	1.10	0.261	1	11/16/24 00:51	11/14/24	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.10	0.211	1	11/16/24 00:51	11/14/24	
Perfluorooctanoic acid (PFOA)	ND U	1.10	0.182	1	11/16/24 00:51	11/14/24	
Perfluoropentane sulfonic acid (PFPeS)	ND U	1.10	0.456	1	11/16/24 00:51	11/14/24	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-13_4-5_20241108

Lab Code:

HN2409094-007

Work Order:

HN2409094

Date Collected:

11/08/24 12:30

Date Received:

11/09/24 08:00

Units:

µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method:

EPA 537Mod

Prep Method:

EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoropentanoic acid (PFPeA)	ND U	1.10	0.129	1	11/16/24 00:51	11/14/24	
Perfluorotetradecanoic acid (PFTDA)	ND U	1.10	0.238	1	11/16/24 00:51	11/14/24	
Perfluorotridecanoic acid (PFTrDA)	ND U	1.10	0.720	1	11/16/24 00:51	11/14/24	
Perfluoroundecanoic acid (PFUnDA)	ND U	1.10	0.332	1	11/16/24 00:51	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-13_4-5_20241108
Lab Code: HN2409094-007

Work Order: HN2409094
Date Collected: 11/08/24 12:30
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 4:2	82.4	50 - 150	11/16/24 00:51	
13C2-FtS 6:2	142	50 - 150	11/16/24 00:51	
13C2-FtS 8:2	105	50 - 150	11/16/24 00:51	
13C2-PFDA	78.4	50 - 150	11/16/24 00:51	
13C2-PFDoA	85.2	50 - 150	11/16/24 00:51	
13C2-PFHxA	77.2	50 - 150	11/16/24 00:51	
13C2-PFTeA	86.5	21 - 170	11/16/24 00:51	
13C2-PFUnA	92.6	50 - 150	11/16/24 00:51	
13C3-HFPO-DA	79.5	50 - 150	11/16/24 00:51	
13C3-PFBS	68.4	50 - 150	11/16/24 00:51	
13C4-PFBA	77.5	50 - 150	11/16/24 00:51	
13C4-PFHpA	72.5	50 - 150	11/16/24 00:51	
13C4-PFOA	77.7	50 - 150	11/16/24 00:51	
13C4-PFOS	76.7	50 - 150	11/16/24 00:51	
13C5-PFNA	80.6	50 - 150	11/16/24 00:51	
13C5-PFPeA	71.2	50 - 150	11/16/24 00:51	
13C8-FOSA	80.5	50 - 150	11/16/24 00:51	
18O2-PFHxS	73.6	50 - 150	11/16/24 00:51	
d3-N-MeFOSAA	91.5	50 - 150	11/16/24 00:51	
d5-N-EtFOSAA	93.2	50 - 150	11/16/24 00:51	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: FD-1_20241108
Lab Code: HN2409094-008

Work Order: HN2409094
Date Collected: 11/08/24
Date Received: 11/09/24 08:00

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND U	0.994	0.250	1	11/16/24 01:05	11/14/24	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND U	1.01	0.550	1	11/16/24 01:05	11/14/24	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND U	0.986	0.304	1	11/16/24 01:05	11/14/24	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND U	1.00	0.293	1	11/16/24 01:05	11/14/24	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND U	1.06	0.468	1	11/16/24 01:05	11/14/24	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND U	1.06	0.301	1	11/16/24 01:05	11/14/24	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND U	1.06	0.247	1	11/16/24 01:05	11/14/24	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND U	0.994	0.628	1	11/16/24 01:05	11/14/24	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND U	0.984	0.152	1	11/16/24 01:05	11/14/24	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND U	1.06	0.368	1	11/16/24 01:05	11/14/24	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND U	1.06	0.672	1	11/16/24 01:05	11/14/24	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND U	1.06	0.682	1	11/16/24 01:05	11/14/24	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND U	1.06	0.0897	1	11/16/24 01:05	11/14/24	
Perfluorobutane sulfonic acid (PFBS)	ND U	0.933	0.129	1	11/16/24 01:05	11/14/24	
Perfluorobutanoic acid (PFBA)	ND U	1.06	0.286	1	11/16/24 01:05	11/14/24	
Perfluorobutylsulfonamide (PFBSA)	ND U	1.06	0.594	1	11/16/24 01:05	11/14/24	
Perfluorodecane sulfonic acid (PFDS)	ND U	1.02	0.594	1	11/16/24 01:05	11/14/24	
Perfluorodecanoic acid (PFDA)	ND U	1.06	0.173	1	11/16/24 01:05	11/14/24	
Perfluorododecanoic acid (PFDOA)	ND U	1.06	0.328	1	11/16/24 01:05	11/14/24	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	1.00	0.565	1	11/16/24 01:05	11/14/24	
Perfluoroheptanoic acid (PFHpA)	ND U	1.06	0.242	1	11/16/24 01:05	11/14/24	
Perfluorohexane sulfonic acid (PFHxS)	ND U	1.06	0.224	1	11/16/24 01:05	11/14/24	
Perfluorohexanesulfonamide (PFHxSA)	ND U	1.06	0.226	1	11/16/24 01:05	11/14/24	
Perfluorohexanoic acid (PFHxA)	ND U	1.06	0.158	1	11/16/24 01:05	11/14/24	
Perfluorononane sulfonic acid (PFNS)	ND U	1.06	0.176	1	11/16/24 01:05	11/14/24	
Perfluorononanoic acid (PFNA)	ND U	1.06	0.153	1	11/16/24 01:05	11/14/24	
Perfluorooctane sulfonamide (PFOSAm)	ND U	1.06	0.251	1	11/16/24 01:05	11/14/24	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.06	0.203	1	11/16/24 01:05	11/14/24	
Perfluorooctanoic acid (PFOA)	ND U	1.06	0.175	1	11/16/24 01:05	11/14/24	
Perfluoropentane sulfonic acid (PFPeS)	ND U	1.06	0.439	1	11/16/24 01:05	11/14/24	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

FD-1_20241108

Lab Code:

HN2409094-008

Work Order:

HN2409094

Date Collected:

11/08/24

Date Received:

11/09/24 08:00

Units:

µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method:

EPA 537Mod

Prep Method:

EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoropentanoic acid (PFPeA)	ND U	1.06	0.124	1	11/16/24 01:05	11/14/24	
Perfluorotetradecanoic acid (PFTDA)	ND U	1.06	0.229	1	11/16/24 01:05	11/14/24	
Perfluorotridecanoic acid (PFTrDA)	ND U	1.06	0.692	1	11/16/24 01:05	11/14/24	
Perfluoroundecanoic acid (PFUnDA)	ND U	1.06	0.320	1	11/16/24 01:05	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: FD-1_20241108
Lab Code: HN2409094-008

Work Order: HN2409094
Date Collected: 11/08/24
Date Received: 11/09/24 08:00
Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 4:2	76.9	50 - 150	11/16/24 01:05	
13C2-FtS 6:2	144	50 - 150	11/16/24 01:05	
13C2-FtS 8:2	91.6	50 - 150	11/16/24 01:05	
13C2-PFDA	79.4	50 - 150	11/16/24 01:05	
13C2-PFDoA	78.4	50 - 150	11/16/24 01:05	
13C2-PFHxA	71.4	50 - 150	11/16/24 01:05	
13C2-PFTeA	80.8	21 - 170	11/16/24 01:05	
13C2-PFUnA	89.9	50 - 150	11/16/24 01:05	
13C3-HFPO-DA	65.2	50 - 150	11/16/24 01:05	
13C3-PFBS	65.4	50 - 150	11/16/24 01:05	
13C4-PFBA	71.8	50 - 150	11/16/24 01:05	
13C4-PFHpA	67.1	50 - 150	11/16/24 01:05	
13C4-PFOA	72.7	50 - 150	11/16/24 01:05	
13C4-PFOS	70.8	50 - 150	11/16/24 01:05	
13C5-PFNA	72.5	50 - 150	11/16/24 01:05	
13C5-PFPeA	66.8	50 - 150	11/16/24 01:05	
13C8-FOSA	74.8	50 - 150	11/16/24 01:05	
18O2-PFHxS	69.4	50 - 150	11/16/24 01:05	
d3-N-MeFOSAA	79.7	50 - 150	11/16/24 01:05	
d5-N-EtFOSAA	92.0	50 - 150	11/16/24 01:05	

Analytical Report

Client:

Project:

Sample Matrix:

Sample Name:

Lab Code:

The Mannik & Smith Group, Inc.

Van Buren Industrial

SOIL/SOLID

SB-1_4-5_20241108

HN2409094-001

Work Order:

Date Collected:

Date Received:

Units:

HN2409094

11/08/24 12:15

11/09/24 08:00

µg/kg

Semivolatile Organic Compounds by GC

Analysis Method:

Prep Method:

EPA 8082A

EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	69.6	23.9	1	11/15/24 19:40	11/15/24 10:45	
Aroclor 1221	ND U	69.6	23.9	1	11/15/24 19:40	11/15/24 10:45	
Aroclor 1232	ND U	69.6	23.9	1	11/15/24 19:40	11/15/24 10:45	
Aroclor 1242	ND U	69.6	23.9	1	11/15/24 19:40	11/15/24 10:45	
Aroclor 1248	ND U	69.6	23.9	1	11/15/24 19:40	11/15/24 10:45	
Aroclor 1254	ND U	69.6	19.4	1	11/15/24 19:40	11/15/24 10:45	
Aroclor 1260	ND U	69.6	19.4	1	11/15/24 19:40	11/15/24 10:45	
Aroclor 1262	ND U	69.6	19.4	1	11/15/24 19:40	11/15/24 10:45	
Aroclor 1268	ND U	69.6	19.4	1	11/15/24 19:40	11/15/24 10:45	
Total PCB	ND U	69.6	19.4	1	11/15/24 19:40	11/15/24 10:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	82.1	68 - 137	11/15/24 19:40	
Tetrachloro-m-xylene	84.4	71 - 126	11/15/24 19:40	

Analytical Report

Client:
Project:
Sample Matrix:

Sample Name:
Lab Code:

The Mannik & Smith Group, Inc.
Van Buren Industrial
SOIL/SOLID

SB-3_4-5_20241108
HN2409094-002

Work Order:
Date Collected:
Date Received:

Units:

HN2409094
11/08/24 13:00
11/09/24 08:00

µg/kg

Semivolatile Organic Compounds by GC

Analysis Method:
Prep Method:

EPA 8082A
EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	182	62.3	1	11/13/24 18:24	11/13/24 09:34	
Aroclor 1221	ND U	182	62.3	1	11/13/24 18:24	11/13/24 09:34	
Aroclor 1232	ND U	182	62.3	1	11/13/24 18:24	11/13/24 09:34	
Aroclor 1242	ND U	182	62.3	1	11/13/24 18:24	11/13/24 09:34	
Aroclor 1248	ND U	182	62.3	1	11/13/24 18:24	11/13/24 09:34	
Aroclor 1254	ND U	182	50.7	1	11/13/24 18:24	11/13/24 09:34	
Aroclor 1260	ND U	182	50.7	1	11/13/24 18:24	11/13/24 09:34	
Aroclor 1262	ND U	182	50.7	1	11/13/24 18:24	11/13/24 09:34	
Aroclor 1268	ND U	182	50.7	1	11/13/24 18:24	11/13/24 09:34	
Total PCB	ND U	182	50.7	1	11/13/24 18:24	11/13/24 09:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	104	68 - 137	11/13/24 18:24	
Tetrachloro-m-xylene	102	71 - 126	11/13/24 18:24	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-6_4-5_20241108

Lab Code:

HN2409094-003

Work Order:

HN2409094

Date Collected:

11/08/24 11:30

Date Received:

11/09/24 08:00

Units:

µg/kg

Semivolatile Organic Compounds by GC

Analysis Method:

EPA 8082A

Prep Method:

EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	73.2	25.1	1	11/13/24 18:59	11/13/24 09:34	
Aroclor 1221	ND U	73.2	25.1	1	11/13/24 18:59	11/13/24 09:34	
Aroclor 1232	ND U	73.2	25.1	1	11/13/24 18:59	11/13/24 09:34	
Aroclor 1242	ND U	73.2	25.1	1	11/13/24 18:59	11/13/24 09:34	
Aroclor 1248	ND U	73.2	25.1	1	11/13/24 18:59	11/13/24 09:34	
Aroclor 1254	ND U	73.2	20.4	1	11/13/24 18:59	11/13/24 09:34	
Aroclor 1260	ND U	73.2	20.4	1	11/13/24 18:59	11/13/24 09:34	
Aroclor 1262	ND U	73.2	20.4	1	11/13/24 18:59	11/13/24 09:34	
Aroclor 1268	ND U	73.2	20.4	1	11/13/24 18:59	11/13/24 09:34	
Total PCB	ND U	73.2	20.4	1	11/13/24 18:59	11/13/24 09:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	107	68 - 137	11/13/24 18:59	
Tetrachloro-m-xylene	102	71 - 126	11/13/24 18:59	

Analytical Report

Client:

Project:

Sample Matrix:

Sample Name:

Lab Code:

The Mannik & Smith Group, Inc.

Van Buren Industrial

SOIL/SOLID

SB-4_4-5_20241108

HN2409094-004

Work Order:

Date Collected:

Date Received:

Units:

HN2409094

11/08/24 11:00

11/09/24 08:00

µg/kg

Semivolatile Organic Compounds by GC

Analysis Method:

Prep Method:

EPA 8082A

EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	180	61.7	1	11/13/24 19:11	11/13/24 09:34	
Aroclor 1221	ND U	180	61.7	1	11/13/24 19:11	11/13/24 09:34	
Aroclor 1232	ND U	180	61.7	1	11/13/24 19:11	11/13/24 09:34	
Aroclor 1242	ND U	180	61.7	1	11/13/24 19:11	11/13/24 09:34	
Aroclor 1248	ND U	180	61.7	1	11/13/24 19:11	11/13/24 09:34	
Aroclor 1254	ND U	180	50.2	1	11/13/24 19:11	11/13/24 09:34	
Aroclor 1260	ND U	180	50.2	1	11/13/24 19:11	11/13/24 09:34	
Aroclor 1262	ND U	180	50.2	1	11/13/24 19:11	11/13/24 09:34	
Aroclor 1268	ND U	180	50.2	1	11/13/24 19:11	11/13/24 09:34	
Total PCB	ND U	180	50.2	1	11/13/24 19:11	11/13/24 09:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	105	68 - 137	11/13/24 19:11	
Tetrachloro-m-xylene	104	71 - 126	11/13/24 19:11	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-10_4-5_20241108

Lab Code:

HN2409094-005

Work Order:

HN2409094

Date Collected:

11/08/24 11:50

Date Received:

11/09/24 08:00

Units:

µg/kg

Semivolatile Organic Compounds by GC

Analysis Method:

EPA 8082A

Prep Method:

EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	69.7	23.9	1	11/13/24 19:23	11/13/24 09:34	
Aroclor 1221	ND U	69.7	23.9	1	11/13/24 19:23	11/13/24 09:34	
Aroclor 1232	ND U	69.7	23.9	1	11/13/24 19:23	11/13/24 09:34	
Aroclor 1242	ND U	69.7	23.9	1	11/13/24 19:23	11/13/24 09:34	
Aroclor 1248	ND U	69.7	23.9	1	11/13/24 19:23	11/13/24 09:34	
Aroclor 1254	ND U	69.7	19.4	1	11/13/24 19:23	11/13/24 09:34	
Aroclor 1260	ND U	69.7	19.4	1	11/13/24 19:23	11/13/24 09:34	
Aroclor 1262	ND U	69.7	19.4	1	11/13/24 19:23	11/13/24 09:34	
Aroclor 1268	ND U	69.7	19.4	1	11/13/24 19:23	11/13/24 09:34	
Total PCB	ND U	69.7	19.4	1	11/13/24 19:23	11/13/24 09:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	116	68 - 137	11/13/24 19:23	
Tetrachloro-m-xylene	106	71 - 126	11/13/24 19:23	

Analytical Report

Client:

Project:

Sample Matrix:

Sample Name:

Lab Code:

The Mannik & Smith Group, Inc.

Van Buren Industrial

SOIL/SOLID

SB-11_4-5_20241108

HN2409094-006

Work Order:

Date Collected:

Date Received:

Units:

HN2409094

11/08/24 13:20

11/09/24 08:00

µg/kg

Semivolatile Organic Compounds by GC

Analysis Method:

Prep Method:

EPA 8082A

EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	71.0	24.4	1	11/13/24 19:34	11/13/24 09:34	
Aroclor 1221	ND U	71.0	24.4	1	11/13/24 19:34	11/13/24 09:34	
Aroclor 1232	ND U	71.0	24.4	1	11/13/24 19:34	11/13/24 09:34	
Aroclor 1242	ND U	71.0	24.4	1	11/13/24 19:34	11/13/24 09:34	
Aroclor 1248	ND U	71.0	24.4	1	11/13/24 19:34	11/13/24 09:34	
Aroclor 1254	ND U	71.0	19.8	1	11/13/24 19:34	11/13/24 09:34	
Aroclor 1260	ND U	71.0	19.8	1	11/13/24 19:34	11/13/24 09:34	
Aroclor 1262	ND U	71.0	19.8	1	11/13/24 19:34	11/13/24 09:34	
Aroclor 1268	ND U	71.0	19.8	1	11/13/24 19:34	11/13/24 09:34	
Total PCB	ND U	71.0	19.8	1	11/13/24 19:34	11/13/24 09:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	103	68 - 137	11/13/24 19:34	
Tetrachloro-m-xylene	102	71 - 126	11/13/24 19:34	

Analytical Report

Client:

The Mannik & Smith Group, Inc.

Project:

Van Buren Industrial

Sample Matrix:

SOIL/SOLID

Sample Name:

SB-13_4-5_20241108

Lab Code:

HN2409094-007

Work Order:

HN2409094

Date Collected:

11/08/24 12:30

Date Received:

11/09/24 08:00

Units:

µg/kg

Semivolatile Organic Compounds by GC

Analysis Method:

EPA 8082A

Prep Method:

EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	70.1	24.0	1	11/13/24 19:46	11/13/24 09:34	
Aroclor 1221	ND U	70.1	24.0	1	11/13/24 19:46	11/13/24 09:34	
Aroclor 1232	ND U	70.1	24.0	1	11/13/24 19:46	11/13/24 09:34	
Aroclor 1242	ND U	70.1	24.0	1	11/13/24 19:46	11/13/24 09:34	
Aroclor 1248	ND U	70.1	24.0	1	11/13/24 19:46	11/13/24 09:34	
Aroclor 1254	ND U	70.1	19.6	1	11/13/24 19:46	11/13/24 09:34	
Aroclor 1260	ND U	70.1	19.6	1	11/13/24 19:46	11/13/24 09:34	
Aroclor 1262	ND U	70.1	19.6	1	11/13/24 19:46	11/13/24 09:34	
Aroclor 1268	ND U	70.1	19.6	1	11/13/24 19:46	11/13/24 09:34	
Total PCB	ND U	70.1	19.6	1	11/13/24 19:46	11/13/24 09:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	115	68 - 137	11/13/24 19:46	
Tetrachloro-m-xylene	105	71 - 126	11/13/24 19:46	

Analytical Report

Client:

Project:

Sample Matrix:

Sample Name:

Lab Code:

The Mannik & Smith Group, Inc.

Van Buren Industrial

SOIL/SOLID

FD-1_20241108

HN2409094-008

Work Order:

Date Collected:

Date Received:

Units:

HN2409094

11/08/24

11/09/24 08:00

µg/kg

Semivolatile Organic Compounds by GC

Analysis Method:

Prep Method:

EPA 8082A

EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	70.7	24.2	1	11/15/24 19:52	11/15/24 10:45	
Aroclor 1221	ND U	70.7	24.2	1	11/15/24 19:52	11/15/24 10:45	
Aroclor 1232	ND U	70.7	24.2	1	11/15/24 19:52	11/15/24 10:45	
Aroclor 1242	ND U	70.7	24.2	1	11/15/24 19:52	11/15/24 10:45	
Aroclor 1248	ND U	70.7	24.2	1	11/15/24 19:52	11/15/24 10:45	
Aroclor 1254	ND U	70.7	19.7	1	11/15/24 19:52	11/15/24 10:45	
Aroclor 1260	ND U	70.7	19.7	1	11/15/24 19:52	11/15/24 10:45	
Aroclor 1262	ND U	70.7	19.7	1	11/15/24 19:52	11/15/24 10:45	
Aroclor 1268	ND U	70.7	19.7	1	11/15/24 19:52	11/15/24 10:45	
Total PCB	ND U	70.7	19.7	1	11/15/24 19:52	11/15/24 10:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	72.3	68 - 137	11/15/24 19:52	
Tetrachloro-m-xylene	76.9	71 - 126	11/15/24 19:52	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-1_4-5_20241108
Lab Code: HN2409094-001

Work Order: HN2409094
Date Collected: 11/08/24 12:15
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1,1-Trichloroethane	ND U	37.0	16.8	1	11/19/24 14:29	11/12/24 13:53	
1,1,2,2-Tetrachloroethane	ND U	37.0	16.3	1	11/19/24 14:29	11/12/24 13:53	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND U	37.0	23.4	1	11/19/24 14:29	11/12/24 13:53	
1,1,2-Trichloroethane	ND U	37.0	15.7	1	11/19/24 14:29	11/12/24 13:53	
1,1-Dichloroethane	ND U	37.0	13.5	1	11/19/24 14:29	11/12/24 13:53	
1,1-Dichloroethylene	ND U	37.0	12.0	1	11/19/24 14:29	11/12/24 13:53	
1,2,3-Trichlorobenzene	ND U	123	44.4	1	11/19/24 14:29	11/12/24 13:53	
1,2,3-Trichloropropane	ND U	37.0	15.5	1	11/19/24 14:29	11/12/24 13:53	
1,2,4-Trichlorobenzene	ND U	123	41.9	1	11/19/24 14:29	11/12/24 13:53	
1,2,4-Trimethylbenzene	ND U	37.0	27.1	1	11/19/24 14:29	11/12/24 13:53	
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND U	37.0	21.8	1	11/19/24 14:29	11/12/24 13:53	
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND U	37.0	14.0	1	11/19/24 14:29	11/12/24 13:53	
1,2-Dichloroethane (Ethylene dichloride)	ND U	123	21.8	1	11/19/24 14:29	11/12/24 13:53	
1,2-Dichloropropane	ND U	37.0	27.3	1	11/19/24 14:29	11/12/24 13:53	
1,3,5-Trimethylbenzene	ND U	123	26.1	1	11/19/24 14:29	11/12/24 13:53	
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND U	37.0	25.6	1	11/19/24 14:29	11/12/24 13:53	
1,3-Dichloropropene	ND U	74.0	20.7	1	11/19/24 14:29	11/12/24 13:53	
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND U	37.0	30.1	1	11/19/24 14:29	11/12/24 13:53	
2-Butanone (Methyl ethyl ketone, MEK)	ND U	247	88.1	1	11/19/24 14:29	11/12/24 13:53	
2-Hexanone	ND U	37.0	18.4	1	11/19/24 14:29	11/12/24 13:53	
4-Methyl-2-pentanone (MIBK)	ND U	37.0	34.5	1	11/19/24 14:29	11/12/24 13:53	
Acetone	ND U	123	110	1	11/19/24 14:29	11/12/24 13:53	
Benzene	ND U	37.0	17.9	1	11/19/24 14:29	11/12/24 13:53	
Bromochloromethane	ND U	37.0	18.8	1	11/19/24 14:29	11/12/24 13:53	
Bromodichloromethane	ND U	37.0	20.7	1	11/19/24 14:29	11/12/24 13:53	
Bromoform	ND U	37.0	15.6	1	11/19/24 14:29	11/12/24 13:53	
Carbon disulfide	ND U	37.0	19.2	1	11/19/24 14:29	11/12/24 13:53	
Carbon tetrachloride	ND U	37.0	14.5	1	11/19/24 14:29	11/12/24 13:53	
Chlorobenzene	ND U	37.0	12.3	1	11/19/24 14:29	11/12/24 13:53	
Chlorodibromomethane	ND U	37.0	20.8	1	11/19/24 14:29	11/12/24 13:53	
Chloroethane (Ethyl chloride)	ND U	123	104	1	11/19/24 14:29	11/12/24 13:53	
Chloroform	ND U	37.0	13.6	1	11/19/24 14:29	11/12/24 13:53	
cis & trans-1,2-Dichloroethene	ND U	74.0	23.8	1	11/19/24 14:29	11/12/24 13:53	
cis-1,2-Dichloroethylene	ND U	37.0	23.8	1	11/19/24 14:29	11/12/24 13:53	
cis-1,3-Dichloropropene	ND U	37.0	27.9	1	11/19/24 14:29	11/12/24 13:53	
Cyclohexane	ND U	123	28.3	1	11/19/24 14:29	11/12/24 13:53	
Dichlorodifluoromethane (Freon-12)	ND U	123	44.8	1	11/19/24 14:29	11/12/24 13:53	
Ethylbenzene	ND U	37.0	26.2	1	11/19/24 14:29	11/12/24 13:53	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-1_4-5_20241108
Lab Code: HN2409094-001

Work Order: HN2409094
Date Collected: 11/08/24 12:15
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Isopropylbenzene	ND U	37.0	23.4	1	11/19/24 14:29	11/12/24 13:53	
Methyl acetate	ND U	308	44.3	1	11/19/24 14:29	11/12/24 13:53	
Methyl bromide (Bromomethane)	ND U	123	70.8	1	11/19/24 14:29	11/12/24 13:53	
Methyl chloride (Chloromethane)	ND U	123	101	1	11/19/24 14:29	11/12/24 13:53	
Methyl tert-butyl ether (MTBE)	ND U	37.0	27.0	1	11/19/24 14:29	11/12/24 13:53	
Methylcyclohexane	ND U	37.0	14.1	1	11/19/24 14:29	11/12/24 13:53	
Methylene chloride (Dichloromethane)	ND U	308	98.2	1	11/19/24 14:29	11/12/24 13:53	
o-Xylene	ND U	37.0	14.3	1	11/19/24 14:29	11/12/24 13:53	
Styrene	ND U	37.0	14.7	1	11/19/24 14:29	11/12/24 13:53	
Tetrachloroethylene (Perchloroethylene)	ND U	37.0	22.3	1	11/19/24 14:29	11/12/24 13:53	
Toluene	ND U	37.0	30.5	1	11/19/24 14:29	11/12/24 13:53	
Total Xylene	ND U	111	14.3	1	11/19/24 14:29	11/12/24 13:53	
trans-1,2-Dichloroethylene	ND U	37.0	30.5	1	11/19/24 14:29	11/12/24 13:53	
trans-1,3-Dichloropropylene	ND U	37.0	20.7	1	11/19/24 14:29	11/12/24 13:53	
Trichloroethene (Trichloroethylene)	ND U	37.0	16.6	1	11/19/24 14:29	11/12/24 13:53	
Trichlorofluoromethane	ND U	37.0	18.9	1	11/19/24 14:29	11/12/24 13:53	
(Fluorotrichloromethane, Freon 11)							
Vinyl chloride (Chloroethene)	ND U	37.0	24.6	1	11/19/24 14:29	11/12/24 13:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95.0	80 - 120	11/19/24 14:29	
4-Bromofluorobenzene	90.5	80 - 120	11/19/24 14:29	
Dibromofluoromethane	96.2	80 - 120	11/19/24 14:29	
Toluene-d8	94.0	80 - 120	11/19/24 14:29	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-3_4-5_20241108
Lab Code: HN2409094-002

Work Order: HN2409094
Date Collected: 11/08/24 13:00
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1,1-Trichloroethane	ND U	42.1	19.1	1	11/19/24 14:47	11/12/24 13:53	
1,1,2,2-Tetrachloroethane	ND U	42.1	18.6	1	11/19/24 14:47	11/12/24 13:53	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND U	42.1	26.6	1	11/19/24 14:47	11/12/24 13:53	
1,1,2-Trichloroethane	ND U	42.1	17.9	1	11/19/24 14:47	11/12/24 13:53	
1,1-Dichloroethane	ND U	42.1	15.3	1	11/19/24 14:47	11/12/24 13:53	
1,1-Dichloroethylene	ND U	42.1	13.6	1	11/19/24 14:47	11/12/24 13:53	
1,2,3-Trichlorobenzene	ND U	140	50.5	1	11/19/24 14:47	11/12/24 13:53	
1,2,3-Trichloropropane	ND U	42.1	17.6	1	11/19/24 14:47	11/12/24 13:53	
1,2,4-Trichlorobenzene	ND U	140	47.7	1	11/19/24 14:47	11/12/24 13:53	
1,2,4-Trimethylbenzene	ND U	42.1	30.9	1	11/19/24 14:47	11/12/24 13:53	
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND U	42.1	24.7	1	11/19/24 14:47	11/12/24 13:53	
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND U	42.1	16.0	1	11/19/24 14:47	11/12/24 13:53	
1,2-Dichloroethane (Ethylene dichloride)	ND U	140	24.7	1	11/19/24 14:47	11/12/24 13:53	
1,2-Dichloropropane	ND U	42.1	31.0	1	11/19/24 14:47	11/12/24 13:53	
1,3,5-Trimethylbenzene	ND U	140	29.7	1	11/19/24 14:47	11/12/24 13:53	
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND U	42.1	29.1	1	11/19/24 14:47	11/12/24 13:53	
1,3-Dichloropropene	ND U	84.2	23.5	1	11/19/24 14:47	11/12/24 13:53	
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND U	42.1	34.2	1	11/19/24 14:47	11/12/24 13:53	
2-Butanone (Methyl ethyl ketone, MEK)	ND U	280	100	1	11/19/24 14:47	11/12/24 13:53	
2-Hexanone	ND U	42.1	20.9	1	11/19/24 14:47	11/12/24 13:53	
4-Methyl-2-pentanone (MIBK)	ND U	42.1	39.2	1	11/19/24 14:47	11/12/24 13:53	
Acetone	ND U	140	125	1	11/19/24 14:47	11/12/24 13:53	
Benzene	ND U	42.1	20.4	1	11/19/24 14:47	11/12/24 13:53	
Bromochloromethane	ND U	42.1	21.4	1	11/19/24 14:47	11/12/24 13:53	
Bromodichloromethane	ND U	42.1	23.6	1	11/19/24 14:47	11/12/24 13:53	
Bromoform	ND U	42.1	17.7	1	11/19/24 14:47	11/12/24 13:53	
Carbon disulfide	ND U	42.1	21.8	1	11/19/24 14:47	11/12/24 13:53	
Carbon tetrachloride	ND U	42.1	16.5	1	11/19/24 14:47	11/12/24 13:53	
Chlorobenzene	ND U	42.1	14.0	1	11/19/24 14:47	11/12/24 13:53	
Chlorodibromomethane	ND U	42.1	23.6	1	11/19/24 14:47	11/12/24 13:53	
Chloroethane (Ethyl chloride)	ND U	140	118	1	11/19/24 14:47	11/12/24 13:53	
Chloroform	ND U	42.1	15.4	1	11/19/24 14:47	11/12/24 13:53	
cis & trans-1,2-Dichloroethene	ND U	84.2	27.1	1	11/19/24 14:47	11/12/24 13:53	
cis-1,2-Dichloroethylene	ND U	42.1	27.1	1	11/19/24 14:47	11/12/24 13:53	
cis-1,3-Dichloropropene	ND U	42.1	31.7	1	11/19/24 14:47	11/12/24 13:53	
Cyclohexane	ND U	140	32.2	1	11/19/24 14:47	11/12/24 13:53	
Dichlorodifluoromethane (Freon-12)	ND U	140	50.9	1	11/19/24 14:47	11/12/24 13:53	
Ethylbenzene	ND U	42.1	29.8	1	11/19/24 14:47	11/12/24 13:53	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-3_4-5_20241108
Lab Code: HN2409094-002

Work Order: HN2409094
Date Collected: 11/08/24 13:00
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Isopropylbenzene	ND U	42.1	26.6	1	11/19/24 14:47	11/12/24 13:53	
Methyl acetate	ND U	351	50.4	1	11/19/24 14:47	11/12/24 13:53	
Methyl bromide (Bromomethane)	ND U	140	80.5	1	11/19/24 14:47	11/12/24 13:53	
Methyl chloride (Chloromethane)	ND U	140	115	1	11/19/24 14:47	11/12/24 13:53	
Methyl tert-butyl ether (MTBE)	ND U	42.1	30.7	1	11/19/24 14:47	11/12/24 13:53	
Methylcyclohexane	ND U	42.1	16.0	1	11/19/24 14:47	11/12/24 13:53	
Methylene chloride (Dichloromethane)	ND U	351	112	1	11/19/24 14:47	11/12/24 13:53	
o-Xylene	ND U	42.1	16.3	1	11/19/24 14:47	11/12/24 13:53	
Styrene	ND U	42.1	16.7	1	11/19/24 14:47	11/12/24 13:53	
Tetrachloroethylene (Perchloroethylene)	ND U	42.1	25.4	1	11/19/24 14:47	11/12/24 13:53	
Toluene	ND U	42.1	34.7	1	11/19/24 14:47	11/12/24 13:53	
Total Xylene	ND U	126	16.3	1	11/19/24 14:47	11/12/24 13:53	
trans-1,2-Dichloroethylene	ND U	42.1	34.7	1	11/19/24 14:47	11/12/24 13:53	
trans-1,3-Dichloropropylene	ND U	42.1	23.5	1	11/19/24 14:47	11/12/24 13:53	
Trichloroethene (Trichloroethylene)	ND U	42.1	18.9	1	11/19/24 14:47	11/12/24 13:53	
Trichlorofluoromethane	ND U	42.1	21.5	1	11/19/24 14:47	11/12/24 13:53	
(Fluorotrichloromethane, Freon 11)							
Vinyl chloride (Chloroethene)	ND U	42.1	28.0	1	11/19/24 14:47	11/12/24 13:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94.4	80 - 120	11/19/24 14:47	
4-Bromofluorobenzene	94.8	80 - 120	11/19/24 14:47	
Dibromofluoromethane	95.9	80 - 120	11/19/24 14:47	
Toluene-d8	96.3	80 - 120	11/19/24 14:47	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-6_4-5_20241108
Lab Code: HN2409094-003

Work Order: HN2409094
Date Collected: 11/08/24 11:30
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1,1-Trichloroethane	ND U	42.6	19.3	1	11/19/24 15:06	11/12/24 13:53	
1,1,2,2-Tetrachloroethane	ND U	42.6	18.8	1	11/19/24 15:06	11/12/24 13:53	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND U	42.6	27.0	1	11/19/24 15:06	11/12/24 13:53	
1,1,2-Trichloroethane	ND U	42.6	18.1	1	11/19/24 15:06	11/12/24 13:53	
1,1-Dichloroethane	ND U	42.6	15.5	1	11/19/24 15:06	11/12/24 13:53	
1,1-Dichloroethylene	ND U	42.6	13.8	1	11/19/24 15:06	11/12/24 13:53	
1,2,3-Trichlorobenzene	ND U	142	51.1	1	11/19/24 15:06	11/12/24 13:53	
1,2,3-Trichloropropane	ND U	42.6	17.8	1	11/19/24 15:06	11/12/24 13:53	
1,2,4-Trichlorobenzene	ND U	142	48.2	1	11/19/24 15:06	11/12/24 13:53	
1,2,4-Trimethylbenzene	ND U	42.6	31.2	1	11/19/24 15:06	11/12/24 13:53	
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND U	42.6	25.0	1	11/19/24 15:06	11/12/24 13:53	
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND U	42.6	16.2	1	11/19/24 15:06	11/12/24 13:53	
1,2-Dichloroethane (Ethylene dichloride)	ND U	142	25.0	1	11/19/24 15:06	11/12/24 13:53	
1,2-Dichloropropane	ND U	42.6	31.4	1	11/19/24 15:06	11/12/24 13:53	
1,3,5-Trimethylbenzene	ND U	142	30.1	1	11/19/24 15:06	11/12/24 13:53	
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND U	42.6	29.4	1	11/19/24 15:06	11/12/24 13:53	
1,3-Dichloropropene	ND U	85.2	23.8	1	11/19/24 15:06	11/12/24 13:53	
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND U	42.6	34.6	1	11/19/24 15:06	11/12/24 13:53	
2-Butanone (Methyl ethyl ketone, MEK)	ND U	284	101	1	11/19/24 15:06	11/12/24 13:53	
2-Hexanone	ND U	42.6	21.1	1	11/19/24 15:06	11/12/24 13:53	
4-Methyl-2-pentanone (MIBK)	ND U	42.6	39.7	1	11/19/24 15:06	11/12/24 13:53	
Acetone	ND U	142	126	1	11/19/24 15:06	11/12/24 13:53	
Benzene	ND U	42.6	20.6	1	11/19/24 15:06	11/12/24 13:53	
Bromochloromethane	ND U	42.6	21.6	1	11/19/24 15:06	11/12/24 13:53	
Bromodichloromethane	ND U	42.6	23.8	1	11/19/24 15:06	11/12/24 13:53	
Bromoform	ND U	42.6	17.9	1	11/19/24 15:06	11/12/24 13:53	
Carbon disulfide	ND U	42.6	22.0	1	11/19/24 15:06	11/12/24 13:53	
Carbon tetrachloride	ND U	42.6	16.7	1	11/19/24 15:06	11/12/24 13:53	
Chlorobenzene	ND U	42.6	14.1	1	11/19/24 15:06	11/12/24 13:53	
Chlorodibromomethane	ND U	42.6	23.9	1	11/19/24 15:06	11/12/24 13:53	
Chloroethane (Ethyl chloride)	ND U	142	119	1	11/19/24 15:06	11/12/24 13:53	
Chloroform	ND U	42.6	15.6	1	11/19/24 15:06	11/12/24 13:53	
cis & trans-1,2-Dichloroethene	ND U	85.2	27.4	1	11/19/24 15:06	11/12/24 13:53	
cis-1,2-Dichloroethylene	ND U	42.6	27.4	1	11/19/24 15:06	11/12/24 13:53	
cis-1,3-Dichloropropene	ND U	42.6	32.1	1	11/19/24 15:06	11/12/24 13:53	
Cyclohexane	ND U	142	32.6	1	11/19/24 15:06	11/12/24 13:53	
Dichlorodifluoromethane (Freon-12)	ND U	142	51.5	1	11/19/24 15:06	11/12/24 13:53	
Ethylbenzene	ND U	42.6	30.2	1	11/19/24 15:06	11/12/24 13:53	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-6_4-5_20241108
Lab Code: HN2409094-003

Work Order: HN2409094
Date Collected: 11/08/24 11:30
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Isopropylbenzene	ND U	42.6	26.9	1	11/19/24 15:06	11/12/24 13:53	
Methyl acetate	ND U	355	51.0	1	11/19/24 15:06	11/12/24 13:53	
Methyl bromide (Bromomethane)	ND U	142	81.4	1	11/19/24 15:06	11/12/24 13:53	
Methyl chloride (Chloromethane)	ND U	142	116	1	11/19/24 15:06	11/12/24 13:53	
Methyl tert-butyl ether (MTBE)	ND U	42.6	31.0	1	11/19/24 15:06	11/12/24 13:53	
Methylcyclohexane	ND U	42.6	16.2	1	11/19/24 15:06	11/12/24 13:53	
Methylene chloride (Dichloromethane)	ND U	355	113	1	11/19/24 15:06	11/12/24 13:53	
o-Xylene	ND U	42.6	16.5	1	11/19/24 15:06	11/12/24 13:53	
Styrene	ND U	42.6	16.9	1	11/19/24 15:06	11/12/24 13:53	
Tetrachloroethylene (Perchloroethylene)	ND U	42.6	25.6	1	11/19/24 15:06	11/12/24 13:53	
Toluene	ND U	42.6	35.1	1	11/19/24 15:06	11/12/24 13:53	
Total Xylene	ND U	128	16.5	1	11/19/24 15:06	11/12/24 13:53	
trans-1,2-Dichloroethylene	ND U	42.6	35.1	1	11/19/24 15:06	11/12/24 13:53	
trans-1,3-Dichloropropylene	ND U	42.6	23.8	1	11/19/24 15:06	11/12/24 13:53	
Trichloroethene (Trichloroethylene)	ND U	42.6	19.1	1	11/19/24 15:06	11/12/24 13:53	
Trichlorofluoromethane	ND U	42.6	21.8	1	11/19/24 15:06	11/12/24 13:53	
(Fluorotrichloromethane, Freon 11)							
Vinyl chloride (Chloroethene)	ND U	42.6	28.3	1	11/19/24 15:06	11/12/24 13:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96.3	80 - 120	11/19/24 15:06	
4-Bromofluorobenzene	96.8	80 - 120	11/19/24 15:06	
Dibromofluoromethane	96.2	80 - 120	11/19/24 15:06	
Toluene-d8	98.4	80 - 120	11/19/24 15:06	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-4_4-5_20241108
Lab Code: HN2409094-004

Work Order: HN2409094
Date Collected: 11/08/24 11:00
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1,1-Trichloroethane	ND U	39.4	17.9	1	11/19/24 15:24	11/12/24 13:53	
1,1,2,2-Tetrachloroethane	ND U	39.4	17.4	1	11/19/24 15:24	11/12/24 13:53	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND U	39.4	25.0	1	11/19/24 15:24	11/12/24 13:53	
1,1,2-Trichloroethane	ND U	39.4	16.8	1	11/19/24 15:24	11/12/24 13:53	
1,1-Dichloroethane	ND U	39.4	14.4	1	11/19/24 15:24	11/12/24 13:53	
1,1-Dichloroethylene	ND U	39.4	12.8	1	11/19/24 15:24	11/12/24 13:53	
1,2,3-Trichlorobenzene	ND U	131	47.3	1	11/19/24 15:24	11/12/24 13:53	
1,2,3-Trichloropropane	ND U	39.4	16.5	1	11/19/24 15:24	11/12/24 13:53	
1,2,4-Trichlorobenzene	ND U	131	44.7	1	11/19/24 15:24	11/12/24 13:53	
1,2,4-Trimethylbenzene	ND U	39.4	28.9	1	11/19/24 15:24	11/12/24 13:53	
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND U	39.4	23.2	1	11/19/24 15:24	11/12/24 13:53	
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND U	39.4	15.0	1	11/19/24 15:24	11/12/24 13:53	
1,2-Dichloroethane (Ethylene dichloride)	ND U	131	23.2	1	11/19/24 15:24	11/12/24 13:53	
1,2-Dichloropropane	ND U	39.4	29.0	1	11/19/24 15:24	11/12/24 13:53	
1,3,5-Trimethylbenzene	ND U	131	27.8	1	11/19/24 15:24	11/12/24 13:53	
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND U	39.4	27.2	1	11/19/24 15:24	11/12/24 13:53	
1,3-Dichloropropene	ND U	78.8	22.0	1	11/19/24 15:24	11/12/24 13:53	
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND U	39.4	32.0	1	11/19/24 15:24	11/12/24 13:53	
2-Butanone (Methyl ethyl ketone, MEK)	ND U	263	93.8	1	11/19/24 15:24	11/12/24 13:53	
2-Hexanone	ND U	39.4	19.6	1	11/19/24 15:24	11/12/24 13:53	
4-Methyl-2-pentanone (MIBK)	ND U	39.4	36.7	1	11/19/24 15:24	11/12/24 13:53	
Acetone	ND U	131	117	1	11/19/24 15:24	11/12/24 13:53	
Benzene	ND U	39.4	19.1	1	11/19/24 15:24	11/12/24 13:53	
Bromochloromethane	ND U	39.4	20.0	1	11/19/24 15:24	11/12/24 13:53	
Bromodichloromethane	ND U	39.4	22.1	1	11/19/24 15:24	11/12/24 13:53	
Bromoform	ND U	39.4	16.6	1	11/19/24 15:24	11/12/24 13:53	
Carbon disulfide	ND U	39.4	20.4	1	11/19/24 15:24	11/12/24 13:53	
Carbon tetrachloride	ND U	39.4	15.4	1	11/19/24 15:24	11/12/24 13:53	
Chlorobenzene	ND U	39.4	13.1	1	11/19/24 15:24	11/12/24 13:53	
Chlorodibromomethane	ND U	39.4	22.1	1	11/19/24 15:24	11/12/24 13:53	
Chloroethane (Ethyl chloride)	ND U	131	110	1	11/19/24 15:24	11/12/24 13:53	
Chloroform	ND U	39.4	14.4	1	11/19/24 15:24	11/12/24 13:53	
cis & trans-1,2-Dichloroethene	ND U	78.8	25.4	1	11/19/24 15:24	11/12/24 13:53	
cis-1,2-Dichloroethylene	ND U	39.4	25.4	1	11/19/24 15:24	11/12/24 13:53	
cis-1,3-Dichloropropene	ND U	39.4	29.7	1	11/19/24 15:24	11/12/24 13:53	
Cyclohexane	ND U	131	30.2	1	11/19/24 15:24	11/12/24 13:53	
Dichlorodifluoromethane (Freon-12)	ND U	131	47.7	1	11/19/24 15:24	11/12/24 13:53	
Ethylbenzene	ND U	39.4	28.0	1	11/19/24 15:24	11/12/24 13:53	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-4_4-5_20241108
Lab Code: HN2409094-004

Work Order: HN2409094
Date Collected: 11/08/24 11:00
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Isopropylbenzene	ND U	39.4	24.9	1	11/19/24 15:24	11/12/24 13:53	
Methyl acetate	ND U	328	47.2	1	11/19/24 15:24	11/12/24 13:53	
Methyl bromide (Bromomethane)	ND U	131	75.4	1	11/19/24 15:24	11/12/24 13:53	
Methyl chloride (Chloromethane)	ND U	131	108	1	11/19/24 15:24	11/12/24 13:53	
Methyl tert-butyl ether (MTBE)	ND U	39.4	28.8	1	11/19/24 15:24	11/12/24 13:53	
Methylcyclohexane	ND U	39.4	15.0	1	11/19/24 15:24	11/12/24 13:53	
Methylene chloride (Dichloromethane)	ND U	328	105	1	11/19/24 15:24	11/12/24 13:53	
o-Xylene	ND U	39.4	15.2	1	11/19/24 15:24	11/12/24 13:53	
Styrene	ND U	39.4	15.6	1	11/19/24 15:24	11/12/24 13:53	
Tetrachloroethylene (Perchloroethylene)	ND U	39.4	23.7	1	11/19/24 15:24	11/12/24 13:53	
Toluene	ND U	39.4	32.5	1	11/19/24 15:24	11/12/24 13:53	
Total Xylene	ND U	118	15.2	1	11/19/24 15:24	11/12/24 13:53	
trans-1,2-Dichloroethylene	ND U	39.4	32.5	1	11/19/24 15:24	11/12/24 13:53	
trans-1,3-Dichloropropylene	ND U	39.4	22.0	1	11/19/24 15:24	11/12/24 13:53	
Trichloroethene (Trichloroethylene)	ND U	39.4	17.7	1	11/19/24 15:24	11/12/24 13:53	
Trichlorofluoromethane	ND U	39.4	20.2	1	11/19/24 15:24	11/12/24 13:53	
(Fluorotrichloromethane, Freon 11)							
Vinyl chloride (Chloroethene)	ND U	39.4	26.2	1	11/19/24 15:24	11/12/24 13:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94.0	80 - 120	11/19/24 15:24	
4-Bromofluorobenzene	97.4	80 - 120	11/19/24 15:24	
Dibromofluoromethane	94.7	80 - 120	11/19/24 15:24	
Toluene-d8	99.0	80 - 120	11/19/24 15:24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-10_4-5_20241108
Lab Code: HN2409094-005

Work Order: HN2409094
Date Collected: 11/08/24 11:50
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1,1-Trichloroethane	ND U	35.5	16.1	1	11/19/24 15:42	11/12/24 13:53	
1,1,2,2-Tetrachloroethane	ND U	35.5	15.6	1	11/19/24 15:42	11/12/24 13:53	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND U	35.5	22.4	1	11/19/24 15:42	11/12/24 13:53	
1,1,2-Trichloroethane	ND U	35.5	15.1	1	11/19/24 15:42	11/12/24 13:53	
1,1-Dichloroethane	ND U	35.5	12.9	1	11/19/24 15:42	11/12/24 13:53	
1,1-Dichloroethylene	ND U	35.5	11.5	1	11/19/24 15:42	11/12/24 13:53	
1,2,3-Trichlorobenzene	ND U	118	42.6	1	11/19/24 15:42	11/12/24 13:53	
1,2,3-Trichloropropane	ND U	35.5	14.8	1	11/19/24 15:42	11/12/24 13:53	
1,2,4-Trichlorobenzene	ND U	118	40.2	1	11/19/24 15:42	11/12/24 13:53	
1,2,4-Trimethylbenzene	ND U	35.5	26.0	1	11/19/24 15:42	11/12/24 13:53	
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND U	35.5	20.8	1	11/19/24 15:42	11/12/24 13:53	
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND U	35.5	13.4	1	11/19/24 15:42	11/12/24 13:53	
1,2-Dichloroethane (Ethylene dichloride)	ND U	118	20.8	1	11/19/24 15:42	11/12/24 13:53	
1,2-Dichloropropane	ND U	35.5	26.1	1	11/19/24 15:42	11/12/24 13:53	
1,3,5-Trimethylbenzene	ND U	118	25.0	1	11/19/24 15:42	11/12/24 13:53	
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND U	35.5	24.5	1	11/19/24 15:42	11/12/24 13:53	
1,3-Dichloropropene	ND U	70.9	19.8	1	11/19/24 15:42	11/12/24 13:53	
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND U	35.5	28.8	1	11/19/24 15:42	11/12/24 13:53	
2-Butanone (Methyl ethyl ketone, MEK)	ND U	236	84.4	1	11/19/24 15:42	11/12/24 13:53	
2-Hexanone	ND U	35.5	17.6	1	11/19/24 15:42	11/12/24 13:53	
4-Methyl-2-pentanone (MIBK)	ND U	35.5	33.0	1	11/19/24 15:42	11/12/24 13:53	
Acetone	ND U	118	105	1	11/19/24 15:42	11/12/24 13:53	
Benzene	ND U	35.5	17.2	1	11/19/24 15:42	11/12/24 13:53	
Bromochloromethane	ND U	35.5	18.0	1	11/19/24 15:42	11/12/24 13:53	
Bromodichloromethane	ND U	35.5	19.8	1	11/19/24 15:42	11/12/24 13:53	
Bromoform	ND U	35.5	14.9	1	11/19/24 15:42	11/12/24 13:53	
Carbon disulfide	ND U	35.5	18.4	1	11/19/24 15:42	11/12/24 13:53	
Carbon tetrachloride	ND U	35.5	13.9	1	11/19/24 15:42	11/12/24 13:53	
Chlorobenzene	ND U	35.5	11.8	1	11/19/24 15:42	11/12/24 13:53	
Chlorodibromomethane	ND U	35.5	19.9	1	11/19/24 15:42	11/12/24 13:53	
Chloroethane (Ethyl chloride)	ND U	118	99.3	1	11/19/24 15:42	11/12/24 13:53	
Chloroform	ND U	35.5	13.0	1	11/19/24 15:42	11/12/24 13:53	
cis & trans-1,2-Dichloroethene	ND U	70.9	22.8	1	11/19/24 15:42	11/12/24 13:53	
cis-1,2-Dichloroethylene	ND U	35.5	22.8	1	11/19/24 15:42	11/12/24 13:53	
cis-1,3-Dichloropropene	ND U	35.5	26.7	1	11/19/24 15:42	11/12/24 13:53	
Cyclohexane	ND U	118	27.2	1	11/19/24 15:42	11/12/24 13:53	
Dichlorodifluoromethane (Freon-12)	ND U	118	42.9	1	11/19/24 15:42	11/12/24 13:53	
Ethylbenzene	ND U	35.5	25.2	1	11/19/24 15:42	11/12/24 13:53	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-10_4-5_20241108
Lab Code: HN2409094-005

Work Order: HN2409094
Date Collected: 11/08/24 11:50
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Isopropylbenzene	ND U	35.5	22.4	1	11/19/24 15:42	11/12/24 13:53	
Methyl acetate	ND U	296	42.5	1	11/19/24 15:42	11/12/24 13:53	
Methyl bromide (Bromomethane)	ND U	118	67.8	1	11/19/24 15:42	11/12/24 13:53	
Methyl chloride (Chloromethane)	ND U	118	96.9	1	11/19/24 15:42	11/12/24 13:53	
Methyl tert-butyl ether (MTBE)	ND U	35.5	25.9	1	11/19/24 15:42	11/12/24 13:53	
Methylcyclohexane	ND U	35.5	13.5	1	11/19/24 15:42	11/12/24 13:53	
Methylene chloride (Dichloromethane)	ND U	296	94.1	1	11/19/24 15:42	11/12/24 13:53	
o-Xylene	ND U	35.5	13.7	1	11/19/24 15:42	11/12/24 13:53	
Styrene	ND U	35.5	14.0	1	11/19/24 15:42	11/12/24 13:53	
Tetrachloroethylene (Perchloroethylene)	ND U	35.5	21.4	1	11/19/24 15:42	11/12/24 13:53	
Toluene	ND U	35.5	29.2	1	11/19/24 15:42	11/12/24 13:53	
Total Xylene	ND U	106	13.7	1	11/19/24 15:42	11/12/24 13:53	
trans-1,2-Dichloroethylene	ND U	35.5	29.2	1	11/19/24 15:42	11/12/24 13:53	
trans-1,3-Dichloropropylene	ND U	35.5	19.8	1	11/19/24 15:42	11/12/24 13:53	
Trichloroethene (Trichloroethylene)	ND U	35.5	15.9	1	11/19/24 15:42	11/12/24 13:53	
Trichlorofluoromethane	ND U	35.5	18.1	1	11/19/24 15:42	11/12/24 13:53	
(Fluorotrichloromethane, Freon 11)							
Vinyl chloride (Chloroethene)	ND U	35.5	23.6	1	11/19/24 15:42	11/12/24 13:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95.2	80 - 120	11/19/24 15:42	
4-Bromofluorobenzene	93.4	80 - 120	11/19/24 15:42	
Dibromofluoromethane	93.4	80 - 120	11/19/24 15:42	
Toluene-d8	97.4	80 - 120	11/19/24 15:42	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-11_4-5_20241108
Lab Code: HN2409094-006

Work Order: HN2409094
Date Collected: 11/08/24 13:20
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1,1-Trichloroethane	ND U	35.3	16.0	1	11/19/24 16:00	11/12/24 13:53	
1,1,2,2-Tetrachloroethane	ND U	35.3	15.6	1	11/19/24 16:00	11/12/24 13:53	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND U	35.3	22.3	1	11/19/24 16:00	11/12/24 13:53	
1,1,2-Trichloroethane	ND U	35.3	15.0	1	11/19/24 16:00	11/12/24 13:53	
1,1-Dichloroethane	ND U	35.3	12.9	1	11/19/24 16:00	11/12/24 13:53	
1,1-Dichloroethylene	ND U	35.3	11.4	1	11/19/24 16:00	11/12/24 13:53	
1,2,3-Trichlorobenzene	ND U	118	42.3	1	11/19/24 16:00	11/12/24 13:53	
1,2,3-Trichloropropane	ND U	35.3	14.8	1	11/19/24 16:00	11/12/24 13:53	
1,2,4-Trichlorobenzene	ND U	118	40.0	1	11/19/24 16:00	11/12/24 13:53	
1,2,4-Trimethylbenzene	ND U	35.3	25.9	1	11/19/24 16:00	11/12/24 13:53	
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND U	35.3	20.7	1	11/19/24 16:00	11/12/24 13:53	
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND U	35.3	13.4	1	11/19/24 16:00	11/12/24 13:53	
1,2-Dichloroethane (Ethylene dichloride)	ND U	118	20.7	1	11/19/24 16:00	11/12/24 13:53	
1,2-Dichloropropane	ND U	35.3	26.0	1	11/19/24 16:00	11/12/24 13:53	
1,3,5-Trimethylbenzene	ND U	118	24.9	1	11/19/24 16:00	11/12/24 13:53	
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND U	35.3	24.4	1	11/19/24 16:00	11/12/24 13:53	
1,3-Dichloropropene	ND U	70.5	19.7	1	11/19/24 16:00	11/12/24 13:53	
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND U	35.3	28.7	1	11/19/24 16:00	11/12/24 13:53	
2-Butanone (Methyl ethyl ketone, MEK)	ND U	235	84.0	1	11/19/24 16:00	11/12/24 13:53	
2-Hexanone	ND U	35.3	17.5	1	11/19/24 16:00	11/12/24 13:53	
4-Methyl-2-pentanone (MIBK)	ND U	35.3	32.9	1	11/19/24 16:00	11/12/24 13:53	
Acetone	ND U	118	105	1	11/19/24 16:00	11/12/24 13:53	
Benzene	ND U	35.3	17.1	1	11/19/24 16:00	11/12/24 13:53	
Bromochloromethane	ND U	35.3	17.9	1	11/19/24 16:00	11/12/24 13:53	
Bromodichloromethane	ND U	35.3	19.8	1	11/19/24 16:00	11/12/24 13:53	
Bromoform	ND U	35.3	14.8	1	11/19/24 16:00	11/12/24 13:53	
Carbon disulfide	ND U	35.3	18.2	1	11/19/24 16:00	11/12/24 13:53	
Carbon tetrachloride	ND U	35.3	13.8	1	11/19/24 16:00	11/12/24 13:53	
Chlorobenzene	ND U	35.3	11.7	1	11/19/24 16:00	11/12/24 13:53	
Chlorodibromomethane	ND U	35.3	19.8	1	11/19/24 16:00	11/12/24 13:53	
Chloroethane (Ethyl chloride)	ND U	118	98.8	1	11/19/24 16:00	11/12/24 13:53	
Chloroform	ND U	35.3	12.9	1	11/19/24 16:00	11/12/24 13:53	
cis & trans-1,2-Dichloroethene	ND U	70.5	22.7	1	11/19/24 16:00	11/12/24 13:53	
cis-1,2-Dichloroethylene	ND U	35.3	22.7	1	11/19/24 16:00	11/12/24 13:53	
cis-1,3-Dichloropropene	ND U	35.3	26.6	1	11/19/24 16:00	11/12/24 13:53	
Cyclohexane	ND U	118	27.0	1	11/19/24 16:00	11/12/24 13:53	
Dichlorodifluoromethane (Freon-12)	ND U	118	42.7	1	11/19/24 16:00	11/12/24 13:53	
Ethylbenzene	ND U	35.3	25.0	1	11/19/24 16:00	11/12/24 13:53	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-11_4-5_20241108
Lab Code: HN2409094-006

Work Order: HN2409094
Date Collected: 11/08/24 13:20
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Isopropylbenzene	ND U	35.3	22.3	1	11/19/24 16:00	11/12/24 13:53	
Methyl acetate	ND U	294	42.2	1	11/19/24 16:00	11/12/24 13:53	
Methyl bromide (Bromomethane)	ND U	118	67.5	1	11/19/24 16:00	11/12/24 13:53	
Methyl chloride (Chloromethane)	ND U	118	96.4	1	11/19/24 16:00	11/12/24 13:53	
Methyl tert-butyl ether (MTBE)	ND U	35.3	25.7	1	11/19/24 16:00	11/12/24 13:53	
Methylcyclohexane	ND U	35.3	13.4	1	11/19/24 16:00	11/12/24 13:53	
Methylene chloride (Dichloromethane)	ND U	294	93.6	1	11/19/24 16:00	11/12/24 13:53	
o-Xylene	ND U	35.3	13.6	1	11/19/24 16:00	11/12/24 13:53	
Styrene	ND U	35.3	14.0	1	11/19/24 16:00	11/12/24 13:53	
Tetrachloroethylene (Perchloroethylene)	ND U	35.3	21.2	1	11/19/24 16:00	11/12/24 13:53	
Toluene	ND U	35.3	29.1	1	11/19/24 16:00	11/12/24 13:53	
Total Xylene	ND U	106	13.6	1	11/19/24 16:00	11/12/24 13:53	
trans-1,2-Dichloroethylene	ND U	35.3	29.1	1	11/19/24 16:00	11/12/24 13:53	
trans-1,3-Dichloropropylene	ND U	35.3	19.7	1	11/19/24 16:00	11/12/24 13:53	
Trichloroethene (Trichloroethylene)	ND U	35.3	15.8	1	11/19/24 16:00	11/12/24 13:53	
Trichlorofluoromethane	ND U	35.3	18.0	1	11/19/24 16:00	11/12/24 13:53	
(Fluorotrichloromethane, Freon 11)							
Vinyl chloride (Chloroethene)	ND U	35.3	23.4	1	11/19/24 16:00	11/12/24 13:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95.0	80 - 120	11/19/24 16:00	
4-Bromofluorobenzene	93.2	80 - 120	11/19/24 16:00	
Dibromofluoromethane	94.4	80 - 120	11/19/24 16:00	
Toluene-d8	98.4	80 - 120	11/19/24 16:00	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-13_4-5_20241108
Lab Code: HN2409094-007

Work Order: HN2409094
Date Collected: 11/08/24 12:30
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1,1-Trichloroethane	ND U	37.9	17.2	1	11/19/24 16:19	11/12/24 13:53	
1,1,2,2-Tetrachloroethane	ND U	37.9	16.7	1	11/19/24 16:19	11/12/24 13:53	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND U	37.9	24.0	1	11/19/24 16:19	11/12/24 13:53	
1,1,2-Trichloroethane	ND U	37.9	16.1	1	11/19/24 16:19	11/12/24 13:53	
1,1-Dichloroethane	ND U	37.9	13.8	1	11/19/24 16:19	11/12/24 13:53	
1,1-Dichloroethylene	ND U	37.9	12.3	1	11/19/24 16:19	11/12/24 13:53	
1,2,3-Trichlorobenzene	ND U	126	45.5	1	11/19/24 16:19	11/12/24 13:53	
1,2,3-Trichloropropane	ND U	37.9	15.9	1	11/19/24 16:19	11/12/24 13:53	
1,2,4-Trichlorobenzene	ND U	126	42.9	1	11/19/24 16:19	11/12/24 13:53	
1,2,4-Trimethylbenzene	ND U	37.9	27.8	1	11/19/24 16:19	11/12/24 13:53	
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND U	37.9	22.3	1	11/19/24 16:19	11/12/24 13:53	
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND U	37.9	14.4	1	11/19/24 16:19	11/12/24 13:53	
1,2-Dichloroethane (Ethylene dichloride)	ND U	126	22.3	1	11/19/24 16:19	11/12/24 13:53	
1,2-Dichloropropane	ND U	37.9	27.9	1	11/19/24 16:19	11/12/24 13:53	
1,3,5-Trimethylbenzene	ND U	126	26.8	1	11/19/24 16:19	11/12/24 13:53	
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND U	37.9	26.2	1	11/19/24 16:19	11/12/24 13:53	
1,3-Dichloropropene	ND U	75.8	21.2	1	11/19/24 16:19	11/12/24 13:53	
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND U	37.9	30.8	1	11/19/24 16:19	11/12/24 13:53	
2-Butanone (Methyl ethyl ketone, MEK)	ND U	252	90.2	1	11/19/24 16:19	11/12/24 13:53	
2-Hexanone	ND U	37.9	18.8	1	11/19/24 16:19	11/12/24 13:53	
4-Methyl-2-pentanone (MIBK)	ND U	37.9	35.3	1	11/19/24 16:19	11/12/24 13:53	
Acetone	ND U	126	112	1	11/19/24 16:19	11/12/24 13:53	
Benzene	ND U	37.9	18.3	1	11/19/24 16:19	11/12/24 13:53	
Bromochloromethane	ND U	37.9	19.3	1	11/19/24 16:19	11/12/24 13:53	
Bromodichloromethane	ND U	37.9	21.2	1	11/19/24 16:19	11/12/24 13:53	
Bromoform	ND U	37.9	15.9	1	11/19/24 16:19	11/12/24 13:53	
Carbon disulfide	ND U	37.9	19.6	1	11/19/24 16:19	11/12/24 13:53	
Carbon tetrachloride	ND U	37.9	14.8	1	11/19/24 16:19	11/12/24 13:53	
Chlorobenzene	ND U	37.9	12.6	1	11/19/24 16:19	11/12/24 13:53	
Chlorodibromomethane	ND U	37.9	21.3	1	11/19/24 16:19	11/12/24 13:53	
Chloroethane (Ethyl chloride)	ND U	126	106	1	11/19/24 16:19	11/12/24 13:53	
Chloroform	ND U	37.9	13.9	1	11/19/24 16:19	11/12/24 13:53	
cis & trans-1,2-Dichloroethene	ND U	75.8	24.4	1	11/19/24 16:19	11/12/24 13:53	
cis-1,2-Dichloroethylene	ND U	37.9	24.4	1	11/19/24 16:19	11/12/24 13:53	
cis-1,3-Dichloropropene	ND U	37.9	28.5	1	11/19/24 16:19	11/12/24 13:53	
Cyclohexane	ND U	126	29.0	1	11/19/24 16:19	11/12/24 13:53	
Dichlorodifluoromethane (Freon-12)	ND U	126	45.8	1	11/19/24 16:19	11/12/24 13:53	
Ethylbenzene	ND U	37.9	26.9	1	11/19/24 16:19	11/12/24 13:53	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-13_4-5_20241108
Lab Code: HN2409094-007

Work Order: HN2409094
Date Collected: 11/08/24 12:30
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Isopropylbenzene	ND U	37.9	23.9	1	11/19/24 16:19	11/12/24 13:53	
Methyl acetate	ND U	316	45.4	1	11/19/24 16:19	11/12/24 13:53	
Methyl bromide (Bromomethane)	ND U	126	72.5	1	11/19/24 16:19	11/12/24 13:53	
Methyl chloride (Chloromethane)	ND U	126	104	1	11/19/24 16:19	11/12/24 13:53	
Methyl tert-butyl ether (MTBE)	ND U	37.9	27.6	1	11/19/24 16:19	11/12/24 13:53	
Methylcyclohexane	ND U	37.9	14.4	1	11/19/24 16:19	11/12/24 13:53	
Methylene chloride (Dichloromethane)	ND U	316	100	1	11/19/24 16:19	11/12/24 13:53	
o-Xylene	ND U	37.9	14.6	1	11/19/24 16:19	11/12/24 13:53	
Styrene	ND U	37.9	15.0	1	11/19/24 16:19	11/12/24 13:53	
Tetrachloroethylene (Perchloroethylene)	ND U	37.9	22.8	1	11/19/24 16:19	11/12/24 13:53	
Toluene	ND U	37.9	31.2	1	11/19/24 16:19	11/12/24 13:53	
Total Xylene	ND U	114	14.6	1	11/19/24 16:19	11/12/24 13:53	
trans-1,2-Dichloroethylene	ND U	37.9	31.2	1	11/19/24 16:19	11/12/24 13:53	
trans-1,3-Dichloropropylene	ND U	37.9	21.2	1	11/19/24 16:19	11/12/24 13:53	
Trichloroethene (Trichloroethylene)	ND U	37.9	17.0	1	11/19/24 16:19	11/12/24 13:53	
Trichlorofluoromethane	ND U	37.9	19.4	1	11/19/24 16:19	11/12/24 13:53	
(Fluorotrichloromethane, Freon 11)							
Vinyl chloride (Chloroethene)	ND U	37.9	25.2	1	11/19/24 16:19	11/12/24 13:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94.6	80 - 120	11/19/24 16:19	
4-Bromofluorobenzene	97.0	80 - 120	11/19/24 16:19	
Dibromofluoromethane	92.0	80 - 120	11/19/24 16:19	
Toluene-d8	96.9	80 - 120	11/19/24 16:19	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: FD-1_20241108
Lab Code: HN2409094-008

Work Order: HN2409094
Date Collected: 11/08/24
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1,1-Trichloroethane	ND U	33.6	15.2	1	11/19/24 16:37	11/12/24 13:53	
1,1,2,2-Tetrachloroethane	ND U	33.6	14.8	1	11/19/24 16:37	11/12/24 13:53	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND U	33.6	21.3	1	11/19/24 16:37	11/12/24 13:53	
1,1,2-Trichloroethane	ND U	33.6	14.3	1	11/19/24 16:37	11/12/24 13:53	
1,1-Dichloroethane	ND U	33.6	12.2	1	11/19/24 16:37	11/12/24 13:53	
1,1-Dichloroethylene	ND U	33.6	10.9	1	11/19/24 16:37	11/12/24 13:53	
1,2,3-Trichlorobenzene	ND U	112	40.3	1	11/19/24 16:37	11/12/24 13:53	
1,2,3-Trichloropropane	ND U	33.6	14.0	1	11/19/24 16:37	11/12/24 13:53	
1,2,4-Trichlorobenzene	ND U	112	38.0	1	11/19/24 16:37	11/12/24 13:53	
1,2,4-Trimethylbenzene	ND U	33.6	24.6	1	11/19/24 16:37	11/12/24 13:53	
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND U	33.6	19.7	1	11/19/24 16:37	11/12/24 13:53	
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND U	33.6	12.7	1	11/19/24 16:37	11/12/24 13:53	
1,2-Dichloroethane (Ethylene dichloride)	ND U	112	19.7	1	11/19/24 16:37	11/12/24 13:53	
1,2-Dichloropropane	ND U	33.6	24.7	1	11/19/24 16:37	11/12/24 13:53	
1,3,5-Trimethylbenzene	ND U	112	23.7	1	11/19/24 16:37	11/12/24 13:53	
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND U	33.6	23.2	1	11/19/24 16:37	11/12/24 13:53	
1,3-Dichloropropene	ND U	67.2	18.7	1	11/19/24 16:37	11/12/24 13:53	
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND U	33.6	27.3	1	11/19/24 16:37	11/12/24 13:53	
2-Butanone (Methyl ethyl ketone, MEK)	ND U	224	79.9	1	11/19/24 16:37	11/12/24 13:53	
2-Hexanone	ND U	33.6	16.6	1	11/19/24 16:37	11/12/24 13:53	
4-Methyl-2-pentanone (MIBK)	ND U	33.6	31.3	1	11/19/24 16:37	11/12/24 13:53	
Acetone	ND U	112	99.6	1	11/19/24 16:37	11/12/24 13:53	
Benzene	ND U	33.6	16.3	1	11/19/24 16:37	11/12/24 13:53	
Bromochloromethane	ND U	33.6	17.1	1	11/19/24 16:37	11/12/24 13:53	
Bromodichloromethane	ND U	33.6	18.8	1	11/19/24 16:37	11/12/24 13:53	
Bromoform	ND U	33.6	14.1	1	11/19/24 16:37	11/12/24 13:53	
Carbon disulfide	ND U	33.6	17.4	1	11/19/24 16:37	11/12/24 13:53	
Carbon tetrachloride	ND U	33.6	13.1	1	11/19/24 16:37	11/12/24 13:53	
Chlorobenzene	ND U	33.6	11.1	1	11/19/24 16:37	11/12/24 13:53	
Chlorodibromomethane	ND U	33.6	18.8	1	11/19/24 16:37	11/12/24 13:53	
Chloroethane (Ethyl chloride)	ND U	112	94.0	1	11/19/24 16:37	11/12/24 13:53	
Chloroform	ND U	33.6	12.3	1	11/19/24 16:37	11/12/24 13:53	
cis & trans-1,2-Dichloroethene	ND U	67.2	21.6	1	11/19/24 16:37	11/12/24 13:53	
cis-1,2-Dichloroethylene	ND U	33.6	21.6	1	11/19/24 16:37	11/12/24 13:53	
cis-1,3-Dichloropropene	ND U	33.6	25.3	1	11/19/24 16:37	11/12/24 13:53	
Cyclohexane	ND U	112	25.7	1	11/19/24 16:37	11/12/24 13:53	
Dichlorodifluoromethane (Freon-12)	ND U	112	40.6	1	11/19/24 16:37	11/12/24 13:53	
Ethylbenzene	ND U	33.6	23.8	1	11/19/24 16:37	11/12/24 13:53	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: FD-1_20241108
Lab Code: HN2409094-008

Work Order: HN2409094
Date Collected: 11/08/24
Date Received: 11/09/24 08:00

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Isopropylbenzene	ND U	33.6	21.2	1	11/19/24 16:37	11/12/24 13:53	
Methyl acetate	ND U	280	40.2	1	11/19/24 16:37	11/12/24 13:53	
Methyl bromide (Bromomethane)	ND U	112	64.2	1	11/19/24 16:37	11/12/24 13:53	
Methyl chloride (Chloromethane)	ND U	112	91.8	1	11/19/24 16:37	11/12/24 13:53	
Methyl tert-butyl ether (MTBE)	ND U	33.6	24.5	1	11/19/24 16:37	11/12/24 13:53	
Methylcyclohexane	ND U	33.6	12.8	1	11/19/24 16:37	11/12/24 13:53	
Methylene chloride (Dichloromethane)	ND U	280	89.1	1	11/19/24 16:37	11/12/24 13:53	
o-Xylene	ND U	33.6	13.0	1	11/19/24 16:37	11/12/24 13:53	
Styrene	ND U	33.6	13.3	1	11/19/24 16:37	11/12/24 13:53	
Tetrachloroethylene (Perchloroethylene)	ND U	33.6	20.2	1	11/19/24 16:37	11/12/24 13:53	
Toluene	ND U	33.6	27.7	1	11/19/24 16:37	11/12/24 13:53	
Total Xylene	ND U	101	13.0	1	11/19/24 16:37	11/12/24 13:53	
trans-1,2-Dichloroethylene	ND U	33.6	27.7	1	11/19/24 16:37	11/12/24 13:53	
trans-1,3-Dichloropropylene	ND U	33.6	18.7	1	11/19/24 16:37	11/12/24 13:53	
Trichloroethene (Trichloroethylene)	ND U	33.6	15.0	1	11/19/24 16:37	11/12/24 13:53	
Trichlorofluoromethane	ND U	33.6	17.2	1	11/19/24 16:37	11/12/24 13:53	
(Fluorotrichloromethane, Freon 11)							
Vinyl chloride (Chloroethene)	ND U	33.6	22.3	1	11/19/24 16:37	11/12/24 13:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98.8	80 - 120	11/19/24 16:37	
4-Bromofluorobenzene	95.0	80 - 120	11/19/24 16:37	
Dibromofluoromethane	91.0	80 - 120	11/19/24 16:37	
Toluene-d8	100	80 - 120	11/19/24 16:37	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-1_4-5_20241108
Lab Code: HN2409094-001

Work Order: HN2409094
Date Collected: 11/08/24 12:15
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	34.8	5.71	1	11/21/24 05:28	11/18/24 09:37	
1,2,4,5-Tetrachlorobenzene	ND U	352	8.12	1	11/21/24 05:28	11/18/24 09:37	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	176	25.2	1	11/21/24 05:28	11/18/24 09:37	
1-Methylnaphthalene	ND U	7.04	5.07	1	11/21/24 05:28	11/18/24 09:37	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	34.8	8.25	1	11/21/24 05:28	11/18/24 09:37	
2,3,4,6-Tetrachlorophenol	ND U	70.4	25.8	1	11/21/24 05:28	11/18/24 09:37	
2,4,5-Trichlorophenol	ND U	34.8	20.9	1	11/21/24 05:28	11/18/24 09:37	
2,4,6-Trichlorophenol	ND U	34.8	9.37	1	11/21/24 05:28	11/18/24 09:37	
2,4-Dichlorophenol	ND U	34.8	18.9	1	11/21/24 05:28	11/18/24 09:37	
2,4-Dimethylphenol	ND SU	35.2	18.1	1	11/21/24 05:28	11/18/24 09:37	
2,4-Dinitrophenol	ND U	352	257	1	11/21/24 05:28	11/18/24 09:37	
2,4-Dinitrotoluene (2,4-DNT)	ND U	35.2	22.9	1	11/21/24 05:28	11/18/24 09:37	
2,6-Dinitrotoluene (2,6-DNT)	ND U	34.8	8.99	1	11/21/24 05:28	11/18/24 09:37	
2-Chloronaphthalene	ND U	7.04	4.92	1	11/21/24 05:28	11/18/24 09:37	
2-Chlorophenol	ND U	34.8	23.0	1	11/21/24 05:28	11/18/24 09:37	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	34.8	29.4	1	11/21/24 05:28	11/18/24 09:37	
2-Methylnaphthalene	ND U	7.04	3.58	1	11/21/24 05:28	11/18/24 09:37	
2-Methylphenol (o-Cresol)	ND SU	34.8	9.52	1	11/21/24 05:28	11/18/24 09:37	
2-Nitroaniline	ND U	34.8	19.6	1	11/21/24 05:28	11/18/24 09:37	
2-Nitrophenol	ND U	34.8	10.0	1	11/21/24 05:28	11/18/24 09:37	
3&4-Methylphenol	ND SU	34.8	19.2	1	11/21/24 05:28	11/18/24 09:37	
3,3'-Dichlorobenzidine	ND SU	176	16.4	1	11/21/24 05:28	11/18/24 09:37	
3-Nitroaniline	ND U	34.8	20.4	1	11/21/24 05:28	11/18/24 09:37	
4-Bromophenyl phenyl ether (BDE-3)	ND U	34.8	19.3	1	11/21/24 05:28	11/18/24 09:37	
4-Chloro-3-methylphenol	ND U	34.8	10.0	1	11/21/24 05:28	11/18/24 09:37	
4-Chloroaniline	ND U	70.4	17.9	1	11/21/24 05:28	11/18/24 09:37	
4-Chlorophenyl phenylether	ND U	34.8	9.73	1	11/21/24 05:28	11/18/24 09:37	
4-Nitroaniline	ND U	176	54.6	1	11/21/24 05:28	11/18/24 09:37	
4-Nitrophenol	ND U	352	82.5	1	11/21/24 05:28	11/18/24 09:37	
Acenaphthene	ND U	7.04	5.09	1	11/21/24 05:28	11/18/24 09:37	
Acenaphthylene	ND U	7.04	6.10	1	11/21/24 05:28	11/18/24 09:37	
Acetophenone	ND U	34.8	5.51	1	11/21/24 05:28	11/18/24 09:37	
Anthracene	ND U	7.04	4.96	1	11/21/24 05:28	11/18/24 09:37	
Atrazine	ND U	34.8	20.6	1	11/21/24 05:28	11/18/24 09:37	
Benzaldehyde	ND U	70.4	54.1	1	11/21/24 05:28	11/18/24 09:37	
Benzo(a)anthracene	12.0	7.04	6.08	1	11/21/24 05:28	11/18/24 09:37	
Benzo(a)pyrene	13.4	7.04	4.32	1	11/21/24 05:28	11/18/24 09:37	
Benzo(b)fluoranthene	17.6 S	7.04	5.25	1	11/21/24 05:28	11/18/24 09:37	
Benzo(g,h,i)perylene	8.45	7.04	5.40	1	11/21/24 05:28	11/18/24 09:37	
Benzo(k)fluoranthene	7.04	7.04	5.33	1	11/21/24 05:28	11/18/24 09:37	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-1_4-5_20241108
Lab Code: HN2409094-001

Work Order: HN2409094
Date Collected: 11/08/24 12:15
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	34.8	22.3	1	11/21/24 05:28	11/18/24 09:37	
bis(2-Chloroethyl) ether	ND U	34.8	9.97	1	11/21/24 05:28	11/18/24 09:37	
Butyl benzyl phthalate	ND U	70.4	44.1	1	11/21/24 05:28	11/18/24 09:37	
Caprolactam	ND U	34.8	31.8	1	11/21/24 05:28	11/18/24 09:37	
Carbazole	ND U	34.8	10.4	1	11/21/24 05:28	11/18/24 09:37	
Chrysene	11.3	7.04	5.69	1	11/21/24 05:28	11/18/24 09:37	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	34.8	29.1	1	11/21/24 05:28	11/18/24 09:37	
Dibenz(a,h) anthracene	ND U	34.8	3.80	1	11/21/24 05:28	11/18/24 09:37	
Dibenzofuran	ND U	34.8	5.18	1	11/21/24 05:28	11/18/24 09:37	
Diethyl phthalate	ND U	34.8	12.0	1	11/21/24 05:28	11/18/24 09:37	
Dimethyl phthalate	ND U	34.8	6.86	1	11/21/24 05:28	11/18/24 09:37	
Di-n-butyl phthalate	ND U	34.8	21.6	1	11/21/24 05:28	11/18/24 09:37	
Di-n-octyl phthalate	ND U	34.8	30.4	1	11/21/24 05:28	11/18/24 09:37	
Fluoranthene	23.9	7.04	3.38	1	11/21/24 05:28	11/18/24 09:37	
Fluorene	ND U	7.04	5.11	1	11/21/24 05:28	11/18/24 09:37	
Hexachlorobenzene	ND U	34.8	10.2	1	11/21/24 05:28	11/18/24 09:37	
Hexachlorobutadiene	ND U	34.8	8.29	1	11/21/24 05:28	11/18/24 09:37	
Hexachlorocyclopentadiene	ND U	34.8	33.4	1	11/21/24 05:28	11/18/24 09:37	
Hexachloroethane	ND U	34.8	14.6	1	11/21/24 05:28	11/18/24 09:37	
Indeno(1,2,3-cd) pyrene	8.45	7.04	4.90	1	11/21/24 05:28	11/18/24 09:37	
Isophorone	ND U	176	6.88	1	11/21/24 05:28	11/18/24 09:37	
Methylphenol, Total	ND SU	67.0	9.52	1	11/21/24 05:28	11/18/24 09:37	
Naphthalene	ND U	7.04	4.50	1	11/21/24 05:28	11/18/24 09:37	
Nitrobenzene	ND U	176	11.8	1	11/21/24 05:28	11/18/24 09:37	
n-Nitrosodi-n-propylamine	ND U	34.8	5.81	1	11/21/24 05:28	11/18/24 09:37	
N-Nitrosodiphenylamine	ND U	34.8	20.4	1	11/21/24 05:28	11/18/24 09:37	
Pentachlorophenol	ND U	34.8	28.0	1	11/21/24 05:28	11/18/24 09:37	
Phenanthrene	10.6	7.04	3.27	1	11/21/24 05:28	11/18/24 09:37	
Phenol	ND U	34.8	17.7	1	11/21/24 05:28	11/18/24 09:37	
Pyrene	18.3	7.04	3.51	1	11/21/24 05:28	11/18/24 09:37	
Pyridine	ND U	176	69.3	1	11/21/24 05:28	11/18/24 09:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	65.4	48 - 94	11/21/24 05:28	
2-Fluorobiphenyl	65.5	50 - 103	11/21/24 05:28	
2-Fluorophenol	58.3	43 - 105	11/21/24 05:28	
4-Terphenyl-d14	74.5	55 - 111	11/21/24 05:28	
Nitrobenzene-d5	68.0	47 - 100	11/21/24 05:28	
Phenol-d6	66.0	49 - 110	11/21/24 05:28	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-3_4-5_20241108
Lab Code: HN2409094-002

Work Order: HN2409094
Date Collected: 11/08/24 13:00
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	93.0	15.2	1	11/22/24 08:28	11/18/24 09:37	
1,2,4,5-Tetrachlorobenzene	ND U	939	21.7	1	11/22/24 08:28	11/18/24 09:37	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	470	67.4	1	11/22/24 08:28	11/18/24 09:37	
1-Methylnaphthalene	ND U	18.8	13.5	1	11/22/24 08:28	11/18/24 09:37	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	93.0	22.0	1	11/22/24 08:28	11/18/24 09:37	
2,3,4,6-Tetrachlorophenol	ND U	188	68.8	1	11/22/24 08:28	11/18/24 09:37	
2,4,5-Trichlorophenol	ND U	93.0	55.7	1	11/22/24 08:28	11/18/24 09:37	
2,4,6-Trichlorophenol	ND U	93.0	25.0	1	11/22/24 08:28	11/18/24 09:37	
2,4-Dichlorophenol	ND U	93.0	50.6	1	11/22/24 08:28	11/18/24 09:37	
2,4-Dimethylphenol	ND U	94.0	48.3	1	11/22/24 08:28	11/18/24 09:37	
2,4-Dinitrophenol	ND U	939	687	1	11/22/24 08:28	11/18/24 09:37	
2,4-Dinitrotoluene (2,4-DNT)	ND U	94.0	61.0	1	11/22/24 08:28	11/18/24 09:37	
2,6-Dinitrotoluene (2,6-DNT)	ND U	93.0	24.0	1	11/22/24 08:28	11/18/24 09:37	
2-Chloronaphthalene	ND U	18.8	13.1	1	11/22/24 08:28	11/18/24 09:37	
2-Chlorophenol	ND U	93.0	61.5	1	11/22/24 08:28	11/18/24 09:37	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	93.0	78.5	1	11/22/24 08:28	11/18/24 09:37	
2-Methylnaphthalene	ND U	18.8	9.56	1	11/22/24 08:28	11/18/24 09:37	
2-Methylphenol (o-Cresol)	ND U	93.0	25.4	1	11/22/24 08:28	11/18/24 09:37	
2-Nitroaniline	ND U	93.0	52.2	1	11/22/24 08:28	11/18/24 09:37	
2-Nitrophenol	ND U	93.0	26.8	1	11/22/24 08:28	11/18/24 09:37	
3&4-Methylphenol	ND U	93.0	51.2	1	11/22/24 08:28	11/18/24 09:37	
3,3'-Dichlorobenzidine	ND U	470	43.9	1	11/22/24 08:28	11/18/24 09:37	
3-Nitroaniline	ND U	93.0	54.6	1	11/22/24 08:28	11/18/24 09:37	
4-Bromophenyl phenyl ether (BDE-3)	ND U	93.0	51.5	1	11/22/24 08:28	11/18/24 09:37	
4-Chloro-3-methylphenol	ND U	93.0	26.8	1	11/22/24 08:28	11/18/24 09:37	
4-Chloroaniline	ND U	188	47.8	1	11/22/24 08:28	11/18/24 09:37	
4-Chlorophenyl phenylether	ND U	93.0	26.0	1	11/22/24 08:28	11/18/24 09:37	
4-Nitroaniline	ND U	470	146	1	11/22/24 08:28	11/18/24 09:37	
4-Nitrophenol	ND U	939	220	1	11/22/24 08:28	11/18/24 09:37	
Acenaphthene	ND U	18.8	13.6	1	11/22/24 08:28	11/18/24 09:37	
Acenaphthylene	ND U	18.8	16.3	1	11/22/24 08:28	11/18/24 09:37	
Acetophenone	ND U	93.0	14.7	1	11/22/24 08:28	11/18/24 09:37	
Anthracene	ND U	18.8	13.2	1	11/22/24 08:28	11/18/24 09:37	
Atrazine	ND U	93.0	55.1	1	11/22/24 08:28	11/18/24 09:37	
Benzaldehyde	ND U	188	144	1	11/22/24 08:28	11/18/24 09:37	
Benzo(a)anthracene	ND U	18.8	16.2	1	11/22/24 08:28	11/18/24 09:37	
Benzo(a)pyrene	ND U	18.8	11.5	1	11/22/24 08:28	11/18/24 09:37	
Benzo(b)fluoranthene	ND U	18.8	14.0	1	11/22/24 08:28	11/18/24 09:37	
Benzo(g,h,i)perylene	ND U	18.8	14.4	1	11/22/24 08:28	11/18/24 09:37	
Benzo(k)fluoranthene	ND U	18.8	14.2	1	11/22/24 08:28	11/18/24 09:37	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-3_4-5_20241108
Lab Code: HN2409094-002

Work Order: HN2409094
Date Collected: 11/08/24 13:00
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	93.0	59.5	1	11/22/24 08:28	11/18/24 09:37	
bis(2-Chloroethyl) ether	ND U	93.0	26.6	1	11/22/24 08:28	11/18/24 09:37	
Butyl benzyl phthalate	ND U	188	118	1	11/22/24 08:28	11/18/24 09:37	
Caprolactam	ND U	93.0	84.8	1	11/22/24 08:28	11/18/24 09:37	
Carbazole	ND U	93.0	27.7	1	11/22/24 08:28	11/18/24 09:37	
Chrysene	ND U	18.8	15.2	1	11/22/24 08:28	11/18/24 09:37	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	93.0	77.7	1	11/22/24 08:28	11/18/24 09:37	
Dibenz(a,h) anthracene	ND U	93.0	10.1	1	11/22/24 08:28	11/18/24 09:37	
Dibenzofuran	ND U	93.0	13.8	1	11/22/24 08:28	11/18/24 09:37	
Diethyl phthalate	ND U	93.0	32.0	1	11/22/24 08:28	11/18/24 09:37	
Dimethyl phthalate	ND U	93.0	18.3	1	11/22/24 08:28	11/18/24 09:37	
Di-n-butyl phthalate	ND U	93.0	57.6	1	11/22/24 08:28	11/18/24 09:37	
Di-n-octyl phthalate	ND U	93.0	81.3	1	11/22/24 08:28	11/18/24 09:37	
Fluoranthene	18.8	18.8	9.02	1	11/22/24 08:28	11/18/24 09:37	
Fluorene	ND U	18.8	13.6	1	11/22/24 08:28	11/18/24 09:37	
Hexachlorobenzene	ND U	93.0	27.3	1	11/22/24 08:28	11/18/24 09:37	
Hexachlorobutadiene	ND U	93.0	22.1	1	11/22/24 08:28	11/18/24 09:37	
Hexachlorocyclopentadiene	ND U	93.0	89.1	1	11/22/24 08:28	11/18/24 09:37	
Hexachloroethane	ND U	93.0	38.9	1	11/22/24 08:28	11/18/24 09:37	
Indeno(1,2,3-cd) pyrene	ND U	18.8	13.1	1	11/22/24 08:28	11/18/24 09:37	
Isophorone	ND U	470	18.4	1	11/22/24 08:28	11/18/24 09:37	
Methylphenol, Total	ND U	93.0	25.4	1	11/22/24 08:28	11/18/24 09:37	
Naphthalene	ND U	18.8	12.0	1	11/22/24 08:28	11/18/24 09:37	
Nitrobenzene	ND U	470	31.6	1	11/22/24 08:28	11/18/24 09:37	
n-Nitrosodi-n-propylamine	ND U	93.0	15.5	1	11/22/24 08:28	11/18/24 09:37	
N-Nitrosodiphenylamine	ND U	93.0	54.4	1	11/22/24 08:28	11/18/24 09:37	
Pentachlorophenol	ND U	93.0	74.6	1	11/22/24 08:28	11/18/24 09:37	
Phenanthrene	ND U	18.8	8.74	1	11/22/24 08:28	11/18/24 09:37	
Phenol	ND U	93.0	47.2	1	11/22/24 08:28	11/18/24 09:37	
Pyrene	ND U	18.8	9.38	1	11/22/24 08:28	11/18/24 09:37	
Pyridine	ND U	470	185	1	11/22/24 08:28	11/18/24 09:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	67.7	48 - 94	11/22/24 08:28	
2-Fluorobiphenyl	59.6	50 - 103	11/22/24 08:28	
2-Fluorophenol	64.9	43 - 105	11/22/24 08:28	
4-Terphenyl-d14	73.3	55 - 111	11/22/24 08:28	
Nitrobenzene-d5	59.7	47 - 100	11/22/24 08:28	
Phenol-d6	69.9	49 - 110	11/22/24 08:28	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-6_4-5_20241108
Lab Code: HN2409094-003

Work Order: HN2409094
Date Collected: 11/08/24 11:30
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	36.0	5.89	1	11/22/24 08:49	11/18/24 09:37	
1,2,4,5-Tetrachlorobenzene	ND U	363	8.38	1	11/22/24 08:49	11/18/24 09:37	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	182	26.0	1	11/22/24 08:49	11/18/24 09:37	
1-Methylnaphthalene	ND U	7.26	5.23	1	11/22/24 08:49	11/18/24 09:37	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	36.0	8.51	1	11/22/24 08:49	11/18/24 09:37	
2,3,4,6-Tetrachlorophenol	ND U	72.6	26.6	1	11/22/24 08:49	11/18/24 09:37	
2,4,5-Trichlorophenol	ND U	36.0	21.5	1	11/22/24 08:49	11/18/24 09:37	
2,4,6-Trichlorophenol	ND U	36.0	9.66	1	11/22/24 08:49	11/18/24 09:37	
2,4-Dichlorophenol	ND U	36.0	19.5	1	11/22/24 08:49	11/18/24 09:37	
2,4-Dimethylphenol	ND U	36.3	18.7	1	11/22/24 08:49	11/18/24 09:37	
2,4-Dinitrophenol	ND U	363	266	1	11/22/24 08:49	11/18/24 09:37	
2,4-Dinitrotoluene (2,4-DNT)	ND U	36.3	23.6	1	11/22/24 08:49	11/18/24 09:37	
2,6-Dinitrotoluene (2,6-DNT)	ND U	36.0	9.27	1	11/22/24 08:49	11/18/24 09:37	
2-Chloronaphthalene	ND U	7.26	5.08	1	11/22/24 08:49	11/18/24 09:37	
2-Chlorophenol	ND U	36.0	23.8	1	11/22/24 08:49	11/18/24 09:37	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	36.0	30.3	1	11/22/24 08:49	11/18/24 09:37	
2-Methylnaphthalene	ND U	7.26	3.69	1	11/22/24 08:49	11/18/24 09:37	
2-Methylphenol (o-Cresol)	ND U	36.0	9.82	1	11/22/24 08:49	11/18/24 09:37	
2-Nitroaniline	ND U	36.0	20.2	1	11/22/24 08:49	11/18/24 09:37	
2-Nitrophenol	ND U	36.0	10.4	1	11/22/24 08:49	11/18/24 09:37	
3&4-Methylphenol	ND U	36.0	19.8	1	11/22/24 08:49	11/18/24 09:37	
3,3'-Dichlorobenzidine	ND U	182	17.0	1	11/22/24 08:49	11/18/24 09:37	
3-Nitroaniline	ND U	36.0	21.1	1	11/22/24 08:49	11/18/24 09:37	
4-Bromophenyl phenyl ether (BDE-3)	ND U	36.0	19.9	1	11/22/24 08:49	11/18/24 09:37	
4-Chloro-3-methylphenol	ND U	36.0	10.4	1	11/22/24 08:49	11/18/24 09:37	
4-Chloroaniline	ND U	72.6	18.4	1	11/22/24 08:49	11/18/24 09:37	
4-Chlorophenyl phenylether	ND U	36.0	10.0	1	11/22/24 08:49	11/18/24 09:37	
4-Nitroaniline	ND U	182	56.3	1	11/22/24 08:49	11/18/24 09:37	
4-Nitrophenol	ND U	363	85.1	1	11/22/24 08:49	11/18/24 09:37	
Acenaphthene	ND U	7.26	5.25	1	11/22/24 08:49	11/18/24 09:37	
Acenaphthylene	ND U	7.26	6.30	1	11/22/24 08:49	11/18/24 09:37	
Acetophenone	ND U	36.0	5.69	1	11/22/24 08:49	11/18/24 09:37	
Anthracene	ND U	7.26	5.12	1	11/22/24 08:49	11/18/24 09:37	
Atrazine	ND U	36.0	21.3	1	11/22/24 08:49	11/18/24 09:37	
Benzaldehyde	ND U	72.6	55.8	1	11/22/24 08:49	11/18/24 09:37	
Benzo(a)anthracene	ND U	7.26	6.28	1	11/22/24 08:49	11/18/24 09:37	
Benzo(a)pyrene	ND U	7.26	4.46	1	11/22/24 08:49	11/18/24 09:37	
Benzo(b)fluoranthene	ND U	7.26	5.42	1	11/22/24 08:49	11/18/24 09:37	
Benzo(g,h,i)perylene	ND U	7.26	5.57	1	11/22/24 08:49	11/18/24 09:37	
Benzo(k)fluoranthene	ND U	7.26	5.50	1	11/22/24 08:49	11/18/24 09:37	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-6_4-5_20241108
Lab Code: HN2409094-003

Work Order: HN2409094
Date Collected: 11/08/24 11:30
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	36.0	23.0	1	11/22/24 08:49	11/18/24 09:37	
bis(2-Chloroethyl) ether	ND U	36.0	10.3	1	11/22/24 08:49	11/18/24 09:37	
Butyl benzyl phthalate	ND U	72.6	45.5	1	11/22/24 08:49	11/18/24 09:37	
Caprolactam	ND U	36.0	32.8	1	11/22/24 08:49	11/18/24 09:37	
Carbazole	ND U	36.0	10.7	1	11/22/24 08:49	11/18/24 09:37	
Chrysene	ND U	7.26	5.87	1	11/22/24 08:49	11/18/24 09:37	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	36.0	30.0	1	11/22/24 08:49	11/18/24 09:37	
Dibenz(a,h) anthracene	ND U	36.0	3.92	1	11/22/24 08:49	11/18/24 09:37	
Dibenzofuran	ND U	36.0	5.34	1	11/22/24 08:49	11/18/24 09:37	
Diethyl phthalate	ND U	36.0	12.4	1	11/22/24 08:49	11/18/24 09:37	
Dimethyl phthalate	ND U	36.0	7.08	1	11/22/24 08:49	11/18/24 09:37	
Di-n-butyl phthalate	ND U	36.0	22.3	1	11/22/24 08:49	11/18/24 09:37	
Di-n-octyl phthalate	ND U	36.0	31.4	1	11/22/24 08:49	11/18/24 09:37	
Fluoranthene	ND U	7.26	3.49	1	11/22/24 08:49	11/18/24 09:37	
Fluorene	ND U	7.26	5.27	1	11/22/24 08:49	11/18/24 09:37	
Hexachlorobenzene	ND U	36.0	10.6	1	11/22/24 08:49	11/18/24 09:37	
Hexachlorobutadiene	ND U	36.0	8.56	1	11/22/24 08:49	11/18/24 09:37	
Hexachlorocyclopentadiene	ND U	36.0	34.4	1	11/22/24 08:49	11/18/24 09:37	
Hexachloroethane	ND U	36.0	15.0	1	11/22/24 08:49	11/18/24 09:37	
Indeno(1,2,3-cd) pyrene	ND U	7.26	5.06	1	11/22/24 08:49	11/18/24 09:37	
Isophorone	ND U	182	7.09	1	11/22/24 08:49	11/18/24 09:37	
Methylphenol, Total	ND U	67.0	9.82	1	11/22/24 08:49	11/18/24 09:37	
Naphthalene	ND U	7.26	4.64	1	11/22/24 08:49	11/18/24 09:37	
Nitrobenzene	ND U	182	12.2	1	11/22/24 08:49	11/18/24 09:37	
n-Nitrosodi-n-propylamine	ND U	36.0	5.99	1	11/22/24 08:49	11/18/24 09:37	
N-Nitrosodiphenylamine	ND U	36.0	21.0	1	11/22/24 08:49	11/18/24 09:37	
Pentachlorophenol	ND U	36.0	28.8	1	11/22/24 08:49	11/18/24 09:37	
Phenanthrene	ND U	7.26	3.38	1	11/22/24 08:49	11/18/24 09:37	
Phenol	ND U	36.0	18.2	1	11/22/24 08:49	11/18/24 09:37	
Pyrene	8.72	7.26	3.62	1	11/22/24 08:49	11/18/24 09:37	
Pyridine	ND U	182	71.5	1	11/22/24 08:49	11/18/24 09:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	74.7	48 - 94	11/22/24 08:49	
2-Fluorobiphenyl	68.7	50 - 103	11/22/24 08:49	
2-Fluorophenol	68.3	43 - 105	11/22/24 08:49	
4-Terphenyl-d14	73.4	55 - 111	11/22/24 08:49	
Nitrobenzene-d5	62.6	47 - 100	11/22/24 08:49	
Phenol-d6	72.1	49 - 110	11/22/24 08:49	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-4_4-5_20241108
Lab Code: HN2409094-004

Work Order: HN2409094
Date Collected: 11/08/24 11:00
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	92.8	15.2	1	11/22/24 09:10	11/18/24 09:37	
1,2,4,5-Tetrachlorobenzene	ND U	936	21.6	1	11/22/24 09:10	11/18/24 09:37	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	469	67.2	1	11/22/24 09:10	11/18/24 09:37	
1-Methylnaphthalene	ND U	18.7	13.5	1	11/22/24 09:10	11/18/24 09:37	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	92.8	22.0	1	11/22/24 09:10	11/18/24 09:37	
2,3,4,6-Tetrachlorophenol	ND U	187	68.6	1	11/22/24 09:10	11/18/24 09:37	
2,4,5-Trichlorophenol	ND U	92.8	55.5	1	11/22/24 09:10	11/18/24 09:37	
2,4,6-Trichlorophenol	ND U	92.8	24.9	1	11/22/24 09:10	11/18/24 09:37	
2,4-Dichlorophenol	ND U	92.8	50.4	1	11/22/24 09:10	11/18/24 09:37	
2,4-Dimethylphenol	ND U	93.7	48.2	1	11/22/24 09:10	11/18/24 09:37	
2,4-Dinitrophenol	ND U	936	685	1	11/22/24 09:10	11/18/24 09:37	
2,4-Dinitrotoluene (2,4-DNT)	ND U	93.7	60.9	1	11/22/24 09:10	11/18/24 09:37	
2,6-Dinitrotoluene (2,6-DNT)	ND U	92.8	23.9	1	11/22/24 09:10	11/18/24 09:37	
2-Chloronaphthalene	ND U	18.7	13.1	1	11/22/24 09:10	11/18/24 09:37	
2-Chlorophenol	ND U	92.8	61.3	1	11/22/24 09:10	11/18/24 09:37	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	92.8	78.3	1	11/22/24 09:10	11/18/24 09:37	
2-Methylnaphthalene	ND U	18.7	9.53	1	11/22/24 09:10	11/18/24 09:37	
2-Methylphenol (o-Cresol)	ND U	92.8	25.3	1	11/22/24 09:10	11/18/24 09:37	
2-Nitroaniline	ND U	92.8	52.0	1	11/22/24 09:10	11/18/24 09:37	
2-Nitrophenol	ND U	92.8	26.7	1	11/22/24 09:10	11/18/24 09:37	
3&4-Methylphenol	ND U	92.8	51.1	1	11/22/24 09:10	11/18/24 09:37	
3,3'-Dichlorobenzidine	ND U	469	43.8	1	11/22/24 09:10	11/18/24 09:37	
3-Nitroaniline	ND U	92.8	54.4	1	11/22/24 09:10	11/18/24 09:37	
4-Bromophenyl phenyl ether (BDE-3)	ND U	92.8	51.3	1	11/22/24 09:10	11/18/24 09:37	
4-Chloro-3-methylphenol	ND U	92.8	26.7	1	11/22/24 09:10	11/18/24 09:37	
4-Chloroaniline	ND U	187	47.6	1	11/22/24 09:10	11/18/24 09:37	
4-Chlorophenyl phenylether	ND U	92.8	25.9	1	11/22/24 09:10	11/18/24 09:37	
4-Nitroaniline	ND U	469	145	1	11/22/24 09:10	11/18/24 09:37	
4-Nitrophenol	ND U	936	220	1	11/22/24 09:10	11/18/24 09:37	
Acenaphthene	ND U	18.7	13.6	1	11/22/24 09:10	11/18/24 09:37	
Acenaphthylene	ND U	18.7	16.2	1	11/22/24 09:10	11/18/24 09:37	
Acetophenone	ND U	92.8	14.7	1	11/22/24 09:10	11/18/24 09:37	
Anthracene	ND U	18.7	13.2	1	11/22/24 09:10	11/18/24 09:37	
Atrazine	ND U	92.8	54.9	1	11/22/24 09:10	11/18/24 09:37	
Benzaldehyde	ND U	187	144	1	11/22/24 09:10	11/18/24 09:37	
Benzo(a)anthracene	ND U	18.7	16.2	1	11/22/24 09:10	11/18/24 09:37	
Benzo(a)pyrene	ND U	18.7	11.5	1	11/22/24 09:10	11/18/24 09:37	
Benzo(b)fluoranthene	ND U	18.7	14.0	1	11/22/24 09:10	11/18/24 09:37	
Benzo(g,h,i)perylene	ND U	18.7	14.4	1	11/22/24 09:10	11/18/24 09:37	
Benzo(k)fluoranthene	ND U	18.7	14.2	1	11/22/24 09:10	11/18/24 09:37	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-4_4-5_20241108
Lab Code: HN2409094-004

Work Order: HN2409094
Date Collected: 11/08/24 11:00
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	92.8	59.4	1	11/22/24 09:10	11/18/24 09:37	
bis(2-Chloroethyl) ether	ND U	92.8	26.5	1	11/22/24 09:10	11/18/24 09:37	
Butyl benzyl phthalate	ND U	187	117	1	11/22/24 09:10	11/18/24 09:37	
Caprolactam	ND U	92.8	84.6	1	11/22/24 09:10	11/18/24 09:37	
Carbazole	ND U	92.8	27.6	1	11/22/24 09:10	11/18/24 09:37	
Chrysene	ND U	18.7	15.2	1	11/22/24 09:10	11/18/24 09:37	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	92.8	77.5	1	11/22/24 09:10	11/18/24 09:37	
Dibenz(a,h) anthracene	ND U	92.8	10.1	1	11/22/24 09:10	11/18/24 09:37	
Dibenzofuran	ND U	92.8	13.8	1	11/22/24 09:10	11/18/24 09:37	
Diethyl phthalate	ND U	92.8	31.9	1	11/22/24 09:10	11/18/24 09:37	
Dimethyl phthalate	ND U	92.8	18.3	1	11/22/24 09:10	11/18/24 09:37	
Di-n-butyl phthalate	ND U	92.8	57.5	1	11/22/24 09:10	11/18/24 09:37	
Di-n-octyl phthalate	ND U	92.8	81.1	1	11/22/24 09:10	11/18/24 09:37	
Fluoranthene	ND U	18.7	9.00	1	11/22/24 09:10	11/18/24 09:37	
Fluorene	ND U	18.7	13.6	1	11/22/24 09:10	11/18/24 09:37	
Hexachlorobenzene	ND U	92.8	27.3	1	11/22/24 09:10	11/18/24 09:37	
Hexachlorobutadiene	ND U	92.8	22.1	1	11/22/24 09:10	11/18/24 09:37	
Hexachlorocyclopentadiene	ND U	92.8	88.8	1	11/22/24 09:10	11/18/24 09:37	
Hexachloroethane	ND U	92.8	38.8	1	11/22/24 09:10	11/18/24 09:37	
Indeno(1,2,3-cd) pyrene	ND U	18.7	13.0	1	11/22/24 09:10	11/18/24 09:37	
Isophorone	ND U	469	18.3	1	11/22/24 09:10	11/18/24 09:37	
Methylphenol, Total	ND U	92.8	25.3	1	11/22/24 09:10	11/18/24 09:37	
Naphthalene	ND U	18.7	12.0	1	11/22/24 09:10	11/18/24 09:37	
Nitrobenzene	ND U	469	31.5	1	11/22/24 09:10	11/18/24 09:37	
n-Nitrosodi-n-propylamine	ND U	92.8	15.5	1	11/22/24 09:10	11/18/24 09:37	
N-Nitrosodiphenylamine	ND U	92.8	54.3	1	11/22/24 09:10	11/18/24 09:37	
Pentachlorophenol	ND U	92.8	74.4	1	11/22/24 09:10	11/18/24 09:37	
Phenanthrene	ND U	18.7	8.72	1	11/22/24 09:10	11/18/24 09:37	
Phenol	ND U	92.8	47.1	1	11/22/24 09:10	11/18/24 09:37	
Pyrene	ND U	18.7	9.35	1	11/22/24 09:10	11/18/24 09:37	
Pyridine	ND U	469	184	1	11/22/24 09:10	11/18/24 09:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	73.4	48 - 94	11/22/24 09:10	
2-Fluorobiphenyl	71.4	50 - 103	11/22/24 09:10	
2-Fluorophenol	73.9	43 - 105	11/22/24 09:10	
4-Terphenyl-d14	79.2	55 - 111	11/22/24 09:10	
Nitrobenzene-d5	63.5	47 - 100	11/22/24 09:10	
Phenol-d6	77.0	49 - 110	11/22/24 09:10	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-10_4-5_20241108
Lab Code: HN2409094-005

Work Order: HN2409094
Date Collected: 11/08/24 11:50
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	35.7	5.85	1	11/22/24 09:32	11/18/24 09:37	
1,2,4,5-Tetrachlorobenzene	ND U	360	8.32	1	11/22/24 09:32	11/18/24 09:37	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	180	25.9	1	11/22/24 09:32	11/18/24 09:37	
1-Methylnaphthalene	ND U	7.21	5.19	1	11/22/24 09:32	11/18/24 09:37	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	35.7	8.45	1	11/22/24 09:32	11/18/24 09:37	
2,3,4,6-Tetrachlorophenol	ND U	72.1	26.4	1	11/22/24 09:32	11/18/24 09:37	
2,4,5-Trichlorophenol	ND U	35.7	21.4	1	11/22/24 09:32	11/18/24 09:37	
2,4,6-Trichlorophenol	ND U	35.7	9.60	1	11/22/24 09:32	11/18/24 09:37	
2,4-Dichlorophenol	ND U	35.7	19.4	1	11/22/24 09:32	11/18/24 09:37	
2,4-Dimethylphenol	ND U	36.1	18.5	1	11/22/24 09:32	11/18/24 09:37	
2,4-Dinitrophenol	ND U	360	264	1	11/22/24 09:32	11/18/24 09:37	
2,4-Dinitrotoluene (2,4-DNT)	ND U	36.1	23.4	1	11/22/24 09:32	11/18/24 09:37	
2,6-Dinitrotoluene (2,6-DNT)	ND U	35.7	9.21	1	11/22/24 09:32	11/18/24 09:37	
2-Chloronaphthalene	ND U	7.21	5.04	1	11/22/24 09:32	11/18/24 09:37	
2-Chlorophenol	ND U	35.7	23.6	1	11/22/24 09:32	11/18/24 09:37	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	35.7	30.1	1	11/22/24 09:32	11/18/24 09:37	
2-Methylnaphthalene	ND U	7.21	3.67	1	11/22/24 09:32	11/18/24 09:37	
2-Methylphenol (o-Cresol)	ND U	35.7	9.75	1	11/22/24 09:32	11/18/24 09:37	
2-Nitroaniline	ND U	35.7	20.0	1	11/22/24 09:32	11/18/24 09:37	
2-Nitrophenol	ND U	35.7	10.3	1	11/22/24 09:32	11/18/24 09:37	
3&4-Methylphenol	ND U	35.7	19.7	1	11/22/24 09:32	11/18/24 09:37	
3,3'-Dichlorobenzidine	ND U	180	16.8	1	11/22/24 09:32	11/18/24 09:37	
3-Nitroaniline	ND U	35.7	20.9	1	11/22/24 09:32	11/18/24 09:37	
4-Bromophenyl phenyl ether (BDE-3)	ND U	35.7	19.8	1	11/22/24 09:32	11/18/24 09:37	
4-Chloro-3-methylphenol	ND U	35.7	10.3	1	11/22/24 09:32	11/18/24 09:37	
4-Chloroaniline	ND U	72.1	18.3	1	11/22/24 09:32	11/18/24 09:37	
4-Chlorophenyl phenylether	ND U	35.7	9.97	1	11/22/24 09:32	11/18/24 09:37	
4-Nitroaniline	ND U	180	55.9	1	11/22/24 09:32	11/18/24 09:37	
4-Nitrophenol	ND U	360	84.5	1	11/22/24 09:32	11/18/24 09:37	
Acenaphthene	ND U	7.21	5.22	1	11/22/24 09:32	11/18/24 09:37	
Acenaphthylene	ND U	7.21	6.25	1	11/22/24 09:32	11/18/24 09:37	
Acetophenone	ND U	35.7	5.65	1	11/22/24 09:32	11/18/24 09:37	
Anthracene	ND U	7.21	5.08	1	11/22/24 09:32	11/18/24 09:37	
Atrazine	ND U	35.7	21.1	1	11/22/24 09:32	11/18/24 09:37	
Benzaldehyde	ND U	72.1	55.4	1	11/22/24 09:32	11/18/24 09:37	
Benzo(a)anthracene	ND U	7.21	6.23	1	11/22/24 09:32	11/18/24 09:37	
Benzo(a)pyrene	ND U	7.21	4.42	1	11/22/24 09:32	11/18/24 09:37	
Benzo(b)fluoranthene	6.49 J	7.21	5.38	1	11/22/24 09:32	11/18/24 09:37	
Benzo(g,h,i)perylene	ND U	7.21	5.53	1	11/22/24 09:32	11/18/24 09:37	
Benzo(k)fluoranthene	ND U	7.21	5.46	1	11/22/24 09:32	11/18/24 09:37	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-10_4-5_20241108
Lab Code: HN2409094-005

Work Order: HN2409094
Date Collected: 11/08/24 11:50
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	35.7	22.8	1	11/22/24 09:32	11/18/24 09:37	
bis(2-Chloroethyl) ether	ND U	35.7	10.2	1	11/22/24 09:32	11/18/24 09:37	
Butyl benzyl phthalate	ND U	72.1	45.2	1	11/22/24 09:32	11/18/24 09:37	
Caprolactam	ND U	35.7	32.6	1	11/22/24 09:32	11/18/24 09:37	
Carbazole	ND U	35.7	10.6	1	11/22/24 09:32	11/18/24 09:37	
Chrysene	ND U	7.21	5.83	1	11/22/24 09:32	11/18/24 09:37	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	35.7	29.8	1	11/22/24 09:32	11/18/24 09:37	
Dibenz(a,h) anthracene	ND U	35.7	3.90	1	11/22/24 09:32	11/18/24 09:37	
Dibenzofuran	ND U	35.7	5.30	1	11/22/24 09:32	11/18/24 09:37	
Diethyl phthalate	ND U	35.7	12.3	1	11/22/24 09:32	11/18/24 09:37	
Dimethyl phthalate	ND U	35.7	7.03	1	11/22/24 09:32	11/18/24 09:37	
Di-n-butyl phthalate	ND U	35.7	22.1	1	11/22/24 09:32	11/18/24 09:37	
Di-n-octyl phthalate	ND U	35.7	31.2	1	11/22/24 09:32	11/18/24 09:37	
Fluoranthene	7.94	7.21	3.46	1	11/22/24 09:32	11/18/24 09:37	
Fluorene	ND U	7.21	5.24	1	11/22/24 09:32	11/18/24 09:37	
Hexachlorobenzene	ND U	35.7	10.5	1	11/22/24 09:32	11/18/24 09:37	
Hexachlorobutadiene	ND U	35.7	8.50	1	11/22/24 09:32	11/18/24 09:37	
Hexachlorocyclopentadiene	ND U	35.7	34.2	1	11/22/24 09:32	11/18/24 09:37	
Hexachloroethane	ND U	35.7	14.9	1	11/22/24 09:32	11/18/24 09:37	
Indeno(1,2,3-cd) pyrene	ND U	7.21	5.02	1	11/22/24 09:32	11/18/24 09:37	
Isophorone	ND U	180	7.04	1	11/22/24 09:32	11/18/24 09:37	
Methylphenol, Total	ND U	67.0	9.75	1	11/22/24 09:32	11/18/24 09:37	
Naphthalene	ND U	7.21	4.61	1	11/22/24 09:32	11/18/24 09:37	
Nitrobenzene	ND U	180	12.1	1	11/22/24 09:32	11/18/24 09:37	
n-Nitrosodi-n-propylamine	ND U	35.7	5.95	1	11/22/24 09:32	11/18/24 09:37	
N-Nitrosodiphenylamine	ND U	35.7	20.9	1	11/22/24 09:32	11/18/24 09:37	
Pentachlorophenol	ND U	35.7	28.6	1	11/22/24 09:32	11/18/24 09:37	
Phenanthrene	5.05 J	7.21	3.35	1	11/22/24 09:32	11/18/24 09:37	
Phenol	ND U	35.7	18.1	1	11/22/24 09:32	11/18/24 09:37	
Pyrene	7.21	7.21	3.60	1	11/22/24 09:32	11/18/24 09:37	
Pyridine	ND U	180	71.0	1	11/22/24 09:32	11/18/24 09:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	74.8	48 - 94	11/22/24 09:32	
2-Fluorobiphenyl	69.4	50 - 103	11/22/24 09:32	
2-Fluorophenol	71.7	43 - 105	11/22/24 09:32	
4-Terphenyl-d14	78.9	55 - 111	11/22/24 09:32	
Nitrobenzene-d5	66.2	47 - 100	11/22/24 09:32	
Phenol-d6	80.0	49 - 110	11/22/24 09:32	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-11_4-5_20241108
Lab Code: HN2409094-006

Work Order: HN2409094
Date Collected: 11/08/24 13:20
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	35.7	5.85	1	11/22/24 00:18	11/18/24 09:37	
1,2,4,5-Tetrachlorobenzene	ND U	360	8.32	1	11/22/24 00:18	11/18/24 09:37	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	180	25.8	1	11/22/24 00:18	11/18/24 09:37	
1-Methylnaphthalene	ND U	7.21	5.19	1	11/22/24 00:18	11/18/24 09:37	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	35.7	8.45	1	11/22/24 00:18	11/18/24 09:37	
2,3,4,6-Tetrachlorophenol	ND U	72.1	26.4	1	11/22/24 00:18	11/18/24 09:37	
2,4,5-Trichlorophenol	ND U	35.7	21.4	1	11/22/24 00:18	11/18/24 09:37	
2,4,6-Trichlorophenol	ND U	35.7	9.60	1	11/22/24 00:18	11/18/24 09:37	
2,4-Dichlorophenol	ND U	35.7	19.4	1	11/22/24 00:18	11/18/24 09:37	
2,4-Dimethylphenol	ND U	36.1	18.5	1	11/22/24 00:18	11/18/24 09:37	
2,4-Dinitrophenol	ND U	360	264	1	11/22/24 00:18	11/18/24 09:37	
2,4-Dinitrotoluene (2,4-DNT)	ND U	36.1	23.4	1	11/22/24 00:18	11/18/24 09:37	
2,6-Dinitrotoluene (2,6-DNT)	ND U	35.7	9.21	1	11/22/24 00:18	11/18/24 09:37	
2-Chloronaphthalene	ND U	7.21	5.04	1	11/22/24 00:18	11/18/24 09:37	
2-Chlorophenol	ND U	35.7	23.6	1	11/22/24 00:18	11/18/24 09:37	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	35.7	30.1	1	11/22/24 00:18	11/18/24 09:37	
2-Methylnaphthalene	ND U	7.21	3.67	1	11/22/24 00:18	11/18/24 09:37	
2-Methylphenol (o-Cresol)	ND U	35.7	9.75	1	11/22/24 00:18	11/18/24 09:37	
2-Nitroaniline	ND U	35.7	20.0	1	11/22/24 00:18	11/18/24 09:37	
2-Nitrophenol	ND U	35.7	10.3	1	11/22/24 00:18	11/18/24 09:37	
3&4-Methylphenol	ND U	35.7	19.6	1	11/22/24 00:18	11/18/24 09:37	
3,3'-Dichlorobenzidine	ND U	180	16.8	1	11/22/24 00:18	11/18/24 09:37	
3-Nitroaniline	ND U	35.7	20.9	1	11/22/24 00:18	11/18/24 09:37	
4-Bromophenyl phenyl ether (BDE-3)	ND U	35.7	19.8	1	11/22/24 00:18	11/18/24 09:37	
4-Chloro-3-methylphenol	ND U	35.7	10.3	1	11/22/24 00:18	11/18/24 09:37	
4-Chloroaniline	ND U	72.1	18.3	1	11/22/24 00:18	11/18/24 09:37	
4-Chlorophenyl phenylether	ND U	35.7	9.96	1	11/22/24 00:18	11/18/24 09:37	
4-Nitroaniline	ND U	180	55.9	1	11/22/24 00:18	11/18/24 09:37	
4-Nitrophenol	ND U	360	84.5	1	11/22/24 00:18	11/18/24 09:37	
Acenaphthene	ND U	7.21	5.21	1	11/22/24 00:18	11/18/24 09:37	
Acenaphthylene	ND U	7.21	6.25	1	11/22/24 00:18	11/18/24 09:37	
Acetophenone	ND U	35.7	5.65	1	11/22/24 00:18	11/18/24 09:37	
Anthracene	ND U	7.21	5.08	1	11/22/24 00:18	11/18/24 09:37	
Atrazine	ND U	35.7	21.1	1	11/22/24 00:18	11/18/24 09:37	
Benzaldehyde	ND U	72.1	55.4	1	11/22/24 00:18	11/18/24 09:37	
Benzo(a)anthracene	10.1	7.21	6.23	1	11/22/24 00:18	11/18/24 09:37	
Benzo(a)pyrene	ND U	7.21	4.42	1	11/22/24 00:18	11/18/24 09:37	
Benzo(b)fluoranthene	ND U	7.21	5.38	1	11/22/24 00:18	11/18/24 09:37	
Benzo(g,h,i)perylene	ND U	7.21	5.53	1	11/22/24 00:18	11/18/24 09:37	
Benzo(k)fluoranthene	ND U	7.21	5.46	1	11/22/24 00:18	11/18/24 09:37	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-11_4-5_20241108
Lab Code: HN2409094-006

Work Order: HN2409094
Date Collected: 11/08/24 13:20
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	35.7	22.8	1	11/22/24 00:18	11/18/24 09:37	
bis(2-Chloroethyl) ether	ND U	35.7	10.2	1	11/22/24 00:18	11/18/24 09:37	
Butyl benzyl phthalate	ND U	72.1	45.1	1	11/22/24 00:18	11/18/24 09:37	
Caprolactam	ND U	35.7	32.5	1	11/22/24 00:18	11/18/24 09:37	
Carbazole	ND U	35.7	10.6	1	11/22/24 00:18	11/18/24 09:37	
Chrysene	ND U	7.21	5.83	1	11/22/24 00:18	11/18/24 09:37	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	35.7	29.8	1	11/22/24 00:18	11/18/24 09:37	
Dibenz(a,h) anthracene	ND U	35.7	3.89	1	11/22/24 00:18	11/18/24 09:37	
Dibenzofuran	ND U	35.7	5.30	1	11/22/24 00:18	11/18/24 09:37	
Diethyl phthalate	ND U	35.7	12.3	1	11/22/24 00:18	11/18/24 09:37	
Dimethyl phthalate	ND U	35.7	7.03	1	11/22/24 00:18	11/18/24 09:37	
Di-n-butyl phthalate	ND U	35.7	22.1	1	11/22/24 00:18	11/18/24 09:37	
Di-n-octyl phthalate	ND U	35.7	31.2	1	11/22/24 00:18	11/18/24 09:37	
Fluoranthene	ND U	7.21	3.46	1	11/22/24 00:18	11/18/24 09:37	
Fluorene	ND U	7.21	5.24	1	11/22/24 00:18	11/18/24 09:37	
Hexachlorobenzene	ND U	35.7	10.5	1	11/22/24 00:18	11/18/24 09:37	
Hexachlorobutadiene	ND U	35.7	8.49	1	11/22/24 00:18	11/18/24 09:37	
Hexachlorocyclopentadiene	ND U	35.7	34.2	1	11/22/24 00:18	11/18/24 09:37	
Hexachloroethane	ND U	35.7	14.9	1	11/22/24 00:18	11/18/24 09:37	
Indeno(1,2,3-cd) pyrene	ND U	7.21	5.02	1	11/22/24 00:18	11/18/24 09:37	
Isophorone	ND U	180	7.04	1	11/22/24 00:18	11/18/24 09:37	
Methylphenol, Total	ND U	67.0	9.75	1	11/22/24 00:18	11/18/24 09:37	
Naphthalene	ND U	7.21	4.61	1	11/22/24 00:18	11/18/24 09:37	
Nitrobenzene	ND U	180	12.1	1	11/22/24 00:18	11/18/24 09:37	
n-Nitrosodi-n-propylamine	ND U	35.7	5.95	1	11/22/24 00:18	11/18/24 09:37	
N-Nitrosodiphenylamine	ND U	35.7	20.9	1	11/22/24 00:18	11/18/24 09:37	
Pentachlorophenol	ND U	35.7	28.6	1	11/22/24 00:18	11/18/24 09:37	
Phenanthrene	ND U	7.21	3.35	1	11/22/24 00:18	11/18/24 09:37	
Phenol	ND U	35.7	18.1	1	11/22/24 00:18	11/18/24 09:37	
Pyrene	15.9	7.21	3.60	1	11/22/24 00:18	11/18/24 09:37	
Pyridine	ND U	180	71.0	1	11/22/24 00:18	11/18/24 09:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	61.6	48 - 94	11/22/24 00:18	
2-Fluorobiphenyl	66.3	50 - 103	11/22/24 00:18	
2-Fluorophenol	70.9	43 - 105	11/22/24 00:18	
4-Terphenyl-d14	75.9	55 - 111	11/22/24 00:18	
Nitrobenzene-d5	59.4	47 - 100	11/22/24 00:18	
Phenol-d6	73.4	49 - 110	11/22/24 00:18	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-13_4-5_20241108
Lab Code: HN2409094-007

Work Order: HN2409094
Date Collected: 11/08/24 12:30
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	35.5	5.82	1	11/22/24 00:40	11/18/24 09:37	
1,2,4,5-Tetrachlorobenzene	ND U	358	8.27	1	11/22/24 00:40	11/18/24 09:37	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	179	25.7	1	11/22/24 00:40	11/18/24 09:37	
1-Methylnaphthalene	ND U	7.17	5.16	1	11/22/24 00:40	11/18/24 09:37	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	35.5	8.40	1	11/22/24 00:40	11/18/24 09:37	
2,3,4,6-Tetrachlorophenol	ND U	71.7	26.3	1	11/22/24 00:40	11/18/24 09:37	
2,4,5-Trichlorophenol	ND U	35.5	21.2	1	11/22/24 00:40	11/18/24 09:37	
2,4,6-Trichlorophenol	ND U	35.5	9.54	1	11/22/24 00:40	11/18/24 09:37	
2,4-Dichlorophenol	ND U	35.5	19.3	1	11/22/24 00:40	11/18/24 09:37	
2,4-Dimethylphenol	ND U	35.9	18.4	1	11/22/24 00:40	11/18/24 09:37	
2,4-Dinitrophenol	ND U	358	262	1	11/22/24 00:40	11/18/24 09:37	
2,4-Dinitrotoluene (2,4-DNT)	ND U	35.9	23.3	1	11/22/24 00:40	11/18/24 09:37	
2,6-Dinitrotoluene (2,6-DNT)	ND U	35.5	9.16	1	11/22/24 00:40	11/18/24 09:37	
2-Chloronaphthalene	ND U	7.17	5.01	1	11/22/24 00:40	11/18/24 09:37	
2-Chlorophenol	ND U	35.5	23.5	1	11/22/24 00:40	11/18/24 09:37	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	35.5	30.0	1	11/22/24 00:40	11/18/24 09:37	
2-Methylnaphthalene	ND U	7.17	3.65	1	11/22/24 00:40	11/18/24 09:37	
2-Methylphenol (o-Cresol)	ND U	35.5	9.69	1	11/22/24 00:40	11/18/24 09:37	
2-Nitroaniline	ND U	35.5	19.9	1	11/22/24 00:40	11/18/24 09:37	
2-Nitrophenol	ND U	35.5	10.2	1	11/22/24 00:40	11/18/24 09:37	
3&4-Methylphenol	ND U	35.5	19.5	1	11/22/24 00:40	11/18/24 09:37	
3,3'-Dichlorobenzidine	ND U	179	16.7	1	11/22/24 00:40	11/18/24 09:37	
3-Nitroaniline	ND U	35.5	20.8	1	11/22/24 00:40	11/18/24 09:37	
4-Bromophenyl phenyl ether (BDE-3)	ND U	35.5	19.6	1	11/22/24 00:40	11/18/24 09:37	
4-Chloro-3-methylphenol	ND U	35.5	10.2	1	11/22/24 00:40	11/18/24 09:37	
4-Chloroaniline	ND U	71.7	18.2	1	11/22/24 00:40	11/18/24 09:37	
4-Chlorophenyl phenylether	ND U	35.5	9.91	1	11/22/24 00:40	11/18/24 09:37	
4-Nitroaniline	ND U	179	55.6	1	11/22/24 00:40	11/18/24 09:37	
4-Nitrophenol	ND U	358	84.0	1	11/22/24 00:40	11/18/24 09:37	
Acenaphthene	ND U	7.17	5.19	1	11/22/24 00:40	11/18/24 09:37	
Acenaphthylene	ND U	7.17	6.22	1	11/22/24 00:40	11/18/24 09:37	
Acetophenone	ND U	35.5	5.62	1	11/22/24 00:40	11/18/24 09:37	
Anthracene	ND U	7.17	5.06	1	11/22/24 00:40	11/18/24 09:37	
Atrazine	ND U	35.5	21.0	1	11/22/24 00:40	11/18/24 09:37	
Benzaldehyde	ND U	71.7	55.1	1	11/22/24 00:40	11/18/24 09:37	
Benzo(a)anthracene	ND U	7.17	6.20	1	11/22/24 00:40	11/18/24 09:37	
Benzo(a)pyrene	ND U	7.17	4.40	1	11/22/24 00:40	11/18/24 09:37	
Benzo(b)fluoranthene	ND U	7.17	5.35	1	11/22/24 00:40	11/18/24 09:37	
Benzo(g,h,i)perylene	ND U	7.17	5.50	1	11/22/24 00:40	11/18/24 09:37	
Benzo(k)fluoranthene	ND U	7.17	5.43	1	11/22/24 00:40	11/18/24 09:37	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: SB-13_4-5_20241108
Lab Code: HN2409094-007

Work Order: HN2409094
Date Collected: 11/08/24 12:30
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	35.5	22.7	1	11/22/24 00:40	11/18/24 09:37	
bis(2-Chloroethyl) ether	ND U	35.5	10.2	1	11/22/24 00:40	11/18/24 09:37	
Butyl benzyl phthalate	ND U	71.7	44.9	1	11/22/24 00:40	11/18/24 09:37	
Caprolactam	ND U	35.5	32.4	1	11/22/24 00:40	11/18/24 09:37	
Carbazole	ND U	35.5	10.6	1	11/22/24 00:40	11/18/24 09:37	
Chrysene	ND U	7.17	5.80	1	11/22/24 00:40	11/18/24 09:37	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	35.5	29.7	1	11/22/24 00:40	11/18/24 09:37	
Dibenz(a,h) anthracene	ND U	35.5	3.87	1	11/22/24 00:40	11/18/24 09:37	
Dibenzofuran	ND U	35.5	5.27	1	11/22/24 00:40	11/18/24 09:37	
Diethyl phthalate	ND U	35.5	12.2	1	11/22/24 00:40	11/18/24 09:37	
Dimethyl phthalate	ND U	35.5	6.99	1	11/22/24 00:40	11/18/24 09:37	
Di-n-butyl phthalate	ND U	35.5	22.0	1	11/22/24 00:40	11/18/24 09:37	
Di-n-octyl phthalate	ND U	35.5	31.0	1	11/22/24 00:40	11/18/24 09:37	
Fluoranthene	5.02 J	7.17	3.44	1	11/22/24 00:40	11/18/24 09:37	
Fluorene	ND U	7.17	5.21	1	11/22/24 00:40	11/18/24 09:37	
Hexachlorobenzene	ND U	35.5	10.4	1	11/22/24 00:40	11/18/24 09:37	
Hexachlorobutadiene	ND U	35.5	8.45	1	11/22/24 00:40	11/18/24 09:37	
Hexachlorocyclopentadiene	ND U	35.5	34.0	1	11/22/24 00:40	11/18/24 09:37	
Hexachloroethane	ND U	35.5	14.8	1	11/22/24 00:40	11/18/24 09:37	
Indeno(1,2,3-cd) pyrene	ND U	7.17	4.99	1	11/22/24 00:40	11/18/24 09:37	
Isophorone	ND U	179	7.00	1	11/22/24 00:40	11/18/24 09:37	
Methylphenol, Total	ND U	67.0	9.69	1	11/22/24 00:40	11/18/24 09:37	
Naphthalene	ND U	7.17	4.58	1	11/22/24 00:40	11/18/24 09:37	
Nitrobenzene	ND U	179	12.0	1	11/22/24 00:40	11/18/24 09:37	
n-Nitrosodi-n-propylamine	ND U	35.5	5.92	1	11/22/24 00:40	11/18/24 09:37	
N-Nitrosodiphenylamine	ND U	35.5	20.8	1	11/22/24 00:40	11/18/24 09:37	
Pentachlorophenol	ND U	35.5	28.5	1	11/22/24 00:40	11/18/24 09:37	
Phenanthrene	ND U	7.17	3.34	1	11/22/24 00:40	11/18/24 09:37	
Phenol	ND U	35.5	18.0	1	11/22/24 00:40	11/18/24 09:37	
Pyrene	ND U	7.17	3.58	1	11/22/24 00:40	11/18/24 09:37	
Pyridine	ND U	179	70.6	1	11/22/24 00:40	11/18/24 09:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	68.0	48 - 94	11/22/24 00:40	
2-Fluorobiphenyl	66.4	50 - 103	11/22/24 00:40	
2-Fluorophenol	71.6	43 - 105	11/22/24 00:40	
4-Terphenyl-d14	75.5	55 - 111	11/22/24 00:40	
Nitrobenzene-d5	59.4	47 - 100	11/22/24 00:40	
Phenol-d6	76.0	49 - 110	11/22/24 00:40	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: FD-1_20241108
Lab Code: HN2409094-008

Work Order: HN2409094
Date Collected: 11/08/24
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	33.8	5.53	1	11/22/24 01:02	11/18/24 09:37	
1,2,4,5-Tetrachlorobenzene	ND U	341	7.86	1	11/22/24 01:02	11/18/24 09:37	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	170	24.4	1	11/22/24 01:02	11/18/24 09:37	
1-Methylnaphthalene	ND U	6.82	4.91	1	11/22/24 01:02	11/18/24 09:37	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	33.8	7.99	1	11/22/24 01:02	11/18/24 09:37	
2,3,4,6-Tetrachlorophenol	ND U	68.2	25.0	1	11/22/24 01:02	11/18/24 09:37	
2,4,5-Trichlorophenol	ND U	33.8	20.2	1	11/22/24 01:02	11/18/24 09:37	
2,4,6-Trichlorophenol	ND U	33.8	9.07	1	11/22/24 01:02	11/18/24 09:37	
2,4-Dichlorophenol	ND U	33.8	18.3	1	11/22/24 01:02	11/18/24 09:37	
2,4-Dimethylphenol	37.5	34.1	17.5	1	11/22/24 01:02	11/18/24 09:37	
2,4-Dinitrophenol	ND U	341	249	1	11/22/24 01:02	11/18/24 09:37	
2,4-Dinitrotoluene (2,4-DNT)	ND U	34.1	22.1	1	11/22/24 01:02	11/18/24 09:37	
2,6-Dinitrotoluene (2,6-DNT)	ND U	33.8	8.70	1	11/22/24 01:02	11/18/24 09:37	
2-Chloronaphthalene	ND U	6.82	4.77	1	11/22/24 01:02	11/18/24 09:37	
2-Chlorophenol	ND U	33.8	22.3	1	11/22/24 01:02	11/18/24 09:37	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	33.8	28.5	1	11/22/24 01:02	11/18/24 09:37	
2-Methylnaphthalene	ND U	6.82	3.47	1	11/22/24 01:02	11/18/24 09:37	
2-Methylphenol (o-Cresol)	ND U	33.8	9.22	1	11/22/24 01:02	11/18/24 09:37	
2-Nitroaniline	ND U	33.8	18.9	1	11/22/24 01:02	11/18/24 09:37	
2-Nitrophenol	ND U	33.8	9.72	1	11/22/24 01:02	11/18/24 09:37	
3&4-Methylphenol	ND U	33.8	18.6	1	11/22/24 01:02	11/18/24 09:37	
3,3'-Dichlorobenzidine	ND U	170	15.9	1	11/22/24 01:02	11/18/24 09:37	
3-Nitroaniline	ND U	33.8	19.8	1	11/22/24 01:02	11/18/24 09:37	
4-Bromophenyl phenyl ether (BDE-3)	ND U	33.8	18.7	1	11/22/24 01:02	11/18/24 09:37	
4-Chloro-3-methylphenol	ND U	33.8	9.72	1	11/22/24 01:02	11/18/24 09:37	
4-Chloroaniline	ND U	68.2	17.3	1	11/22/24 01:02	11/18/24 09:37	
4-Chlorophenyl phenylether	ND U	33.8	9.42	1	11/22/24 01:02	11/18/24 09:37	
4-Nitroaniline	ND U	170	52.9	1	11/22/24 01:02	11/18/24 09:37	
4-Nitrophenol	ND U	341	79.8	1	11/22/24 01:02	11/18/24 09:37	
Acenaphthene	ND U	6.82	4.93	1	11/22/24 01:02	11/18/24 09:37	
Acenaphthylene	ND U	6.82	5.91	1	11/22/24 01:02	11/18/24 09:37	
Acetophenone	ND U	33.8	5.34	1	11/22/24 01:02	11/18/24 09:37	
Anthracene	ND U	6.82	4.81	1	11/22/24 01:02	11/18/24 09:37	
Atrazine	ND U	33.8	20.0	1	11/22/24 01:02	11/18/24 09:37	
Benzaldehyde	ND U	68.2	52.4	1	11/22/24 01:02	11/18/24 09:37	
Benzo(a)anthracene	10.2	6.82	5.89	1	11/22/24 01:02	11/18/24 09:37	
Benzo(a)pyrene	13.0	6.82	4.18	1	11/22/24 01:02	11/18/24 09:37	
Benzo(b)fluoranthene	14.3	6.82	5.08	1	11/22/24 01:02	11/18/24 09:37	
Benzo(g,h,i)perylene	8.86	6.82	5.23	1	11/22/24 01:02	11/18/24 09:37	
Benzo(k)fluoranthene	8.18	6.82	5.16	1	11/22/24 01:02	11/18/24 09:37	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: FD-1_20241108
Lab Code: HN2409094-008

Work Order: HN2409094
Date Collected: 11/08/24
Date Received: 11/09/24 08:00

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	33.8	21.6	1	11/22/24 01:02	11/18/24 09:37	
bis(2-Chloroethyl) ether	ND U	33.8	9.66	1	11/22/24 01:02	11/18/24 09:37	
Butyl benzyl phthalate	ND U	68.2	42.7	1	11/22/24 01:02	11/18/24 09:37	
Caprolactam	ND U	33.8	30.8	1	11/22/24 01:02	11/18/24 09:37	
Carbazole	ND U	33.8	10.0	1	11/22/24 01:02	11/18/24 09:37	
Chrysene	8.86	6.82	5.51	1	11/22/24 01:02	11/18/24 09:37	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	33.8	28.2	1	11/22/24 01:02	11/18/24 09:37	
Dibenz(a,h) anthracene	ND U	33.8	3.68	1	11/22/24 01:02	11/18/24 09:37	
Dibenzofuran	ND U	33.8	5.01	1	11/22/24 01:02	11/18/24 09:37	
Diethyl phthalate	ND U	33.8	11.6	1	11/22/24 01:02	11/18/24 09:37	
Dimethyl phthalate	ND U	33.8	6.65	1	11/22/24 01:02	11/18/24 09:37	
Di-n-butyl phthalate	ND U	33.8	20.9	1	11/22/24 01:02	11/18/24 09:37	
Di-n-octyl phthalate	ND U	33.8	29.5	1	11/22/24 01:02	11/18/24 09:37	
Fluoranthene	19.1	6.82	3.27	1	11/22/24 01:02	11/18/24 09:37	
Fluorene	ND U	6.82	4.95	1	11/22/24 01:02	11/18/24 09:37	
Hexachlorobenzene	ND U	33.8	9.92	1	11/22/24 01:02	11/18/24 09:37	
Hexachlorobutadiene	ND U	33.8	8.03	1	11/22/24 01:02	11/18/24 09:37	
Hexachlorocyclopentadiene	ND U	33.8	32.3	1	11/22/24 01:02	11/18/24 09:37	
Hexachloroethane	ND U	33.8	14.1	1	11/22/24 01:02	11/18/24 09:37	
Indeno(1,2,3-cd) pyrene	9.55	6.82	4.74	1	11/22/24 01:02	11/18/24 09:37	
Isophorone	ND U	170	6.66	1	11/22/24 01:02	11/18/24 09:37	
Methylphenol, Total	ND U	67.0	9.22	1	11/22/24 01:02	11/18/24 09:37	
Naphthalene	ND U	6.82	4.36	1	11/22/24 01:02	11/18/24 09:37	
Nitrobenzene	ND U	170	11.4	1	11/22/24 01:02	11/18/24 09:37	
n-Nitrosodi-n-propylamine	ND U	33.8	5.62	1	11/22/24 01:02	11/18/24 09:37	
N-Nitrosodiphenylamine	ND U	33.8	19.7	1	11/22/24 01:02	11/18/24 09:37	
Pentachlorophenol	ND U	33.8	27.1	1	11/22/24 01:02	11/18/24 09:37	
Phenanthrene	9.55	6.82	3.17	1	11/22/24 01:02	11/18/24 09:37	
Phenol	ND U	33.8	17.1	1	11/22/24 01:02	11/18/24 09:37	
Pyrene	15.7	6.82	3.40	1	11/22/24 01:02	11/18/24 09:37	
Pyridine	ND U	170	67.1	1	11/22/24 01:02	11/18/24 09:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	66.4	48 - 94	11/22/24 01:02	
2-Fluorobiphenyl	67.5	50 - 103	11/22/24 01:02	
2-Fluorophenol	65.4	43 - 105	11/22/24 01:02	
4-Terphenyl-d14	76.6	55 - 111	11/22/24 01:02	
Nitrobenzene-d5	60.1	47 - 100	11/22/24 01:02	
Phenol-d6	74.0	49 - 110	11/22/24 01:02	



Metals

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001

Work Order: HN2409094
Date Collected: 11/08/24 12:15
Date Received: 11/09/24 08:00

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	EPA 6020B	3.38	mg/kg	0.286	0.0343	1	11/15/24 16:51	11/14/24 11:02	
Barium	EPA 6020B	30.1	mg/kg	0.286	0.263	1	11/15/24 16:51	11/14/24 11:02	
Cadmium	EPA 6020B	0.126	mg/kg	0.114	0.0172	1	11/15/24 16:51	11/14/24 11:02	
Chromium	EPA 6020B	6.94	mg/kg	0.286	0.126	1	11/15/24 16:51	11/14/24 11:02	
Lead	EPA 6020B	7.33	mg/kg	0.286	0.137	1	11/15/24 16:51	11/14/24 11:02	
Mercury	EPA 7471B	0.0233	mg/kg	0.0200	0.0136	1	11/14/24 10:48	11/13/24 13:30	
Selenium	EPA 6020B	ND U	mg/kg	0.286	0.263	1	11/15/24 16:51	11/14/24 11:02	
Silver	EPA 6020B	ND U	mg/kg	0.286	0.0378	1	11/15/24 16:51	11/14/24 11:02	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/24 13:00
Date Received: 11/09/24 08:00

Sample Name: SB-3_4-5_20241108
Laboratory Code: HN2409094-002

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	EPA 6020B	1.43	mg/kg	0.299	0.0359	1	11/15/24 16:54	11/14/24 11:02	
Barium	EPA 6020B	13.5	mg/kg	0.299	0.275	1	11/15/24 16:54	11/14/24 11:02	
Cadmium	EPA 6020B	0.0353 J	mg/kg	0.120	0.0179	1	11/15/24 16:54	11/14/24 11:02	
Chromium	EPA 6020B	5.73	mg/kg	0.299	0.132	1	11/15/24 16:54	11/14/24 11:02	
Lead	EPA 6020B	3.65	mg/kg	0.299	0.144	1	11/15/24 16:54	11/14/24 11:02	
Mercury	EPA 7471B	ND U	mg/kg	0.0200	0.0136	1	11/14/24 10:53	11/13/24 13:30	
Selenium	EPA 6020B	ND U	mg/kg	0.299	0.275	1	11/15/24 16:54	11/14/24 11:02	
Silver	EPA 6020B	ND U	mg/kg	0.299	0.0395	1	11/15/24 16:54	11/14/24 11:02	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-6_4-5_20241108
Laboratory Code: HN2409094-003

Work Order: HN2409094
Date Collected: 11/08/24 11:30
Date Received: 11/09/24 08:00

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	EPA 6020B	2.37	mg/kg	0.280	0.0337	1	11/15/24 16:56	11/14/24 11:02	
Barium	EPA 6020B	9.30	mg/kg	0.280	0.258	1	11/15/24 16:56	11/14/24 11:02	
Cadmium	EPA 6020B	ND U	mg/kg	0.112	0.0168	1	11/15/24 16:56	11/14/24 11:02	
Chromium	EPA 6020B	5.10	mg/kg	0.280	0.123	1	11/15/24 16:56	11/14/24 11:02	
Lead	EPA 6020B	6.01	mg/kg	0.280	0.135	1	11/15/24 16:56	11/14/24 11:02	
Mercury	EPA 7471B	ND U	mg/kg	0.0204	0.0139	1	11/14/24 10:55	11/13/24 13:30	
Selenium	EPA 6020B	ND U	mg/kg	0.280	0.258	1	11/15/24 16:56	11/14/24 11:02	
Silver	EPA 6020B	ND U	mg/kg	0.280	0.0370	1	11/15/24 16:56	11/14/24 11:02	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-4_4-5_20241108
Laboratory Code: HN2409094-004

Work Order: HN2409094
Date Collected: 11/08/24 11:00
Date Received: 11/09/24 08:00

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	EPA 6020B	2.94	mg/kg	0.292	0.0350	1	11/15/24 16:58	11/14/24 11:02	
Barium	EPA 6020B	6.80	mg/kg	0.292	0.268	1	11/15/24 16:58	11/14/24 11:02	
Cadmium	EPA 6020B	0.0659 J	mg/kg	0.117	0.0175	1	11/15/24 16:58	11/14/24 11:02	
Chromium	EPA 6020B	3.97	mg/kg	0.292	0.128	1	11/15/24 16:58	11/14/24 11:02	
Lead	EPA 6020B	3.82	mg/kg	0.292	0.140	1	11/15/24 16:58	11/14/24 11:02	
Mercury	EPA 7471B	ND U	mg/kg	0.0224	0.0152	1	11/14/24 10:57	11/13/24 13:30	
Selenium	EPA 6020B	ND U	mg/kg	0.292	0.268	1	11/15/24 16:58	11/14/24 11:02	
Silver	EPA 6020B	ND U	mg/kg	0.292	0.0385	1	11/15/24 16:58	11/14/24 11:02	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/24 11:50
Date Received: 11/09/24 08:00

Sample Name: SB-10_4-5_20241108
Laboratory Code: HN2409094-005

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	EPA 6020B	0.840	mg/kg	0.328	0.0394	1	11/15/24 17:00	11/14/24 11:02	
Barium	EPA 6020B	9.14	mg/kg	0.328	0.302	1	11/15/24 17:00	11/14/24 11:02	
Cadmium	EPA 6020B	ND U	mg/kg	0.131	0.0197	1	11/15/24 17:00	11/14/24 11:02	
Chromium	EPA 6020B	8.27	mg/kg	0.328	0.144	1	11/15/24 17:00	11/14/24 11:02	
Lead	EPA 6020B	4.70	mg/kg	0.328	0.158	1	11/15/24 17:00	11/14/24 11:02	
Mercury	EPA 7471B	0.0154 J	mg/kg	0.0200	0.0136	1	11/14/24 10:59	11/13/24 13:30	
Selenium	EPA 6020B	ND U	mg/kg	0.328	0.302	1	11/15/24 17:00	11/14/24 11:02	
Silver	EPA 6020B	ND U	mg/kg	0.328	0.0433	1	11/15/24 17:00	11/14/24 11:02	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/24 13:20
Date Received: 11/09/24 08:00

Sample Name: SB-11_4-5_20241108
Laboratory Code: HN2409094-006

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	EPA 6020B	0.849	mg/kg	0.314	0.0376	1	11/15/24 17:01	11/14/24 11:02	
Barium	EPA 6020B	3.82	mg/kg	0.314	0.288	1	11/15/24 17:01	11/14/24 11:02	
Cadmium	EPA 6020B	ND U	mg/kg	0.125	0.0188	1	11/15/24 17:01	11/14/24 11:02	
Chromium	EPA 6020B	4.48	mg/kg	0.314	0.138	1	11/15/24 17:01	11/14/24 11:02	
Lead	EPA 6020B	3.54	mg/kg	0.314	0.150	1	11/15/24 17:01	11/14/24 11:02	
Mercury	EPA 7471B	ND U	mg/kg	0.0200	0.0136	1	11/14/24 11:00	11/13/24 13:30	
Selenium	EPA 6020B	ND U	mg/kg	0.314	0.288	1	11/15/24 17:01	11/14/24 11:02	
Silver	EPA 6020B	ND U	mg/kg	0.314	0.0414	1	11/15/24 17:01	11/14/24 11:02	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/24 12:30
Date Received: 11/09/24 08:00

Sample Name: SB-13_4-5_20241108
Laboratory Code: HN2409094-007

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	EPA 6020B	2.91	mg/kg	0.338	0.0405	1	11/15/24 17:03	11/14/24 11:02	
Barium	EPA 6020B	22.3	mg/kg	0.338	0.311	1	11/15/24 17:03	11/14/24 11:02	
Cadmium	EPA 6020B	0.0675 J	mg/kg	0.135	0.0203	1	11/15/24 17:03	11/14/24 11:02	
Chromium	EPA 6020B	5.87	mg/kg	0.338	0.149	1	11/15/24 17:03	11/14/24 11:02	
Lead	EPA 6020B	4.95	mg/kg	0.338	0.162	1	11/15/24 17:03	11/14/24 11:02	
Mercury	EPA 7471B	0.0256	mg/kg	0.0200	0.0136	1	11/14/24 11:08	11/13/24 13:30	
Selenium	EPA 6020B	ND U	mg/kg	0.338	0.311	1	11/15/24 17:03	11/14/24 11:02	
Silver	EPA 6020B	ND U	mg/kg	0.338	0.0446	1	11/15/24 17:03	11/14/24 11:02	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/24
Date Received: 11/09/24 08:00

Sample Name: FD-1_20241108
Laboratory Code: HN2409094-008

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	EPA 6020B	2.46	mg/kg	0.293	0.0352	1	11/15/24 17:08	11/14/24 11:02	
Barium	EPA 6020B	20.8	mg/kg	0.293	0.270	1	11/15/24 17:08	11/14/24 11:02	
Cadmium	EPA 6020B	0.108 J	mg/kg	0.117	0.0176	1	11/15/24 17:08	11/14/24 11:02	
Chromium	EPA 6020B	5.17	mg/kg	0.293	0.129	1	11/15/24 17:08	11/14/24 11:02	
Lead	EPA 6020B	5.68	mg/kg	0.293	0.141	1	11/15/24 17:08	11/14/24 11:02	
Mercury	EPA 7471B	0.0198 J	mg/kg	0.0200	0.0136	1	11/14/24 11:09	11/13/24 13:30	
Selenium	EPA 6020B	ND U	mg/kg	0.293	0.270	1	11/15/24 17:08	11/14/24 11:02	
Silver	EPA 6020B	ND U	mg/kg	0.293	0.0387	1	11/15/24 17:08	11/14/24 11:02	



General Chemistry

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001

Work Order: HN2409094
Date Collected: 11/08/24 12:15
Date Received: 11/09/24 08:00

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chloride	SM 4500-Cl E-2011	ND U	mg/kg	10.7	8.55	1	11/18/24 13:49	11/15/24 16:02	
Percent Moisture	EPA 3550C	5.9	%	0.1	0.1	1	11/13/24 17:33	NA	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-3_4-5_20241108
Laboratory Code: HN2409094-002

Work Order: HN2409094
Date Collected: 11/08/24 13:00
Date Received: 11/09/24 08:00

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chloride	SM 4500-Cl E-2011	ND U	mg/kg	11.9	9.53	1	11/18/24 13:49	11/15/24 16:02	
Percent Moisture	EPA 3550C	14.9	%	0.1	0.1	1	11/13/24 17:33	NA	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-6_4-5_20241108
Laboratory Code: HN2409094-003

Work Order: HN2409094
Date Collected: 11/08/24 11:30
Date Received: 11/09/24 08:00

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chloride	SM 4500-Cl E-2011	ND U	mg/kg	11.1	8.89	1	11/18/24 13:49	11/15/24 16:02	
Percent Moisture	EPA 3550C	9.8	%	0.1	0.1	1	11/13/24 17:33	NA	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-4_4-5_20241108
Laboratory Code: HN2409094-004

Work Order: HN2409094
Date Collected: 11/08/24 11:00
Date Received: 11/09/24 08:00

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chloride	SM 4500-Cl E-2011	ND U	mg/kg	11.9	9.50	1	11/18/24 13:49	11/15/24 16:02	
Percent Moisture	EPA 3550C	12.6	%	0.1	0.1	1	11/13/24 17:33	NA	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-10_4-5_20241108
Laboratory Code: HN2409094-005

Work Order: HN2409094
Date Collected: 11/08/24 11:50
Date Received: 11/09/24 08:00

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chloride	SM 4500-Cl E-2011	ND U	mg/kg	10.4	8.31	1	11/18/24 13:50	11/15/24 16:02	
Percent Moisture	EPA 3550C	7.6	%	0.1	0.1	1	11/13/24 17:33	NA	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-11_4-5_20241108
Laboratory Code: HN2409094-006

Work Order: HN2409094
Date Collected: 11/08/24 13:20
Date Received: 11/09/24 08:00

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chloride	SM 4500-Cl E-2011	ND U	mg/kg	10.6	8.52	1	11/18/24 13:50	11/15/24 16:02	
Percent Moisture	EPA 3550C	8.3	%	0.1	0.1	1	11/13/24 17:33	NA	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: SB-13_4-5_20241108
Laboratory Code: HN2409094-007

Work Order: HN2409094
Date Collected: 11/08/24 12:30
Date Received: 11/09/24 08:00

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chloride	SM 4500-Cl E-2011	ND U	mg/kg	10.6	8.53	1	11/18/24 13:50	11/15/24 16:02	
Percent Moisture	EPA 3550C	8.4	%	0.1	0.1	1	11/13/24 17:33	NA	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/24
Date Received: 11/09/24 08:00

Sample Name: FD-1_20241108
Laboratory Code: HN2409094-008

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Percent Moisture	EPA 3550C	5.7	%	0.1	0.1	1	11/13/24 17:33	NA	



QC Summary Forms



Organics

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Extraction Method: EPA 537Mod
Analysis Lab Lot: 2764111

Sample Name	Lab Code	13C2-FtS 4:2	13C2-FtS 6:2	13C2-FtS 8:2
		50 - 150	50 - 150	50 - 150
SB-1_4-5_20241108	HN2409094-001	88.7	147	92.1
SB-3_4-5_20241108	HN2409094-002	83.6	120	87.5
SB-6_4-5_20241108	HN2409094-003	82.9	119	84.7
SB-4_4-5_20241108	HN2409094-004	76.6	190 S	251 S
SB-10_4-5_20241108	HN2409094-005	71.7	143	113
SB-11_4-5_20241108	HN2409094-006	79.7	121	100
SB-13_4-5_20241108	HN2409094-007	82.4	142	105
FD-1_20241108	HN2409094-008	76.9	144	91.6
Method Blank	QC-1765887-001	82.7	114	83.4
Laboratory Control Sample	QC-1765887-002	90.0	146	89.6
SB-1_4-5_20241108	QC-1765887-005	83.6	147	88.1
SB-1_4-5_20241108	QC-1765887-006	85.8	122	93.4

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Extraction Method: EPA 537Mod

Analysis Lab Lot: 2764111

Sample Name	Lab Code	13C2-PFDA	13C2-PFD _o A	13C2-PFH _x A
		50 - 150	50 - 150	50 - 150
SB-1_4-5_20241108	HN2409094-001	83.3	81.8	80.5
SB-3_4-5_20241108	HN2409094-002	81.5	85.8	83.2
SB-6_4-5_20241108	HN2409094-003	79.1	81.5	80.2
SB-4_4-5_20241108	HN2409094-004	80.7	78.9	65.2
SB-10_4-5_20241108	HN2409094-005	68.2	72.6	60.1
SB-11_4-5_20241108	HN2409094-006	81.6	88.4	73.8
SB-13_4-5_20241108	HN2409094-007	78.4	85.2	77.2
FD-1_20241108	HN2409094-008	79.4	78.4	71.4
Method Blank	QC-1765887-001	82.0	77.1	78.5
Laboratory Control Sample	QC-1765887-002	76.7	78.5	77.8
SB-1_4-5_20241108	QC-1765887-005	78.8	75.8	76.8
SB-1_4-5_20241108	QC-1765887-006	76.2	70.8	74.4

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Extraction Method: EPA 537Mod
Analysis Lab Lot: 2764111

Sample Name	Lab Code	13C2-PFTeA	13C2-PFUnA	13C3-HFPO-DA
		21 - 170	50 - 150	50 - 150
SB-1_4-5_20241108	HN2409094-001	81.6	87.2	81.8
SB-3_4-5_20241108	HN2409094-002	84.2	93.1	83.4
SB-6_4-5_20241108	HN2409094-003	84.2	94.7	76.7
SB-4_4-5_20241108	HN2409094-004	67.1	94.2	66.4
SB-10_4-5_20241108	HN2409094-005	73.3	81.6	59.8
SB-11_4-5_20241108	HN2409094-006	87.2	93.9	71.8
SB-13_4-5_20241108	HN2409094-007	86.5	92.6	79.5
FD-1_20241108	HN2409094-008	80.8	89.9	65.2
Method Blank	QC-1765887-001	83.3	87.3	71.8
Laboratory Control Sample	QC-1765887-002	87.9	83.5	82.5
SB-1_4-5_20241108	QC-1765887-005	79.6	88.0	86.2
SB-1_4-5_20241108	QC-1765887-006	82.4	90.1	83.7

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Extraction Method: EPA 537Mod

Analysis Lab Lot: 2764111

Sample Name	Lab Code	13C3-PFBS	13C4-PFBA	13C4-PFHpA
		50 - 150	50 - 150	50 - 150
SB-1_4-5_20241108	HN2409094-001	76.6	80.4	79.8
SB-3_4-5_20241108	HN2409094-002	77.4	81.7	76.7
SB-6_4-5_20241108	HN2409094-003	76.0	78.2	75.5
SB-4_4-5_20241108	HN2409094-004	60.7	64.2	64.0
SB-10_4-5_20241108	HN2409094-005	59.1	59.4	59.5
SB-11_4-5_20241108	HN2409094-006	68.8	73.9	67.7
SB-13_4-5_20241108	HN2409094-007	68.4	77.5	72.5
FD-1_20241108	HN2409094-008	65.4	71.8	67.1
Method Blank	QC-1765887-001	74.5	79.0	77.6
Laboratory Control Sample	QC-1765887-002	81.6	77.8	85.9
SB-1_4-5_20241108	QC-1765887-005	71.8	75.8	72.0
SB-1_4-5_20241108	QC-1765887-006	74.2	72.0	76.8

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod **Analysis Lab Lot:** 2764111
Extraction Method: EPA 537Mod

Sample Name	Lab Code	13C4-PFOA	13C4-PFOS	13C5-PFNA
		50 - 150	50 - 150	50 - 150
SB-1_4-5_20241108	HN2409094-001	83.3	76.7	80.9
SB-3_4-5_20241108	HN2409094-002	88.8	80.7	81.5
SB-6_4-5_20241108	HN2409094-003	80.0	78.3	80.4
SB-4_4-5_20241108	HN2409094-004	72.5	61.8	75.5
SB-10_4-5_20241108	HN2409094-005	63.4	57.9	62.1
SB-11_4-5_20241108	HN2409094-006	78.0	72.1	76.6
SB-13_4-5_20241108	HN2409094-007	77.7	76.7	80.6
FD-1_20241108	HN2409094-008	72.7	70.8	72.5
Method Blank	QC-1765887-001	82.2	77.1	79.3
Laboratory Control Sample	QC-1765887-002	78.9	78.0	75.0
SB-1_4-5_20241108	QC-1765887-005	76.5	78.1	73.0
SB-1_4-5_20241108	QC-1765887-006	78.7	73.5	76.8

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Extraction Method: EPA 537Mod

Analysis Lab Lot: 2764111

Sample Name	Lab Code	13C5-PFPeA	13C8-FOSA	18O2-PFHxS
		50 - 150	50 - 150	50 - 150
SB-1_4-5_20241108	HN2409094-001	79.4	80.3	79.6
SB-3_4-5_20241108	HN2409094-002	80.0	83.2	81.7
SB-6_4-5_20241108	HN2409094-003	76.0	79.1	77.6
SB-4_4-5_20241108	HN2409094-004	62.4	63.6	59.5
SB-10_4-5_20241108	HN2409094-005	61.0	66.6	58.9
SB-11_4-5_20241108	HN2409094-006	70.3	77.9	71.4
SB-13_4-5_20241108	HN2409094-007	71.2	80.5	73.6
FD-1_20241108	HN2409094-008	66.8	74.8	69.4
Method Blank	QC-1765887-001	77.4	76.6	74.7
Laboratory Control Sample	QC-1765887-002	84.3	83.4	73.5
SB-1_4-5_20241108	QC-1765887-005	74.9	74.1	75.3
SB-1_4-5_20241108	QC-1765887-006	75.8	81.5	69.8

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Extraction Method: EPA 537Mod
Analysis Lab Lot: 2764111

Sample Name	Lab Code	d3-N-MeFOSAA	d5-N-EtFOSAA
		50 - 150	50 - 150
SB-1_4-5_20241108	HN2409094-001	86.5	84.8
SB-3_4-5_20241108	HN2409094-002	79.8	85.5
SB-6_4-5_20241108	HN2409094-003	79.9	94.2
SB-4_4-5_20241108	HN2409094-004	108	126
SB-10_4-5_20241108	HN2409094-005	87.0	107
SB-11_4-5_20241108	HN2409094-006	89.1	108
SB-13_4-5_20241108	HN2409094-007	91.5	93.2
FD-1_20241108	HN2409094-008	79.7	92.0
Method Blank	QC-1765887-001	81.9	86.2
Laboratory Control Sample	QC-1765887-002	88.6	85.6
SB-1_4-5_20241108	QC-1765887-005	81.3	83.3
SB-1_4-5_20241108	QC-1765887-006	83.5	90.3

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/2024
Date Received: 11/09/2024
Date Analyzed: 11/15/2024
Date Extracted: 11/14/2024

Matrix Spike Summary Per- and Polyfluorinated Alkyl Substances by LC-MS

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001
Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Units: µg/kg
Analysis Lab Lot: 2764111

Matrix Spike QC-1765887-005

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND	3.88	3.77	103	56-146
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	4.35	3.83	114	65-137
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND	3.90	3.74	104	62-145
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	3.99	3.79	105	64-140
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND	3.96	4	97.8	70-130
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND	3.92	4	97.8	70-130
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND	4.00	4	99.7	70-130
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND	4.11	3.77	109	52-144
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND	3.40	3.73	91.3	66-140
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND	3.75	4	92.6	66-141
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND	3.97	4	97.3	61-139
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND	4.08	4	100	63-144

QA/QC Report

Client:	The Mannik & Smith Group, Inc.	Work Order:	HN2409094
Project:	Van Buren Industrial	Date Collected:	11/08/2024
Sample Matrix:	SOIL/SOLID	Date Received:	11/09/2024
		Date Analyzed:	11/15/2024
		Date Extracted:	11/14/2024

Matrix Spike Summary Per- and Polyfluorinated Alkyl Substances by LC-MS

Sample Name:	SB-1_4-5_20241108	Units:	µg/kg
Laboratory Code:	HN2409094-001	Analysis Lab Lot:	2764111
Analysis Method:	EPA 537Mod		
Prep Method:	EPA 537Mod		

Matrix Spike QC-1765887-005

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND	3.33	3.6	92.4	70-130
Perfluorobutane sulfonic acid (PFBS)	ND	3.74	3.54	105	72-128
Perfluorobutanoic acid (PFBA)	ND	4.29	4	107	71-135
Perfluorobutylsulfonamide (PFBSA)	ND	4.12	4	103	70-130
Perfluorodecane sulfonic acid (PFDS)	ND	3.71	3.86	96.0	59-134
Perfluorodecanoic acid (PFDA)	ND	4.15	4	104	69-133
Perfluorododecanoic acid (PFDOA)	ND	4.30	4	106	69-135
Perfluoroheptane sulfonic acid (PFHpS)	ND	4.00	3.81	105	70-132
Perfluoroheptanoic acid (PFHpA)	ND	4.21	4	105	71-131
Perfluorohexane sulfonic acid (PFHxS)	ND	3.53	3.64	94.9	67-130
Perfluorohexanesulfonamide (PFHxSA)	ND	4.10	4	102	70-130
Perfluorohexanoic acid (PFHxA)	ND	3.91	4	97.1	70-132
Perfluorononane sulfonic acid (PFNS)	ND	3.78	3.84	98.6	69-125
Perfluorononanoic acid (PFNA)	ND	4.13	4	103	72-129
Perfluorooctane sulfonamide (PFOSAm)	ND	4.15	4	104	67-137
Perfluorooctane sulfonic acid (PFOS)	ND	3.94	3.71	105	68-136
Perfluorooctanoic acid (PFOA)	ND	3.89	4	95.7	69-133
Perfluoropentane sulfonic acid (PFPeS)	ND	3.87	3.75	103	73-123
Perfluoropentanoic acid (PFPeA)	ND	3.97	4	98.7	69-132

QA/QC Report

Client:

Project:

Sample Matrix:

The Mannik & Smith Group, Inc.
Van Buren Industrial
SOIL/SOLID

Work Order:

Date Collected:

Date Received:

Date Analyzed:

Date Extracted:

HN2409094
11/08/2024
11/09/2024
11/15/2024
11/14/2024

Matrix Spike Summary
Per- and Polyfluorinated Alkyl Substances by LC-MS

Sample Name:

Laboratory Code:

Analysis Method:

Prep Method:

SB-1_4-5_20241108
HN2409094-001
EPA 537Mod
EPA 537Mod

Units: µg/kg

Analysis Lab Lot:

2764111

Matrix Spike
QC-1765887-005

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Perfluorotetradecanoic acid (PFTDA)	ND	4.57	4	114	69-133
Perfluorotridecanoic acid (PFTrDA)	ND	4.66	4	116	66-139
Perfluoroundecanoic acid (PFUnDA)	ND	4.30	4	107	64-136

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/2024
Date Received: 11/09/2024
Date Analyzed: 11/15/2024
Date Extracted: 11/14/2024

Duplicate Matrix Spike Summary Per- and Polyfluorinated Alkyl Substances by LC-MS

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001
Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Units: µg/kg
Analysis Lab Lot:2764111

Analyte Name	Sample Result	Matrix Spike QC-1765887-005			Duplicate Matrix Spike QC-1765887-006			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND	3.88	3.77	103	4.45	3.7889	118	56-146	13.7	30
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	4.35	3.83	114	4.68	3.8492	122	65-137	7.29	30
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND	3.90	3.74	104	4.14	3.7588	110	62-145	5.89	30
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	3.99	3.79	105	4.11	3.809	108	64-140	3.13	30
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND	3.96	4	97.8	3.99	4.0201	97.9	70-130	0.562	30
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND	3.92	4	97.8	4.11	4.0201	102	70-130	4.75	30
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND	4.00	4	99.7	4.40	4.0201	109	70-130	9.56	30
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND	4.11	3.77	109	4.00	3.7889	106	52-144	2.74	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND	3.40	3.73	91.3	3.77	3.7487	100	66-140	10.1	30
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND	3.75	4	92.6	4.20	4.0201	103	66-141	11.3	30

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/2024
Date Received: 11/09/2024
Date Analyzed: 11/15/2024
Date Extracted: 11/14/2024

Duplicate Matrix Spike Summary Per- and Polyfluorinated Alkyl Substances by LC-MS

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001
Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Units: µg/kg
Analysis Lab Lot: 2764111

Analyte Name	Sample Result	Matrix Spike QC-1765887-005			Duplicate Matrix Spike QC-1765887-006			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND	3.97	4	97.3	3.48	4.0201	84.7	61-139	13.0	30
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND	4.08	4	100	4.17	4.0201	102	63-144	2.15	30
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND	3.33	3.6	92.4	3.95	3.6181	109	70-130	17.0	30
Perfluorobutane sulfonic acid (PFBS)	ND	3.74	3.54	105	3.75	3.5578	105	72-128	0.405	30
Perfluorobutanoic acid (PFBA)	ND	4.29	4	107	4.58	4.0201	113	71-135	6.52	30
Perfluorobutylsulfonamide (PFBSA)	ND	4.12	4	103	3.82	4.0201	94.9	70-130	7.76	30
Perfluorodecane sulfonic acid (PFDS)	ND	3.71	3.86	96.0	3.98	3.8794	102	59-134	7.02	30
Perfluorodecanoic acid (PFDA)	ND	4.15	4	104	4.51	4.0201	112	69-133	8.32	30
Perfluorododecanoic acid (PFDOA)	ND	4.30	4	106	4.68	4.0201	116	69-135	8.66	30
Perfluoroheptane sulfonic acid (PFHpS)	ND	4.00	3.81	105	4.40	3.8291	115	70-132	9.40	30
Perfluoroheptanoic acid (PFHpA)	ND	4.21	4	105	4.09	4.0201	102	71-131	2.91	30
Perfluorohexane sulfonic acid (PFHxS)	ND	3.53	3.64	94.9	3.75	3.6583	101	67-130	6.26	30
Perfluorohexanesulfonamide (PFHxSA)	ND	4.10	4	102	4.15	4.0201	103	70-130	1.29	30
Perfluorohexanoic acid (PFHxA)	ND	3.91	4	97.1	4.27	4.0201	106	70-132	8.82	30

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/2024
Date Received: 11/09/2024
Date Analyzed: 11/15/2024
Date Extracted: 11/14/2024

Duplicate Matrix Spike Summary Per- and Polyfluorinated Alkyl Substances by LC-MS

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001
Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Units: µg/kg
Analysis Lab Lot: 2764111

Matrix Spike
QC-1765887-005

Duplicate Matrix Spike
QC-1765887-006

Analyte Name	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Perfluorononane sulfonic acid (PFNS)	ND	3.78	3.84	98.6	4.16	3.8593	108	69-125	9.32	30
Perfluorononanoic acid (PFNA)	ND	4.13	4	103	4.09	4.0201	102	72-129	0.943	30
Perfluorooctane sulfonamide (PFOSAm)	ND	4.15	4	104	4.08	4.0201	101	67-137	1.68	30
Perfluorooctane sulfonic acid (PFOS)	ND	3.94	3.71	105	4.31	3.7286	114	68-136	8.99	30
Perfluorooctanoic acid (PFOA)	ND	3.89	4	95.7	3.89	4.0201	95.2	69-133	0.0350	30
Perfluoropentane sulfonic acid (PFPeS)	ND	3.87	3.75	103	4.29	3.7688	114	73-123	10.3	30
Perfluoropentanoic acid (PFPeA)	ND	3.97	4	98.7	4.07	4.0201	101	69-132	2.40	30
Perfluorotetradecanoic acid (PFTDA)	ND	4.57	4	114	4.50	4.0201	111	69-133	1.44	30
Perfluorotridecanoic acid (PFTrDA)	ND	4.66	4	116	4.63	4.0201	115	66-139	0.552	30
Perfluoroundecanoic acid (PFUnDA)	ND	4.30	4	107	4.43	4.0201	110	64-136	2.87	30

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1765887-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA
Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND U	0.942	0.237	1	11/15/24 20:29	11/14/24	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND U	0.958	0.521	1	11/15/24 20:29	11/14/24	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND U	0.934	0.288	1	11/15/24 20:29	11/14/24	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND U	0.948	0.278	1	11/15/24 20:29	11/14/24	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND U	1.00	0.444	1	11/15/24 20:29	11/14/24	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND U	1.00	0.285	1	11/15/24 20:29	11/14/24	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND U	1.00	0.234	1	11/15/24 20:29	11/14/24	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND U	0.942	0.595	1	11/15/24 20:29	11/14/24	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND U	0.932	0.144	1	11/15/24 20:29	11/14/24	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND U	1.00	0.349	1	11/15/24 20:29	11/14/24	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND U	1.00	0.637	1	11/15/24 20:29	11/14/24	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND U	1.00	0.646	1	11/15/24 20:29	11/14/24	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND U	1.00	0.0850	1	11/15/24 20:29	11/14/24	
Perfluorobutane sulfonic acid (PFBS)	ND U	0.884	0.122	1	11/15/24 20:29	11/14/24	
Perfluorobutanoic acid (PFBA)	ND U	1.00	0.271	1	11/15/24 20:29	11/14/24	
Perfluorobutylsulfonamide (PFBSA)	ND U	1.00	0.563	1	11/15/24 20:29	11/14/24	
Perfluorodecane sulfonic acid (PFDS)	ND U	0.964	0.563	1	11/15/24 20:29	11/14/24	
Perfluorodecanoic acid (PFDA)	ND U	1.00	0.164	1	11/15/24 20:29	11/14/24	
Perfluorododecanoic acid (PFDOA)	ND U	1.00	0.311	1	11/15/24 20:29	11/14/24	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	0.952	0.535	1	11/15/24 20:29	11/14/24	
Perfluoroheptanoic acid (PFHpA)	ND U	1.00	0.229	1	11/15/24 20:29	11/14/24	
Perfluorohexane sulfonic acid (PFHxS)	ND U	1.00	0.212	1	11/15/24 20:29	11/14/24	
Perfluorohexanesulfonamide (PFHxSA)	ND U	1.00	0.214	1	11/15/24 20:29	11/14/24	
Perfluorohexanoic acid (PFHxA)	ND U	1.00	0.150	1	11/15/24 20:29	11/14/24	
Perfluorononane sulfonic acid (PFNS)	ND U	1.00	0.167	1	11/15/24 20:29	11/14/24	
Perfluorononanoic acid (PFNA)	ND U	1.00	0.145	1	11/15/24 20:29	11/14/24	
Perfluorooctane sulfonamide (PFOSAm)	ND U	1.00	0.238	1	11/15/24 20:29	11/14/24	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.00	0.192	1	11/15/24 20:29	11/14/24	
Perfluorooctanoic acid (PFOA)	ND U	1.00	0.166	1	11/15/24 20:29	11/14/24	
Perfluoropentane sulfonic acid (PFPeS)	ND U	1.00	0.416	1	11/15/24 20:29	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.

Project: Van Buren Industrial

Sample Matrix: SOIL/SOLID

Sample Name: Method Blank

Lab Code: QC-1765887-001

Work Order: HN2409094

Date Collected: NA

Date Received: NA

Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod

Prep Method: EPA 537Mod

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoropentanoic acid (PFPeA)	ND U	1.00	0.118	1	11/15/24 20:29	11/14/24	
Perfluorotetradecanoic acid (PFTDA)	ND U	1.00	0.217	1	11/15/24 20:29	11/14/24	
Perfluorotridecanoic acid (PFTrDA)	ND U	1.00	0.656	1	11/15/24 20:29	11/14/24	
Perfluoroundecanoic acid (PFUnDA)	ND U	1.00	0.303	1	11/15/24 20:29	11/14/24	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1765887-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA
Units: µg/kg

Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 4:2	82.7	50 - 150	11/15/24 20:29	
13C2-FtS 6:2	114	50 - 150	11/15/24 20:29	
13C2-FtS 8:2	83.4	50 - 150	11/15/24 20:29	
13C2-PFDA	82.0	50 - 150	11/15/24 20:29	
13C2-PFDoA	77.1	50 - 150	11/15/24 20:29	
13C2-PFHxA	78.5	50 - 150	11/15/24 20:29	
13C2-PFTeA	83.3	21 - 170	11/15/24 20:29	
13C2-PFUnA	87.3	50 - 150	11/15/24 20:29	
13C3-HFPO-DA	71.8	50 - 150	11/15/24 20:29	
13C3-PFBS	74.5	50 - 150	11/15/24 20:29	
13C4-PFBA	79.0	50 - 150	11/15/24 20:29	
13C4-PFHpA	77.6	50 - 150	11/15/24 20:29	
13C4-PFOA	82.2	50 - 150	11/15/24 20:29	
13C4-PFOS	77.1	50 - 150	11/15/24 20:29	
13C5-PFNA	79.3	50 - 150	11/15/24 20:29	
13C5-PFPeA	77.4	50 - 150	11/15/24 20:29	
13C8-FOSA	76.6	50 - 150	11/15/24 20:29	
18O2-PFHxS	74.7	50 - 150	11/15/24 20:29	
d3-N-MeFOSAA	81.9	50 - 150	11/15/24 20:29	
d5-N-EtFOSAA	86.2	50 - 150	11/15/24 20:29	

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/15/2024
Date Extracted:11/14/2024

Laboratory Control Sample Summary Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Units:µg/kg
Analysis Lab Lot:2764111

QC-1765887-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	4.46	3.77	118	56-146
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	4.52	3.83	118	65-137
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	3.83	3.74	102	62-145
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	3.95	3.79	104	64-140
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	4.22	4	105	70-130
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	4.07	4	102	70-130
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	4.19	4	105	70-130
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	4.25	3.77	113	52-144
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	3.74	3.73	100	66-140
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	3.99	4	99.7	66-141
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	3.95	4	98.7	61-139
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	3.98	4	99.4	63-144
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	3.73	3.6	104	70-130
Perfluorobutane sulfonic acid (PFBS)	3.64	3.54	103	72-128
Perfluorobutanoic acid (PFBA)	4.55	4	114	71-135
Perfluorobutylsulfonamide (PFBSA)	3.89	4	97.3	70-130
Perfluorodecane sulfonic acid (PFDS)	4.12	3.86	107	59-134
Perfluorodecanoic acid (PFDA)	4.49	4	112	69-133
Perfluorododecanoic acid (PFDOA)	4.58	4	114	69-135
Perfluoroheptane sulfonic acid (PFHpS)	4.59	3.81	120	70-132
Perfluoroheptanoic acid (PFHpA)	3.98	4	99.6	71-131
Perfluorohexane sulfonic acid (PFHxS)	3.98	3.64	109	67-130
Perfluorohexanesulfonamide (PFHxSA)	4.45	4	111	70-130
Perfluorohexanoic acid (PFHxA)	4.20	4	105	70-132
Perfluorononane sulfonic acid (PFNS)	4.10	3.84	107	69-125
Perfluorononanoic acid (PFNA)	4.30	4	107	72-129
Perfluorooctane sulfonamide (PFOSAm)	4.02	4	100	67-137
Perfluorooctane sulfonic acid (PFOS)	4.12	3.71	111	68-136
Perfluorooctanoic acid (PFOA)	4.00	4	100	69-133
Perfluoropentane sulfonic acid (PFPeS)	4.30	3.75	114	73-123
Perfluoropentanoic acid (PFPeA)	3.93	4	98.3	69-132
Perfluorotetradecanoic acid (PFTDA)	4.47	4	112	69-133

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/15/2024
Date Extracted:11/14/2024

Laboratory Control Sample Summary Per- and Polyfluorinated Alkyl Substances by LC-MS

Analysis Method: EPA 537Mod
Prep Method: EPA 537Mod

Units:µg/kg
Analysis Lab Lot:2764111

QC-1765887-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Perfluorotridecanoic acid (PFTrDA)	4.61	4	115	66-139
Perfluoroundecanoic acid (PFUnDA)	4.49	4	112	64-136

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC

Analysis Method: EPA 8082A **Analysis Lab Lot:** 2754066
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		68 - 137	71 - 126
SB-3_4-5_20241108	HN2409094-002	104	102
SB-6_4-5_20241108	HN2409094-003	107	102
SB-4_4-5_20241108	HN2409094-004	105	104
SB-10_4-5_20241108	HN2409094-005	116	106
SB-11_4-5_20241108	HN2409094-006	103	102
SB-13_4-5_20241108	HN2409094-007	115	105
Method Blank	QC-1763092-001	112	106
Laboratory Control Sample	QC-1763092-002	119	110

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC

Analysis Method: EPA 8082A **Analysis Lab Lot:** 2764313
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		68 - 137	71 - 126
SB-1_4-5_20241108	HN2409094-001	82.1	84.4
FD-1_20241108	HN2409094-008	72.3	76.9
Method Blank	QC-1767675-001	87.6	96.2
Laboratory Control Sample	QC-1767675-002	101	101

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1763092-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA
Units: µg/kg

Semivolatile Organic Compounds by GC

Analysis Method: EPA 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	66.7	22.9	1	11/13/24 16:15	11/13/24 09:35	
Aroclor 1221	ND U	66.7	22.9	1	11/13/24 16:15	11/13/24 09:35	
Aroclor 1232	ND U	66.7	22.9	1	11/13/24 16:15	11/13/24 09:35	
Aroclor 1242	ND U	66.7	22.9	1	11/13/24 16:15	11/13/24 09:35	
Aroclor 1248	ND U	66.7	22.9	1	11/13/24 16:15	11/13/24 09:35	
Aroclor 1254	ND U	66.7	18.6	1	11/13/24 16:15	11/13/24 09:35	
Aroclor 1260	ND U	66.7	18.6	1	11/13/24 16:15	11/13/24 09:35	
Aroclor 1262	ND U	66.7	18.6	1	11/13/24 16:15	11/13/24 09:35	
Aroclor 1268	ND U	66.7	18.6	1	11/13/24 16:15	11/13/24 09:35	
Total PCB	ND U	66.7	18.6	1	11/13/24 16:15	11/13/24 09:35	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	112	68 - 137	11/13/24 16:15	
Tetrachloro-m-xylene	106	71 - 126	11/13/24 16:15	

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1767675-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA
Units: µg/kg

Semivolatile Organic Compounds by GC

Analysis Method: EPA 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	66.7	22.9	1	11/15/24 18:41	11/15/24 10:46	
Aroclor 1221	ND U	66.7	22.9	1	11/15/24 18:41	11/15/24 10:46	
Aroclor 1232	ND U	66.7	22.9	1	11/15/24 18:41	11/15/24 10:46	
Aroclor 1242	ND U	66.7	22.9	1	11/15/24 18:41	11/15/24 10:46	
Aroclor 1248	ND U	66.7	22.9	1	11/15/24 18:41	11/15/24 10:46	
Aroclor 1254	ND U	66.7	18.6	1	11/15/24 18:41	11/15/24 10:46	
Aroclor 1260	ND U	66.7	18.6	1	11/15/24 18:41	11/15/24 10:46	
Aroclor 1262	ND U	66.7	18.6	1	11/15/24 18:41	11/15/24 10:46	
Aroclor 1268	ND U	66.7	18.6	1	11/15/24 18:41	11/15/24 10:46	
Total PCB	ND U	66.7	18.6	1	11/15/24 18:41	11/15/24 10:46	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	87.6	68 - 137	11/15/24 18:41	
Tetrachloro-m-xylene	96.2	71 - 126	11/15/24 18:41	

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/13/2024
Date Extracted:11/13/2024

Laboratory Control Sample Summary Semivolatile Organic Compounds by GC

Analysis Method: EPA 8082A
Prep Method: EPA 3546

Units:µg/kg
Analysis Lab Lot:2754066

QC-1763092-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Aroclor 1016	854	833	102	75-129
Aroclor 1260	810	833	97.3	69-127

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/15/2024
Date Extracted:11/15/2024

Laboratory Control Sample Summary
Semivolatile Organic Compounds by GC

Analysis Method: EPA 8082A
Prep Method: EPA 3546

Units:µg/kg
Analysis Lab Lot:2764313

QC-1767675-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Aroclor 1016	814	833	97.8	75-129
Aroclor 1260	756	833	90.7	69-127

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Extraction Method: EPA 5035A

Analysis Lab Lot: 2767421

Sample Name	Lab Code	1,2-Dichloroethane-d4	4-Bromofluorobenzene	Dibromofluoromethane
		80 - 120	80 - 120	80 - 120
SB-1_4-5_20241108	HN2409094-001	95.0	90.5	96.2
SB-3_4-5_20241108	HN2409094-002	94.4	94.8	95.9
SB-6_4-5_20241108	HN2409094-003	96.3	96.8	96.2
SB-4_4-5_20241108	HN2409094-004	94.0	97.4	94.7
SB-10_4-5_20241108	HN2409094-005	95.2	93.4	93.4
SB-11_4-5_20241108	HN2409094-006	95.0	93.2	94.4
SB-13_4-5_20241108	HN2409094-007	94.6	97.0	92.0
FD-1_20241108	HN2409094-008	98.8	95.0	91.0

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Extraction Method: EPA 5035A

Analysis Lab Lot: 2767421

Sample Name	Lab Code	Toluene-d8
		80 - 120
SB-1_4-5_20241108	HN2409094-001	94.0
SB-3_4-5_20241108	HN2409094-002	96.3
SB-6_4-5_20241108	HN2409094-003	98.4
SB-4_4-5_20241108	HN2409094-004	99.0
SB-10_4-5_20241108	HN2409094-005	97.4
SB-11_4-5_20241108	HN2409094-006	98.4
SB-13_4-5_20241108	HN2409094-007	96.9
FD-1_20241108	HN2409094-008	100

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D **Analysis Lab Lot:** 2775410
Extraction Method: EPA 5035A

Sample Name	Lab Code	1,2-Dichloroethane-d4	4-Bromofluorobenzene	Dibromofluoromethane
		80 - 120	80 - 120	80 - 120
Method Blank	QC-1765574-001	96.2	102	87.4
Laboratory Control Sample	QC-1765574-002	101	100	106

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Extraction Method: EPA 5035A

Analysis Lab Lot: 2775410

Sample Name	Lab Code	Toluene-d8
		80 - 120
Method Blank	QC-1765574-001	94.2
Laboratory Control Sample	QC-1765574-002	98.6

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1765574-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA

Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1,1-Trichloroethane	ND U	30.0	13.6	1	11/21/24 13:50	11/12/24 13:54	
1,1,2,2-Tetrachloroethane	ND U	30.0	13.2	1	11/21/24 13:50	11/12/24 13:54	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND U	30.0	19.0	1	11/21/24 13:50	11/12/24 13:54	
1,1,2-Trichloroethane	ND U	30.0	12.8	1	11/21/24 13:50	11/12/24 13:54	
1,1-Dichloroethane	ND U	30.0	10.9	1	11/21/24 13:50	11/12/24 13:54	
1,1-Dichloroethylene	ND U	30.0	9.72	1	11/21/24 13:50	11/12/24 13:54	
1,2,3-Trichlorobenzene	ND U	100	36.0	1	11/21/24 13:50	11/12/24 13:54	
1,2,3-Trichloropropane	ND U	30.0	12.6	1	11/21/24 13:50	11/12/24 13:54	
1,2,4-Trichlorobenzene	ND U	100	34.0	1	11/21/24 13:50	11/12/24 13:54	
1,2,4-Trimethylbenzene	ND U	30.0	22.0	1	11/21/24 13:50	11/12/24 13:54	
1,2-Dibromoethane (EDB, Ethylene dibromide)	ND U	30.0	17.6	1	11/21/24 13:50	11/12/24 13:54	
1,2-Dichlorobenzene (o-Dichlorobenzene)	ND U	30.0	11.4	1	11/21/24 13:50	11/12/24 13:54	
1,2-Dichloroethane (Ethylene dichloride)	ND U	100	26.3	1	11/21/24 13:50	11/12/24 13:54	
1,2-Dichloropropane	ND U	30.0	22.1	1	11/21/24 13:50	11/12/24 13:54	
1,3,5-Trimethylbenzene	ND U	100	21.2	1	11/21/24 13:50	11/12/24 13:54	
1,3-Dichlorobenzene (m-Dichlorobenzene)	ND U	30.0	20.7	1	11/21/24 13:50	11/12/24 13:54	
1,3-Dichloropropene	ND U	60.0	16.8	1	11/21/24 13:50	11/12/24 13:54	
1,4-Dichlorobenzene (p-Dichlorobenzene)	ND U	30.0	24.4	1	11/21/24 13:50	11/12/24 13:54	
2-Butanone (Methyl ethyl ketone, MEK)	ND U	200	71.4	1	11/21/24 13:50	11/12/24 13:54	
2-Hexanone	ND U	30.0	14.9	1	11/21/24 13:50	11/12/24 13:54	
4-Methyl-2-pentanone (MIBK)	ND U	30.0	28.0	1	11/21/24 13:50	11/12/24 13:54	
Acetone	ND U	100	89.0	1	11/21/24 13:50	11/12/24 13:54	
Benzene	ND U	30.0	14.5	1	11/21/24 13:50	11/12/24 13:54	
Bromochloromethane	ND U	30.0	15.3	1	11/21/24 13:50	11/12/24 13:54	
Bromodichloromethane	ND U	30.0	16.8	1	11/21/24 13:50	11/12/24 13:54	
Bromoform	ND U	30.0	12.6	1	11/21/24 13:50	11/12/24 13:54	
Carbon disulfide	ND U	30.0	15.5	1	11/21/24 13:50	11/12/24 13:54	
Carbon tetrachloride	ND U	30.0	11.7	1	11/21/24 13:50	11/12/24 13:54	
Chlorobenzene	ND U	30.0	9.96	1	11/21/24 13:50	11/12/24 13:54	
Chlorodibromomethane	ND U	30.0	16.8	1	11/21/24 13:50	11/12/24 13:54	
Chloroethane (Ethyl chloride)	ND U	100	84.0	1	11/21/24 13:50	11/12/24 13:54	
Chloroform	ND U	30.0	11.0	1	11/21/24 13:50	11/12/24 13:54	
cis & trans-1,2-Dichloroethene	ND U	60.0	19.3	1	11/21/24 13:50	11/12/24 13:54	
cis-1,2-Dichloroethylene	ND U	30.0	19.3	1	11/21/24 13:50	11/12/24 13:54	
cis-1,3-Dichloropropene	ND U	30.0	22.6	1	11/21/24 13:50	11/12/24 13:54	
Cyclohexane	ND U	100	23.0	1	11/21/24 13:50	11/12/24 13:54	
Dichlorodifluoromethane (Freon-12)	ND U	100	36.3	1	11/21/24 13:50	11/12/24 13:54	
Ethylbenzene	ND U	30.0	21.3	1	11/21/24 13:50	11/12/24 13:54	

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1765574-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA
Units: µg/kg

Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Isopropylbenzene	ND U	30.0	19.0	1	11/21/24 13:50	11/12/24 13:54	
Methyl acetate	ND U	250	35.9	1	11/21/24 13:50	11/12/24 13:54	
Methyl bromide (Bromomethane)	ND U	100	57.4	1	11/21/24 13:50	11/12/24 13:54	
Methyl chloride (Chloromethane)	ND U	100	82.0	1	11/21/24 13:50	11/12/24 13:54	
Methyl tert-butyl ether (MTBE)	ND U	30.0	21.9	1	11/21/24 13:50	11/12/24 13:54	
Methylcyclohexane	ND U	30.0	11.4	1	11/21/24 13:50	11/12/24 13:54	
Methylene chloride (Dichloromethane)	ND U	250	79.6	1	11/21/24 13:50	11/12/24 13:54	
o-Xylene	ND U	30.0	11.6	1	11/21/24 13:50	11/12/24 13:54	
Styrene	ND U	30.0	11.9	1	11/21/24 13:50	11/12/24 13:54	
Tetrachloroethylene (Perchloroethylene)	ND U	30.0	18.1	1	11/21/24 13:50	11/12/24 13:54	
Toluene	ND U	30.0	24.7	1	11/21/24 13:50	11/12/24 13:54	
Total Xylene	ND U	90.0	11.6	1	11/21/24 13:50	11/12/24 13:54	
trans-1,2-Dichloroethylene	ND U	30.0	24.8	1	11/21/24 13:50	11/12/24 13:54	
trans-1,3-Dichloropropylene	ND U	30.0	16.8	1	11/21/24 13:50	11/12/24 13:54	
Trichloroethene (Trichloroethylene)	ND U	30.0	13.4	1	11/21/24 13:50	11/12/24 13:54	
Trichlorofluoromethane	ND U	30.0	15.3	1	11/21/24 13:50	11/12/24 13:54	
(Fluorotrichloromethane, Freon 11)							
Vinyl chloride (Chloroethene)	ND U	30.0	19.9	1	11/21/24 13:50	11/12/24 13:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96.2	80 - 120	11/21/24 13:50	
4-Bromofluorobenzene	102	80 - 120	11/21/24 13:50	
Dibromofluoromethane	87.4	80 - 120	11/21/24 13:50	
Toluene-d8	94.2	80 - 120	11/21/24 13:50	

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/21/2024
Date Extracted:11/12/2024

Laboratory Control Sample Summary Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Units:µg/kg
Analysis Lab Lot:2775410

QC-1765574-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane	774	1000	77.4	75-121
1,1,2,2-Tetrachloroethane	889	1000	88.9	79-125
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	836	1000	83.6	62-129
1,1,2-Trichloroethane	793	1000	79.3 S	80-123
1,1-Dichloroethane	844	1000	84.4	74-124
1,1-Dichloroethylene	848	1000	84.8	68-131
1,2,3-Trichlorobenzene	910	1000	91.0	60-135
1,2,3-Trichloropropane	852	1000	85.2	77-121
1,2,4-Trichlorobenzene	876	1000	87.6	63-130
1,2,4-Trimethylbenzene	874	1000	87.4	64-126
1,2-Dibromoethane (EDB, Ethylene dibromide)	852	1000	85.2	63-155
1,2-Dichlorobenzene (o-Dichlorobenzene)	898	1000	89.8	77-122
1,2-Dichloroethane (Ethylene dichloride)	874	1000	87.4	70-130
1,2-Dichloropropane	852	1000	85.2	71-130
1,3,5-Trimethylbenzene	878	1000	87.8	66-130
1,3-Dichlorobenzene (m-Dichlorobenzene)	869	1000	86.9	78-121
1,3-Dichloropropene	1870	2000	93.4	62-124
1,4-Dichlorobenzene (p-Dichlorobenzene)	886	1000	88.6	78-122
2-Butanone (Methyl ethyl ketone, MEK)	896	1000	89.6	47-164
2-Hexanone	888	1000	88.8	70-137
4-Methyl-2-pentanone (MIBK)	1180	1000	118	57-200
Acetone	905	1000	90.5	52-190
Benzene	860	1000	86.0	78-122
Bromochloromethane	900	1000	90.0	68-130
Bromodichloromethane	936	1000	93.6	75-125
Bromoform	802	1000	80.2	59-120
Carbon disulfide	847	1000	84.7	60-163
Carbon tetrachloride	843	1000	84.3	69-123
Chlorobenzene	870	1000	87.0	79-120
Chlorodibromomethane	880	1000	88.0	57-123
Chloroethane (Ethyl chloride)	1590	1000	159 S	38-132
Chloroform	836	1000	83.6	72-122
cis & trans-1,2-Dichloroethene	1730	2000	86.7	72-127
cis-1,2-Dichloroethylene	873	1000	87.3	74-125
cis-1,3-Dichloropropene	916	1000	91.6	62-124
Dichlorodifluoromethane (Freon-12)	459	1000	45.9	28-137
Ethylbenzene	875	1000	87.5	75-121
Isopropylbenzene	904	1000	90.4	74-121
Methyl acetate	334	1000	33.4 S	61-125
Methyl bromide (Bromomethane)	420	1000	42.0	31-169
Methyl chloride (Chloromethane)	540	1000	54.0	24-119

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Analyzed: 11/21/2024
Date Extracted: 11/12/2024

Laboratory Control Sample Summary Volatile Organic Compounds by GC-MS

Analysis Method: EPA 8260D
Prep Method: EPA 5035A

Units: µg/kg
Analysis Lab Lot: 2775410

QC-1765574-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Methyl tert-butyl ether (MTBE)	897	1000	89.7	79-139
Methylene chloride (Dichloromethane)	842	1000	84.2	62-135
o-Xylene	870	1000	87.0	75-120
Styrene	872	1000	87.2	74-126
Tetrachloroethylene (Perchloroethylene)	846	1000	84.6	76-128
Toluene	847	1000	84.7	76-120
Total Xylene	2630	3000	87.5	67-129
trans-1,2-Dichloroethylene	860	1000	86.0	72-127
trans-1,3-Dichloropropylene	953	1000	95.3	66-120
Trichloroethene (Trichloroethylene)	845	1000	84.5	75-122
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	754	1000	75.4	51-115
Vinyl chloride (Chloroethene)	672	1000	67.2	43-128

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E **Analysis Lab Lot:** 2757722
Extraction Method: EPA 3546

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		48 - 94	50 - 103	43 - 105
Method Blank	QC-1763310-001	80.9	66.7	74.5
Laboratory Control Sample	QC-1763310-002	80.1	66.0	71.7

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E **Analysis Lab Lot:** 2757722
Extraction Method: EPA 3546

Sample Name	Lab Code	4-Terphenyl-d14	Nitrobenzene-d5	Phenol-d6
		55 - 111	47 - 100	49 - 110
Method Blank	QC-1763310-001	70.2	71.1	74.5
Laboratory Control Sample	QC-1763310-002	65.0	70.5	72.0

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E **Analysis Lab Lot:** 2772682
Extraction Method: EPA 3546

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		48 - 94	50 - 103	43 - 105
SB-1_4-5_20241108	HN2409094-001	65.4	65.5	58.3
Method Blank	QC-1770905-001	67.2	67.3	75.7
Laboratory Control Sample	QC-1770905-002	80.0	70.1	74.8
SB-1_4-5_20241108	QC-1770905-005	66.9	65.6	60.4
SB-1_4-5_20241108	QC-1770905-006	67.8	65.1	63.0

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E **Analysis Lab Lot:** 2772682
Extraction Method: EPA 3546

Sample Name	Lab Code	4-Terphenyl-d14	Nitrobenzene-d5	Phenol-d6
		55 - 111	47 - 100	49 - 110
SB-1_4-5_20241108	HN2409094-001	74.5	68.0	66.0
Method Blank	QC-1770905-001	72.8	70.3	76.9
Laboratory Control Sample	QC-1770905-002	76.2	71.5	77.4
SB-1_4-5_20241108	QC-1770905-005	67.2	68.1	65.8
SB-1_4-5_20241108	QC-1770905-006	71.7	68.5	67.0

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E **Analysis Lab Lot:** 2775985
Extraction Method: EPA 3546

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		48 - 94	50 - 103	43 - 105
SB-11_4-5_20241108	HN2409094-006	61.6	66.3	70.9
SB-13_4-5_20241108	HN2409094-007	68.0	66.4	71.6
FD-1_20241108	HN2409094-008	66.4	67.5	65.4

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E **Analysis Lab Lot:** 2775985
Extraction Method: EPA 3546

Sample Name	Lab Code	4-Terphenyl-d14	Nitrobenzene-d5	Phenol-d6
		55 - 111	47 - 100	49 - 110
SB-11_4-5_20241108	HN2409094-006	75.9	59.4	73.4
SB-13_4-5_20241108	HN2409094-007	75.5	59.4	76.0
FD-1_20241108	HN2409094-008	76.6	60.1	74.0

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E **Analysis Lab Lot:** 2776996
Extraction Method: EPA 3546

Sample Name	Lab Code	2,4,6-Tribromophenol	2-Fluorobiphenyl	2-Fluorophenol
		48 - 94	50 - 103	43 - 105
SB-3_4-5_20241108	HN2409094-002	67.7	59.6	64.9
SB-6_4-5_20241108	HN2409094-003	74.7	68.7	68.3
SB-4_4-5_20241108	HN2409094-004	73.4	71.4	73.9
SB-10_4-5_20241108	HN2409094-005	74.8	69.4	71.7

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094

SURROGATE RECOVERY SUMMARY Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E **Analysis Lab Lot:** 2776996
Extraction Method: EPA 3546

Sample Name	Lab Code	4-Terphenyl-d14	Nitrobenzene-d5	Phenol-d6
		55 - 111	47 - 100	49 - 110
SB-3_4-5_20241108	HN2409094-002	73.3	59.7	69.9
SB-6_4-5_20241108	HN2409094-003	73.4	62.6	72.1
SB-4_4-5_20241108	HN2409094-004	79.2	63.5	77.0
SB-10_4-5_20241108	HN2409094-005	78.9	66.2	80.0

QA/QC Report

Client:

Project:

Sample Matrix:

The Mannik & Smith Group, Inc.
Van Buren Industrial
SOIL/SOLID

Work Order:

Date Collected:

Date Received:

Date Analyzed:

Date Extracted:

HN2409094
11/08/2024
11/09/2024
11/21/2024
11/18/2024

Matrix Spike Summary Semivolatile Organic Compounds by GC-MS

Sample Name:

Laboratory Code:

Analysis Method:

Prep Method:

SB-1_4-5_20241108
HN2409094-001
EPA 8270E
EPA 3546

Units: µg/kg

Analysis Lab Lot:2772682

Matrix Spike QC-1770905-005

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
1,1'-Biphenyl (BZ-0)	ND	890	1279.2	69.6	57-101
1,2,4,5-Tetrachlorobenzene	ND	853	1279.2	66.7	54-98
1-Methylnaphthalene	ND	909	1279.2	71.1	56-100
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl) ether	ND	968	1279.2	75.7	50-101
2,3,4,6-Tetrachlorophenol	ND	857	1279.2	67.0	48-103
2,4,5-Trichlorophenol	ND	855	1279.2	66.9	54-98
2,4,6-Trichlorophenol	ND	800	1279.2	62.6	56-97
2,4-Dichlorophenol	ND	874	1279.2	68.4	54-99
2,4-Dimethylphenol	ND	493 S	1279.2	38.6 S	47-102
2,4-Dinitrophenol	ND	755	1279.2	59.0	10-100
2,4-Dinitrotoluene (2,4-DNT)	ND	866	1279.2	67.7	62-105
2,6-Dinitrotoluene (2,6-DNT)	ND	856	1279.2	66.9	62-103
2-Chloronaphthalene	ND	850	1279.2	66.4	57-101
2-Chlorophenol	ND	812	1279.2	63.5	52-102
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND	995	1279.2	77.8	42-104
2-Methylnaphthalene	ND	946	1279.2	74.0	55-102
2-Methylphenol (o-Cresol)	ND	668 S	1279.2	52.2 S	54-103
2-Nitroaniline	ND	887	1279.2	69.4	57-103
2-Nitrophenol	ND	895	1279.2	70.0	52-102
3&4-Methylphenol	ND	693 S	1279.2	54.2 S	56-103
3,3'-Dichlorobenzidine	ND	228 S	1279.2	17.8 S	41-91
3-Nitroaniline	ND	796	1279.2	62.3	35-107
4-Bromophenyl phenyl ether (BDE-3)	ND	974	1279.2	76.2	63-104
4-Chloro-3-methylphenol	ND	839	1279.2	65.6	57-103
4-Chloroaniline	ND	759	1279.2	59.3	32-99
4-Chlorophenyl phenylether	ND	860	1279.2	67.3	62-100
4-Nitroaniline	ND	757	1279.2	59.2	19-124
4-Nitrophenol	ND	976	1279.2	76.3	44-106
Acenaphthene	ND	857	1279.2	67.0	60-101
Acenaphthylene	ND	847	1279.2	66.2	59-101

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/2024
Date Received: 11/09/2024
Date Analyzed: 11/21/2024
Date Extracted: 11/18/2024

Matrix Spike Summary Semivolatile Organic Compounds by GC-MS

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001
Analysis Method: EPA 8270E
Prep Method: EPA 3546

Units: µg/kg
Analysis Lab Lot: 2772682

Matrix Spike QC-1770905-005

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Acetophenone	ND	887	1279.2	69.4	54-102
Anthracene	ND	968	1279.2	75.5	63-96
Atrazine	ND	897	1279.2	70.1	60-110
Benzaldehyde	ND	823	1279.2	64.4	10-143
Benzo(a)anthracene	12.0	892	1279.2	68.8	66-102
Benzo(a)pyrene	13.4	892	1279.2	68.7	66-105
Benzo(b)fluoranthene	17.6	867 S	1279.2	66.5 S	67-105
Benzo(g,h,i)perylene	8.45	878	1279.2	68.0	59-110
Benzo(k)fluoranthene	7.04	896	1279.2	69.5	68-106
bis(2-Chloroethoxy)methane	ND	968	1279.2	75.7	54-102
bis(2-Chloroethyl) ether	ND	986	1279.2	77.1	51-101
Butyl benzyl phthalate	ND	879	1279.2	68.7	59-107
Caprolactam	ND	914	1279.2	71.5	49-103
Carbazole	ND	958	1279.2	74.9	63-103
Chrysene	11.3	889	1279.2	68.7	66-105
Di(2-ethylhexyl) phthalate (bis (2-Ethylhexyl)phthalate, DEHP)	ND	914	1279.2	71.5	63-101
Dibenz(a,h) anthracene	ND	864	1279.2	67.4	61-109
Dibenzofuran	ND	876	1279.2	68.5	61-101
Diethyl phthalate	ND	839	1279.2	65.6	63-105
Dimethyl phthalate	ND	834	1279.2	65.2	64-104
Di-n-butyl phthalate	ND	967	1279.2	75.6	66-108
Di-n-octyl phthalate	ND	930	1279.2	72.7	53-126
Fluoranthene	23.9	980	1279.2	74.8	66-105
Fluorene	ND	870	1279.2	68.0	62-101
Hexachlorobenzene	ND	951	1279.2	74.3	61-104
Hexachlorobutadiene	ND	897	1279.2	70.1	52-99
Hexachlorocyclopentadiene	ND	716	1279.2	56.0	39-106
Hexachloroethane	ND	875	1279.2	68.4	59-99
Indeno(1,2,3-cd) pyrene	8.45	880	1279.2	68.2	57-114
Isophorone	ND	967	1279.2	75.6	55-101
Methylphenol, Total	ND	1360 S	2559.4	53.2 S	54-103
Naphthalene	ND	902	1279.2	70.5	54-99

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/2024
Date Received: 11/09/2024
Date Analyzed: 11/21/2024
Date Extracted: 11/18/2024

Matrix Spike Summary Semivolatile Organic Compounds by GC-MS

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001
Analysis Method: EPA 8270E
Prep Method: EPA 3546

Units: µg/kg
Analysis Lab Lot: 2772682

Matrix Spike QC-1770905-005

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Nitrobenzene	ND	981	1279.2	76.7	53-100
n-Nitrosodi-n-propylamine	ND	953	1279.2	74.5	52-104
N-Nitrosodiphenylamine	ND	837	1279.2	65.4	61-104
Pentachlorophenol	ND	993	1279.2	77.6	35-100
Phenanthrene	10.6	940	1279.2	72.7	64-101
Phenol	ND	823	1279.2	64.3	51-107
Pyrene	18.3	907	1279.2	69.6	52-114
Pyridine	ND	631	1279.2	49.4	40-84

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/2024
Date Received: 11/09/2024
Date Analyzed: 11/21/2024
Date Extracted: 11/18/2024

Duplicate Matrix Spike Summary Semivolatile Organic Compounds by GC-MS

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001
Analysis Method: EPA 8270E
Prep Method: EPA 3546

Units: µg/kg
Analysis Lab Lot: 2772682

Matrix Spike
QC-1770905-005

Duplicate Matrix Spike
QC-1770905-006

Analyte Name	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1'-Biphenyl (BZ-0)	ND	890	1279.2	69.6	923	1329.2	69.4	57-101	3.54	30
1,2,4,5-Tetrachlorobenzene	ND	853	1279.2	66.7	891	1329.2	67.0	54-98	4.35	30
1-Methylnaphthalene	ND	909	1279.2	71.1	950	1329.2	71.5	56-100	4.39	30
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND	968	1279.2	75.7	975	1329.2	73.4	50-101	0.744	30
2,3,4,6-Tetrachlorophenol	ND	857	1279.2	67.0	938	1329.2	70.6	48-103	8.99	30
2,4,5-Trichlorophenol	ND	855	1279.2	66.9	900	1329.2	67.7	54-98	5.09	30
2,4,6-Trichlorophenol	ND	800	1279.2	62.6	808	1329.2	60.8	56-97	0.912	30
2,4-Dichlorophenol	ND	874	1279.2	68.4	916	1329.2	68.9	54-99	4.63	30
2,4-Dimethylphenol	ND	493 S	1279.2	38.6 S	473 S	1329.2	35.6 S	47-102	4.27	30
2,4-Dinitrophenol	ND	755	1279.2	59.0	911	1329.2	68.5	10-100	18.7	30
2,4-Dinitrotoluene (2,4-DNT)	ND	866	1279.2	67.7	908	1329.2	68.3	62-105	4.71	30
2,6-Dinitrotoluene (2,6-DNT)	ND	856	1279.2	66.9	901	1329.2	67.8	62-103	5.09	30
2-Chloronaphthalene	ND	850	1279.2	66.4	893	1329.2	67.2	57-101	4.95	30
2-Chlorophenol	ND	812	1279.2	63.5	855	1329.2	64.3	52-102	5.16	30
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND	995	1279.2	77.8	1030	1329.2	77.5	42-104	3.38	30
2-Methylnaphthalene	ND	946	1279.2	74.0	984	1329.2	74.1	55-102	3.97	30
2-Methylphenol (o-Cresol)	ND	668 S	1279.2	52.2 S	683 S	1329.2	51.4 S	54-103	2.29	30
2-Nitroaniline	ND	887	1279.2	69.4	885	1329.2	66.6	57-103	0.290	30
2-Nitrophenol	ND	895	1279.2	70.0	982	1329.2	73.9	52-102	9.25	30
3&4-Methylphenol	ND	693 S	1279.2	54.2 S	728 S	1329.2	54.8 S	56-103	4.93	30
3,3'-Dichlorobenzidine	ND	228 S	1279.2	17.8 S	249 S	1329.2	18.7 S	41-91	8.76	30
3-Nitroaniline	ND	796	1279.2	62.3	845	1329.2	63.6	35-107	5.90	30
4-Bromophenyl phenyl ether (BDE-3)	ND	974	1279.2	76.2	1010	1329.2	76.1	63-104	3.70	30
4-Chloro-3-methylphenol	ND	839	1279.2	65.6	848	1329.2	63.8	57-103	1.05	30
4-Chloroaniline	ND	759	1279.2	59.3	820	1329.2	61.7	32-99	7.71	30

QA/QC Report

Client:

Project:

Sample Matrix:

The Mannik & Smith Group, Inc.
Van Buren Industrial
SOIL/SOLID

Work Order:

Date Collected:

Date Received:

Date Analyzed:

Date Extracted:

HN2409094
11/08/2024
11/09/2024
11/21/2024
11/18/2024

Duplicate Matrix Spike Summary Semivolatile Organic Compounds by GC-MS

Sample Name:

Laboratory Code:

Analysis Method:

Prep Method:

SB-1_4-5_20241108
HN2409094-001
EPA 8270E
EPA 3546

Units: µg/kg

Analysis Lab Lot:2772682

Matrix Spike QC-1770905-005					Duplicate Matrix Spike QC-1770905-006					
Analyte Name	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
4-Chlorophenyl phenylether	ND	860	1279.2	67.3	913	1329.2	68.7	62-100	5.96	30
4-Nitroaniline	ND	757	1279.2	59.2	788	1329.2	59.3	19-124	4.08	30
4-Nitrophenol	ND	976	1279.2	76.3	1030	1329.2	77.3	44-106	5.07	30
Acenaphthene	ND	857	1279.2	67.0	889	1329.2	66.9	60-101	3.68	30
Acenaphthylene	ND	847	1279.2	66.2	891	1329.2	67.1	59-101	5.11	30
Acetophenone	ND	887	1279.2	69.4	931	1329.2	70.1	54-102	4.84	30
Anthracene	ND	968	1279.2	75.5	994	1329.2	74.6	63-96	2.63	30
Atrazine	ND	897	1279.2	70.1	933	1329.2	70.2	60-110	3.90	30
Benzaldehyde	ND	823	1279.2	64.4	885	1329.2	66.6	10-143	7.26	30
Benzo(a)anthracene	12.0	892	1279.2	68.8	945	1329.2	70.3	66-102	5.82	30
Benzo(a)pyrene	13.4	892	1279.2	68.7	941	1329.2	69.8	66-105	5.32	30
Benzo(b)fluoranthene	17.6	867 S	1279.2	66.5 S	954	1329.2	70.5	67-105	9.56	30
Benzo(g,h,i)perylene	8.45	878	1279.2	68.0	923	1329.2	68.8	59-110	4.92	30
Benzo(k)fluoranthene	7.04	896	1279.2	69.5	960	1329.2	71.8	68-106	6.99	30
bis(2-Chloroethoxy) methane	ND	968	1279.2	75.7	975	1329.2	73.4	54-102	0.744	30
bis(2-Chloroethyl) ether	ND	986	1279.2	77.1	1030	1329.2	77.5	51-101	4.35	30
Butyl benzyl phthalate	ND	879	1279.2	68.7	964	1329.2	72.5	59-107	9.21	30
Caprolactam	ND	914	1279.2	71.5	957	1329.2	72.0	49-103	4.60	30
Carbazole	ND	958	1279.2	74.9	991	1329.2	74.6	63-103	3.43	30
Chrysene	11.3	889	1279.2	68.7	948	1329.2	70.6	66-105	6.46	30
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND	914	1279.2	71.5	1000	1329.2	75.2	63-101	8.94	30
Dibenz(a,h) anthracene	ND	864	1279.2	67.4	939	1329.2	70.5	61-109	8.31	30
Dibenzofuran	ND	876	1279.2	68.5	913	1329.2	68.7	61-101	4.05	30
Diethyl phthalate	ND	839	1279.2	65.6	895	1329.2	67.4	63-105	6.46	30
Dimethyl phthalate	ND	834	1279.2	65.2	891	1329.2	67.0	64-104	6.55	30
Di-n-butyl phthalate	ND	967	1279.2	75.6	1040	1329.2	77.9	66-108	6.83	30
Di-n-octyl phthalate	ND	930	1279.2	72.7	1020	1329.2	76.5	53-126	8.86	30
Fluoranthene	23.9	980	1279.2	74.8	1010	1329.2	74.5	66-105	3.31	30
Fluorene	ND	870	1279.2	68.0	929	1329.2	69.9	62-101	6.58	30

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Collected: 11/08/2024
Date Received: 11/09/2024
Date Analyzed: 11/21/2024
Date Extracted: 11/18/2024

Duplicate Matrix Spike Summary Semivolatile Organic Compounds by GC-MS

Sample Name: SB-1_4-5_20241108
Laboratory Code: HN2409094-001
Analysis Method: EPA 8270E
Prep Method: EPA 3546

Units: µg/kg
Analysis Lab Lot: 2772682

Matrix Spike
QC-1770905-005

Duplicate Matrix Spike
QC-1770905-006

Analyte Name	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Hexachlorobenzene	ND	951	1279.2	74.3	1010	1329.2	75.7	61-104	5.70	30
Hexachlorobutadiene	ND	897	1279.2	70.1	951	1329.2	71.6	52-99	5.88	30
Hexachlorocyclopentadiene	ND	716	1279.2	56.0	735	1329.2	55.3	39-106	2.66	30
Hexachloroethane	ND	875	1279.2	68.4	943	1329.2	70.9	59-99	7.42	30
Indeno(1,2,3-cd) pyrene	8.45	880	1279.2	68.2	941	1329.2	70.2	57-114	6.62	30
Isophorone	ND	967	1279.2	75.6	967	1329.2	72.8	55-101	0.0551	30
Methylphenol, Total	ND	1360 S	2559.4	53.2 S	1410 S	2659.3	53.1 S	54-103	3.64	30
Naphthalene	ND	902	1279.2	70.5	962	1329.2	72.4	54-99	6.42	30
Nitrobenzene	ND	981	1279.2	76.7	1040	1329.2	78.2	53-100	5.77	30
n-Nitrosodi-n-propylamine	ND	953	1279.2	74.5	950	1329.2	71.5	52-104	0.348	30
N-Nitrosodiphenylamine	ND	837	1279.2	65.4	840	1329.2	63.2	61-104	0.410	30
Pentachlorophenol	ND	993	1279.2	77.6	1100	1329.2	82.9	35-100	10.4	30
Phenanthrene	10.6	940	1279.2	72.7	1040	1329.2	77.2	64-101	9.70	30
Phenol	ND	823	1279.2	64.3	854	1329.2	64.3	51-107	3.75	30
Pyrene	18.3	907	1279.2	69.6	993	1329.2	73.4	52-114	9.05	30
Pyridine	ND	631	1279.2	49.4	595	1329.2	44.8	40-84	5.95	30

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1763310-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA
Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	33.0	5.41	1	11/14/24 15:18	11/13/24 12:58	
1,2,4,5-Tetrachlorobenzene	ND U	333	7.69	1	11/14/24 15:18	11/13/24 12:58	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	167	23.9	1	11/14/24 15:18	11/13/24 12:58	
1-Methylnaphthalene	ND U	6.67	4.80	1	11/14/24 15:18	11/13/24 12:58	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	33.0	7.81	1	11/14/24 15:18	11/13/24 12:58	
2,3,4,6-Tetrachlorophenol	ND U	67.0	24.4	1	11/14/24 15:18	11/13/24 12:58	
2,4,5-Trichlorophenol	ND U	33.0	19.8	1	11/14/24 15:18	11/13/24 12:58	
2,4,6-Trichlorophenol	ND U	33.0	8.87	1	11/14/24 15:18	11/13/24 12:58	
2,4-Dichlorophenol	ND U	33.0	17.9	1	11/14/24 15:18	11/13/24 12:58	
2,4-Dimethylphenol	ND U	33.3	17.1	1	11/14/24 15:18	11/13/24 12:58	
2,4-Dinitrophenol	ND U	333	244	1	11/14/24 15:18	11/13/24 12:58	
2,4-Dinitrotoluene (2,4-DNT)	ND U	33.3	21.6	1	11/14/24 15:18	11/13/24 12:58	
2,6-Dinitrotoluene (2,6-DNT)	ND U	33.0	8.51	1	11/14/24 15:18	11/13/24 12:58	
2-Chloronaphthalene	ND U	6.67	4.66	1	11/14/24 15:18	11/13/24 12:58	
2-Chlorophenol	ND U	33.0	21.8	1	11/14/24 15:18	11/13/24 12:58	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	33.0	27.8	1	11/14/24 15:18	11/13/24 12:58	
2-Methylnaphthalene	ND U	6.67	3.39	1	11/14/24 15:18	11/13/24 12:58	
2-Methylphenol (o-Cresol)	ND U	33.0	9.01	1	11/14/24 15:18	11/13/24 12:58	
2-Nitroaniline	ND U	33.0	18.5	1	11/14/24 15:18	11/13/24 12:58	
2-Nitrophenol	ND U	33.0	9.50	1	11/14/24 15:18	11/13/24 12:58	
3&4-Methylphenol	ND U	33.0	18.2	1	11/14/24 15:18	11/13/24 12:58	
3,3'-Dichlorobenzidine	ND U	167	15.6	1	11/14/24 15:18	11/13/24 12:58	
3-Nitroaniline	ND U	33.0	19.4	1	11/14/24 15:18	11/13/24 12:58	
4-Bromophenyl phenyl ether (BDE-3)	ND U	33.0	18.3	1	11/14/24 15:18	11/13/24 12:58	
4-Chloro-3-methylphenol	ND U	33.0	9.50	1	11/14/24 15:18	11/13/24 12:58	
4-Chloroaniline	ND U	67.0	16.9	1	11/14/24 15:18	11/13/24 12:58	
4-Chlorophenyl phenylether	ND U	33.0	9.21	1	11/14/24 15:18	11/13/24 12:58	
4-Nitroaniline	ND U	167	51.7	1	11/14/24 15:18	11/13/24 12:58	
4-Nitrophenol	ND U	333	78.1	1	11/14/24 15:18	11/13/24 12:58	
Acenaphthene	ND U	6.67	4.82	1	11/14/24 15:18	11/13/24 12:58	
Acenaphthylene	ND U	6.67	5.78	1	11/14/24 15:18	11/13/24 12:58	
Acetophenone	ND U	33.0	5.22	1	11/14/24 15:18	11/13/24 12:58	
Anthracene	ND U	6.67	4.70	1	11/14/24 15:18	11/13/24 12:58	
Atrazine	ND U	33.0	19.5	1	11/14/24 15:18	11/13/24 12:58	
Benzaldehyde	ND U	67.0	51.2	1	11/14/24 15:18	11/13/24 12:58	
Benzo(a)anthracene	ND U	6.67	5.76	1	11/14/24 15:18	11/13/24 12:58	
Benzo(a)pyrene	5.33 J	6.67	4.09	1	11/14/24 15:18	11/13/24 12:58	
Benzo(b)fluoranthene	ND U	6.67	4.97	1	11/14/24 15:18	11/13/24 12:58	
Benzo(g,h,i)perylene	ND U	6.67	5.11	1	11/14/24 15:18	11/13/24 12:58	
Benzo(k)fluoranthene	ND U	6.67	5.05	1	11/14/24 15:18	11/13/24 12:58	

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1763310-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA
Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	33.0	21.1	1	11/14/24 15:18	11/13/24 12:58	
bis(2-Chloroethyl) ether	ND U	33.0	9.44	1	11/14/24 15:18	11/13/24 12:58	
Butyl benzyl phthalate	ND U	67.0	41.7	1	11/14/24 15:18	11/13/24 12:58	
Caprolactam	ND U	33.0	30.1	1	11/14/24 15:18	11/13/24 12:58	
Carbazole	ND U	33.0	9.82	1	11/14/24 15:18	11/13/24 12:58	
Chrysene	ND U	6.67	5.39	1	11/14/24 15:18	11/13/24 12:58	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	33.0	27.6	1	11/14/24 15:18	11/13/24 12:58	
Dibenz(a,h) anthracene	5.33 J	33.0	3.60	1	11/14/24 15:18	11/13/24 12:58	
Dibenzofuran	ND U	33.0	4.90	1	11/14/24 15:18	11/13/24 12:58	
Diethyl phthalate	ND U	33.0	11.3	1	11/14/24 15:18	11/13/24 12:58	
Dimethyl phthalate	ND U	33.0	6.50	1	11/14/24 15:18	11/13/24 12:58	
Di-n-butyl phthalate	ND U	33.0	20.4	1	11/14/24 15:18	11/13/24 12:58	
Di-n-octyl phthalate	ND U	33.0	28.8	1	11/14/24 15:18	11/13/24 12:58	
Fluoranthene	ND U	6.67	3.20	1	11/14/24 15:18	11/13/24 12:58	
Fluorene	ND U	6.67	4.84	1	11/14/24 15:18	11/13/24 12:58	
Hexachlorobenzene	ND U	33.0	9.70	1	11/14/24 15:18	11/13/24 12:58	
Hexachlorobutadiene	ND U	33.0	7.85	1	11/14/24 15:18	11/13/24 12:58	
Hexachlorocyclopentadiene	ND U	33.0	31.6	1	11/14/24 15:18	11/13/24 12:58	
Hexachloroethane	ND U	33.0	13.8	1	11/14/24 15:18	11/13/24 12:58	
Indeno(1,2,3-cd) pyrene	6.00 J	6.67	4.64	1	11/14/24 15:18	11/13/24 12:58	
Isophorone	ND U	167	6.51	1	11/14/24 15:18	11/13/24 12:58	
Methylphenol, Total	ND U	67.0	9.01	1	11/14/24 15:18	11/13/24 12:58	
Naphthalene	ND U	6.67	4.26	1	11/14/24 15:18	11/13/24 12:58	
Nitrobenzene	ND U	167	11.2	1	11/14/24 15:18	11/13/24 12:58	
n-Nitrosodi-n-propylamine	ND U	33.0	5.50	1	11/14/24 15:18	11/13/24 12:58	
N-Nitrosodiphenylamine	ND U	33.0	19.3	1	11/14/24 15:18	11/13/24 12:58	
Pentachlorophenol	ND U	33.0	26.5	1	11/14/24 15:18	11/13/24 12:58	
Phenanthrene	ND U	6.67	3.10	1	11/14/24 15:18	11/13/24 12:58	
Phenol	ND U	33.0	16.7	1	11/14/24 15:18	11/13/24 12:58	
Pyrene	3.33 J	6.67	3.33	1	11/14/24 15:18	11/13/24 12:58	
Pyridine	ND U	167	65.6	1	11/14/24 15:18	11/13/24 12:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	80.9	48 - 94	11/14/24 15:18	
2-Fluorobiphenyl	66.7	50 - 103	11/14/24 15:18	
2-Fluorophenol	74.5	43 - 105	11/14/24 15:18	
4-Terphenyl-d14	70.2	55 - 111	11/14/24 15:18	
Nitrobenzene-d5	71.1	47 - 100	11/14/24 15:18	
Phenol-d6	74.5	49 - 110	11/14/24 15:18	

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1770905-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA
Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,1'-Biphenyl (BZ-0)	ND U	33.0	5.41	1	11/21/24 01:30	11/18/24 09:38	
1,2,4,5-Tetrachlorobenzene	ND U	333	7.69	1	11/21/24 01:30	11/18/24 09:38	
1,4-Dioxane (1,4- Diethyleneoxide)	ND U	167	23.9	1	11/21/24 01:30	11/18/24 09:38	
1-Methylnaphthalene	ND U	6.67	4.80	1	11/21/24 01:30	11/18/24 09:38	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	ND U	33.0	7.81	1	11/21/24 01:30	11/18/24 09:38	
2,3,4,6-Tetrachlorophenol	ND U	67.0	24.4	1	11/21/24 01:30	11/18/24 09:38	
2,4,5-Trichlorophenol	ND U	33.0	19.8	1	11/21/24 01:30	11/18/24 09:38	
2,4,6-Trichlorophenol	ND U	33.0	8.87	1	11/21/24 01:30	11/18/24 09:38	
2,4-Dichlorophenol	ND U	33.0	17.9	1	11/21/24 01:30	11/18/24 09:38	
2,4-Dimethylphenol	ND U	33.3	17.1	1	11/21/24 01:30	11/18/24 09:38	
2,4-Dinitrophenol	ND U	333	244	1	11/21/24 01:30	11/18/24 09:38	
2,4-Dinitrotoluene (2,4-DNT)	ND U	33.3	21.6	1	11/21/24 01:30	11/18/24 09:38	
2,6-Dinitrotoluene (2,6-DNT)	ND U	33.0	8.51	1	11/21/24 01:30	11/18/24 09:38	
2-Chloronaphthalene	ND U	6.67	4.66	1	11/21/24 01:30	11/18/24 09:38	
2-Chlorophenol	ND U	33.0	21.8	1	11/21/24 01:30	11/18/24 09:38	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	ND U	33.0	27.8	1	11/21/24 01:30	11/18/24 09:38	
2-Methylnaphthalene	ND U	6.67	3.39	1	11/21/24 01:30	11/18/24 09:38	
2-Methylphenol (o-Cresol)	ND U	33.0	9.01	1	11/21/24 01:30	11/18/24 09:38	
2-Nitroaniline	ND U	33.0	18.5	1	11/21/24 01:30	11/18/24 09:38	
2-Nitrophenol	ND U	33.0	9.50	1	11/21/24 01:30	11/18/24 09:38	
3&4-Methylphenol	ND U	33.0	18.2	1	11/21/24 01:30	11/18/24 09:38	
3,3'-Dichlorobenzidine	ND U	167	15.6	1	11/21/24 01:30	11/18/24 09:38	
3-Nitroaniline	ND U	33.0	19.4	1	11/21/24 01:30	11/18/24 09:38	
4-Bromophenyl phenyl ether (BDE-3)	ND U	33.0	18.3	1	11/21/24 01:30	11/18/24 09:38	
4-Chloro-3-methylphenol	ND U	33.0	9.50	1	11/21/24 01:30	11/18/24 09:38	
4-Chloroaniline	ND U	67.0	16.9	1	11/21/24 01:30	11/18/24 09:38	
4-Chlorophenyl phenylether	ND U	33.0	9.21	1	11/21/24 01:30	11/18/24 09:38	
4-Nitroaniline	ND U	167	51.7	1	11/21/24 01:30	11/18/24 09:38	
4-Nitrophenol	ND U	333	78.1	1	11/21/24 01:30	11/18/24 09:38	
Acenaphthene	ND U	6.67	4.82	1	11/21/24 01:30	11/18/24 09:38	
Acenaphthylene	ND U	6.67	5.78	1	11/21/24 01:30	11/18/24 09:38	
Acetophenone	ND U	33.0	5.22	1	11/21/24 01:30	11/18/24 09:38	
Anthracene	ND U	6.67	4.70	1	11/21/24 01:30	11/18/24 09:38	
Atrazine	ND U	33.0	19.5	1	11/21/24 01:30	11/18/24 09:38	
Benzaldehyde	ND U	67.0	51.2	1	11/21/24 01:30	11/18/24 09:38	
Benzo(a)anthracene	ND U	6.67	5.76	1	11/21/24 01:30	11/18/24 09:38	
Benzo(a)pyrene	ND U	6.67	4.09	1	11/21/24 01:30	11/18/24 09:38	
Benzo(b)fluoranthene	ND U	6.67	4.97	1	11/21/24 01:30	11/18/24 09:38	
Benzo(g,h,i)perylene	ND U	6.67	5.11	1	11/21/24 01:30	11/18/24 09:38	
Benzo(k)fluoranthene	ND U	6.67	5.05	1	11/21/24 01:30	11/18/24 09:38	

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID
Sample Name: Method Blank
Lab Code: QC-1770905-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA

Units: µg/kg

Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
bis(2-Chloroethoxy)methane	ND U	33.0	21.1	1	11/21/24 01:30	11/18/24 09:38	
bis(2-Chloroethyl) ether	ND U	33.0	9.44	1	11/21/24 01:30	11/18/24 09:38	
Butyl benzyl phthalate	ND U	67.0	41.7	1	11/21/24 01:30	11/18/24 09:38	
Caprolactam	ND U	33.0	30.1	1	11/21/24 01:30	11/18/24 09:38	
Carbazole	ND U	33.0	9.82	1	11/21/24 01:30	11/18/24 09:38	
Chrysene	ND U	6.67	5.39	1	11/21/24 01:30	11/18/24 09:38	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	ND U	33.0	27.6	1	11/21/24 01:30	11/18/24 09:38	
Dibenz(a,h) anthracene	ND U	33.0	3.60	1	11/21/24 01:30	11/18/24 09:38	
Dibenzofuran	ND U	33.0	4.90	1	11/21/24 01:30	11/18/24 09:38	
Diethyl phthalate	ND U	33.0	11.3	1	11/21/24 01:30	11/18/24 09:38	
Dimethyl phthalate	ND U	33.0	6.50	1	11/21/24 01:30	11/18/24 09:38	
Di-n-butyl phthalate	ND U	33.0	20.4	1	11/21/24 01:30	11/18/24 09:38	
Di-n-octyl phthalate	ND U	33.0	28.8	1	11/21/24 01:30	11/18/24 09:38	
Fluoranthene	ND U	6.67	3.20	1	11/21/24 01:30	11/18/24 09:38	
Fluorene	ND U	6.67	4.84	1	11/21/24 01:30	11/18/24 09:38	
Hexachlorobenzene	ND U	33.0	9.70	1	11/21/24 01:30	11/18/24 09:38	
Hexachlorobutadiene	ND U	33.0	7.85	1	11/21/24 01:30	11/18/24 09:38	
Hexachlorocyclopentadiene	ND U	33.0	31.6	1	11/21/24 01:30	11/18/24 09:38	
Hexachloroethane	ND U	33.0	13.8	1	11/21/24 01:30	11/18/24 09:38	
Indeno(1,2,3-cd) pyrene	ND U	6.67	4.64	1	11/21/24 01:30	11/18/24 09:38	
Isophorone	ND U	167	6.51	1	11/21/24 01:30	11/18/24 09:38	
Methylphenol, Total	ND U	67.0	9.01	1	11/21/24 01:30	11/18/24 09:38	
Naphthalene	ND U	6.67	4.26	1	11/21/24 01:30	11/18/24 09:38	
Nitrobenzene	ND U	167	11.2	1	11/21/24 01:30	11/18/24 09:38	
n-Nitrosodi-n-propylamine	ND U	33.0	5.50	1	11/21/24 01:30	11/18/24 09:38	
N-Nitrosodiphenylamine	ND U	33.0	19.3	1	11/21/24 01:30	11/18/24 09:38	
Pentachlorophenol	ND U	33.0	26.5	1	11/21/24 01:30	11/18/24 09:38	
Phenanthrene	ND U	6.67	3.10	1	11/21/24 01:30	11/18/24 09:38	
Phenol	ND U	33.0	16.7	1	11/21/24 01:30	11/18/24 09:38	
Pyrene	ND U	6.67	3.33	1	11/21/24 01:30	11/18/24 09:38	
Pyridine	ND U	167	65.6	1	11/21/24 01:30	11/18/24 09:38	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	67.2	48 - 94	11/21/24 01:30	
2-Fluorobiphenyl	67.3	50 - 103	11/21/24 01:30	
2-Fluorophenol	75.7	43 - 105	11/21/24 01:30	
4-Terphenyl-d14	72.8	55 - 111	11/21/24 01:30	
Nitrobenzene-d5	70.3	47 - 100	11/21/24 01:30	
Phenol-d6	76.9	49 - 110	11/21/24 01:30	

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/14/2024
Date Extracted:11/13/2024

Laboratory Control Sample Summary Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Units:µg/kg
Analysis Lab Lot:2757722

QC-1763310-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1'-Biphenyl (BZ-0)	881	1333	66.1	57-101
1,2,4,5-Tetrachlorobenzene	869	1333	65.2	54-98
1-Methylnaphthalene	889	1333	66.7	56-100
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	963	1333	72.2	50-101
2,3,4,6-Tetrachlorophenol	913	1333	68.5	48-103
2,4,5-Trichlorophenol	919	1333	68.9	54-98
2,4,6-Trichlorophenol	940	1333	70.5	56-97
2,4-Dichlorophenol	914	1333	68.6	54-99
2,4-Dimethylphenol	1040	1333	78.1	47-102
2,4-Dinitrophenol	1090	1333	81.9	10-100
2,4-Dinitrotoluene (2,4-DNT)	958	1333	71.9	62-105
2,6-Dinitrotoluene (2,6-DNT)	937	1333	70.3	62-103
2-Chloronaphthalene	897	1333	67.3	57-101
2-Chlorophenol	930	1333	69.8	52-102
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	1090	1333	81.8	42-104
2-Methylnaphthalene	933	1333	70.0	55-102
2-Methylphenol (o-Cresol)	931	1333	69.8	54-103
2-Nitroaniline	1010	1333	76.0	57-103
2-Nitrophenol	1060	1333	79.7	52-102
3&4-Methylphenol	911	1333	68.4	56-103
3,3'-Dichlorobenzidine	811	1333	60.8	41-91
3-Nitroaniline	830	1333	62.3	35-107
4-Bromophenyl phenyl ether (BDE-3)	985	1333	73.9	63-104
4-Chloro-3-methylphenol	918	1333	68.9	57-103
4-Chloroaniline	873	1333	65.5	32-99
4-Chlorophenyl phenylether	906	1333	68.0	62-100
4-Nitroaniline	797	1333	59.8	19-124
4-Nitrophenol	923	1333	69.3	44-106
Acenaphthene	901	1333	67.6	60-101
Acenaphthylene	903	1333	67.7	59-101
Acetophenone	897	1333	67.3	54-102
Anthracene	971	1333	72.8	63-96
Atrazine	939	1333	70.4	60-110
Benzaldehyde	733	1333	55.0	10-143
Benzo(a)anthracene	931	1333	69.9	66-102
Benzo(a)pyrene	936	1333	70.2	66-105
Benzo(b)fluoranthene	923	1333	69.2	67-105
Benzo(g,h,i)perylene	930	1333	69.8	59-110
Benzo(k)fluoranthene	895	1333	67.1 S	68-106

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/14/2024
Date Extracted:11/13/2024

Laboratory Control Sample Summary Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Units:µg/kg
Analysis Lab Lot:2757722

QC-1763310-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
bis(2-Chloroethoxy)methane	963	1333	72.2	54-102
bis(2-Chloroethyl) ether	882	1333	66.2	51-101
Butyl benzyl phthalate	874	1333	65.6	59-107
Caprolactam	906	1333	68.0	49-103
Carbazole	951	1333	71.3	63-103
Chrysene	885	1333	66.4	66-105
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	898	1333	67.4	63-101
Dibenz(a,h) anthracene	936	1333	70.2	61-109
Dibenzofuran	921	1333	69.1	61-101
Diethyl phthalate	899	1333	67.4	63-105
Dimethyl phthalate	887	1333	66.6	64-104
Di-n-butyl phthalate	975	1333	73.1	66-108
Di-n-octyl phthalate	932	1333	69.9	53-126
Fluoranthene	959	1333	72.0	66-105
Fluorene	913	1333	68.5	62-101
Hexachlorobenzene	981	1333	73.6	61-104
Hexachlorobutadiene	934	1333	70.1	52-99
Hexachlorocyclopentadiene	787	1333	59.0	39-106
Hexachloroethane	957	1333	71.8	59-99
Indeno(1,2,3-cd) pyrene	1030	1333	77.5	57-114
Isophorone	969	1333	72.7	55-101
Methylphenol, Total	1840	2667	69.1	54-103
Naphthalene	909	1333	68.2	54-99
Nitrobenzene	957	1333	71.8	53-100
n-Nitrosodi-n-propylamine	925	1333	69.4	52-104
N-Nitrosodiphenylamine	972	1333	72.9	61-104
Pentachlorophenol	936	1333	70.2	35-100
Phenanthrene	957	1333	71.8	64-101
Phenol	909	1333	68.2	51-107
Pyrene	878	1333	65.9	62-114
Pyridine	580	1333	43.5	40-84

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/21/2024
Date Extracted:11/18/2024

Laboratory Control Sample Summary Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Units:µg/kg
Analysis Lab Lot:2772682

QC-1770905-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1'-Biphenyl (BZ-0)	989	1333	74.2	57-101
1,2,4,5-Tetrachlorobenzene	967	1333	72.5	54-98
1-Methylnaphthalene	1000	1333	75.3	56-100
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	1010	1333	76.0	50-101
2,3,4,6-Tetrachlorophenol	1040	1333	78.1	48-103
2,4,5-Trichlorophenol	982	1333	73.7	54-98
2,4,6-Trichlorophenol	953	1333	71.5	56-97
2,4-Dichlorophenol	1020	1333	76.5	54-99
2,4-Dimethylphenol	1080	1333	81.2	47-102
2,4-Dinitrophenol	891	1333	66.9	10-100
2,4-Dinitrotoluene (2,4-DNT)	1010	1333	75.6	62-105
2,6-Dinitrotoluene (2,6-DNT)	979	1333	73.5	62-103
2-Chloronaphthalene	952	1333	71.4	57-101
2-Chlorophenol	971	1333	72.9	52-102
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	1140	1333	85.3	42-104
2-Methylnaphthalene	1020	1333	76.8	55-102
2-Methylphenol (o-Cresol)	1030	1333	77.3	54-103
2-Nitroaniline	899	1333	67.5	57-103
2-Nitrophenol	1010	1333	75.8	52-102
3&4-Methylphenol	1050	1333	79.1	56-103
3,3'-Dichlorobenzidine	887	1333	66.6	41-91
3-Nitroaniline	952	1333	71.4	35-107
4-Bromophenyl phenyl ether (BDE-3)	1100	1333	82.9	63-104
4-Chloro-3-methylphenol	989	1333	74.2	57-103
4-Chloroaniline	995	1333	74.6	32-99
4-Chlorophenyl phenylether	979	1333	73.4	62-100
4-Nitroaniline	951	1333	71.4	19-124
4-Nitrophenol	1060	1333	79.5	44-106
Acenaphthene	963	1333	72.3	60-101
Acenaphthylene	947	1333	71.1	59-101
Acetophenone	1020	1333	76.5	54-102
Anthracene	1090	1333	82.1	63-96
Atrazine	1010	1333	75.6	60-110
Benzaldehyde	946	1333	71.0	10-143
Benzo(a)anthracene	1020	1333	76.2	66-102
Benzo(a)pyrene	979	1333	73.4	66-105
Benzo(b)fluoranthene	1000	1333	75.0	67-105
Benzo(g,h,i)perylene	978	1333	73.4	59-110
Benzo(k)fluoranthene	1000	1333	75.4	68-106

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order: HN2409094
Date Analyzed: 11/21/2024
Date Extracted: 11/18/2024

Laboratory Control Sample Summary Semivolatile Organic Compounds by GC-MS

Analysis Method: EPA 8270E
Prep Method: EPA 3546

Units: µg/kg
Analysis Lab Lot: 2772682

QC-1770905-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
bis(2-Chloroethoxy)methane	1010	1333	76.0	54-102
bis(2-Chloroethyl) ether	1050	1333	79.0	51-101
Butyl benzyl phthalate	951	1333	71.4	59-107
Caprolactam	957	1333	71.8	49-103
Carbazole	1090	1333	82.1	63-103
Chrysene	1020	1333	76.3	66-105
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	1000	1333	75.1	63-101
Dibenz(a,h) anthracene	1010	1333	76.0	61-109
Dibenzofuran	968	1333	72.6	61-101
Diethyl phthalate	982	1333	73.7	63-105
Dimethyl phthalate	950	1333	71.3	64-104
Di-n-butyl phthalate	1090	1333	81.6	66-108
Di-n-octyl phthalate	958	1333	71.9	53-126
Fluoranthene	1110	1333	83.2	66-105
Fluorene	983	1333	73.8	62-101
Hexachlorobenzene	1100	1333	82.5	61-104
Hexachlorobutadiene	1000	1333	75.4	52-99
Hexachlorocyclopentadiene	875	1333	65.7	39-106
Hexachloroethane	1020	1333	76.5	59-99
Indeno(1,2,3-cd) pyrene	993	1333	74.5	57-114
Isophorone	1060	1333	79.2	55-101
Methylphenol, Total	2080	2667	78.2	54-103
Naphthalene	1020	1333	76.4	54-99
Nitrobenzene	1100	1333	82.3	53-100
n-Nitrosodi-n-propylamine	1100	1333	82.5	52-104
N-Nitrosodiphenylamine	1070	1333	80.6	61-104
Pentachlorophenol	1090	1333	82.0	35-100
Phenanthrene	1060	1333	79.5	64-101
Phenol	1010	1333	75.9	51-107
Pyrene	1020	1333	76.8	62-114
Pyridine	650	1333	48.8	40-84



Metals

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: Method Blank
Laboratory Code: QC-1763264-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	EPA 7471B	ND U	mg/kg	0.0200	0.0136	1	11/14/24 10:45	11/13/24 13:31	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: Method Blank
Laboratory Code: QC-1765802-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA

Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	EPA 6020B	ND U	mg/kg	0.250	0.0300	1	11/15/24 16:34	11/14/24 11:03	
Barium	EPA 6020B	ND U	mg/kg	0.250	0.230	1	11/15/24 16:34	11/14/24 11:03	
Cadmium	EPA 6020B	ND U	mg/kg	0.100	0.0150	1	11/15/24 16:34	11/14/24 11:03	
Chromium	EPA 6020B	ND U	mg/kg	0.250	0.110	1	11/15/24 16:34	11/14/24 11:03	
Lead	EPA 6020B	ND U	mg/kg	0.250	0.120	1	11/15/24 16:34	11/14/24 11:03	
Selenium	EPA 6020B	ND U	mg/kg	0.250	0.230	1	11/15/24 16:34	11/14/24 11:03	
Silver	EPA 6020B	ND U	mg/kg	0.250	0.0330	1	11/15/24 16:34	11/14/24 11:03	

QA/QC Report

Client:

Project:

Sample Matrix:

The Mannik & Smith Group, Inc.
Van Buren Industrial
SOIL/SOLID

Work Order:

Date Collected:

Date Received:

Date Analyzed:

Date Extracted:

HN2409094
11/08/2024
11/09/2024
11/14/2024
11/13/2024

Matrix Spike Summary
Metals

Sample Name:

Laboratory Code:

Analysis Method:

Prep Method:

SB-1_4-5_20241108
HN2409094-001
EPA 7471B
Method

Units: mg/kg

Analysis Lab Lot:

2749459

Matrix Spike
QC-1763264-004

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	0.0233	0.170	0.1421	104	75-125

QA/QC Report

Client:

Project:

Sample Matrix:

The Mannik & Smith Group, Inc.
Van Buren Industrial
SOIL/SOLID

Work Order:

Date Collected:

Date Received:

Date Analyzed:

Date Extracted:

HN2409094
11/08/2024
11/09/2024
11/14/2024
11/13/2024

Duplicate Matrix Spike Summary
Metals

Sample Name:

Laboratory Code:

Analysis Method:

Prep Method:

SB-1_4-5_20241108
HN2409094-001
EPA 7471B
Method

Units: mg/kg

Analysis Lab Lot:

2749459

Matrix Spike

Duplicate Matrix Spike

QC-1763264-004
QC-1763264-005

Analyte Name	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Mercury	0.0233	0.170	0.1421	104	0.164	0.13647	104	75-125	3.62	35

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/14/2024
Date Extracted:11/13/2024

Laboratory Control Sample Summary
Metals
Mercury

Analysis Method: EPA 7471B
Prep Method: Method

Units:mg/kg
Analysis Lab Lot:2749459

Sample Name	Laboratory Code	Result	Spike Amount	% Rec	% Rec Limits
Laboratory Control Sample	QC-1763264-002	0.167	0.1665	100	80-120

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/15/2024
Date Extracted:11/14/2024

Laboratory Control Sample Summary
Metals

Analysis Method: EPA 6020B
Prep Method: EPA 3050B

Units:mg/kg
Analysis Lab Lot:2757455

QC-1765802-002

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.77	5	95.3	80-120
Barium	4.96	5	99.1	80-120
Cadmium	4.97	5	99.3	80-120
Chromium	4.89	5	97.9	80-120
Lead	5.13	5	102	80-120
Selenium	4.85	5	96.9	80-120
Silver	4.87	5	97.4	80-120



General Chemistry

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: Method Blank
Laboratory Code: QC-1763277-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Percent Moisture	EPA 3550C	ND U	%	0.1	0.1	1	11/13/24 17:33	NA	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: Method Blank
Laboratory Code: QC-1763281-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Percent Moisture	EPA 3550C	ND U	%	0.1	0.1	1	11/13/24 17:33	NA	

Analytical Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Sample Name: Method Blank
Laboratory Code: QC-1768515-001

Work Order: HN2409094
Date Collected: NA
Date Received: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Chloride	SM 4500-Cl E-2011	ND U	mg/kg	10.0	8.00	1	11/15/24 16:10	11/15/24 16:03	

QA/QC Report

Client:

Project:

Sample Matrix:

The Mannik & Smith Group, Inc.
Van Buren Industrial
SOIL/SOLID

Work Order:

Date Collected:

Date Received:

Date Analyzed:

Date Extracted:

HN2409094
11/08/2024
11/09/2024
11/18/2024
11/15/2024

Matrix Spike Summary
General Chemistry Parameters

Sample Name:

Laboratory Code:

Analysis Method:

Prep Method:

SB-1_4-5_20241108
HN2409094-001
SM 4500-Cl E-2011
Method

Units: mg/kg

Analysis Lab Lot:

2757664

Matrix Spike
QC-1768515-005

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chloride	ND	497	498.01	98.2	91-118

QA/QC Report

Client:

Project:

Sample Matrix:

The Mannik & Smith Group, Inc.
Van Buren Industrial
SOIL/SOLID

Work Order:

Date Collected:

Date Received:

Date Analyzed:

Date Extracted:

HN2409094
11/08/2024
11/09/2024
11/18/2024
11/15/2024

Duplicate Matrix Spike Summary
General Chemistry Parameters

Sample Name:

Laboratory Code:

Analysis Method:

Prep Method:

SB-1_4-5_20241108
HN2409094-001
SM 4500-Cl E-2011
Method

Units: mg/kg

Analysis Lab Lot:

2757664

Matrix Spike

Duplicate Matrix Spike

QC-1768515-005
QC-1768515-006

Analyte Name	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Chloride	ND	497	498.01	98.2	494	504.03	96.5	91-118	0.583	10

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/13/2024

Laboratory Control Sample Summary
General Chemistry Parameters
Percent Moisture

Analysis Method: EPA 3550C

Units:%
Analysis Lab Lot:2748405

Sample Name	Laboratory Code	Result	Spike Amount	% Rec	% Rec Limits
Laboratory Control Sample	QC-1763277-002	100	100	100	98-102

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/13/2024

Laboratory Control Sample Summary
General Chemistry Parameters
Percent Moisture

Analysis Method: EPA 3550C

Units:%
Analysis Lab Lot:2748412

Sample Name	Laboratory Code	Result	Spike Amount	% Rec	% Rec Limits
Laboratory Control Sample	QC-1763281-002	100	100	100	98-102

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/15/2024
Date Extracted:11/15/2024

Laboratory Control Sample Summary
General Chemistry Parameters
Chloride

Analysis Method: SM 4500-Cl E-2011
Prep Method: Method

Units:mg/kg
Analysis Lab Lot:2757664

Sample Name	Laboratory Code	Result	Spike Amount	% Rec	% Rec Limits
Laboratory Control Sample	QC-1768515-002	102	100	102	91-118

QA/QC Report

Client: The Mannik & Smith Group, Inc.
Project: Van Buren Industrial
Sample Matrix: SOIL/SOLID

Work Order:HN2409094
Date Analyzed:11/15/2024
Date Extracted:11/15/2024

Laboratory Control Sample Summary
General Chemistry Parameters
Chloride

Analysis Method: SM 4500-Cl E-2011
Prep Method: Method

Units:mg/kg
Analysis Lab Lot:2757664

Sample Name	Laboratory Code	Result	Spike Amount	% Rec	% Rec Limits
Laboratory Control Sample	QC-1768515-003	517	500	103	91-118

APPENDIX C

PHOTOLOG



401.2401193
Van Buren RACER Property
Photographs taken by: Eddie Bosas on November 5-8, 2024



Soil bucket for sampling
SB-4_4-5_11082024



Test pit that was dug for gathering sample
SB-4_4-5_11082024



Soil bucket for sampling
SB-6_4-5_11082024



Test pit that was dug for gathering sample
SB-6_4-5_11082024



Soil bucket for sampling
SB-10_4-5_11082024



Test pit that was dug for gathering sample
SB-10_4-5_11082024

401.2401193
Van Buren RACER Property
Photographs taken by: Eddie Bosas on November 5-8, 2024



Soil bucket for sampling
SB-1_4-5_11082024



Test pit that was dug for gathering sample
SB-1_4-5_11082024



Soil bucket for sampling
SB-13_4-5_11082024



Test pit that was dug for gathering sample
SB-13_4-5_11082024



Soil bucket for sampling
SB-3_4-5_11082024



Test pit that was dug for gathering sample
SB-3_4-5_11082024

401.2401193
Van Buren RACER Property
Photographs taken by: Eddie Bosas on November 5-8, 2024



Soil bucket for sampling
SB-11_4-5_11082024



Test pit that was dug for gathering sample
SB-11_4-5_11082024