Final
Administration Area Soil Vapor Investigation
Work Plan
Revision 1

Fort Wingate Depot Activity
McKinley County, New Mexico

January 29, 2025

Contract No.: W912PP22-D0014
Task Order: W912PP23F0040

Prepared for:

U.S. Army Corps of Engineers,
Albuquerque District
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14. ABSTRACT

This Administration Area Soil Vapor Investigation Work Plan describes additional investigation activities within the Administration Area within Parcel 11 at Fort Wingate Depot Activity, McKinley County, New Mexico. This document has been prepared for submission to the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB), as required by Section VII.F.1 of the Resource Conservation and Recovery Act (RCRA) Permit, No. NM6213820974 and in response to a Notice of Disapproval dated January 25, 2022 for Final Northern Area Groundwater RCRA Facility Investigation Report and a Notice of Disapproval dated July 25, 2022 for Revised Final Northern Area Groundwater RCRA Facility Investigation Report.

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Final Administration Area Soil Vapor Investigation Work Plan, Revision 1
Fort Wingate Depot Activity, McKinley County, NM

40 CFR 270.11

January 2025

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Cheryl Frischkorn

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Notes:

BEC	=	Base Environmental Coordinator
BIA	=	Bureau of Indian Affairs
BIA-NRO	=	Bureau of Indian Affairs – Navajo Regional Office
BRAC	=	U.S. Army Base Realignment and Closure Division
COR	=	Contracting Officer's Representative
FWDA BEC	=	Fort Wingate Depot Activity Base Realignment and Closure Environmental Coordinator
NM	=	New Mexico
NMED HWB	=	New Mexico Environment Department, Hazardous Waste Bureau
NN	=	Navajo Nation
OH	=	Ohio
PDT	=	Project Delivery Team
USACE	=	U.S. Army Corps of Engineers
USEPA	=	U.S. Environmental Protection Agency

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EXECUTIVE SUMMARY

ES.1 EXECUTIVE SUMMARY INTRODUCTION

This Administration Area Soil Vapor Investigation Work Plan (Work Plan) was prepared by Parsons Government Services, Inc. (Parsons) for the Army for submission to the New Mexico Environment Department (NMED) Hazardous Waste Bureau, as required by Section VII.H.1.a of the Resource Conservation and Recovery Act (RCRA) permit (NM 6213820974) effective December 31, 2005, and last revised February 2015 (NMED, 2015).

This Work Plan has been written to address NMED (2022a) comments #27, #42, and #50 from January 25, 2022, NMED (2022b) comments #17 and #50 from July 25, 2022, NMED (2023a) comment #18 from March 27, 2023, and NMED (2023b) comment #25 from October 19, 2023 (see **Appendix A**) on the Northern Area Groundwater RFI (HDR, 2023) requesting a separate work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building 5 and Building 6. Buildings 5 and 6 will be demolished prior to the implementation of this work plan.

ES.2 PURPOSE AND SCOPE

The purpose of this Work Plan is to:

1. Address NMED's directive to assess the extent of the soil vapor plume and the potential for vapor intrusion in the Administration Area;
2. Evaluate existing data and identify data gaps; and
3. Present a sampling approach to address data gaps to complete the Administration Area Soil Vapor Investigation Report.

This Work Plan contains investigative information for two solid waste management units (SWMUs) and one area of concern (AOC) in Parcel 11:

- SWMU 5: Building 5;
- SWMU 45: Building 6; and
- AOC 49: Structure 39.

This Work Plan has been prepared separately from the Northern Area Groundwater RCRA Facility Investigation (RFI), as agreed in NMED's (2022a, 2022b) disapproval letters (**Appendix A**). Investigation activities that are not related to the soil vapor investigation in the Administration Area are discussed in the Parcel 11 Phase 2 RFI Work Plan.

ES.3 PROPOSED INVESTIGATIONS

Existing data have been evaluated to identify any remaining soil vapor data gaps that must be addressed in order to refine the previous soil contamination data, address the soil vapor migration pathways, and evaluate potential for vapor intrusion at potential future buildings in the Administration Area.

To assess the extent of the soil vapor plume and the potential for vapor intrusion in the Administration Area, 11 soil vapor probes will be installed near Building 5, Building 6, and Structure 39. Two rounds of soil vapor samples will be collected and analyzed for the following:

- Total Petroleum Hydrocarbon (TPH); and
- Volatile Organic Compounds (VOCs)

Although not the focus of this Work Plan, soil samples will also be collected and analyzed for TPH, VOCs, and total lead. As soil samples can't be used to quantitatively evaluate vapor intrusion, the soil analytical results will be used in the Parcel 11 Phase 2 RFI.

Section 2 summarizes data from previous investigations, **Section 3** summarizes the investigation rationale, and **Section 4** summarizes the proposed investigation activities. Parsons, under the direction of the USACE, will conduct the soil vapor investigation activities in accordance with the RCRA permit (NMED, 2015) and this Work Plan, once approved by the NMED.

ES.4 POST-IMPLEMENTATION REPORTING

The activities conducted as part of this Work Plan will be documented in a table, so that the need for step-out samples can be evaluated. If the preliminary data exceed screening levels, step-out sampling may be performed.

Once both rounds of soil vapor sampling and any step-out sampling are complete, the results will be summarized in a report. The report will contain a detailed schedule of completed activities, a summary of the analytical data, and a comparison of the analytical data to the appropriate screening levels. As part of the report, a qualitative vapor intrusion pathway evaluation will be conducted to assess the potential for exposure to the volatiles detected in soil vapor via inhalation of indoor air.

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ACRONYMS AND ABBREVIATIONS

≤	Less than or equal to
%	Percent
%R	Percent recovery
1,2-DCA	1,2-dichloroethane
AHA	Activity Hazard Analysis
AOC	Area of Concern
APP	Accident Prevention Plan
Army	U.S. Department of the Army
BTEX	Benzene, toluene, ethylbenzene, and total xylenes
bgs	Below ground surface
BRAC(D)	Defense Base Realignment and Closure Act (Division)
COC	Chain of custody
COPC	Chemical of potential concern
DL	Detection limit
DOI	Department of the Interior
DPT	Direct push technology
DRO	Diesel-range organics
Eco	Eco & Associates
FWDA	Fort Wingate Depot Activity
GPS	Global Positioning System
GRO	Gasoline-range organics
HDR	HDR Environmental, Operations and Construction
Hg	Mercury
HQ	Hazard quotient
HWB	Hazardous Waste Bureau
ID	Identification
IDW	Investigation-derived waste
LCS	Laboratory control sample
LOD	Limit of detection
LOQ	Limit of quantitation
$\mu g/m^3$	Microgram(s) per cubic meter
µg/kg	Microgram(s) per kilogram
µg/L	microgram(s) per liter
mg/kg	Milligram(s) per kilogram
mmHg	Millimeter(s) of mercury
mL/min	Milliliter(s) per minute
MS	Matrix spike
MSL	Mean sea level

MTBE	Methyl tert-butyl ether
N/A	Not applicable
NAPL	Nonaqueous phase liquid
NMED	New Mexico Environment Department
ORO	oil-range organics
OSHA	Occupational Safety and Health Administration
Parsons	Parsons Government Services, Inc.
Permit	RCRA Permit NM 6213820974 for the FWDA Permit
PID	Photoionization detector
PPE	Personal protective equipment
ppmv	Part(s) per million by volume
QA	Quality assurance
QC	Quality control
QSM	Quality Systems Manual
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RPD	Relative percent difference
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
SWMU	Solid Waste Management Unit
TEAD	Tooele Army Depot
TIC	Tentatively identified compound
TPH	Total petroleum hydrocarbons
TPMC	TerranearPMC
U.S.	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
UST	Underground storage tank
VISL	Vapor intrusion Screening Level
VOC	Volatile organic compound
VMP	Vapor monitor probe
Work Plan	Administration Area Soil Vapor Investigation Work Plan

1.0 INTRODUCTION

This Administration Area Soil Vapor Investigation Work Plan (Work Plan) describes soil vapor investigation activities to be completed within the Administration Area at Fort Wingate Depot Activity (FWDA), in McKinley County, New Mexico (**Figure 1.1**). The potential impacts to be investigated by this Work Plan for the Administration Area are located entirely within Parcel 11 (**Figures 1.2 through 1.4**).

This Work Plan has been prepared for the Army for submission to the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB), as required by Section VII.H.1.a of the Resource Conservation and Recovery Act (RCRA) Permit (Permit) (NM 6213820974) for FWDA, which became effective December 31, 2005, and was most recently modified in February 2015 (NMED, 2015).

This Work Plan describes the soil vapor investigation to be completed in response to NMED comments received in the following disapproval and approval with modifications letters:

- First disapproval letter dated January 25, 2022 (NMED, 2022a) on the *Final Northern Area Groundwater RCRA Facility Investigation Report;*
- Second disapproval letter dated July 25, 2022 (NMED, 2022b) on the *Final Northern Area Groundwater RCRA Facility Investigation Report, Revision 1;*
- Third disapproval letter dated March 27, 2023 (NMED, 2023a) *Final Northern Area Groundwater RCRA Facility Investigation Report, Revision 2;* and
- Approval with Modification letter dated October 19, 2023 (NMED, 2023b) on the *Final Northern Area Groundwater RCRA Facility Investigation Report, Revision 3*.

This Work Plan also incorporates methodologies from the latest NMED (2022c) Risk Assessment Guidance for Site Investigations and Remediation. A Response to Comments for the NMED comments from the Disapproval letters that are related to soil vapor in the Administration Area is provided in **Appendix A**.

1.1 PURPOSE AND SCOPE

This Work Plan has been written in response to NMED (2022a) comments #27, #42, and #50 from January 25, 2022, NMED (2022b) comments #17 and #50 from July 25, 2022, NMED (2023a) comment #18 from March 27, 2023, and NMED (2023b) comment #25 from October 19, 2023 (see **Appendix A**) on the Northern Area Groundwater RFI (HDR, 2023) requesting a work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building 6. The purpose of this Work Plan is to identify any remaining soil vapor data gaps that must be addressed in order to refine the previous soil contamination data. This information will be used to address the soil vapor migration pathway, as well as to evaluate the potential for vapor intrusion from past releases of volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) at Building 5, Building 6, and Structure 39. This Work Plan presents a sampling approach to address those data gaps. In response to NMED's (2022a, 2022b, 2023a, 2023b) comments (**Appendix A**), this Work Plan has been prepared separately from the Northern Area Groundwater RCRA Facility Investigation (RFI). Investigation activities that are not related to the soil vapor investigation in the Administration Area are discussed in the Parcel 11 Phase 2 RFI Work Plan.

1.1.1 Scope of Activities

The scope of this Work Plan includes the following:

- Address NMED's directive to assess the extent of the soil vapor plume and the potential for vapor intrusion in the Administration Area,
- Evaluate existing data and identify data gaps (see **Section 2.5**), and
- Present a sampling approach to address data gaps to complete the Administration Area Soil Vapor Investigation Report (see **Section 3.0**).

1.2 DOCUMENT ORGANIZATION

The remainder of this Work Plan is organized into the following sections.

- Section 2 presents FWDA installation background information, and describes previous investigations, and general site conditions.
- Section 3 describes the proposed site-specific investigation, including sample locations and the rationale for the sample locations.
- Section 4 presents general investigation and data validation methods.
- Section 5 summarizes how the data will be evaluated and reported.
- Section 6 provides the approximate project schedule.
- Section 7 presents references for documents cited in this Work Plan.

2.0 BACKGROUND

This section describes conditions at FWDA and summarizes historical information and findings of previous investigations in the Administration Area.

2.1 SITE DESCRIPTION AND OPERATIONAL HISTORY

The FWDA installation is located approximately eight miles east of Gallup, New Mexico, and currently occupies approximately 15,277 acres of land in McKinley County, New Mexico (**Figure 1.1**). The installation is almost entirely surrounded by federally owned or administered lands, including both national forest and tribal lands.

The FWDA installation (the installation) was originally established by the U.S. Department of the Army (Army) in 1862 at the southern edge of the Navajo territory. In 1918, the mission of FWDA changed from tribal activities to World War I related activities. Beginning in 1940, FWDA's mission was primarily to receive, store, maintain, and ship explosives and military munitions, as well as to disassemble and dispose of unserviceable or obsolete explosives and military munitions. In 1975, the installation came under the administrative command of Tooele Army Depot (TEAD), located near Salt Lake City, Utah.

In January 1993, the active mission of FWDA ceased, and the installation was closed as a result of the Defense Base Realignment and Closure Act of 1990 (BRAC). Beginning in 2002, the Army reassigned many FWDA functions to the BRAC Division (BRACD), including caretaker duties, property transfer, and performance of environmental compliance and remediation activities. Command and control responsibilities were retained by TEAD until January 31, 2008, when these responsibilities were transferred to White Sands Missile Range (AMEC, 2013).

The installation is currently undergoing environmental characterization and remediation activities prior to final property transfer and reuse. Since the 1980s, when FWDA became subject to Permit requirements, it has transferred 8,351 acres to the U.S. Department of the Interior (DOI).

2.2 SITE CONDITIONS

2.2.1 Climate

Northwestern New Mexico is characterized by a semi-arid continental climate. Mean annual rainfall for the area ranges between 10 and 16 inches but can fluctuate from 8 to 20 inches depending on elevation. Most of the precipitation in this region occurs as rain or hail in summer thunderstorms from May through October. Some additional precipitation falls in the form of light winter snow. Spring and fall droughts are common (USACE, 2014).

The average seasonal temperatures also vary with elevation and topographic features. Average temperatures in winter are about 27 degrees Fahrenheit (°F) and about 70°F in summer. Extreme temperatures range from -30°F in winter to 100°F in summer. During winter, daily temperatures can fluctuate as much as 70°F in a 24-hour period. There are approximately 100 to 150 frost-free days during the year from the middle of May to the middle of October (USACE, 2014).

2.2.2 Topography

The elevation of FWDA ranges from approximately 6,660 feet above mean sea level (amsl) in the north to about 8,200 feet amsl in the south. Topographically, FWDA can be divided into three areas:

- The southwestern area where the north-to-south trending Nutria Monocline (also known as the Hogback) is present,
- The southern portion of the FWDA, which is characterized by the northern hill slopes of the Zuni Mountains, and
- The northern portion of the FWDA, which contains alluvial plains marked by bedrock remnants.

Drainages generally flow from south to north and follow the topography. However, many tributaries follow the regional trend, flowing from southwest to northeast. Drainages discharge to the South Fork of the Puerco River near the northern boundary of FWDA. During rainfall and snowmelt events, streams transport sediment to low-lying areas in the northern part of FWDA, creating an extensive alluvial deposit among remnants of bedrock (USACE, 2014).

The Administration Area is relatively flat, and the majority of the area is paved. Surface runoff drains into arroyos that flow only during precipitation events or pool locally in low areas where it evaporates or infiltrates (USACE, 2014).

2.2.3 Vegetation/Habitat

The Administration Area is primarily paved with asphalt, but some areas in the immediate vicinity are landscaped with grass and trees. The vegetation cover for the Administration Area includes moderate grasslands and sagebrush (USACE, 2014). Outside of the developed areas, there is potential habitat for antelope, prairie dogs, rattlesnakes, badgers, field mice, the occasional mountain lion or bear, and various other insects and animals.

2.2.4 Soils

The major soil types at FWDA are variants/complexes of sands, loams, clays, and rocks. These soils are reported as being relatively thin, and the parent bedrock is either at or near the surface in more than a quarter of the installation (USACE, 2014).

The primary soil type in the southern portion of Parcel 11 is the Aquima-Hawaikuh silt loams, and the primary soil type in the northern portion of Parcel 11 is the Rehobeth silty clay loam. A small area of Zia sandy loam is present in the western portion of the parcel, and a small area of Bamac extremely gravelly sandy loam is present on the eastern portion of the parcel (USACE, 2014).

2.2.5 Geology and Hydrogeology

The following is a brief description of the geology at FWDA and Parcel 11. A detailed description of the structural geology and stratigraphy can be found in the Parcel 11 RCRA Facility Investigation Report (USACE, 2014).

Recent alluvial sediments cover much of the Administration Area. These sediments consist predominately of silts and clays, with discontinuous bodies of sand and occasionally gravel. To the north of the developed portion of the Administration Area, the near surface sediments are dominated by the substantially sandier riverine deposits associated with the Puerco River (USACE, 2014).

A water bearing zone is present in the alluvium throughout Parcel 11. Groundwater is typically encountered at depths of 10 to 60 feet below ground surface (bgs) (USACE, 2014). Groundwater near Building 5, Building 6, and Structure 39 has been observed at 40-45 feet bgs during periodic groundwater monitoring events (Eco & Associates [Eco], 2023a,b).

Alluvial sediments are primarily underlain by Triassic mudstone and sandstone layers that dip to the northwest. However, in the western and southern portions of FWDA, Jurassic and Cretaceous sandstone and claystone layers are exposed along the Nutria Monocline, which is commonly known as "the Hogback." The Hogback is a steeply west dipping, north trending monoclinal fold (USACE, 2014).

2.3 HISTORICAL USES

This workplan focuses on potential VOC and TPH releases from Buildings 5 and 6, and Structure 39 (**Figure 1.4**). Each area is discussed in terms of the processes and activities involving chemicals of potential concern (COPCs) that were conducted at these locations.

2.3.1 Building 5 (SWMU 5)

Building 5 (SWMU 5; **Figure 1.4**) is a one-story brick building built in 1941. It is approximately 263 feet long by 68 feet wide. Building 5 was used for vehicle storage and maintenance operations. The building contained a hydraulic lift, a containment sump, grease rack, a truck lift, two battery charging racks, a washing/steam-cleaning rack, offices, and parts storage. A boiler is present in the basement on the east side of Building 5. This building will be demolished prior to performing the soil vapor investigation.

2.3.2 Building 6 (SWMU 45)

Building 6 (SWMU 45; **Figure 1.4**) is a one-story brick structure built in 1941. It is approximately 20 feet long by 20 feet wide. Building 6 was equipped with two gasoline dispensers, one kerosene dispenser, two 11,750-gallon gasoline underground storage tanks (USTs), one 11,750-gallon diesel fuel UST, and one 1,000-gallon kerosene UST. Fill pipes for the USTs were located along the railroad siding at the adjacent loading docks. As described in **Section 2.4.1**, the USTs and some of the associated piping were removed in 1993 (Envirotech, 1993). This building will be demolished prior to performing the soil vapor investigation.

2.3.3 Structure 39 (AOC 49)

AOC 49 (**Figure 1.4**) is adjacent to SWMU 45 and includes Structure 39, which is a reinforced concrete loading dock that was built in 1941. The loading dock consists of an approximately 60 feet long by 60 feet wide reinforced concrete ramp to allow for the unloading of railroad cars. There is no enclosed area available for human occupancy and use in Structure 39. No historical records were found that provide additional information on what was loaded/unloaded at Structure 39 (TPMC, 2009). Based on its location within the Administration Area near vehicle and equipment maintenance operations, and that the adjacent warehouses were used for the receipt and storage of various products and materials, TPMC (2009) assumed that Structure 39 was used to load and unload vehicles and equipment from railcars. Another loading dock with no enclosed area available for human occupancy and use (Structure 38) is adjacent to Structure 39 (**Figure 1.4**).

2.4 PREVIOUS INVESTIGATIONS

This section describes previous investigations and other remedial activities at Building 5, Building 6, and Structure 39 for VOCs and TPH in soil, soil vapor, and groundwater. Activities related to other contaminants are not described here.

Although groundwater monitoring wells have been installed and sampled in the Administration Area as far back as 1993, contaminant concentrations in groundwater have changed substantially over time. Only the most recent groundwater data are relevant to this current soil vapor investigation work plan; therefore, only the groundwater results from the most recent periodic groundwater monitoring events in April and October 2022 are discussed below. Soil and soil gas sample results are discussed below as they help to identify potential release areas and source zones.

Although numerous studies have been conducted in the Administration Area, much of the data can only be used qualitatively when evaluating the soil vapor migration pathway. Data directly related to soil vapor, such as PID readings and deep soil gas samples cannot be compared directly to NMED (2022c) or USEPA (2023a) screening levels protective of the vapor intrusion pathway (i.e., vapor intrusion screening levels or VISLs), but can be used to infer the location of the contaminant source. Groundwater data, which can be compared to VISLs, are available, but the aerial extent of these data is limited. Soil analytical data have also been collected, but there are no NMED (2022c) or USEPA (2023a,b) VISLs for soil.

As outlined in the following sections, the primary COPCs for soil vapor migration are TPH and the VOC 1,2-dichloroethane (1,2-DCA) resulting from releases from underground storage tanks (USTs). In the absence of applicable screening levels, the TPH Soil Screening Levels in NMED (2022c) Table 6-2 were used as order-of-magnitude indicators to evaluate soil contaminant concentrations. While this is not reflective of the full risk that soil contaminants may pose, these indicators are helpful to identify the source areas that warrant further investigation under this soil vapor investigation work plan. Based on the contents of the former USTs (described in **Section 2.4.1**), the relevant TPH Soil Screening Levels to be used as "source indicators" are the residential exposure values, for the following:

- Gasoline: 100 mg/kg, as measured by TPH as gasoline (TPHg), gasoline-range organics (GRO), or TPH-GRO, depending on how it was reported
- Diesel #2: 1,000 mg/kg, as measured by TPH as diesel (TPHd), diesel-range organics (DRO), or TPH-DRO, depending on how it was reported
- Kerosene and jet fuel: 1,000 mg/kg. as measured by oil-range organics (ORO), or TPH-ORO, depending on how it was reported

More information about how historical data was evaluated is provided in the sections below.

2.4.1 UST Removal at Building 6

In January 1993, four USTs, including one UST containing leaded gasoline, were removed from around Building 6 (SWMU 45) (Envirotech, 1993). A lead scavenger, 1,2-DCA was often added to leaded gasoline to prevent engine fouling. Therefore, leaks from UST(s) containing leaded gasoline may have also released 1,2-DCA. A summary of the tanks that were removed is provided in **Table 2.1** and the tank locations are shown in **Figure 2.1**. The piping from the USTs to the dispensers, as well as a limited amount of hydrocarbon-contaminated soils, were also removed from the UST excavation. Hydrocarbon impacted soils were encountered in the UST excavation, not all impacted soils were excavated, and the excavation was left open for additional investigation (Envirotech, 1993). Although not explicitly stated in the report, based on the depths of the photoionization detector (PID) readings from the excavation bottoms, it is assumed that the soils were excavated to 15 feet bgs beneath UST #1, the north half of UST #2, and UST #3; 14 feet bgs on the south half of UST #2; and 4 feet bgs beneath UST #4 (**Table 2.2**, **Figure 2.1**). Groundwater was not encountered at the maximum depth of the excavation at Building 6, which was assumed to be 15 feet bgs (Envirotech, 1993).

During the January 1993 UST removal, eight soil samples were collected from the tank and piping excavations and two samples were collected from the dispenser island (**Table 2.2**) (Envirotech, 1993). Samples were analyzed for TPH and/or benzene, toluene, ethylbenzene, and total xylenes (BTEX). BTEX was detected in all samples collected, but samples were not analyzed for 1,2-DCA. TPHg was detected above the current 100 mg/kg indicator level under the gasoline dispenser (sample 4472; see **Table 2.2**), immediately north UST#3 (samples 4473 and 4474), and under the unleaded fuel line east of UST#3 (sample 4474). TPHd was detected above the current 1,000 mg/kg indicator level under the gasoline dispenser (sample 4472) and immediately north of UST#3 (sample 4474). In addition, ethylbenzene, toluene, and xylene were detected above the NMED (2022c) soil saturation concentrations (149, 292, and 81.8 mg/kg, respectively) immediately north of UST#3 (sample 4474), which potentially indicates the presence of a nonaqueous phase liquid (NAPL).

Additional contaminated soils were removed after sampling, but the removal was not documented in any available reports and the statement was not referenced (TPMC, 2009). Conclusive information about the excavation depths is not available.

2.4.2 UST Investigation at Building 6

Following the UST removal near Building 6, the area around Building 6 was investigated (USACE, 1993). Sixteen borings were completed to an average depth of 50 feet. Five borings were located within the UST excavation area, and the remaining 11 borings were located within 250 feet around the excavation to help define the nature and extent of potential impacts.

The soil cores from each boring were screened using a PID every 5 feet in length/depth of the core, and each boring was drilled until two consecutive PID readings were below 100 parts per million by volume (ppmv) (USACE, 1993). Soil samples were collected at or near the bottom of each boring and were analyzed for TPH, BTEX and methyl tert-butyl ether (MTBE). Since samples were collected from the bottom of the borings where the PID readings were below 100 ppmv, all results for TPH, BTEX, and MTBE were non-detect. However, headspace PID readings from the borings can be used to assess the vertical and lateral extent of potential impacts from the USTs.

A tiered approach was used for evaluating the PID measurements. New Mexico Petroleum Storage Tank Regulations (New Mexico Administrative Code (NMAC) 20.5.119.1908.B) establishes 100 ppmv as a reasonable threshold for determining the extent of contaminants in soil from UST releases when using a field instrument. For the purposes of identifying potential soil impacts, a conservative value of 50 ppmv or less (1/2 the 100 ppmv threshold in NMAC 20.5.119.1908.B), was used here as an indicator that no soil impacts were present at or adjacent to the soil boring. If the PID reading was between 51 and 150 ppmv (0.5 to 1.5 times the NMAC 20.5.119.1908.B PID threshold), it was assumed that impacts may be present in the boring or nearby. If the PID reading was greater than 150 ppmv, it was assumed that soil impacts are likely and that the boring may be in or near a source area. The headspace PID readings are presented in **Table 2.3,** and the boring locations are shown in **Figure 2.2**.

Borings FW-1 through FW-5 were located in the tank excavation area. FW-1 and FW-5 had the highest PID readings (4,029 and 4,035 ppmv, respectively), with impacts observed from 10 to 35 feet bgs. Borings FW-2 and FW-3 had PID readings greater than 150 ppmv from 15 to 30 feet bgs. PID readings were below 150 ppmv at FW-4 (**Table 2.3**).

Impacts appear to extend north and also east from the excavation area, with PID readings greater than 150 ppmv observed in FW-7, FW-11, and FW-16 to the north and FW-13 to the east. Impacts generally occurred from 10 to 40 feet bgs, with the highest impacts observed from 30 to 35 feet bgs. No impacts were observed farther northeast in FW-14. There were no PID readings greater than 50 ppmv in Boring FW-10, located east of FW-11. To the northwest, boring FW-6 (104 ppmv at 25 to 30 feet bgs) and boring FW-15 farther northwest (79.5 ppmv at 40 to 45 feet bgs) may be potentially impacted, but did not exceed 150 ppmv and are likely not in the source zone. Farther west, FW-12 (69.2 ppmv at 25 to 30 feet bgs) may also be potentially impacted, but outside the source zone. Boring FW-9 to the southwest did not have any PID readings above 50 ppmv. A boring to the southeast (FW-8) had PID readings from 122 to 141 ppmv between 20 and 40 feet bgs (**Table 2.3**, **Figure 2.2**). Thus, the primary area of impacts is within the UST excavation and extends to the north and east from there.

2.4.3 RCRA Facility Investigation (RFI)

2.4.3.1 Building 5 (SWMU 5)

In 2010, 10 borings were advanced within Building 5 (**Figure 2.3**). From those borings, 14 soil samples were collected at up to 8 feet bgs and were analyzed for VOCs and TPH (**Table 2.4**; USACE, 2014). TPH-GRO was detected at up to 0.22 mg/kg, TPH-DRO at up to 5.8 mg/kg, TPH-ORO at up to 46 mg/kg, and tetrachloroethene at up to 11 micrograms per kilogram (µg/kg). 1,2-DCA was not detected (USACE, 2014). As TPH was not detected above the current indicator concentrations (100 mg/kg for TPH-GRO, 1,000 mg/kg for TPH-DRO, and 1,000 mg/kg for TPH-ORO) and 1,2-DCA was not detected in any samples, it is assumed that shallow soil (0-5 feet bgs) at Building 5 has not been impacted by releases of VOCs or TPH from Building 5, and that shallow soil does not significantly contribute VOCs or TPH to the 1,2-DCA soil vapor plume observed at 30 feet bgs (see **Section 2.4.4** and **Figure 2.5**).

2.4.3.2 Building 6 (SWMU 45)

In 2010, seven soil borings (1145BLDG6-SB01 through 1145BLDG6-SB07; **Figure 2.3**) were advanced in the former UST excavation, and samples were collected from 15, 30, and 45 feet bgs. Unfortunately, the borings were not logged, so indicators about potential contamination (such as PID readings and visual observations about odors, staining, etc.) are not available. Samples were analyzed for TPH-GRO, TPH-DRO, TPH-ORO, and VOCs (**Table 2.4**; USACE, 2014).

Petroleum hydrocarbons did not exceed the current indicator concentrations (100 mg/kg to TPHg or GRO, 1,000 mg/kg for TPHd or DRO, and 1,000 mg/kg for TPH-ORO), except for 1145BLDG6-SB07 at 15 feet bgs, where TPH-GRO was detected at 3,600 mg/kg (**Table 2.4**). 1,2-DCA was detected in all borings at 45 feet bgs (i.e., at the water table) from 0.018 mg/kg (1145BLDG6-SB03) to 0.12 mg/kg (1145BLDG6-SB07). 1,2-DCA was also detected at 30 feet bgs in 1145BLDG6-SB03 at 0.044 mg/kg. This indicates that the area below the former USTs still contains a significant source of TPH and potentially 1,2-DCA that can migrate to soil vapor.

2.4.3.3 Structure 39 (AOC 49)

In 2010, two soil borings (1149DOCK-SB01 and 1149DOCK-SB02; **Figure 2.3**) were advanced on the south side of Structure 39. Samples were collected at depths 1, 2, and 5 feet bgs and analyzed for VOCs (**Table 2.4**). As samples were not analyzed for TPH, comparisons to the current indicator levels cannot be made. While VOCs were detected in all samples (USACE, 2014), all results were at least two orders of magnitude below saturation concentrations (NMED, 2022c). In addition, 1,2-DCA was not detected in any of the soil samples. Therefore, it is assumed that soil on the south side of Structure 39 is not a significant source of VOCs or TPH in soil vapor.

2.4.4 Northern Area Groundwater RFI

In 2019-2020, an investigation was completed to define groundwater characteristics (i.e., presence of multiple aquifers, potentiometric surface, and hydraulic conductivity) and the nature and extent of groundwater contaminant plumes (Environmental, Operations and Construction [HDR], 2023). Soil vapor data were collected to help delineate the 1,2-DCA groundwater plume and select locations for groundwater well installation. The results of the VOCs and TPH analyses near Building 5 and Building 6 are discussed below.

The following 12 alluvial wells are located near Building 6 and were used to assess the groundwater conditions in the alluvial aquifer: MW18D, MW18S, MW20, MW22S, MW22D, MW29, MW30, MW31, MW32, TMW33, TMW34, and TMW35 (**Figure 2.4**). There are no bedrock wells[1] within the Building 6 VOC and TPH study area.

Two aquifers were identified – an alluvial aquifer and a bedrock aquifer. In the Administration Area, the alluvial aquifer is located starting at approximately 40 to 45 feet bgs. No bedrock wells were installed in the Administration Area, but the Northern Area Groundwater RFI notes that the potentiometric surface of the bedrock aquifer is slightly above the potentiometric surface of the alluvial aquifer, which implies that the vertical groundwater gradient is upward, from the bedrock aquifer towards the alluvial aquifer. The alluvial aquifer appears to flow towards Building 6 from the south, east and north, and then flows from Building 6 to the west. The bedrock aquifer also appears to flow towards Building 6 from the south, east and north, but there are no nearby bedrock wells to the west to assess groundwater flow in that direction.

Soil samples were collected at 10 and 40 feet bgs from the borings used to construct wells MW29, MW30, MW31, and MW32 and were analyzed for VOCs. 1,2-DCA was detected in MW31 at 40 to 42 feet bgs at 0.0028 mg/kg, but not in any of the other samples. Other VOCs, such as 1,2,4-trimethylbenzene, acetone, BTEX, and tetrachloroethene were also detected, as shown in **Table 2.5**. The samples were not analyzed for TPH (**Table 2.5**).

Fifty-two temporary soil vapor probes were installed and sampled from the area surrounding Building 6 and analyzed for 1,2-DCA between June and July 2019 (**Figure 2.5**, **Table 2.6**). Preliminary screening samples were analyzed in the field utilizing a HAPSITE GC/MS to identify where groundwater contamination may be present (HDR 2022). Detected concentrations ranged from 0.18 to 3,325 micrograms per cubic meter (μg/m^3). Soil vapor samples were not collected

[1] Monitoring wells MW18D and MW22D are screened in the alluvium.

within the former UST excavation area, so no soil vapor data are available to assess the current soil vapor conditions in this area. The soil vapor sample with the highest concentration was SG59 (3,325 µg/m^3), which is located northeast of Building 6 (**Figure 2.5)**.

2.4.5 Groundwater Periodic Monitoring Reports

Periodic groundwater monitoring was completed in April and October 2022 (Eco, 2023a,b; **Table 2.7, Figure 2.6**). Groundwater flow directions were similar to those observed in 2018 (HDR, 2023). That is, alluvial groundwater flows towards Building 6 from the north, east, and southeast, and flows away from Building 6 towards the west (Eco, 2023a,b). Groundwater elevations from this report were used to draw the groundwater contours and groundwater flow direction shown in **Figure 2.4.** Groundwater flows to the northwest through the Administration Area.

The following wells were sampled for VOCs and TPH in the Administration Area in April and October 2022: MW18D, MW20, MW22D, MW29, MW30, MW31, MW32, TMW10, TMW33, TMW34, and TMW35. The highest concentration of 1,2-DCA occurred in MW18D (63 µg/L and 91 µg/L in April and October, respectively) and concentrations decrease to the northwest as the plume migrates towards TMW33 and MW31. Although BTEX was initially detected at in groundwater during the UST removal (TPMC, 2009), BTEX was not detected in the wells surrounding Building 6 in 2022 (**Table 2.7**). In both sampling events, TPH-GRO was only detected in MW18D and TMW33. In April 2022, TPH-DRO was detected in MW20, MW32, and TMW-34, with the highest concentration (130 µg/L) detected in MW20. In October 2022, TPH-DRO was detected in MW31, MW32, TMW33, and TMW34, with the highest concentration (320 µg/L) detected in TMW33. The TPH-DRO detected in MW31, MW32, TMW33, and TMW34 may be from a source that is unrelated to the 1,2-DCA groundwater plume in the Administration Area.

2.5 ASSESSMENT OF DATA GAPS

The available information and boring logs from the UST removal (Envirotech, 1993), subsequent UST investigation (USACE, 1993), and RFI (USACE, 2014) are insufficient to provide a clear evaluation of the depth of the original UST excavation, which is assumed to be where the soil source zone starts.

The results of the UST investigation (**Figure 2.2**; USACE, 1993) indicate that the release from the USTs at Building 6 flowed to the north and east towards Building 5, but it was not determined how far the release extended to the east or whether the release extended to or underneath Building 5.

The soil vapor investigation performed as part of the Northern Area Groundwater RFI (HDR, 2023) (a) did not include boring logs, (b) collected no samples within or adjacent to the former UST excavation at Building 6, and (c), did not collect soil vapor samples at 5, 10, or 15 feet bgs (which are most useful for evaluating the vapor intrusion pathway). While the investigation determined that the release went towards Building 5 (**Figure 2.5**), the investigation did not determine whether the release extended to or underneath Building 5 and did not evaluate the potential for vapor intrusion in the source area.

This work plan has been prepared to address these identified data gaps. Soil vapor samples are proposed to refine the previous soil contamination data, to evaluate the soil vapor migration pathway, and assess the potential for vapor intrusion from past releases. The rationale for the soil vapor investigation is discussed further in **Section 3.0**.

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3.0 SWMU-45 SOIL VAPOR INVESTIGATION RATIONALE

This section provides the rationale for why additional sampling has been proposed in the Administration Area. An explanation of the methods that will be used to conduct the investigation is provided in **Section 4**.

Investigations at Building 6 (SWMU 45) began in 1993 when four USTs containing gasoline (leaded and unleaded), diesel, and kerosene were removed from a former gasoline station (Envirotech, 1993).

Impacted soils were discovered during the removal of the USTs. Some impacted soils were left in place, and analytical results (**Table 2.2**) indicate they may have contained residual NAPL petroleum hydrocarbons. Subsequent investigations (USACE, 1993) indicate that the release migrated belowground primarily to the north and east from Building 6. Soil concentrations were compared to the soil saturation concentrations defined in NMED's *Risk Assessment Guidance for Site Investigations and Remediation. Volume I Soil Screening Guidance for Human Health Risk Assessments* (NMED, 2022c). Although BTEX was detected in soil samples collected from the tank excavation at concentrations exceeding saturation (**Table 2.2**), BTEX has not been detected in recent groundwater samples (**Table 2.7**). Similar to the soil investigations, the screening soil vapor results from the Northern Area Groundwater RFI (HDR, 2023; **Figure 2.5**) indicate that the release migrated belowground primarily to the north and east from Building 6.

The results from the previous investigations (Envirotech, 1993; USACE, 1993; HDR, 2023) have been combined to provide a qualitative estimate of the potential extent of the soil source area around the UST excavation area near Building 6 (**Figure 3.1**). The synthesis of these results indicate that the soil source area is immediately below the former USTs and Building 6, and extends slightly to the east, north, northwest, and south from the UST excavation. The available data indicate that the primary release of 1,2-DCA and TPH is associated with Building 6 and that Building 5 is not a source.

Although the release at Building 6 was gasoline and diesel fuels, the USTs were installed at a time when most gasoline was leaded and 1,2-DCA was used as a lead scavenger in leaded gasoline. Therefore, it is believed that the gasoline/diesel release is also the source for the 1,2-DCA that has been detected in soil vapor and groundwater in this area. Based on a review of historical screening data, the extent of the 1,2-DCA source area has been estimated and is presented in **Figure 3.1.** Soil vapor samples are proposed to refine the previous soil contamination data and to evaluate the soil vapor migration pathway and the potential for vapor intrusion from past releases.

The proposed locations of most soil vapor probes are in the source area. As the data from the previous temporary soil vapor probes (**Table 2.6** and **Figure 2.5**) are HAPSITE GC/MS screening data, the placement of the soil vapor probes proposed here are designed to quantitatively verify the concentrations of 1,2-DCA in soil vapor a) beneath the former USTs (1145BLDG6-SV01 and 1145BLDG6-SV02) and b) at the edges of the soil vapor plume that were estimated from the semi-quantitative temporary soil vapor probe data. 1145BLDG6-SV01 was placed to the west of Building 6 and in the approximate center of the UST investigation. 1145BLDG6-SV02 was placed in the approximate location of the samples collected during the UST excavation that had BTEX results above saturation (sample 4474). 1145BLDG6-SV03 was placed near the highest concentration of 1,2-DCA detected in soil vapor (SG59, 3,325 $\mu g/m^3$) during the Northern Area

Groundwater RFI. 1145BLDG6-SV04 was placed between soil vapor probe SG51 (where 1,2-DCA was detected at 351 µg/m^3 in 2019) and boring FW-11 (which had a PID reading of 1,285 ppmv in 1993) to quantitatively evaluate the northern edge of the soil source zone. While 1,2-DCA was detected in soil vapor at SG47, SG48, and SG51 above screening levels, the data from those soil vapor probes will be verified with fully quantitative samples for risk assessment purposes. 1145BLDG6-SV04 was moved slightly closer to Building 6 from FW-11 as the PID data used to evaluate the extent of the soil source zone is from 1993 and the extent may have shrunk since then. The other proposed locations will help to address the lack of soil vapor data immediately east (1145BLDG6-SV06, 1145BLDG6-SV10, and 1145BLDG6-SV11) of Building 6, as well as the potential western extent (1145BLDG6-SV05 and 1145BLDG6-SV08), northern extent (1145BLDG6-SV09), and southern extent (1145BLDG6-SV07) of the soil source area.

The 11 proposed soil vapor probe locations and associated sample numbers are presented in **Table 3.1.** Proposed sample locations are illustrated in **Figure 3.1**. If the samples collected from these soil vapor probes do not delineate the extent of contamination, step-out soil vapor probe sampling locations may be proposed to complete delineation, as discussed in **Section 5.3**.

Soil vapor probes will be installed at 5 feet bgs and at the location of the highest PID reading in the boring in all 11 locations. Additionally, one soil vapor probe will be installed at the interface between native soil and clean fill or at the depth of the highest PID reading in the upper 15 feet of soil. The probes at 5 feet bgs are most useful for evaluating the potential for vapor intrusion to potential future buildings while the deeper probes will be positioned at potential soil source zone(s). Together, the three probe depths can also be used to evaluate the vertical distribution of the contaminants in soil vapor.

Soil samples are also planned to confirm the extent of impacts in the source area. Soils will be logged on a soil boring log and soils will be screened using a PID. One sample will be collected from the depth of the highest PID reading at each boring to assess remaining impacted soil that may contribute to the soil migration pathway. Soil samples will be analyzed for TPH, VOCs, and total lead. As described in **Section 4.2.2**, additional soil samples may also be collected from other borings, if warranted.

4.0 INVESTIGATION METHODS

This section provides general information regarding the planned field activities to be completed as part of this Work Plan.

4.1 SITE SAFETY AND AWARENESS

All work will be performed in accordance with Army safety measures. A project-specific Accident Prevention Plan/Site Safety and Health Plan (APP/SSHP) has been developed for sampling activities at FWDA. The APP/SSHP defines the roles and responsibilities of site personnel, establishes proper levels of personal protective equipment (PPE), and describes emergency response and contingency procedures. The associated Activity Hazard Analyses (AHAs) define hazards associated with each type of work activity and how those hazards will be mitigated. The APP/SSHP will be reviewed by site personnel prior to performing any site work. In addition, task specific AHAs will be reviewed before any new tasks are performed and periodically during daily tailgate safety meetings.

All work will be completed by a supervisor, operators, and technicians that have successfully completed 40-hour Hazardous Waste Operations and Emergency Response training in accordance with *29 U.S. Code of Federal Regulations* 1910.120. A dedicated Site Safety and Health Officer (SSHO) will be on site during all field activities associated with implementation of this Work Plan. The SSHO will be responsible for conducting site-specific training, daily tailgate safety meetings, and periodic safety inspections.

The SSHO will also be responsible for ensuring site monitoring, worker training, and effective selection and use of PPE. The SSHO will have completed the Occupational Safety and Health Administration (OSHA) 30-hour Construction Safety Course prior to being tasked to fill the position.

4.2 SOIL VAPOR PROBE INSTALLATION, SAMPLING AND ANALYSIS

This section provides general information regarding the methods that will be employed during site activities.

4.2.1 Pre-Drilling Activities

The proposed drilling locations will be marked with white paint, and New Mexico 811 will be notified of the proposed drilling locations a minimum of 72 hours prior to initiating drilling activities. The utility owners of record within the vicinity of the proposed boreholes will be notified of the planned subsurface investigation in proximity to buried utilities. The utility owners of record or their designated agents will clearly mark the position of their utilities on the ground surface in the nearest right-of-way. The proposed drilling locations will also be surveyed by a private utility locator for the presence of underground utilities using geophysical methods (including ground penetrating radar, electromagnetic utility locating, and deep search metal detector). If necessary, boring locations will be shifted to be a minimum of two feet from known utilities and five feet from buildings. Shifted locations will be as close as practicable to the original location and, if possible, will be shifted towards the former UST locations.

4.2.2 Drilling, Soil Sampling, and Soil Vapor Probe Construction

The 11proposed borings will be advanced at the Site, as shown in **Figure 3.1**. The borings will be hand augered to a maximum depth of approximately 5 feet bgs for utility clearance. Then a direct push technology (DPT) rig will be used to complete the borings under the oversight of a Parsons field technician. If required, alternative drilling methods may be used, as described below. Continuous cores will be collected for lithologic logging and soils will be screened at least every five feet in depth using a PID. The results will be recorded in a soil boring log (**Section 4.2.4**).

The soil borings will be advanced to a minimum depth of 35 feet bgs and one soil sample will be collected from each boring at the depth with the highest PID reading. These soil samples will help delineate soil contamination that would act as a source of soil vapor impacts. Soil samples will be analyzed for TPH, VOCs, and total lead. If the DPT rig reaches refusal, the boring may be redrilled deeper under a separate mobilization with a hollow-stem auger rig, or other appropriate equipment.

At each location, nested soil vapor probes will be installed at a minimum of two depths as follows:

1. 5 feet bgs to assess near surface soil vapor conditions and potential upward migration from the vapor source
2. At the interface between native soil and clean fill so that the probes may be installed within the vicinity of the former UST location as identified by lithology changes or changes in PID readings, as applicable. Or at the depth where the highest PID reading is observed in the upper 15 ft of soil.
3. At the depth of the highest PID reading in the soil boring.

A summary of the samples to be collected at each soil vapor probe location is shown in **Table 3.1**. The nested probes will be used to evaluate the vertical distribution of VOCs and TPH in soil vapor. Each probe depth will be identified by its location and depth, as outlined in **Section 4.9**.

Once the total depth has been reached, new disposable 1/4-inch outside diameter x 3/16 inside diameter Teflon tubing will be extended to the target depth and fitted with an AMS 25005 stainless steel soil vapor probe implant, or equivalent. The implant will have a 1-inch screen with a 50 µm filter to prevent particulates from entering the sample train. A 12-inch sand filter pack will be placed in the boring, with the soil vapor probe placed midway through the filter pack sand. Following the installation of the sand pack, dry granular bentonite will be emplaced between the sand pack and the hydrated bentonite grout to prevent infiltration of the hydrated bentonite or bentonite grout into the sand pack. The borehole will be grouted to the surface in approximately 6-inch lifts with hydrated bentonite. A valve will be fitted to the aboveground end of the tubing and will be kept closed prior to purging and sampling. Following installation, a lockable, aboveground stove pipe will be constructed to protect the probe. The stove pipe will be protected by up to four yellow bollards set in concrete, as necessary. An example diagram showing the proposed nested probe construction is shown in **Figure 4.1**.

If a soil vapor probe cannot be installed at a particular location due to access limitations or other issues, alternative locations will be selected as close as practicable to the planned location.

4.2.3 Soil Vapor Sampling

This section provides general information regarding the methods that will be employed for soil vapor and soil sampling that will be completed during site activities. A summary of analytical methods, sample containers, preservatives, and holding times is provided in **Table 4.1**. The following sections provide details regarding sample collection and management, quality assurance (QA), and quality control (QC).

4.2.3.1 Soil Vapor Sampling

All soil vapor probes will be allowed to equilibrate for at least 48-hours before sampling. Soil vapor sampling will be performed in two (2) monitoring events to collect data in the middle of both the hot (May-September) and cold (October-April) seasons in July and January, or as close as possible, to evaluate seasonal variation. Soil vapor probes will not be sampled during or within 5-days of a significant rain event (i.e., rainfall of 1/2 inch or greater during a 24-hour period). Areas subject to soil vapor sampling should be free of standing or ponding water for at least five days prior to sampling.

The following process will be used to collect a soil vapor sample:

1. Open well box.
2. Calculate three purge volumes of the soil vapor probe, filter pack, and all tubing in the purge/sampling train to the purge pump, as shown on the Soil Vapor Probe Sampling Form (**Appendix B**).
3. Calibrate Gilair-5 purge pump (or equivalent) to flow at a rate between 100 and 400 milliliters per minute (mL/min). Document the flow rate on the soil vapor purge form.
4. Connect soil vapor probe tubing to sample train.
5. Connect a multi-gas meter to the sampling train using a t-valve and Teflon connector.
6. Place a rag saturated with a tracer (2-propanol, also known as isopropanol or rubbing alcohol) around the probe seal at the surface and near the connection from the tubing to the sample train. This leak check compound will remain in-place during purging and sampling activities at the probe.
7. Perform “shut-in” test (see below) and apply leak check compound.
8. Turn on the Gilair-5 purge pump and purge three volumes of air from the system.
9. Record total VOC, methane, oxygen (O_2), and carbon dioxide (CO_2) readings from the multi-gas meter.
10. Monitor the flow during purging operations to ensure that there are no blockages, and that no condensate is observed in the flow stream.
11. Document the required purge time based on the flow rate of the pump.
12. Complete purge requirements.
13. Collect soil vapor sample and close the valve to the SUMMA canister where there is between 4 and 8 millimeters of mercury (mmHg) of vacuum remaining in the canister.

Prior to collecting a soil vapor sample, the above-ground sampling equipment (sample train) will be leak tested. The process of leak testing ensures that the sample collected is representative of subsurface conditions. In this case, a “shut-in” test will be completed that uses a sustained vacuum in closed tubing to check for leaks at connection points along components of the sampling train.

The "shut-in" test will be performed using the following procedures:

1. Turn on the purge pump with the valve to the vapor monitoring probe (VMP) closed.
2. The above-ground valves, lines, and fittings downstream from the top of the probes will be evacuated to approximately 100 inches of water (approximately 11 pounds per square inch gauge) using the pump.
3. The test will be conducted while the sampling canister is attached, with its valve in the closed position. The vacuum gauge should not drop in vacuum at a perceivable rate during a one-minute observation period, indicating that the sampling train and associated valves have no leaks. The vacuum gauge should be sensitive enough to indicate a pressure change of 0.5 inches of water.
4. If the vacuum gauge indicates a consistent drop in vacuum, the valves in the sampling train will be adjusted; all fittings will be checked and tightened as necessary.
5. If leaks are persistent, the valves will be used to isolate sections of the tubing to more easily identify leak points.
6. Once leaks are repaired, steps 1 through 4 will be repeated until no leaks are observed.

After the soil vapor probe is appropriately shut-in tested and purged, the soil vapor samples will be collected as follows:

1. Samples for laboratory analyses will be collected directly into SUMMA cannisters provided by the laboratory.
2. The samples will be labeled with a unique identifier, as described in **Section 4.9**, and analyzed by an off-site laboratory using the SUMMA cannisters supplied by the laboratory. A chain-of-custody (COC) form will be filled out and placed with the sample to ensure there is no mix up with samples, as discussed in **Section 4.4**.
3. The field measurements, conditions and procedures will be recorded in the field log.

4.2.3.2 Subsurface Soil Sampling

Shallow subsurface samples (less than 2 feet) will be collected using a decontaminated hand auger. Deeper subsurface samples will be collected using direct-push technology or hollow-stem auger equipment utilizing decontaminated split spoons, as appropriate. All boreholes will have a complete record of borehole information as described in **Section 4.2.4**.

4.2.3.2.1 Direct Push or Hand Auger Method for Subsurface Soil

This section provides procedures for subsurface soil sampling using a direct push type rig (e.g., Geoprobe®) or hand auger. If a direct push rig is used, it shall be operated by an appropriately licensed driller.

Soil samples will be collected as follows:

1. Spread clean plastic sheeting on the ground or table at each sampling location to keep sampling equipment clean and prevent cross-contamination.
2. Advance the hand auger or direct push tool to the desired sample depth.

3. Collect the sample using an approved sampling tool (e.g., stainless steel or disposable spoon, trowel, or scoop) and scoop the soil from the hand auger bucket or retrieve the acetate liner from the direct push rig. For hand augering, use a new, clean auger bucket once the top of the sampling depth is reached.
4. Log the soils from the soil core on a soil boring log, noting soil recovery, soil characteristics, visual or olfactory signs of contamination, and PID screening results.
5. Transfer the sample from the auger bucket or trowel into a large disposable or stainless-steel bowl and mix the combined soil thoroughly to ensure a representative sample. EXCEPTION: If collecting subsurface samples for VOC or TPH analysis, the sample will be collected as a discrete sample, directly from the sample equipment (e.g., auger bucket or acetate sleeve) using a Terra Core® sampler as described in **Section 4.2.3.2.3**. The soil shall not be mixed before sample collection.
6. Collect suitable quantities with the approved sampling tool and transfer directly into the laboratory supplied clean containers with a moisture-tight lid (or a re-sealable plastic bag for grain size samples).
7. Repeat these steps as necessary to obtain sufficient sample volume.
8. When sample containers are filled, secure the caps tightly on the containers. Lids will be sealed by labels or custody seals to prevent tampering.
9. The sample containers will then be placed into a cooler with ice and cooled to less than or equal to 6 degrees Celsius (≤ 6°C).
10. After sampling is completed, backfill the hole with remaining soil to return the site to as close to original condition as possible.

4.2.3.2.2 Hollow-Stem Auger Method for Subsurface Soil

Soil drilling using the hollow-stem auger method will be accomplished using a truck-mounted auger rig of sufficient size and power to advance augers to the required drilling depth operated by an appropriately licensed driller.

Soil samples will be collected as follows:

1. Spread clean plastic sheeting on the ground or table at each sampling location to keep sampling equipment clean and prevent cross-contamination.
2. When drilling investigation boreholes, the lead hollow-stem auger will be advanced to the top of the soil interval to be sampled.
3. The selected soil sampling device then will be inserted into the auger string and advanced to the bottom of the soil interval. When using a split-spoon sampler, this device will be advanced to the required depth using a 63.5-kg (140-lb) hammer or continuously advanced with the auger string. When using a split-barrel sampler, this device will be hydraulically pushed to the required depth. Samplers used in non-cohesive soils may require the use of a decontaminated catch basket inserted into the shoe of the sampler in order to obtain recovery. A clean sampling device will be used to collect soil core from each sampled interval of the investigation boreholes.

4. Upon retrieval of the sampling device, the percentage of recovery will be recorded, and the contained soil core will be split in half, lengthwise, using a stainless-steel knife. The soil will be logged for soil recovery, soil characteristics, visual or olfactory signs of contamination, and PID screening results.
5. Samples designated for laboratory analysis will be collected from the core using a stainless-steel scoop. EXCEPTION: If collecting subsurface samples for VOC or TPH analysis, the sample will be collected as a discrete sample directly from the sample equipment (e.g., split-spoon or acetate sleeve) using a Terra Core® sampler as described in **Section 4.2.3.2.3**. The soil shall not be mixed before sample collection.
6. Immediately after discrete or composite samples are collected and bottles are labeled, each sample container will be placed into a sealable plastic bag and then placed into an ice-filled cooler to ensure preservation. Remaining soil will be managed as IDW.
7. After soil samples are collected (to preserve sample integrity), the remaining lithologic samples will be fully described. After the contents of the sampler are measured, sampled, and described, the core will be discarded and handled as investigation-derived waste (IDW) as described in **Section 4.10**.
8. All borings will be abandoned by grouting to surface. For deeper borings (those extending into the water table), rigid tremie pipe will be extended to the bottom of the boring and pump grout through the pipe until undiluted grout flows from the boring at ground surface. For shallow borings (those not penetrating the water table), grout will be poured into the boring from the surface until grout flows from the boring at ground surface. Grout will be composed of 20 parts cement (Portland cement, Type II, or V), up to one part bentonite, and a maximum of 8 gallons of approved water per 94-pound bag of cement.

4.2.3.2.3 Terra Core® Sampling Method for Soil

Samples requiring VOC analysis may be collected using EnNovative Technologies Terra Core® samplers. Terra Core® samplers limit the amount of volatilization that occurs during sampling, which allows for a more accurate and valid analytical result.

The procedure that will be used to collect soil samples with Terra Core® samplers is as follows:

1. Prepare a Terra Core® sampler, and a 40mL VOA vial containing the proper preservative (deionized [DI] water or methanol) and a magnetic stirring bar (if required).
2. With the plunger seated in the handle, push the Terra Core® sampler into the soil until the sample chamber is filled. Wipe all soil or debris from the outside of the Terra Core® sampler. The soil plug should be flush with the mouth of the sampler.
3. Rotate the plunger that was seated in the handle to 90° until it is aligned with the slots in the sampler body. Place the mouth of the sampler into the 40mL VOA vial and extrude the sample into the container by pushing the plunger down.
4. Quickly replace the lid of the 40mL VOA vial. When capping the VOA vial, be sure to remove any soil or debris from the top or threads of the vial. Place the collected sample on ice as soon as possible (if required by sample preservation method).

4.2.4 Boring Logs

Each borehole log generated during the RFI will fully describe the subsurface environment and the procedures used to gain that description. Guidance on field logging of soil and rock may be found in ASTM (2009) D5434-09. Original borehole logs will be of sufficient legibility and contrast so as to provide comparable quality in reproduction and will be recorded directly in the field without transcribing from a field book or other document.

All borehole logs will contain the following:

- Unique borehole/monitoring well number and location denoted on a sketch map as part of the log.
- Depths recorded in feet and decimal fractions thereof (tenths of feet).
- Field estimates of soil classification (Unified Soil Classification System) in accordance with ASTM (2017) D2488-17e1prepared in the field at the time of sampling by the site geologist.
- Full description of each soil sample collected.
- Visual numeric estimates of secondary soil constituents and quantitative definitions of description terms (e.g., trace, little, some) recorded on the log.
- Full description, to the greatest extent practical, of bedrock material encountered.
- Description of disturbed samples (if used to supplement subsurface description) in terms of the appropriate soil/rock parameter, to the extent practical. At a minimum, classification along with a description of drill action for the corresponding depth will be recorded. Notations will be made on the log that these descriptions are based on observations of disturbed material rather than intact samples.
- Description of drilling equipment, including such information as auger size (inner and outer diameter), bit types, compressor type, rig manufacturer, and model.
- Sequence of drilling activities.
- Any special problems encountered during drilling and their resolution.
- Dates and times for the start and completion of the borehole along with notation by depth for drill crew shifts and individual days.
- Each sequential boundary between various soil types and individual lithologies.
- For a rock core, a scaled graphic sketch of the core should be provided on or with the log denoted by depth location, orientation, and nature (natural or coring-induced) of all core breaks. If fractures are too numerous to be individually shown, their location may be drawn as a zone and described on the log.
- Intervals of lost core.
- The depth of first encountered free water along with the method of determination and any subsequent distinct water level(s) encountered thereafter. Before proceeding, the first encountered water will be allowed to partially stabilize (from 5 to 10 minutes) and recorded along with the time between measurements.

- Interval by depth for each sample collected, including the length of sampled interval, length of sample recovery, blow counts, and the sampler type and size (diameter and length).
- Total depth of drilling and sampling.
- Results of soil core organic vapor scan readings and soil sample organic vapor headspace readings. Notation will include interval sampled, corresponding vapor readings, and key to the specific instrument used to obtain readings. A general note will be made on the log indicating the manufacturer, model, serial number, and calibration information for each instrument used.
- Definition of any special abbreviations used at the first occurrence of their usage.

4.2.5 Decontamination Procedures

Equipment used to drill boreholes and collect soil samples during the investigation will be decontaminated within a temporary decontamination pad constructed at the near Building 6. The decontamination pad will be designed so that all decontamination liquids are contained from the surrounding environment and can be recovered for disposal as IDW. Drilling equipment will be decontaminated after each borehole is completed. The decontamination procedure that will be followed for excavation and drilling equipment is as follows:

1. Remove caked soil material from the exterior of the buckets and/or augers and cutting heads using a rod and/or brush.
2. Steam clean the equipment interior and exterior with approved water using a brush where steam cleaning is not sufficient to remove all soil material.
3. Rinse thoroughly with approved potable water.
4. Allow equipment to air dry as long as possible.
5. Place equipment on clean plastic if it will be used immediately or wrap in plastic to prevent contamination if storage is required.

Non-dedicated sampling equipment will be decontaminated after each use during borehole interval sampling. The procedure for decontamination of sampling equipment will be as follows:

1. Wash with approved water and phosphate-free detergent using brushes required to remove particulate matter and surface films.
2. Rinse thoroughly with approved potable water.
3. If analyzing for metals and expecting high levels of contamination, rinse thoroughly with hydrochloric acid (2% solution) or nitric acid (10% solution).
4. Rinse thoroughly with ASTM Type I or equivalent deionized/distilled water with analytical certification.
5. If analyzing for organics and expecting high levels of contamination, rinse thoroughly with solvent-pesticide grade isopropanol, acetone, or methanol, depending on analytes of interest.
6. Rinse thoroughly with ASTM Type I or equivalent deionized/distilled water with analytical certification.

7. Allow equipment to air dry as long as possible.
8. Place equipment on clean plastic if immediate use is anticipated or wrap in aluminum foil to prevent contamination if storage is required.

A final decontamination inspection of any equipment leaving the site at the end of field activities will be conducted to ensure proper decontamination.

4.2.6 Sample Analysis

Soil samples will be analyzed by Eurofins Environment Testing in Arvada, Colorado for VOCs via USEPA (2018) Method 8260D, for TPH-Gasoline-Range Organics and TPH-Diesel-Range Organics via USEPA (2003) Method 8015D, and for total lead via USEPA Method 6010. Soil vapor samples will be analyzed for VOCs by Eurofins Air Toxics in Folsom, California, via USEPA (1999a) Method TO-15 full scan and for USEPA (1999b) TPH via Method TO-3. Both analytical laboratories are DoD Environmental Laboratory Accreditation Program certified laboratories. Analytical methods, sample containers, preservatives, and holding times are summarized in **Table 4.1**.

Up to 11 primary soil samples and a total of 33 primary soil vapor samples will be collected during each sampling event (**Table 4.2**) (i.e., 11 soil vapor locations will be sampled at three depths).

4.3 QUALITY CONTROL

In order to attain data of sufficient quality to support project objectives, specific procedures are required to allow evaluation of data quality. The quality assurance/quality control (QA/QC) procedures and requirements for their evaluation will comply with Quality Systems Manual (QSM), Version 5.4 (Department of Defense [DoD] 2021).

4.3.1 Field and Laboratory Quality Control Samples

Evaluation of field sampling procedures and laboratory equipment accuracy and precision requires the collection and evaluation of field and laboratory QC samples. **Table 4.2** and **Table 4.3** summarize the planned QC samples for this project. A description of each QC sample type is provided in the following sections.

4.3.1.1 Quality Control Analyses/Parameters Originated by the Laboratory

<u>**Method Blank**</u>

Method blanks are used to monitor each preparation or analytical batch for interference and/or contamination from glassware, reagents, and other potential sources within the laboratory. A method blank is a contaminant-free matrix (laboratory reagent water for aqueous samples or Ottawa sand, sodium sulfate, or glass beads [metals] for soil samples) to which all reagents are added in the same amount or proportions as are added to the samples. It is processed through the entire sample preparation and analytical procedures along with the samples in the batch.

There will be at least one method blank per preparation or analytical batch. If a target compound is found at a concentration that exceeds one-half the reporting limit, corrective action must be performed in an attempt to identify and, if possible, eliminate the contamination source. If sufficient sample volume remains in the sample container, samples associated with the blank contamination should be reprocessed and reanalyzed after the contamination source has been eliminated.

Laboratory Control Sample

The laboratory control sample (LCS) will consist of a contaminant-free matrix such as laboratory reagent water for aqueous samples or Ottawa sand, sodium sulfate, or glass beads for soil samples spiked with known amounts of compounds that come from a source different than that used for calibration standards. Target compounds will be spiked into the LCS. The spike levels will be less than or equal to the midpoint of the calibration range. If LCS results are outside the specified control limits, corrective action must be taken, including sample re-preparation and re-analysis, if appropriate. If more than one LCS is analyzed in a preparation or analytical batch, the results for each LCS must be reported. Any LCS recovery outside QC limits affects the accuracy for the entire batch and requires corrective action.

4.3.1.2 Quality Control Analyses Originated by the Field Team

Field QC samples will be collected to determine the accuracy and precision of the analytical results. The QC sample frequencies are stated in the following sections.

Equipment Blanks

Equipment blanks will be collected to monitor the cleanliness of sampling equipment and the effectiveness of decontamination procedures. Contamination from the sampling equipment can bias the analytical results high or lead to false positive results being reported. Equipment blanks will be prepared by filling sample containers with laboratory-grade contaminant free water that has been passed through a decontaminated or unused disposable sampling device. The required QC limits for equipment blank concentrations are to be less than the method's reporting limit.

Equipment blanks will be collected at a frequency of approximately one per day for hand augering activities and other reusable equipment. Samples associated with equipment blanks that have detected target compounds will be assessed during the data validation process. The usability of the associated analytical data will be documented and affected data will be appropriately qualified. Field corrective action to improve equipment decontamination procedures may also be implemented by the Field Lead at the request of the project chemist.

Field Duplicates

Field duplicates are collected in the field from a single aliquot of the sample to determine the precision and accuracy of the field team's sampling procedures. Soil vapor field duplicates will be collected concurrently using a T-splitter. Field duplicates will be collected and analyzed at a frequency of 10%. Samples will be randomly labeled as either parent sample or field duplicate sample.

Trip Blanks

Trip blanks are used to monitor for contamination during soil sample shipping and handling, and for cross-contamination through volatile component migration among the collected soil samples. They are prepared in the laboratory by pouring organic-free water into a volatile organic analysis (VOA) sample container. They are then sealed, transported to the field, and transported back to the laboratory in the same cooler as the volatile component samples. One trip blank sample set (two

VOAs) will accompany each volatile component sample cooler. Trip blanks are not necessary for soil vapor samples.

4.3.2 Data Accuracy, Representativeness, Comparability and Completeness

Field QA/QC samples and laboratory internal QA/QC samples are collected and analyzed to assess the data's quality and usability. The following sections discuss the parameters that are used to assess the data quality.

Precision

The precision of laboratory analysis for soil samples will be assessed by comparing the analytical results between MS/MSD and laboratory duplicate samples. The precision of the field sampling procedures will be assessed by reviewing field duplicate sample results. The RPD will be calculated for the duplicate samples using the equation:

$$\%RPD = \{(S - D)/[(S + D)/2]\} \times 100$$

where:

S = first sample value (original value)
D = second sample value (duplicate value)

The precision criteria for the duplicate samples will be ±50% in soil samples.

Accuracy

Accuracy of laboratory results for soil will be assessed for compliance with the established QC criteria using the analytical results of method blanks, reagent/ preparation blanks, LCS and MS/MSD samples and surrogate results, where applicable. Laboratory accuracy will be assessed for compliance with the established QC criteria listed in Appendix C of the QSM. The percent recovery (%R) of LCSs will be calculated using the equation:

$$\%R = (A/B) \times 100$$

where:

A = the analyte concentration determined experimentally from the LCS

B = the known amount of concentration in the sample

Completeness

The data completeness of laboratory analyses results will be assessed for compliance with the amount of data required for decision making. Complete data are data that are not rejected. Data with qualifiers such as "J" or "UJ" are deemed acceptable and can be used to make project decisions as qualified. Data qualifiers are listed in **Table 4.4**. The completeness of the analytical data is calculated using the equation:

$$\%Completeness = [(complete\ data\ obtained)/(total\ data\ planned)] \times 100$$

The percent completeness goal for this sampling event is 90% for each analytical method.

Representativeness

Representativeness is the degree to which sampling data accurately and precisely represent site conditions and is dependent on sampling and analytical variability and the variability of environmental media at the site. Representativeness is a qualitative "measure" of data quality.

Soil vapor leak check analytical results for 2-propanol will be used to evaluate representativeness as follows: If the concentration of 2-propanol is greater than or equal to 10x the LOQ for target analytes, then corrective action is needed, and the analytical results should be rejected.

Achieving representative data in the field starts with a properly designed and executed sampling program that carefully considers the project's overall objectives. Proper location controls and sample handling are critical to obtaining representative samples.

The goal of achieving representative data in the laboratory is measured by assessing accuracy and precision. The laboratory will provide representative data when the analytical systems are in control. Therefore, representativeness is a redundant objective for laboratory systems if sample COC and sample preservation are properly documented, analytical procedures are followed and holding times are met.

Comparability

Comparability is the degree of confidence to which one data set can be compared to another Comparability is a qualitative "measure" of data quality.

Achieving comparable data in the field starts with a properly designed and executed sampling program that carefully considers the project's overall objectives. Proper location controls and sample handling are critical to obtaining comparable samples.

The goal of achieving comparable data in the laboratory is measured by assessing accuracy and precision. The laboratory will provide comparable data when analytical systems are in control. Therefore, comparability is a redundant QC objective for laboratory systems if proper analytical procedures are followed and holding times are met.

Sensitivity

Sensitivity is the ability of the method or instrument to detect the contaminant of concern and other target compounds at the level of interest. Appropriate sampling and analytical methods have been selected that have QC acceptance limits that support the achievement of established performance criteria. Elevated sensitivities due to dilutions caused by matrix interference will be communicated in the case narrative of the laboratory report.

For soil vapor, the performance criteria are the NMED (2022c) VISLs modified to use a target risk of 10E-5. The NMED VISLs will be used to evaluate contaminant concentrations in soil vapor samples. For human receptors, if NMED does not have a published VISL, then a U.S. Environmental Protection Agency (USEPA) VISL will be used if one is published (USEPA, 2023a). Assessment of analytical sensitivity will require thorough data validation. A comparison of the NMED VISLs (or USEPA VISLs) to laboratory quantitation limits is provided in **Table 4.5** for soil vapor.

To achieve an LOQ and LOD for 1,2-dibromoethane in soil vapor that is less than the VISL of 1.56 $\mu g/m^3$, the analytical laboratory will analyze 1,2-dibromomethane by TO-15 Low-Level from the same canister.

For soils, the performance criteria are the NMED (2022c) soil screening levels. If NMED does not have a published SSL, then a USEPA (2023b) Regional Screening Level (RSL) was used if one is published. A comparison of the NMED SSLs (or USEPA RSLs) to laboratory quantitation limits is provided in **Table 4.6,** which includes an evaluation of analytes with LOQs that are greater than lowest NMED SSLs (or USEPA RSLs). As soil data are not being used as part of this investigation to evaluate potential human health risks, the detection limits for soil are not evaluated further here. A complete evaluation of the soil data and risk screening will be presented in the Administration Area Soil Vapor Investigation Report.

Highlighted values in **Table 4.6** indicate achievable laboratory LOQs, limits of detection (LODs), and/or detection limits (DLs) that are greater than the Project Quantitation Limit Goals (PQLGs). Therefore, any analyte that is never detected, but has an LOD greater than the PQLG will be identified in the uncertainty section of the risk assessment and the potential underestimation of the risk will be acknowledged.

If the sensitivity requirements are not met for a particular analyte, the team will evaluate whether the data can still be used for project decisions. If non-detect values exceed the PQLGs, data are considered usable if the analyte is not a site-related compound. Analytes that are not site-related chemicals, and thus are not expected to be found, do not impact decision making. For analytes that are site-related, the team will use a “weight of evidence” approach to evaluate the likelihood of the chemical’s presence. This approach uses available data that does meet sensitivity requirements to evaluate the presence or absence of the compound in other samples or other similar compounds and/or degradation products for the analyte in question.

If sufficient evidence exists to determine a compound was likely not present because of the absence of similar compounds and breakdown products, the team will conclude that the analyte was not present, and thus data are usable for decision making. If it cannot be determined that the compound is likely not present, then the risk will be calculated assuming that the compound is present at the DL. This calculated risk will be presented as an uncertainty in the risk assessment, and the risk will not be included in the estimation of cumulative risk.

4.3.3 Data Verification and Data Review Procedures

Personnel involved in data validation will be independent of any data generation effort. The project chemist will be responsible for the oversight of data verification, review, and validation. Data verification and review will be performed when the data packages are received from the laboratory. Verification will be performed on an analytical-batch basis using the summary results of calibration and laboratory QC, as well as those of the associated field samples. There are five stages of review, as defined in DoD (2019) General Data Validation Guidelines:

Stage 1: A verification and validation conducted only on completeness and compliance of sample specific information and field QC: field sample IDs and target analytes verified against the chain of custody for completeness; sample conditions upon arrival at laboratory noted; sample preservation was appropriate and verified by the laboratory; holding times were met; concentrations and units for limits of detection and quantitation were appropriate; trip blanks, field blanks, equipment blanks, and field duplicates met project requirements for frequency and field quality control.

Stage 2A: Stage 1 validation plus evaluation of preparatory batch QC results: method blanks, LCSs, LCS duplicates (LCSDs), MSs/MSDs, surrogates (organics), serial dilutions, post-digestion spikes (as appropriate to the method), and any preparatory batch cleanup QC to assure project requirements for analyte spike list, frequency, and QC limits are met.

Stage 2B: Stage 2A validation plus evaluation of instrument-related QC results including Instrument Performance Samples: Tunes, breakdown standard check results, peak tailing factors (if applicable), instrument initial calibration summaries (including response factors and any regression summaries), initial calibration verification and continuing calibration verification summaries, internal standards, initial and continuing calibration blank summaries, confirmation of positive results for second column or detector including percent difference between the two analytical concentrations that are greater than the detection limit, and interference check samples to assure project requirements for frequency and quality control criteria are met.

Stage 3: Stage 2B validation plus re-quantification and recalculation of selected samples (i.e., target analytes quantitated from appropriate internal standards) and instrument QC: Appropriate selection of curve fit type, weighting factors, and with or without forcing through zero, continuing calibration verifications and blanks, and percent ratios of tunes and performance checks and preparatory batch QC results (such as spike percent recoveries and serial dilution percent differences) from instrument response. Instrument response data are required to perform re-quantification and recalculation.

Stage 4: Stage 3 validation plus qualitative review of non-detected, detected, and tentatively identified compounds (TICs) from instrument outputs: Chromatograms are checked for peak integration (10% of automated integration and 100% of manual integrations where chromatograms from before and after manual integration are examined for cause and justification), baseline, and interferences; mass spectra are checked for minimum signal to noise, qualitative ion mass presence, ion abundances; retention times or relative retention times are within method requirements for analyte identification. Raw data quantitation reports, chromatograms, mass spectra, instrument background corrections, and interference corrections are required to perform review of the instrument outputs.

For this project, 100% of the data packages will undergo data verification and data review, 90% to Stage 2B, and 10% to Stage 4.

4.3.4 Data Assessment

Limitations on data usability will be assigned, if appropriate, as a result of the validation process described earlier. The results of the data validation will be discussed in a separate report so that overall data quality can be verified through the precision, accuracy, representativeness, comparability, and completeness of sample results.

4.4 CHAIN OF CUSTODY

For each sample, COC forms will be completed and will accompany each sample at all times. Data on the COC form will include the sample identification (ID) (as described in **Section 4.9**), depth interval, date sampled, time sampled, project name, project number, and signatures of those in possession of the sample. The COC forms will accompany those samples shipped to the designated laboratory so that sample possession information can be maintained. The field team will retain a separate copy of the COC form at the field office. Additionally, the sample ID, date and time collected, collection location, and analysis requested will be documented in the field logbook as discussed in **Section 4.6**.

4.5 PACKAGING AND SHIPPING PROCEDURES

All samples will be shipped by overnight air freight to the laboratory. Soil samples will be treated as environmental samples, shipped in heavy duty coolers, packed in materials (e.g., bubble wrap) to prevent breakage. SUMMA canisters will be shipped in cardboard boxes. Each shipment will include the appropriate field QC samples (e.g., field duplicates and equipment blanks). Trip blanks and ice cooler preservation are not applicable for soil vapor sampling with SUMMA canisters. Corresponding COC forms will be placed in waterproof bags and taped to the inside of the shipping container. All coolers/boxes will be taped shut and a custody seal will be placed over the tape to prevent tampering.

4.6 SAMPLE DOCUMENTATION

Sample control and tracking information will be recorded in bound dedicated field logbooks and will include the following information: sample identification number and location, date, sampler's name, method of sampling, sample depth, SUMMA canister number, sampling start and end time, initial and end vacuum reading of the SUMMA canisters, ambient weather conditions, shut-in test results, information about leak check compounds used, and miscellaneous observations. An example sample form for soil vapor sampling is included in **Appendix B.2**. At the conclusion of each day in the field, the sampling team leader will review each page of the logbook for errors and omissions. The sampling team leader will then date and sign each reviewed page.

4.7 FIELD INSTRUMENT CALIBRATION

All field instruments will be calibrated following manufacturer recommended calibration procedures and frequencies. Field instrument calibrations will be recorded in a designated portion of the field logbook at the time of the calibration. Adverse trends in instrument calibration behavior will be corrected.

4.8 SURVEY OF SAMPLE LOCATIONS

The location of each sample collected will be surveyed using appropriate instrumentation and procedures to obtain horizontal accuracy of less than 0.1 foot. A Trimble Total Station Global Positioning System (GPS), Trimble Static GPS, or equivalent, will be utilized to document each soil sample location. A North American Datum 1983 Northing and Easting in U.S. Survey Feet will be established for all surveyed points and recorded in a dedicated field notebook. Survey data will be supplied in the Final Report in New Mexico State Plane and Universal Transverse Mercator Index coordinates.

4.9 SAMPLE IDENTIFICATION

During sampling, unique sample ID numbers will be assigned to each sample or subsample. Each sample ID number will consist of a combination of the Parcel number, SWMU/AOC number, additional site identifier, source of sample, increment or boring number, type of sample, and depth of sample collection. Following is an example sample number and a description of the sample identifiers to be used during implementation of this Work Plan.

Example Sample ID: 1145BLDG6-SV01-5D-SV-062024

Parcel: 11

SWMU or AOC: SWMU 45

Additional Sample Location Identifier related to nearby Buildings: BLDG6 (Building 6)

Boring type: SV (soil vapor probe)

Increment Number: Samples collected within Parcel 11 will be assigned sequential 2-digit or 3-digit numbers (in this case 01)

Depth Range: In feet (in this case 5 feet)

Type of Sample: D (discrete)

Matrix: SV (soil vapor) or SO (soil)

Date (MMYYYY): date (in this case 06/2024), for soil vapor samples only

QA/QC samples will carry the same sample nomenclature as the parent sample with a unique suffix and numeral (if required) to distinguish individual samples. Trip blanks and field blanks are not applicable to soil vapor sampling with SUMMA canisters, but are applicable for soil samples. Equipment blanks are applicable for any re-usable equipment that potentially comes into contact with contaminated media. Field duplicate samples will carry the sample location identifier with an additional designation of XXFD (where XX represents the sequence or increment number of the sample, such as 1145BLDG6-SV01FD-5D-SV-062024 for the above example sample ID).

4.10 INVESTIGATION-DERIVED WASTE

Three types of IDW may be generated during the sampling of environmental media during the Administration Area Soil Vapor Investigation activities: residual soil volume, decontamination fluids, and disposable sampling equipment/PPE. Proper management of this IDW is required to ensure compliance with federal, state, and Army regulations applicable to the collection, storage, transport, and disposal of potentially hazardous materials. Required IDW management measures for FWDA investigations or remedial activities will be waste segregation, containerization and labeling, temporary storage, waste characterization, and disposal.

These three IDW categories will be managed as follows:

1. Soil that remains after required samples have been collected will be emptied from sampling sleeves and placed in lidded steel 55-gallon drums for appropriate characterization and disposal. IDW drums will be placed on secondary containment pallets for temporary storage.
2. Small volumes of decontamination fluids are anticipated. Decontamination fluids will be contained within the temporary decontamination pad areas during active sampling and decontamination activities at a site. Accumulated wash and rinse water will then be containerized in lidded steel 55-gallon drums and combined with fluids produced during drilling activities for appropriate characterization and disposal.
3. Used, disposable sampling equipment and PPE are anticipated. Field personnel will place these items in polyethylene trash bags and treat them as general refuse. Field personnel will place refuse in suitable on-site covered trash receptacles daily.

5.0 POST-IMPLEMENTATION ACTIVITIES

The data collected from this investigation will be used to refine the previous soil contamination data from past releases of VOCs and TPH and identify areas where soil vapor migration pathway is potentially complete. The purpose of this Work Plan is to complete Step 1 of the vapor intrusion assessment in NMED's (2022c) tiered approach to human health risk assessments. That is, the maximum detected concentrations detected in soil vapor will be compared against the NMED VISLs. Then, the Army will determine what additional steps, if any, are required.

5.1 CONCEPTUAL SITE MODEL

While there is not yet enough data to develop a conceptual site model (CSM), a preliminary CSM was prepared in accordance with the human health risk assessment guidance (NMED, 2022c) and is described below. The primary source of potential contaminants is the release of VOCs and TPH from former USTs located near Building 6. The primary release mechanism was VOCs and TPH leaking from former USTs that impacted surrounding soils and groundwater. The primary source (the USTs) has been removed, but secondary sources of potential contaminants (impacted subsurface soils) remain in place. While impacted soil remails in place, it is generally below 15 feet bgs and, therefore, is too deep for the direct contact soil exposure pathway to be complete, however, the vapor phase may migrate both upward (being released to outdoor air and into buildings, if present) and downwards (potentially impacting groundwater).

Transport mechanisms may include leaching and infiltration to subsurface soil and groundwater and volatilization of contaminants in subsurface soil to air. Due to the presence of contaminants in groundwater below Building 6, it is assumed that contamination has leached from the secondary soil source at Building 6 to groundwater. At present, groundwater impacted by contaminants from Building 6 is not used as a drinking water source and does not discharge to the surface. The focus of this investigation is the impacts to soil and the soil vapor migration pathway. Potential exposure pathways other than inhalation of volatiles that have migrated to indoor air from soil vapor will be addressed in the Parcel 11 Phase 2 RFI Report. Buildings 5 and 6 will be demolished prior to conducting this investigation. The pathway for receptors to be exposed to contamination remaining from historical activities conducted at FWDA via the inhalation of volatiles that have migrated to indoor air from soil vapor is currently incomplete. In the future, this pathway may be potentially complete if buildings were to be constructed without a vapor barrier.

5.2 SELECTION OF SCREENING LEVELS

Soil and soil vapor will be evaluated in the Administration Area Soil Vapor Investigation Report. This section describes how screening levels will be selected for comparison to the data that is collected from the work proposed in this Work Plan. The hierarchy of soil vapor screening levels is provided below:

1. Screening levels published in Appendix A and Table 6-5 of the NMED (2022c) risk guidance will be selected as the screening levels. Both carcinogenic and noncarcinogenic endpoints will be evaluated for those analytes exhibiting both types of effect.
2. For analytes without an NMED VISL, VISLs calculated using the USEPA VISL calculator for residential receptors will be selected (USEPA, 2023a). The USEPA VISLs are based

on a noncancer endpoint corresponding to the NMED target hazard quotient (HQ) of 1.0 for noncarcinogenic analytes. The USEPA VISLs based on a cancer endpoint will be adjusted to a cancer risk of $1x10^{-5}$ for consistency with NMED.

Analytes without screening levels published by NMED or USEPA will be evaluated using surrogate analytes that are structurally similar or that provide a conservative estimate of toxicity, as appropriate. As indicated in **Table 4.5**, four compounds on the analyte list required the use of surrogates. Surrogates in **Table 4.5** are meant to provide an approximate evaluation of the potential for risk from a particular compound. The implications of using surrogates will be discussed in the Uncertainty Section of the Administration Area Soil Vapor Investigation Report.

5.3 PRELIMINARY DATA EVALUATION

The preliminary soil vapor analytical results will be evaluated to determine whether there are exceedances of the VISLs (see **Section 5.2**). The soil vapor sample results will be compared to the VISLs in a table for Army review. If volatiles are detected in soil vapor at concentrations exceeding residential VISLs, step-out sampling will be required to delineate the extent. If step-out sampling is warranted, the field sampling approach will be modified for additional field sampling. The sampling plan modification will be documented with a figure to be submitted for NMED's review and approval prior to installing additional soil borings. The figure will depict the proposed step-out locations along with the observed soil and soil gas concentrations at the original sampling locations. This additional sampling is intended to be conducted prior to initiation of reporting in an Administration Area Soil Vapor Investigation Report. If soil vapor concentrations do not exceed the VISLs, the Army will determine what steps, if any, are necessary to complete NMED's tiered approach for a human health risk assessment (NMED, 2022c).

5.4 REPORTING

All activities conducted as part of this Work Plan will be documented in an Administration Area Soil Vapor Investigation Report. The report will contain, at a minimum, a detailed schedule of completed activities, field methods, deviations from approved work plan, a summary of analytical data, and an evaluation of data comparing results to the appropriate screening levels (see **Section 5.1**). All soil vapor analytical results will be compared with residential VISLs, and a recommendation will be made as to whether Steps 2 through 4 of NMED (2022c) guidance for evaluating the vapor intrusion path and/or a human health risk assessment is warranted.

6.0 SCHEDULE

The approximate schedule for conducting the soil vapor investigation activities at the Administration Area of Parcel 11 is summarized below.

1. Submittal of Army Draft Final Work Plan – February 2024
2. Submittal of Final Work Plan to Tribes/NMED – 15 days after receipt of comments from the Army
3. Regulatory/Tribal Review – 30 days
4. Revised Final Work Plan – January 29, 2025
5. Building 5 and 6 Hazardous Material / Structural Removal – Summer/Fall 2025
6. Implementation of Soil Vapor Investigation Fieldwork – Winter 2026 and Summer 2026 (two seasonal sampling events)
7. Submittal of proposed Step-Out Sampling figure to NMED (if necessary) – 120 days after completion of initial sampling event
8. Implementation of Step-Out Sampling (if necessary) – 45 days after acceptance of NMED step-out sampling locations
9. Submittal of Army Draft Final Report – 90 days after completion of the investigation activities, including laboratory reporting, data validation, waste disposal, and site restoration
10. Submittal of Final Report to Tribes/NMED – 15 days after receipt of comments from the Army
11. Regulatory/Tribal Review – 30 days
12. Revised Final Report – 15 days after receipt of comments from NMED and Tribes (as necessary).

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TABLES

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Table 2.1 – USTs Removed from the Building 6 Area

Tank Number	Product Stored	Location	Tank Size
Tank #1	Leaded Gasoline	West of Building 6	11,750 gallon
Tank #2	Unleaded Gasoline	West of Building 6	11,750 gallon
Tank #3	Diesel	South of Building 6	11,750 gallon
Tank #4	Kerosene	North of Building 6	1,000 gallon

Acronyms and Definitions:
UST = underground storage tank

Source:
Envirotech. 1993. Underground Storage Tank Closure, Fort Wingate Army Depot , Fort Wingate, New Mexico. February.

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Table 2.2 – 1993 UST Removal Confirmation Sample Results

		Sample Location	NMED Soil SAT [1]	Diesel Pump Area	Unleaded Pump Area	13'6" N of Diesel Tank	8' N of Diesel Tank	Under Unleaded Lines	Tank #4 E End	Tank #4 W End	Tank #1 S End	Tank #1 N End	Tank #3 E End	Tank #3 W End	Tank #2 N End	Tank #2 S End
		depth (ft bgs)		**?**	**?**	**13.5**	**8**	**?**	**6?**	**6?**	**15**	**15**	**14.5**	**14.5**	**15**	**14**
		SampleID		**4471**	**4472**	**4473**	**4474**	**4475**	**4518**	**4519**	**4520**	**4521**	**4522**	**4523**	**4524**	**4525**
Method	**Chemical**	**Units**		**1/14/1993**	**1/14/1993**	**1/14/1993**	**1/14/1993**	**1/14/1993**	**1/19/1993**	**1/19/1993**	**1/19/1993**	**1/19/1993**	**1/19/1993**	**1/19/1993**	**1/19/1993**	**1/19/1993**
8020	Benzene	mg/kg	748	--	8.8	5.6	45.6	6.8	--	--	0.62	0.191	--	--	0.139	0.121
8020	Toluene	mg/kg	292	--	2.14	1.64	298.9	174.4	--	--	1.47	0.920	--	--	0.620	0.59
8020	Ethylbenzene	mg/kg	149	--	<0.079	12.6	280.9	110.2	--	--	8.10	0.214	--	--	0.0255U	0.0255U
8020	Xylenes (total)	mg/kg	81.8	--	80.6	46.2	707.4	304.6	--	--	15.6	0.545	--	--	0.290	0.329
8015	TPHg (C5-C10)	mg/kg	--	3.1	1,170	530	4,100	1,350	2.8	0.9	188	3.0	--	--	2.0	2.5
8015	TPHd (C10-C28)	mg/kg	--	369	1,480	500	2,160	960	232	40.8	510	21.9	--	--	13.8	8.2
8015	TPHo (C28-C36)	mg/kg	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	--	--	0.1 U	0.1 U
8015	Calculated Total TPH	mg/kg	--	372	2,650	1,030	6,300	2,310	235	41.7	700	25.0	--	--	15.8	10.7
418.1	Total TPH	mg/kg	--	--	--	--	--	--	--	--	--	--	10 U	13.8	--	--
Field	Photoionization Detector	ppmv	--	--	--	--	--	--	--	--	889	349	42	91	148	573

Acronyms and Definitions:
-- = not analyzed
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
ND = not detected
ppmv = parts per million by volume
TPH = total petroleum hydrocarbons
TPHg = TPH as gasoline range organics
TPHd = TPH as diesel range organics
TPHo = TPH as oil range organics
U = not detected at the indicated detection limit
UST = underground storage tank

Notes:
[1] Soil saturation limit (calculated for VOCs not solid at soil temperature only) based on NMED. Risk Assessment Guidance for Investigations and Remediation, Volume I. June 2022

Source:
Envirotech. 1993. Underground Storage Tank Closure, Fort Wingate Army Depot , Fort Wingate, New Mexico. February.

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Table 2.3 – 1993 UST Investigation PID Results

Sample Location	FW-1	FW-2	FW-3	FW-4	FW-5	FW-6	FW-7	FW-8	FW-9	FW-10	FW-11	FW-12	FW-13	FW-14	FW-15	FW-16
Depth (ft bgs)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)
10-15	**782**	5.2	6.7	37.8	**628**	68.5	130	44	8.2	24.1	83.4	17.7	**470**	4.5	42.2	19.5
15-20	**3,418**	**165**	**974**	6.1	**290**	45.9	**188**	31.7	5.6	18.9	84.2	13.9	**833**	3.9	14.6	**117**
20-25	**4,029**	**596**	**492**	32	**484**	52.8	**230**	122	7.2	45.7	86.7	11.4	**479**	3.4	49.3	**180**
25-30	**3,450**	**637**	**241**	95.2	**894**	104	**451**	34.8	6.3	27.7	**239**	69.2	**405**	4.4	32.6	64.8
30-35	**1,987**	36.3	3.1	37.4	**4,035**	81	**2,956**	79	12	28.8	**1,285**	37	**1,103**	3.5	62.2	31.9
35-40	27.6	10.9	2.4	11	35.9	-	24.4	141	7.3	10.3	**328**	31.4	**769**	1.1	31.5	**240**
40-45	22.6	1.6	0	3.4	4.5	22.7	4	7.5	10.4	3.4	5.4	23.7	6.3	0	79.3	15
45-50	22.6	1.5	--	2.3	4.4	47.6	7.1	--	7.2	--	4.5	16.8	10.0	1.8	45	28
50-55	3.8	--	--	--	--	7.4	--	--	--	--	--	4.3	20.8	0	32.7	21.1
55-60	7.8	--	--	--	--	--	--	--	--	--	--	--	3.5	--	50.6	92
60-65	--	--	--	--	--	--	--	--	--	--	--	--	11.4	--	41	--
65-70	--	--	--	--	--	--	--	--	--	--	--	--	4.6	--	16	--

Acronyms and Definitions:
Bold = results above 150 ppmv are in **bold**. This is 1.5 times the threshold for petroleum contamination specified in New Mexico Administrative Code 20.5.119.1908.B
--= not analyzed
ft bgs = feet below ground surface
PID = photoionization detector
ppmv = parts per million by volume
UST = underground storage tank

Source:
USACE. 1993. Investigation of Soils Contamination, Fort Wingate Army Depot Activity, Gallup, New Mexico. June. Draft.

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Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-001D-S	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 FD 1151BLDG6-15-001DU	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 SPS 1151BLDG6-15-001T	1145BLDG6-SB01-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-002D-S	1145BLDG6-SB01-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-003D-S	1145BLDG6-SB02-15D-SO 2010/03/30 15 - 15_5 N 1151BLDG6-15-004D-S	1145BLDG6-SB02-30D-SO 2010/03/30 30 - 30_5 N 1151BLDG6-30-005D-S
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	**130 J**	**150 J**	0.37 U	**1.5 J**	0.85 UJ	**5.9**	**3.3 J**
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.19 UJ	0.19 UJ	-	0.18 UJ	0.17 UJ	**22**	**11**
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00029 UJ	0.0003 U	-	0.00029 UJ	0.00025 UJ	0.00034 UJ	0.00026 UJ
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00044 UJ	0.00046 U	-	0.00044 UJ	0.00038 UJ	0.00052 UJ	**0.026 J**
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00032 UJ	0.00033 UJ	0.00026 U	0.00032 UJ	0.00028 UJ	0.00038 UJ	0.00029 UJ
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.0003 UJ	0.00031 U	0.00032 U	0.0003 UJ	0.00026 UJ	0.00035 UJ	0.00027 UJ
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00035 UJ	0.00036 U	0.0003 U	0.00035 UJ	0.0003 UJ	0.00042 UJ	0.00031 UJ
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00026 U	0.00027 U	-	0.00026 U	0.00022 U	0.00031 UJ	0.00023 UJ
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.0005 UJ	0.00052 U	0.00063 U	0.0005 UJ	0.00044 UJ	0.0006 UJ	0.00045 UJ
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00012 UJ	0.00012 U	0.00043 U	0.00012 UJ	0.0001 UJ	0.00014 UJ	0.00011 UJ
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00034 UJ	0.00035 U	0.0004 U	0.00034 UJ	0.00029 UJ	0.0004 UJ	0.0003 UJ
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00031 UJ	0.00032 U	-	0.00031 UJ	0.00027 UJ	0.00037 UJ	0.00028 UJ
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00043 UJ	0.00045 UJ	-	0.00043 UJ	0.00037 UJ	0.00051 UJ	0.00039 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00046 UJ	0.00048 U	0.00062 U	0.00046 UJ	0.0004 UJ	0.00055 UJ	0.00042 UJ
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00042 UJ	0.00043 UJ	-	0.00042 UJ	0.00036 UJ	0.0005 UJ	0.00038 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00033 UJ	0.00034 U	-	0.00033 UJ	0.00029 UJ	**1.2 J**	**1.1 J**
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00034 UJ	0.00036 U	0.0013 U	0.00034 UJ	0.0003 UJ	0.00041 UJ	0.00031 UJ
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.0003 UJ	0.00031 UJ	0.00048 U	0.0003 UJ	0.00026 UJ	0.00035 UJ	0.00027 UJ
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00026 UJ	0.00027 U	-	0.00026 UJ	0.00022 UJ	0.00031 UJ	0.00023 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.0004 UJ	0.00042 U	0.00041 U	0.0004 UJ	**0.026 J**	0.00048 UJ	0.00036 UJ
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00032 UJ	0.00033 U	0.00035 U	0.00031 UJ	0.00027 UJ	0.00037 UJ	0.00028 UJ
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00033 UJ	0.00034 U	-	**0.0023 J**	0.00028 UJ	**0.44 J**	**0.4 J**
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00028 UJ	0.00029 U	-	0.00027 UJ	0.00024 UJ	0.00033 UJ	0.00025 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00029 UJ	0.0003 UJ	-	0.00029 UJ	0.00025 UJ	0.00035 UJ	0.00026 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00045 UJ	0.00046 U	-	0.00045 UJ	0.00039 UJ	0.00053 UJ	0.0004 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.032 U	0.033 U	0.025 U	0.032 U	0.028 U	0.038 UJ	0.029 UJ
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00045 UJ	0.00046 U	-	0.00045 UJ	0.00039 UJ	0.00053 UJ	0.0004 UJ
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00028 UJ	0.00029 U	-	**0.00044 J**	0.00024 UJ	0.00033 UJ	**0.047 J**
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00025 U	0.00026 U	-	0.00025 U	0.00022 U	0.0003 UJ	0.00023 UJ
8260B	2-Butanone	78-93-3	mg/kg	0.001 U	0.0011 UJ	0.00043 U	**0.0036 J**	0.00091 U	0.0012 UJ	0.00094 UJ
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	0.00043 U	-	-	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0028 UJ	0.0029 U	0.00029 U	0.0028 UJ	0.0024 UJ	0.0033 UJ	0.0025 UJ
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00019 UJ	0.0002 U	-	0.00019 UJ	0.00017 UJ	0.00023 UJ	0.00018 UJ
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0025 U	0.0026 U	0.00036 U	0.0025 U	0.0022 U	0.003 UJ	0.0022 UJ
8260B	Acetone	67-64-1	mg/kg	0.0031 UJ	0.0032 UJ	**0.0089 J**	0.0031 U	0.0027 U	**0.11 J**	**0.062 J**
8260B	Acetonitrile	75-05-8	mg/kg	-	-	0.0043 U	-	-	-	-
8260B	Acrolein	107-02-8	mg/kg	-	-	0.0032 U	-	-	-	-

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB02-45D-SO 2010/03/30 45 - 45_5 N 1151BLDG6-45-006D-S	1145BLDG6-SB03-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-007D-S	1145BLDG6-SB03-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-008D-S	1145BLDG6-SB03-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-009D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 N 1151BLDG6-15-010D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 FD 1151BLDG6-15-010DU	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 SPS 1151BLDG6-15-010T
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	**2.2 J**	**2.1 J**	**1.2 J**	0.76 UJ	**1.6 J**	**1.4 J**	0.41 U
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.17 UJ	0.18 UJ	0.19 UJ	0.17 UJ	0.2 UJ	0.18 UJ	-
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00025 U	0.00031 UJ	0.00031 UJ	0.00027 UJ	0.00025 U	0.00034 U	-
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00038 U	0.00048 UJ	**0.00093 J**	0.00042 UJ	0.00039 U	0.00052 U	-
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00028 U	0.00035 UJ	0.00035 UJ	0.00031 UJ	0.00028 U	0.00038 U	0.017 U
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00026 U	0.00033 UJ	0.00032 UJ	0.00029 UJ	0.00026 U	0.00035 U	0.012 U
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0003 U	0.00038 UJ	0.00038 UJ	0.00033 UJ	0.00031 U	0.00041 U	0.018 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00022 U	0.00028 U	0.00028 U	0.00025 U	0.00023 U	0.0003 U	-
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00043 U	0.00055 UJ	0.00055 UJ	0.00048 UJ	0.00044 U	0.00059 U	0.036 U
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.0001 U	0.00013 UJ	0.00013 UJ	0.00012 UJ	0.00011 U	0.00014 U	0.012 U
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00029 U	0.00037 UJ	0.00037 UJ	0.00032 UJ	0.0003 U	0.0004 U	0.029 U
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00027 U	0.00034 UJ	0.00034 UJ	0.0003 UJ	0.00027 U	0.00036 U	-
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00037 UJ	0.00047 UJ	0.00047 UJ	0.00041 UJ	0.00038 U	0.0005 U	-
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.0004 U	0.00051 UJ	0.00051 UJ	0.00044 UJ	0.00041 U	0.00054 U	0.063 U
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00036 UJ	0.00046 UJ	0.00046 UJ	0.0004 UJ	0.00037 U	0.00049 U	-
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00029 U	0.00036 UJ	0.00036 UJ	0.00032 UJ	0.00029 U	0.00039 U	-
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.0003 U	0.00038 UJ	0.00037 UJ	0.00033 UJ	0.0003 U	0.0004 U	0.08 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00026 U	0.00033 UJ	0.00032 UJ	0.00029 UJ	0.00026 U	0.00035 U	0.021 U
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00022 U	0.00028 UJ	0.00028 UJ	0.00025 UJ	0.00023 U	0.0003 U	-
8260B	1,2-Dichloroethane	107-06-2	mg/kg	**0.077**	0.00044 UJ	**0.0044 J**	**0.018 J**	0.00035 U	0.00047 U	0.013 U
8260B	1,2-Dichloropropane	78-87-5	mg/kg	**0.00029 J**	0.00035 UJ	0.00034 UJ	0.0003 UJ	0.00028 U	0.00037 U	0.019 U
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00028 U	0.00036 UJ	**0.0079 J**	0.00031 UJ	0.00029 U	0.00038 U	-
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00024 U	0.0003 UJ	0.0003 UJ	0.00026 UJ	0.00024 U	0.00032 U	-
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00025 U	0.00032 UJ	0.00032 UJ	0.00028 UJ	0.00026 U	0.00034 U	-
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00038 U	0.00049 UJ	0.00049 UJ	0.00043 UJ	0.00039 U	0.00052 U	-
8260B	1,4-Dioxane	123-91-1	mg/kg	0.028 U	0.035 U	0.035 U	0.031 U	0.028 U	0.038 U	2.4 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00038 U	0.00049 UJ	0.00049 UJ	0.00043 UJ	0.00039 U	0.00052 U	-
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00024 U	0.00031 UJ	**0.0016 J**	0.00027 UJ	0.00025 U	0.00033 U	-
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00022 U	0.00028 U	0.00027 U	0.00024 U	0.00022 U	0.0003 U	-
8260B	2-Butanone	78-93-3	mg/kg	0.0009 UJ	0.0012 U	**0.0017 J**	0.001 U	**0.0012 J**	**0.0015 J**	0.081 U
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	-	-	-	-	0.011 U
8260B	2-Hexanone	591-78-6	mg/kg	0.0024 U	0.0031 UJ	0.0031 UJ	0.0027 UJ	0.0024 U	0.0033 U	0.015 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00017 U	0.00021 UJ	**0.001 J**	0.00019 UJ	0.00017 U	0.00023 U	-
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0022 U	0.0027 U	0.0027 U	0.0024 U	0.0022 U	0.0029 U	0.025 U
8260B	Acetone	67-64-1	mg/kg	0.0027 UJ	0.0034 U	0.0034 U	0.0029 UJ	0.0027 U	**0.0038 J**	0.1 U
8260B	Acetonitrile	75-05-8	mg/kg	-	-	-	-	-	-	0.099 U
8260B	Acrolein	107-02-8	mg/kg	-	-	-	-	-	-	0.11 U

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB04-30D-SO 2010/04/02 30 - 30_5 N 1151BLDG6-30-011D-S	1145BLDG6-SB04-45D-SO 2010/04/02 45 - 45_5 N 1151BLDG6-45-012D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 N 1151BLDG6-15-013D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 FD 1151BLDG6-15-013DU	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 SPS 1151BLDG6-15-013T	1145BLDG6-SB05-30D-SO 2010/04/06 30 - 30_5 N 1151BLDG6-30-014D-S	1145BLDG6-SB05-45D-SO 2010/04/06 45 - 45_5 N 1151BLDG6-45-015D-S
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	**1.4 J**	0.78 U	**1.2 J**	0.8 U	0.4 U	**3.2 J**	0.85 U
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	**8.5**	0.17 UJ	0.19 UJ	0.25 UJ	-	**23 J**	0.2 UJ
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00031 U	0.00027 U	0.00033 U	0.00032 U	-	0.00044 UJ	0.00031 U
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	**0.0064**	0.00041 U	0.00051 U	0.00049 U	-	**0.026 J**	**0.00066 J**
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00035 U	0.0003 U	0.00037 U	0.00036 U	0.00029 U	0.0005 UJ	0.00034 U
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00032 U	0.00028 U	0.00035 UJ	0.00033 UJ	0.00035 U	0.00046 UJ	0.00032 UJ
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00038 U	0.00032 U	0.00041 U	0.00039 U	0.00033 U	0.00054 UJ	0.00038 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00028 U	0.00024 U	0.0003 U	0.00029 U	-	0.0004 UJ	0.00028 U
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00055 U	0.00047 U	0.00059 U	0.00056 U	0.00069 U	0.00078 UJ	0.00054 U
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00013 U	0.00011 U	0.00014 UJ	0.00013 UJ	0.00047 U	0.00019 UJ	0.00013 UJ
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00037 U	0.00031 U	0.00039 U	0.00038 U	0.00044 U	0.00052 UJ	0.00036 U
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00034 U	0.00029 U	0.00036 UJ	0.00034 UJ	-	0.00048 UJ	0.00033 UJ
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00047 U	0.0004 U	0.0005 UJ	0.00048 UJ	-	0.00066 UJ	0.00046 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00051 U	0.00043 U	0.00054 U	0.00052 U	0.00067 U	0.00072 UJ	0.0005 U
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00046 U	0.00039 U	0.00049 UJ	0.00047 UJ	-	0.00065 UJ	0.00045 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	**0.047**	0.00031 U	0.00039 U	0.00037 U	-	**0.48 J**	**0.00055 J**
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00037 U	0.00032 U	0.0004 U	0.00038 U	0.0014 U	0.00053 UJ	0.00037 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00032 U	0.00028 U	0.00035 U	0.00033 U	0.00052 U	0.00046 UJ	0.00032 U
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00028 U	0.00024 U	0.0003 UJ	0.00029 UJ	-	0.0004 UJ	0.00028 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00044 U	**0.019**	0.00047 UJ	0.00045 UJ	0.00045 U	0.00062 UJ	**0.039 J**
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00034 U	0.00029 U	0.00037 UJ	0.00035 UJ	0.00038 U	0.00049 UJ	0.00034 UJ
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	**0.047**	0.0003 U	0.00038 U	0.00036 U	-	**0.16 J**	0.00035 U
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.0003 U	0.00025 U	0.00032 UJ	0.00031 UJ	-	0.00042 UJ	0.0003 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00032 U	0.00027 U	0.00034 UJ	0.00033 UJ	-	0.00045 UJ	0.00031 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00049 U	0.00041 U	0.00052 UJ	0.0005 UJ	-	0.00069 UJ	0.00048 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.035 U	0.03 U	0.037 U	0.036 U	0.027 U	0.05 UJ	0.035 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00049 U	0.00041 U	0.00052 UJ	0.0005 UJ	-	0.00069 UJ	0.00048 UJ
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	**0.022**	0.00026 U	0.00033 UJ	0.00031 UJ	-	**0.045 J**	0.0003 UJ
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00027 U	0.00023 U	0.00029 UJ	0.00028 UJ	-	0.00039 UJ	0.00027 UJ
8260B	2-Butanone	78-93-3	mg/kg	**0.0071 J**	**0.0044 J**	**0.0014 J**	**0.0014 J**	0.00047 U	0.0016 UJ	0.0011 U
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	-	-	0.00047 U	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0031 U	0.0026 U	0.0033 U	0.0031 U	0.00031 U	0.0043 UJ	0.003 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00021 U	0.00018 U	0.00023 U	0.00022 U	-	0.0003 UJ	0.00021 U
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0027 U	0.0023 U	0.0029 U	0.0028 U	0.00039 U	0.0039 UJ	0.0027 U
8260B	Acetone	67-64-1	mg/kg	**0.027**	0.0029 U	0.0036 U	0.0034 U	0.0078 U	**0.046 J**	**0.0077 J**
8260B	Acetonitrile	75-05-8	mg/kg	-	-	-	-	0.0047 U	-	-
8260B	Acrolein	107-02-8	mg/kg	-	-	-	-	0.0035 U	-	-

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB06-15D-SO 2010/04/01 15 - 15_5 N 1151BLDG6-15-016D-S	1145BLDG6-SB06-30D-SO 2010/04/01 30 - 30_5 N 1151BLDG6-30-017D-S	1145BLDG6-SB06-45D-SO 2010/04/01 45 - 45_5 N 1151BLDG6-45-018D-S	1145BLDG6-SB07-15D-SO 2010/04/05 15 - 15_5 N 1151BLDG6-15-019D-S	1145BLDG6-SB07-30D-SO 2010/04/05 30 - 30_5 N 1151BLDG6-30-020D-S	1145BLDG6-SB07-45D-SO 2010/04/05 45 - 45_5 N 1151BLDG6-45-021D-S	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS001D-SO
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	**0.89 J**	**3.9 J**	0.82 U	**210**	**16**	**0.97 J**	-
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.19 UJ	**14**	0.19 UJ	**3600**	**55**	0.19 UJ	-
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00028 U	0.00035 UJ	0.00026 U	0.00043 UJ	0.017 U	0.00031 U	0.00027 UJ
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00043 U	**0.021 J**	0.00041 U	**2.9 J**	**0.73**	**0.0029 J**	0.00041 UJ
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00032 U	0.00039 UJ	0.0003 UJ	0.00048 UJ	0.013 U	0.00034 U	0.0003 UJ
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00029 U	0.00036 UJ	0.00027 UJ	0.00045 U	0.012 U	0.00032 U	0.00028 UJ
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00034 U	0.00042 UJ	0.00032 U	0.00053 UJ	0.018 U	0.00037 U	0.00032 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00025 U	0.00031 UJ	0.00024 U	0.00039 U	0.04 U	0.00028 U	0.00024 U
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.0005 U	0.00061 UJ	0.00046 U	0.00076 U	0.017 U	0.00054 U	0.00047 UJ
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00012 U	0.00015 UJ	0.00011 UJ	0.00018 U	0.031 U	0.00013 U	0.00011 UJ
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00033 U	0.00041 UJ	0.00031 U	0.00051 U	0.031 U	0.00036 U	0.00031 UJ
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.0003 U	0.00038 UJ	0.00029 UJ	0.00047 U	0.029 U	0.00033 U	0.00029 UJ
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00042 U	0.00052 UJ	0.0004 U	0.00065 UJ	0.021 U	0.00046 UJ	0.0004 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00046 U	0.00056 UJ	0.00043 UJ	0.0007 UJ	0.029 U	0.0005 U	0.00043 UJ
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00041 U	0.00051 UJ	0.00039 U	0.00063 UJ	0.029 U	**0.00076 J**	0.00039 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	**0.00035 J**	**1.7 J**	0.00031 UJ	**98 J**	**12**	0.00035 U	0.00031 UJ
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00034 U	0.00042 UJ	0.00032 U	0.00052 UJ	0.053 U	0.00037 U	0.00032 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00029 U	0.00036 UJ	0.00027 UJ	0.00045 UJ	0.015 U	0.00032 U	0.00028 UJ
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00025 U	0.00031 UJ	0.00024 UJ	0.00039 UJ	0.057 U	0.00028 U	0.00024 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00039 U	0.00049 UJ	**0.029**	0.00061 U	0.015 U	**0.12**	0.00037 UJ
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00031 U	0.00038 UJ	0.00029 UJ	0.00048 U	0.028 U	0.00034 U	0.00029 UJ
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00032 U	**0.13 J**	0.0003 U	**34 J**	**4**	0.00035 U	0.0003 UJ
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00027 U	0.00033 UJ	0.00025 U	0.00042 UJ	0.025 U	0.00029 U	0.00026 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00029 U	0.00035 UJ	0.00027 UJ	0.00044 UJ	0.017 U	0.00031 U	0.00027 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00044 U	0.00054 UJ	0.00041 U	0.00067 UJ	0.015 U	0.00048 U	0.00042 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.032 U	0.039 UJ	0.03 U	0.049 U	1.5 U	0.034 U	0.03 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00044 U	0.00054 UJ	0.00041 UJ	0.00067 UJ	0.014 U	0.00048 U	0.00042 UJ
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00028 U	0.00034 UJ	0.00026 UJ	**2.9 J**	**0.43**	**0.0027 J**	0.00026 UJ
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00025 U	0.00031 UJ	0.00023 U	0.00038 U	0.017 U	0.00027 U	0.00023 UJ
8260B	2-Butanone	78-93-3	mg/kg	0.001 UJ	0.0013 UJ	0.00097 UJ	0.0016 U	0.18 U	0.0011 U	**0.002 J**
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	-	-	-	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0028 U	0.0034 UJ	0.0026 U	0.0042 U	0.13 U	0.003 U	0.0026 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00019 U	**0.00073 J**	0.00018 U	0.00029 U	0.031 U	0.00021 U	0.00018 UJ
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0025 U	0.003 UJ	0.0023 U	0.0038 U	0.14 U	0.0027 U	0.0023 U
8260B	Acetone	67-64-1	mg/kg	0.003 U	**0.037 J**	0.0028 U	0.0047 U	0.24 U	**0.065**	0.0029 U
8260B	Acetonitrile	75-05-8	mg/kg	-	-	-	-	-	-	-
8260B	Acrolein	107-02-8	mg/kg	-	-	-	-	-	-	-

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 FD 1149AOC49-SS001DUP-SO	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 SPS 1149AOC49-SS001TRIP-	1149DOCK-SB01-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-002D-SO	1149DOCK-SB01-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-003D-SO	1149DOCK-SB02-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS004D-SO	1149DOCK-SB02-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-005D-SO	1149DOCK-SB02-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-006D-SO
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00031 UJ	-	0.00041 UJ	0.00037 UJ	0.00035 UJ	0.00031 UJ	0.0003 UJ
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00047 UJ	-	**0.0074 J**	0.00058 UJ	0.00055 UJ	0.00048 UJ	**0.34 J**
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00034 UJ	0.00028 U	0.00046 UJ	0.00042 UJ	0.0004 UJ	0.00035 UJ	0.00034 UJ
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00032 UJ	0.00034 U	0.00043 UJ	0.00039 UJ	0.00037 UJ	0.00032 UJ	0.00032 UJ
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00037 U	0.00032 U	0.0005 UJ	0.00046 U	0.00043 U	0.00038 U	0.00037 UJ
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00027 U	-	0.00037 UJ	0.00034 U	0.00032 U	0.00028 U	0.00027 UJ
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00054 UJ	0.00067 U	0.00072 UJ	0.00066 UJ	0.00062 UJ	0.00055 UJ	0.00054 UJ
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00013 UJ	0.00046 U	0.00017 UJ	0.00016 UJ	0.00015 UJ	0.00013 UJ	0.00013 UJ
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00036 UJ	0.00043 U	0.00048 UJ	0.00044 UJ	0.00042 UJ	0.00037 UJ	0.00036 UJ
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00033 UJ	-	0.00044 UJ	0.0004 UJ	0.00038 UJ	0.00034 UJ	0.00033 UJ
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00046 UJ	-	0.00062 UJ	0.00056 UJ	0.00053 UJ	0.00047 UJ	0.00046 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00049 UJ	0.00065 U	0.00067 UJ	0.00061 UJ	0.00057 UJ	0.0005 UJ	0.00049 UJ
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00045 UJ	-	0.0006 UJ	0.00055 UJ	0.00052 UJ	0.00045 UJ	0.00044 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00035 UJ	-	**0.088 J**	0.00043 UJ	0.00041 UJ	0.00036 UJ	**2.8 J**
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00037 U	0.0013 U	0.00049 UJ	0.00045 U	0.00043 U	0.00037 U	0.00037 UJ
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00032 UJ	0.00051 U	0.00043 UJ	0.00039 UJ	0.00037 UJ	0.00032 UJ	0.00032 UJ
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00027 UJ	-	0.00037 UJ	0.00034 UJ	0.00032 UJ	0.00028 UJ	0.00027 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00043 UJ	0.00044 U	0.00057 UJ	0.00052 UJ	0.0005 UJ	0.00044 UJ	0.00043 UJ
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00034 UJ	0.00037 U	0.00045 UJ	0.00041 UJ	0.00039 UJ	0.00034 UJ	0.00033 UJ
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00035 UJ	-	0.00047 UJ	0.00043 UJ	0.0004 UJ	0.00035 UJ	**1.1 J**
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00029 UJ	-	0.00039 UJ	0.00036 UJ	0.00034 UJ	0.0003 UJ	0.00029 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00031 UJ	-	0.00042 UJ	0.00038 UJ	0.00036 UJ	0.00032 UJ	0.00031 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00048 UJ	-	0.00064 UJ	0.00058 UJ	0.00055 UJ	0.00049 UJ	0.00047 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.034 U	0.027 U	0.046 UJ	0.042 U	0.04 U	0.035 U	0.034 UJ
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00048 UJ	-	0.00064 UJ	0.00058 UJ	0.00055 UJ	0.00049 UJ	**0.015 J**
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.0003 UJ	-	**0.0062 J**	0.00037 UJ	0.00035 UJ	0.00031 UJ	**0.27 J**
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00027 UJ	-	0.00036 UJ	0.00033 UJ	0.00031 UJ	0.00027 UJ	0.00027 UJ
8260B	2-Butanone	78-93-3	mg/kg	**0.002 J**	0.00046 U	**0.047 J**	**0.003 J**	**0.0022 J**	**0.002 J**	0.0011 UJ
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	0.00045 U	-	-	-	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.003 U	0.00031 U	0.004 UJ	0.0037 U	0.0035 U	0.003 U	0.003 UJ
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00021 UJ	-	0.00028 UJ	0.00025 UJ	0.00024 UJ	0.00021 UJ	0.00021 UJ
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0027 U	0.00038 U	0.0036 UJ	0.0033 U	0.0031 U	0.0027 U	0.0027 UJ
8260B	Acetone	67-64-1	mg/kg	0.0033 U	0.0076 U	**0.051 J**	0.004 U	0.0038 U	0.0033 U	0.0033 UJ
8260B	Acetonitrile	75-05-8	mg/kg	-	0.0046 U	-	-	-	-	-
8260B	Acrolein	107-02-8	mg/kg	-	0.0034 U	-	-	-	-	-

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 FD 1105BLDG5-SS001DUP-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS001D-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 SPS 1105BLDG5-SS001TRIP-SO	1105BLDG5-SS002D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS002D-SO	1105BLDG5-SS003D-SO 2010/03/18 2 - 3 N 1105BLDG5-SS003D-SO	1105BLDG5-SS004D-SO 2010/03/18 0_5 - 1 N 1105BLDG5-SS004D-SO	1105BLDG5-SS005D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS005D-SO
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	**4 J**	**5.8**	-	**2.8 J**	1.3 U	**17**	1.3 U
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	**2 J**	**3.1 J**	0.42 U	**1.8 J**	0.86 U	**11**	0.87 U
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.28 UJ	0.21 UJ	-	0.23 UJ	0.3 UJ	**0.22 J**	0.3 U
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	**6.7 J**	**8.1 J**	0.8 U	**5.3 J**	5 U	**17**	5 U
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00042 U	0.00042 UJ	-	0.00027 U	0.0004 UJ	0.00032 UJ	0.00037 U
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00064 U	0.00065 UJ	-	0.00041 U	0.00062 UJ	0.00049 UJ	0.00057 U
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00047 U	0.00047 UJ	0.00047 U	0.0003 U	0.00045 UJ	0.00036 UJ	0.00042 U
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00043 U	0.00044 UJ	0.00029 U	0.00028 U	0.00042 UJ	0.00033 UJ	0.00039 U
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00051 U	0.00052 UJ	0.00055 U	0.00033 U	0.00049 UJ	0.00039 UJ	0.00045 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00037 U	0.00038 U	-	0.00024 U	0.00036 UJ	0.00029 U	0.00034 U
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00073 U	0.00075 UJ	0.00045 U	0.00047 U	0.00071 UJ	0.00056 UJ	0.00066 U
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00017 U	0.00018 UJ	0.00046 U	0.00011 U	0.00017 UJ	0.00013 UJ	0.00016 U
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00049 U	0.0005 UJ	0.00029 U	0.00032 U	0.00048 UJ	0.00037 UJ	0.00044 U
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00045 U	0.00046 UJ	-	0.00029 U	0.00044 UJ	0.00034 UJ	0.0004 U
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00062 UJ	0.00064 UJ	-	0.0004 UJ	0.0006 UJ	0.00048 UJ	0.00056 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00067 U	0.00069 UJ	0.0006 U	0.00044 U	0.00065 UJ	0.00051 UJ	0.0006 U
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00061 UJ	0.00062 UJ	-	0.00039 UJ	0.00059 UJ	0.00046 UJ	0.00054 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00048 U	0.00049 UJ	-	0.00031 U	0.00047 UJ	0.00037 UJ	0.00043 U
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.0005 U	0.00051 UJ	0.00074 U	0.00032 U	0.00048 UJ	0.00038 UJ	0.00045 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00043 U	0.00044 UJ	0.00038 U	0.00028 U	0.00042 UJ	0.00033 UJ	0.00039 U
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00037 U	0.00038 UJ	-	0.00024 U	0.00036 UJ	0.00029 UJ	0.00034 U
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00058 U	0.00059 UJ	0.0004 U	0.00038 U	0.00056 UJ	0.00044 UJ	0.00052 U
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00046 U	0.00047 UJ	0.00046 U	0.0003 U	0.00044 UJ	0.00035 UJ	0.00041 U
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00047 U	0.00048 UJ	-	0.00031 U	0.00046 UJ	0.00036 UJ	0.00042 U
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.0004 U	0.00041 UJ	-	0.00026 U	0.00039 UJ	0.0003 UJ	0.00036 U
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00042 U	0.00043 UJ	-	0.00027 U	0.00041 UJ	0.00032 UJ	0.00038 U
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00065 U	0.00066 UJ	-	0.00042 U	0.00063 UJ	0.0005 UJ	0.00058 U
8260B	1,4-Dioxane	123-91-1	mg/kg	0.047 U	0.047 U	0.016 U	0.03 U	0.045 UJ	0.036 U	0.042 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00065 U	0.00066 UJ	-	0.00042 U	0.00063 UJ	0.0005 UJ	0.00058 U
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00041 U	0.00041 UJ	-	0.00026 U	0.00039 UJ	0.00031 UJ	0.00037 U
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00037 U	0.00037 UJ	-	0.00024 U	0.00035 UJ	0.00028 UJ	0.00033 U
8260B	2-Butanone	78-93-3	mg/kg	0.0015 U	0.0015 UJ	0.00071 U	0.00098 UJ	0.0015 UJ	0.0012 UJ	0.0014 U
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	0.00038 U	-	-	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0041 U	0.0041 UJ	0.00035 U	0.0026 U	0.0039 UJ	0.0031 UJ	0.0036 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00028 U	0.00029 UJ	-	0.00018 U	0.00027 UJ	0.00022 UJ	0.00025 U
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0036 U	0.0037 UJ	0.00038 U	0.0023 U	0.0035 UJ	0.0028 UJ	0.0032 U
8260B	Acetone	67-64-1	mg/kg	0.0045 U	0.0046 UJ	0.0081 U	0.0029 U	0.0043 UJ	0.0034 UJ	0.004 U
8260B	Acetonitrile	75-05-8	mg/kg	-	-	0.0043 U	-	-	-	-
8260B	Acrolein	107-02-8	mg/kg	-	-	0.0034 U	-	-	-	-

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1105BLDG5-SS006D-SO 2010/03/18 0 - 0_5 N 1105BLDG5-SS006D-SO	1105BLDG5-SS007D-SO 2010/04/23 0 - 0_5 N 1105BLDG5-SS007D-SO	1105BLDG5-SS019D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS019D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 FD 1105BLDG5-SS020DUP-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 N 1105BLDG5-SS020D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 SPS 1105BLDG5-SS020TRIP-S	1105BLDG5-SS021D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS021D-SO
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	**2 J**	1.3 U	1.2 U	1.2 U	**1.6 J**	-	1.1 U
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	**1.6 J**	0.86 U	0.84 U	0.81 U	0.81 U	0.41 U	0.73 U
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.24 UJ	0.18 UJ	0.24 UJ	0.21 UJ	0.18 UJ	-	0.23 UJ
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	4.8 U	4.9 U	4.8 U	4.7 U	4.7 UJ	**45**	4.2 U
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.0003 U	0.00029 UJ	0.0004 UJ	0.00031 UJ	0.00037 UJ	-	0.00038 UJ
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00045 U	0.00045 UJ	0.00062 UJ	0.00047 UJ	0.00057 UJ	-	0.00058 UJ
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00033 U	0.00033 UJ	0.00045 UJ	0.00035 UJ	0.00042 UJ	0.00046 U	0.00042 UJ
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00031 U	0.00031 U	0.00042 U	0.00032 U	0.00039 U	0.00029 U	0.00039 U
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00036 U	0.00036 UJ	0.00049 U	0.00038 U	0.00045 U	0.00054 U	0.00046 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00027 U	0.00027 U	0.00036 U	0.00028 U	0.00033 U	-	0.00034 U
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00052 U	0.00052 U	0.00071 U	0.00054 U	0.00065 U	0.00044 U	0.00067 U
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00012 U	0.00012 U	0.00017 U	0.00013 U	0.00016 U	0.00045 U	0.00016 U
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00035 U	0.00035 U	0.00048 U	0.00036 U	0.00044 U	0.00029 U	0.00045 U
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00032 U	0.00032 U	0.00044 U	0.00033 U	0.0004 U	-	0.00041 U
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00044 UJ	0.00044 UJ	0.0006 UJ	0.00046 UJ	0.00056 UJ	-	0.00057 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00048 U	0.00048 UJ	0.00065 UJ	0.0005 UJ	0.0006 UJ	0.00059 U	0.00061 UJ
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00043 UJ	0.00043 UJ	0.00059 UJ	0.00045 UJ	0.00054 UJ	-	0.00055 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00034 U	0.00034 UJ	0.00047 UJ	0.00036 UJ	0.00043 UJ	-	0.00044 UJ
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00035 U	0.00035 UJ	0.00048 U	0.00037 U	0.00045 U	0.00072 U	0.00045 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00031 U	0.00031 UJ	0.00042 UJ	0.00032 UJ	0.00039 UJ	0.00037 U	0.00039 UJ
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00027 U	0.00027 UJ	0.00036 UJ	0.00028 UJ	0.00033 UJ	-	0.00034 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00041 U	0.00041 U	0.00056 UJ	0.00043 UJ	0.00052 UJ	0.00039 U	0.00053 UJ
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00032 U	0.00032 U	0.00044 U	0.00034 U	0.00041 U	0.00045 U	0.00042 U
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00034 U	0.00034 UJ	0.00046 UJ	0.00035 UJ	0.00042 UJ	-	0.00043 UJ
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00028 U	0.00028 UJ	0.00039 UJ	0.0003 UJ	0.00036 UJ	-	0.00036 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.0003 U	0.0003 UJ	0.00041 UJ	0.00031 UJ	0.00038 UJ	-	0.00039 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00046 U	0.00046 UJ	0.00063 UJ	0.00048 UJ	0.00058 UJ	-	0.00059 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.033 U	0.033 U	0.045 U	0.035 U	0.042 U	0.016 U	0.043 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00046 U	0.00046 UJ	0.00063 UJ	0.00048 UJ	0.00058 UJ	-	0.00059 UJ
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00029 U	0.00029 UJ	0.00039 UJ	0.0003 UJ	0.00036 UJ	-	0.00037 UJ
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00026 U	0.00026 U	0.00035 U	0.00027 U	0.00033 U	-	0.00033 U
8260B	2-Butanone	78-93-3	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0014 U	0.0007 U	0.0014 U
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	-	-	-	0.00037 U	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0029 U	0.0029 U	0.0039 U	0.003 U	0.0036 U	0.00034 U	0.0037 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.0002 U	0.0002 U	0.00027 U	0.00021 U	0.00025 U	-	0.00026 U
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0026 U	0.0026 U	0.0035 U	0.0027 U	0.0032 U	0.00037 U	0.0033 U
8260B	Acetone	67-64-1	mg/kg	0.0032 U	0.0032 U	0.0043 U	0.0033 U	**0.0042 J**	0.0079 U	0.0041 U
8260B	Acetonitrile	75-05-8	mg/kg	-	-	-	-	-	0.0042 U	-
8260B	Acrolein	107-02-8	mg/kg	-	-	-	-	-	0.0033 U	-

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-001D-S	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 FD 1151BLDG6-15-001DU	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 SPS 1151BLDG6-15-001T	1145BLDG6-SB01-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-002D-S	1145BLDG6-SB01-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-003D-S	1145BLDG6-SB02-15D-SO 2010/03/30 15 - 15_5 N 1151BLDG6-15-004D-S	1145BLDG6-SB02-30D-SO 2010/03/30 30 - 30_5 N 1151BLDG6-30-005D-S
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	0.0012 U	-	-	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	0.00039 U	-	-	-	-
8260B	Benzene	71-43-2	mg/kg	0.00027 UJ	0.00028 U	0.00028 U	0.00027 UJ	0.00023 UJ	**0.1 J**	**0.14 J**
8260B	Bromobenzene	108-86-1	mg/kg	0.00028 UJ	0.00029 U	-	0.00028 UJ	0.00024 UJ	0.00033 UJ	0.00025 UJ
8260B	Bromochloromethane	74-97-5	mg/kg	0.00017 UJ	0.00018 U	-	0.00017 UJ	0.00015 UJ	0.0002 UJ	0.00015 UJ
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00013 UJ	0.00013 U	0.00028 U	0.00013 UJ	0.00011 UJ	0.00015 UJ	0.00011 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00013 UJ	0.00014 UJ	0.0004 U	0.00013 UJ	0.00011 UJ	0.00016 UJ	0.00012 UJ
8260B	Bromomethane	74-83-9	mg/kg	0.00029 UJ	0.0003 U	0.00044 U	0.00029 UJ	0.00025 UJ	0.00034 UJ	0.00026 UJ
8260B	Butylbenzene	104-51-8	mg/kg	0.00032 UJ	0.00033 U	-	0.00032 UJ	0.00028 UJ	**0.054 J**	**0.059 J**
8260B	Carbon disulfide	75-15-0	mg/kg	0.00024 UJ	0.00025 U	0.00041 U	0.00024 UJ	0.00021 UJ	0.00029 UJ	0.00022 UJ
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00036 UJ	0.00037 U	0.0004 U	0.00036 UJ	0.00031 UJ	0.00043 UJ	0.00033 UJ
8260B	Chlorobenzene	108-90-7	mg/kg	0.00031 UJ	0.00032 UJ	0.00042 U	0.00031 UJ	0.00027 UJ	0.00037 UJ	0.00028 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.00051 UJ	0.00053 U	0.00042 U	0.00051 UJ	0.00044 UJ	0.00061 UJ	0.00046 UJ
8260B	Chloroform	67-66-3	mg/kg	0.00017 UJ	0.00017 U	0.0001 U	0.00017 UJ	0.00014 UJ	0.0002 UJ	0.00015 UJ
8260B	Chloromethane	74-87-3	mg/kg	0.00044 UJ	0.00046 U	0.00061 U	0.00044 UJ	0.00038 UJ	0.00052 UJ	0.0004 UJ
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00032 UJ	0.00033 U	-	0.00032 UJ	0.00028 UJ	0.00038 UJ	0.00029 UJ
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00074 UJ	0.00077 U	0.00037 U	0.00074 UJ	0.00064 UJ	0.00088 UJ	0.00067 UJ
8260B	Cumene	98-82-8	mg/kg	0.00034 UJ	0.00035 U	-	0.00034 UJ	0.00029 UJ	**0.048 J**	**0.038 J**
8260B	Cyclohexane	110-82-7	mg/kg	0.00023 U	0.00024 U	-	**0.002 J**	0.0002 U	**0.12 J**	**0.11 J**
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00033 UJ	0.00034 UJ	0.00036 U	0.00033 UJ	0.00028 UJ	0.00039 UJ	0.00029 UJ
8260B	Dibromomethane	74-95-3	mg/kg	0.00048 UJ	0.0005 U	0.00045 U	0.00048 UJ	0.00042 UJ	0.00057 UJ	0.00043 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.0003 UJ	0.00031 U	0.0005 U	0.0003 UJ	0.00026 UJ	0.00035 UJ	0.00027 UJ
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	0.0013 U	-	-	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	0.00026 U	-	-	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00038 UJ	0.0004 UJ	0.00033 U	0.00038 UJ	0.00033 UJ	-	**0.23 J**
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00032 UJ	0.00033 U	-	0.00031 UJ	0.00027 UJ	0.00037 UJ	0.00028 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	0.0017 U	-	-	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	0.0081 U	-	-	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	0.0017 U	-	-	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0016 U	0.0016 U	-	0.0016 U	0.0014 U	0.0019 UJ	0.0014 UJ
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	0.00055 U	-	-	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00024 U	0.00025 U	-	**0.0025 J**	0.00021 U	**0.22 J**	**0.19 J**
8260B	Methylene chloride	75-09-2	mg/kg	0.00043 UJ	0.00045 U	0.00088 U	0.00043 UJ	0.00037 UJ	0.00051 UJ	**0.0027 J**
8260B	Naphthalene	91-20-3	mg/kg	0.00036 UJ	0.00037 UJ	-	0.00036 UJ	0.00031 UJ	**0.016 J**	**0.075 J**
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00029 UJ	0.0003 U	-	0.00029 UJ	0.00025 UJ	0.00035 UJ	0.00026 UJ
8260B	Propylbenzene	103-65-1	mg/kg	0.00033 UJ	0.00034 U	-	0.00033 UJ	0.00029 UJ	**0.082 J**	**0.082 J**
8260B	Styrene	100-42-5	mg/kg	0.00036 UJ	0.00037 UJ	0.00038 U	0.00036 UJ	0.00031 UJ	0.00043 UJ	0.00033 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00034 UJ	0.00035 UJ	0.00031 U	0.00034 UJ	0.00029 UJ	0.0004 UJ	0.0003 UJ
8260B	Toluene	108-88-3	mg/kg	0.0004 UJ	0.00041 U	0.00033 U	0.00039 UJ	0.00034 UJ	**0.27 J**	**0.032 J**

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB02-45D-SO 2010/03/30 45 - 45_5 N 1151BLDG6-45-006D-S	1145BLDG6-SB03-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-007D-S	1145BLDG6-SB03-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-008D-S	1145BLDG6-SB03-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-009D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 N 1151BLDG6-15-010D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 FD 1151BLDG6-15-010DU	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 SPS 1151BLDG6-15-010T
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	-	-	-	-	0.092 U
8260B	Allyl chloride	107-05-1	mg/kg	-	-	-	-	-	-	0.037 U
8260B	Benzene	71-43-2	mg/kg	0.00023 U	0.0003 UJ	**0.00047 J**	0.00026 UJ	0.00024 U	0.00032 U	0.012 U
8260B	Bromobenzene	108-86-1	mg/kg	0.00024 U	0.00031 UJ	0.00031 UJ	0.00027 UJ	0.00025 U	0.00033 U	-
8260B	Bromochloromethane	74-97-5	mg/kg	0.00015 U	0.00019 UJ	0.00019 UJ	0.00016 UJ	0.00015 U	0.0002 U	-
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00011 U	0.00014 UJ	0.00014 UJ	0.00012 UJ	0.00011 U	0.00015 U	0.013 U
8260B	Bromoform	75-25-2	mg/kg	0.00011 U	0.00014 UJ	0.00014 UJ	0.00013 UJ	0.00012 U	0.00015 U	0.02 U
8260B	Bromomethane	74-83-9	mg/kg	0.00025 U	0.00031 UJ	0.00031 UJ	0.00027 UJ	0.00025 U	0.00034 U	0.029 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00028 U	0.00035 UJ	0.00035 UJ	0.00031 UJ	0.00028 U	0.00038 U	-
8260B	Carbon disulfide	75-15-0	mg/kg	0.00021 U	0.00026 UJ	0.00026 UJ	0.00023 UJ	0.00021 U	0.00028 U	0.015 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00031 U	0.0004 UJ	0.00039 UJ	0.00035 UJ	0.00032 U	0.00042 U	0.021 U
8260B	Chlorobenzene	108-90-7	mg/kg	0.00027 U	0.00034 UJ	0.00034 UJ	0.0003 UJ	0.00027 U	0.00036 U	0.013 U
8260B	Chloroethane	75-00-3	mg/kg	0.00044 U	0.00056 UJ	0.00056 UJ	0.00049 UJ	0.00045 U	0.0006 U	0.016 U
8260B	Chloroform	67-66-3	mg/kg	0.00014 U	0.00018 UJ	0.00018 UJ	0.00016 UJ	0.00015 U	0.0002 U	0.013 U
8260B	Chloromethane	74-87-3	mg/kg	0.00038 U	0.00048 UJ	0.00048 UJ	0.00042 UJ	0.00039 U	0.00052 U	0.03 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00028 U	0.00035 UJ	0.00035 UJ	0.00031 UJ	0.00028 U	0.00038 U	-
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00064 U	0.00081 UJ	0.00081 UJ	0.00071 UJ	0.00065 U	0.00087 U	0.0078 U
8260B	Cumene	98-82-8	mg/kg	0.00029 U	0.00037 UJ	0.00037 UJ	0.00032 UJ	0.0003 U	0.0004 U	-
8260B	Cyclohexane	110-82-7	mg/kg	0.0002 U	0.00025 U	**0.00082 J**	0.00022 U	0.0002 U	0.00027 U	-
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00028 U	0.00036 UJ	0.00036 UJ	0.00031 UJ	0.00029 U	0.00038 U	0.012 U
8260B	Dibromomethane	74-95-3	mg/kg	0.00041 U	0.00053 UJ	0.00052 UJ	0.00046 UJ	0.00042 U	0.00057 U	0.028 U
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00026 U	0.00033 UJ	0.00032 UJ	0.00029 UJ	0.00026 U	0.00035 U	0.035 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	-	-	-	-	0.17 U
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	-	-	-	-	0.014 U
8260B	Ethylbenzene	100-41-4	mg/kg	0.00033 U	0.00042 UJ	0.00042 UJ	0.00037 UJ	0.00034 U	0.00045 U	0.01 U
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00027 U	0.00035 UJ	0.00034 UJ	0.0003 UJ	0.00028 U	0.00037 U	-
8260B	Iodomethane	74-88-4	mg/kg	-	-	-	-	-	-	0.025 U
8260B	Isobutanol	78-83-1	mg/kg	-	-	-	-	-	-	0.53 U
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	-	-	-	-	0.072 U
8260B	Methyl acetate	79-20-9	mg/kg	0.0014 U	0.0017 U	0.0017 U	0.0015 U	0.0014 U	0.0018 U	-
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	-	-	-	-	0.06 U
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00021 U	0.00026 U	**0.00084 J**	0.00023 U	0.00021 U	0.00028 U	-
8260B	Methylene chloride	75-09-2	mg/kg	0.00037 U	0.00047 UJ	0.00047 UJ	0.00041 UJ	0.00038 U	0.0005 U	0.062 U
8260B	Naphthalene	91-20-3	mg/kg	0.00031 UJ	0.0004 UJ	0.00039 UJ	0.00035 UJ	0.00032 U	0.00042 U	-
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00025 U	0.00032 UJ	0.00032 UJ	0.00028 UJ	0.00026 U	0.00034 U	-
8260B	Propylbenzene	103-65-1	mg/kg	0.00029 U	0.00036 UJ	0.00036 UJ	0.00032 UJ	0.00029 U	0.00039 U	-
8260B	Styrene	100-42-5	mg/kg	0.00031 U	0.0004 UJ	0.00039 UJ	0.00035 UJ	0.00032 U	0.00042 U	0.018 U
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00029 U	0.00037 UJ	0.00037 UJ	0.00032 UJ	0.0003 U	0.0004 U	0.024 U
8260B	Toluene	108-88-3	mg/kg	0.00034 U	0.00043 UJ	0.00043 UJ	0.00038 UJ	0.00035 U	0.00046 U	0.016 U

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Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB04-30D-SO 2010/04/02 30 - 30_5 N 1151BLDG6-30-011D-S	1145BLDG6-SB04-45D-SO 2010/04/02 45 - 45_5 N 1151BLDG6-45-012D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 N 1151BLDG6-15-013D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 FD 1151BLDG6-15-013DU	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 SPS 1151BLDG6-15-013T	1145BLDG6-SB05-30D-SO 2010/04/06 30 - 30_5 N 1151BLDG6-30-014D-S	1145BLDG6-SB05-45D-SO 2010/04/06 45 - 45_5 N 1151BLDG6-45-015D-S
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	-	-	0.0014 U	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	-	-	0.00042 U	-	-
8260B	Benzene	71-43-2	mg/kg	**0.002 J**	0.00025 U	0.00031 UJ	0.0003 UJ	0.0003 U	**0.14 J**	0.00029 UJ
8260B	Bromobenzene	108-86-1	mg/kg	0.00031 U	0.00026 U	0.00033 U	0.00031 U	-	0.00043 UJ	0.0003 U
8260B	Bromochloromethane	74-97-5	mg/kg	0.00019 U	0.00016 U	0.0002 U	0.00019 U	-	0.00027 UJ	0.00018 U
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00014 U	0.00012 U	0.00015 UJ	0.00014 UJ	0.0003 U	0.00019 UJ	0.00014 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00014 U	0.00012 U	0.00015 U	0.00015 U	0.00044 U	0.0002 UJ	0.00014 U
8260B	Bromomethane	74-83-9	mg/kg	0.00031 U	0.00027 U	0.00033 U	0.00032 U	0.00048 U	0.00044 UJ	0.00031 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00035 U	0.0003 U	0.00037 UJ	0.00036 UJ	-	0.0005 UJ	0.00034 UJ
8260B	Carbon disulfide	75-15-0	mg/kg	**0.00034 J**	0.00022 U	0.00028 U	0.00027 U	0.00044 U	0.00037 UJ	0.00026 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00039 U	0.00033 U	0.00042 UJ	0.0004 UJ	0.00043 U	0.00056 UJ	0.00039 UJ
8260B	Chlorobenzene	108-90-7	mg/kg	0.00034 U	0.00029 U	0.00036 UJ	0.00034 UJ	0.00046 U	0.00048 UJ	0.00033 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.00056 U	0.00047 U	0.00059 U	0.00057 U	0.00046 U	0.00079 UJ	0.00055 U
8260B	Chloroform	67-66-3	mg/kg	0.00018 U	0.00015 U	0.00019 UJ	0.00019 UJ	0.00011 U	0.00026 UJ	0.00018 UJ
8260B	Chloromethane	74-87-3	mg/kg	0.00048 U	0.00041 U	0.00051 U	0.00049 U	0.00066 U	0.00068 UJ	0.00047 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00035 U	0.0003 U	0.00037 U	0.00036 U	-	0.0005 UJ	0.00034 U
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00081 U	0.00068 U	0.00086 UJ	0.00082 UJ	0.00041 U	0.0011 UJ	0.00079 UJ
8260B	Cumene	98-82-8	mg/kg	**0.0012 J**	0.00031 U	0.00039 UJ	0.00038 UJ	-	**0.044 J**	0.00036 UJ
8260B	Cyclohexane	110-82-7	mg/kg	**0.034**	0.00021 U	0.00027 U	0.00026 U	-	**0.092 J**	**0.0016 J**
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00036 U	0.0003 U	0.00038 U	0.00036 U	0.00039 U	0.0005 UJ	0.00035 U
8260B	Dibromomethane	74-95-3	mg/kg	0.00052 U	0.00045 U	0.00056 UJ	0.00054 UJ	0.00049 U	0.00074 UJ	0.00052 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00032 U	0.00028 U	0.00035 U	0.00033 U	0.00054 U	0.00046 UJ	0.00032 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	-	-	0.0014 U	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	-	-	0.00029 U	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00042 U	0.00036 U	0.00045 UJ	0.00043 UJ	0.00036 U	**0.14 J**	0.00041 UJ
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00034 U	0.00029 U	0.00037 UJ	0.00035 UJ	-	0.00049 UJ	0.00034 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	-	-	0.0018 U	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	-	-	0.0088 U	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	-	-	0.0018 U	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0017 U	0.0015 U	0.0018 U	0.0018 U	-	0.0024 UJ	0.0017 U
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	-	-	0.0006 U	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	**0.042**	0.00022 U	0.00028 U	0.00027 U	-	**0.23 J**	0.00026 U
8260B	Methylene chloride	75-09-2	mg/kg	0.00047 U	**0.00057 J**	0.0005 U	0.00048 U	0.00096 U	0.00066 UJ	0.00046 U
8260B	Naphthalene	91-20-3	mg/kg	0.00039 UJ	0.00033 U	0.00042 UJ	0.0004 UJ	-	**0.009 J**	0.00039 UJ
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00032 U	0.00027 U	0.00034 U	0.00033 U	-	0.00045 UJ	0.00031 U
8260B	Propylbenzene	103-65-1	mg/kg	0.00036 U	0.00031 U	0.00039 U	0.00037 U	-	**0.027 J**	0.00036 U
8260B	Styrene	100-42-5	mg/kg	0.00039 U	0.00033 U	0.00042 UJ	0.0004 UJ	0.00042 U	0.00056 UJ	0.00039 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00037 U	0.00031 U	0.00039 U	0.00038 U	0.00034 U	0.00052 UJ	0.00036 U
8260B	Toluene	108-88-3	mg/kg	**0.0037**	0.00037 U	0.00046 UJ	0.00044 UJ	0.00036 U	**0.015 J**	0.00042 UJ

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB06-15D-SO 2010/04/01 15 - 15_5 N 1151BLDG6-15-016D-S	1145BLDG6-SB06-30D-SO 2010/04/01 30 - 30_5 N 1151BLDG6-30-017D-S	1145BLDG6-SB06-45D-SO 2010/04/01 45 - 45_5 N 1151BLDG6-45-018D-S	1145BLDG6-SB07-15D-SO 2010/04/05 15 - 15_5 N 1151BLDG6-15-019D-S	1145BLDG6-SB07-30D-SO 2010/04/05 30 - 30_5 N 1151BLDG6-30-020D-S	1145BLDG6-SB07-45D-SO 2010/04/05 45 - 45_5 N 1151BLDG6-45-021D-S	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS001D-SO
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	-	-	-	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	-	-	-	-	-
8260B	Benzene	71-43-2	mg/kg	0.00026 U	**0.11 J**	0.00025 UJ	**2.3 J**	**0.82**	0.00029 U	0.00025 UJ
8260B	Bromobenzene	108-86-1	mg/kg	0.00028 U	0.00034 UJ	0.00026 U	0.00042 UJ	0.012 U	0.0003 U	0.00026 UJ
8260B	Bromochloromethane	74-97-5	mg/kg	0.00017 U	0.00021 UJ	0.00016 UJ	0.00026 U	0.029 U	0.00018 U	0.00016 UJ
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00012 U	0.00015 UJ	0.00012 UJ	0.00019 U	0.024 U	0.00013 U	0.00012 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00013 U	0.00016 UJ	0.00012 U	0.0002 UJ	0.018 U	0.00014 U	0.00012 U
8260B	Bromomethane	74-83-9	mg/kg	0.00028 U	0.00035 UJ	0.00026 U	0.00043 U	0.027 U	0.00031 U	0.00027 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00032 U	**0.034 J**	0.0003 U	**9.4 J**	**1.2**	0.00034 U	0.0003 UJ
8260B	Carbon disulfide	75-15-0	mg/kg	0.00024 U	**0.00057 J**	0.00022 U	0.00036 U	0.039 U	0.00026 U	0.00022 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00035 U	0.00044 UJ	0.00033 U	0.00055 U	0.01 U	0.00039 U	0.00034 UJ
8260B	Chlorobenzene	108-90-7	mg/kg	0.0003 U	0.00038 UJ	0.00029 UJ	0.00047 UJ	0.018 U	0.00033 U	0.00029 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.0005 U	0.00062 UJ	0.00047 U	0.00077 U	0.027 U	0.00054 U	0.00047 U
8260B	Chloroform	67-66-3	mg/kg	0.00016 U	0.0002 UJ	0.00015 UJ	0.00025 U	0.028 U	0.00018 U	0.00015 UJ
8260B	Chloromethane	74-87-3	mg/kg	0.00043 U	0.00054 UJ	0.00041 U	0.00067 U	0.031 U	0.00047 U	0.00041 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00032 U	0.00039 UJ	0.0003 UJ	0.00048 U	0.013 U	0.00034 U	0.0003 UJ
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00073 U	0.0009 UJ	0.00068 UJ	0.0011 U	0.017 U	0.00079 U	0.00069 UJ
8260B	Cumene	98-82-8	mg/kg	0.00033 U	**0.037 J**	0.00031 UJ	**4.2 J**	**1.2**	0.00036 U	0.00031 UJ
8260B	Cyclohexane	110-82-7	mg/kg	0.00023 U	**0.11 J**	0.00021 U	**7.5 J**	0.017 U	**0.019**	0.00021 U
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00032 U	0.0004 UJ	0.0003 U	0.00049 UJ	0.02 U	0.00035 U	0.0003 UJ
8260B	Dibromomethane	74-95-3	mg/kg	0.00047 U	0.00058 UJ	0.00044 UJ	0.00073 U	0.018 U	0.00051 U	0.00045 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00029 U	0.00036 UJ	0.00027 U	0.00045 U	0.013 U	0.00032 U	0.00028 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	-	-	-	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	-	-	-	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00038 U	**0.79 J**	0.00035 UJ	**25 J**	**5.4**	0.00041 U	0.00036 UJ
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00031 U	0.00038 UJ	0.00029 U	0.00048 UJ	0.03 U	**0.00048 J**	0.00029 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	-	-	-	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	-	-	-	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	-	-	-	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0015 U	0.0019 UJ	0.0015 U	0.0024 U	0.15 U	0.0017 U	0.0015 U
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	-	-	-	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00024 U	**0.11 J**	0.00022 U	**15 J**	**5.2**	**0.013**	0.00022 U
8260B	Methylene chloride	75-09-2	mg/kg	0.00042 U	0.00052 UJ	0.0004 U	0.00065 U	0.042 U	0.00046 U	0.0004 U
8260B	Naphthalene	91-20-3	mg/kg	0.00035 UJ	**0.027 J**	0.00033 U	**0.12 J**	**2.5**	0.00039 UJ	0.00034 UJ
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00029 U	0.00035 UJ	0.00027 UJ	0.00044 UJ	0.016 U	0.00031 U	0.00027 UJ
8260B	Propylbenzene	103-65-1	mg/kg	0.00033 U	**0.058 J**	0.00031 U	**13 J**	**2.3**	0.00035 U	0.00031 UJ
8260B	Styrene	100-42-5	mg/kg	0.00035 U	0.00044 UJ	0.00033 UJ	0.00055 UJ	0.016 U	0.00039 U	0.00034 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00033 U	0.00041 UJ	0.00031 U	0.00051 UJ	0.017 U	0.00036 U	0.00031 UJ
8260B	Toluene	108-88-3	mg/kg	0.00039 U	**0.044 J**	0.00036 UJ	**8.8 J**	**3.2**	0.00042 U	0.00037 UJ

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 FD 1149AOC49-SS001DUP-SO	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 SPS 1149AOC49-SS001TRIP-	1149DOCK-SB01-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-002D-SO	1149DOCK-SB01-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-003D-SO	1149DOCK-SB02-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS004D-SO	1149DOCK-SB02-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-005D-SO	1149DOCK-SB02-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-006D-SO
8260B	Acrylonitrile	107-13-1	mg/kg	-	0.0013 U	-	-	-	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	0.00041 U	-	-	-	-	-
8260B	Benzene	71-43-2	mg/kg	0.00029 UJ	0.0003 U	0.00039 UJ	0.00035 UJ	0.00033 UJ	0.00029 UJ	**0.3 J**
8260B	Bromobenzene	108-86-1	mg/kg	0.0003 UJ	-	0.0004 UJ	0.00037 UJ	0.00035 UJ	0.00031 UJ	0.0003 UJ
8260B	Bromochloromethane	74-97-5	mg/kg	0.00018 UJ	-	0.00025 UJ	0.00022 UJ	0.00021 UJ	0.00019 UJ	0.00018 UJ
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00013 UJ	0.0003 U	0.00018 UJ	0.00016 UJ	0.00016 UJ	0.00014 UJ	0.00013 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00014 U	0.00043 U	0.00019 UJ	0.00017 U	0.00016 U	0.00014 U	0.00014 UJ
8260B	Bromomethane	74-83-9	mg/kg	0.00031 U	0.00046 U	0.00041 UJ	0.00037 U	0.00035 U	0.00031 U	0.0003 UJ
8260B	Butylbenzene	104-51-8	mg/kg	0.00034 UJ	-	0.00046 UJ	0.00042 UJ	0.0004 UJ	0.00035 UJ	**0.33 J**
8260B	Carbon disulfide	75-15-0	mg/kg	0.00026 U	0.00043 U	0.00034 UJ	**0.0017 J**	0.0003 U	0.00026 U	0.00026 UJ
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00038 UJ	0.00042 U	0.00052 UJ	0.00047 UJ	0.00045 UJ	0.00039 UJ	0.00038 UJ
8260B	Chlorobenzene	108-90-7	mg/kg	0.00033 UJ	0.00045 U	0.00044 UJ	0.0004 UJ	0.00038 UJ	0.00034 UJ	0.00033 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.00054 U	0.00045 U	0.00073 UJ	0.00067 U	0.00063 U	0.00055 U	0.00054 UJ
8260B	Chloroform	67-66-3	mg/kg	0.00018 UJ	0.00011 U	0.00024 UJ	0.00022 UJ	0.00021 UJ	0.00018 UJ	0.00018 UJ
8260B	Chloromethane	74-87-3	mg/kg	0.00047 U	0.00065 U	0.00063 UJ	0.00058 U	0.00055 U	0.00048 U	0.00047 UJ
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00034 UJ	-	0.00046 UJ	0.00042 UJ	0.0004 UJ	0.00035 UJ	0.00034 UJ
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00079 UJ	0.0004 U	0.0011 UJ	0.00097 UJ	0.00092 UJ	0.0008 UJ	0.00079 UJ
8260B	Cumene	98-82-8	mg/kg	0.00036 UJ	-	**0.00074 J**	0.00044 UJ	0.00042 UJ	0.00037 UJ	**0.78 J**
8260B	Cyclohexane	110-82-7	mg/kg	**0.00049 J**	-	**0.14 J**	**0.00058 J**	**0.00055 J**	**0.00041 J**	**4.1 J**
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00035 UJ	0.00038 U	0.00047 UJ	0.00043 UJ	0.0004 UJ	0.00035 UJ	0.00035 UJ
8260B	Dibromomethane	74-95-3	mg/kg	0.00051 UJ	0.00047 U	0.00069 UJ	0.00063 UJ	0.0006 UJ	0.00052 UJ	0.00051 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00032 U	0.00053 U	0.00043 UJ	0.00039 U	0.00037 U	0.00032 U	0.00032 UJ
8260B	Ethyl cyanide	107-12-0	mg/kg	-	0.0013 U	-	-	-	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	0.00028 U	-	-	-	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00041 UJ	0.00035 U	0.00055 UJ	0.0005 UJ	0.00048 UJ	0.00042 UJ	**4.2 J**
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00034 UJ	-	0.00045 UJ	0.00041 UJ	0.00039 UJ	0.00034 UJ	0.00033 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	0.0018 U	-	-	-	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	0.0086 U	-	-	-	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	0.0018 U	-	-	-	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0017 U	-	0.0023 UJ	0.0021 U	0.002 U	0.0017 U	0.0017 UJ
8260B	Methyl methacrylate	80-62-6	mg/kg	-	0.00058 U	-	-	-	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	**0.00052 J**	-	**0.17 J**	**0.00063 J**	**0.00048 J**	**0.00041 J**	**6.6 J**
8260B	Methylene chloride	75-09-2	mg/kg	0.00046 U	**0.0031 J**	0.00062 UJ	0.00056 U	0.00053 U	0.00047 U	0.00046 UJ
8260B	Naphthalene	91-20-3	mg/kg	0.00038 UJ	-	**0.023 J**	0.00047 UJ	0.00045 UJ	0.00039 UJ	**0.036 J**
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00031 UJ	-	0.00042 UJ	0.00038 UJ	0.00036 UJ	0.00032 UJ	0.00031 UJ
8260B	Propylbenzene	103-65-1	mg/kg	0.00035 UJ	-	0.00048 UJ	0.00043 UJ	0.00041 UJ	0.00036 UJ	**0.95 J**
8260B	Styrene	100-42-5	mg/kg	0.00038 UJ	0.00041 U	0.00052 UJ	0.00047 UJ	0.00045 UJ	0.00039 UJ	0.00038 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00036 UJ	0.00033 U	0.00048 UJ	0.00044 UJ	0.00042 UJ	0.00037 UJ	0.00036 UJ
8260B	Toluene	108-88-3	mg/kg	0.00042 UJ	0.00035 U	0.00057 UJ	0.00052 UJ	0.00049 UJ	0.00043 UJ	0.00042 UJ

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 FD 1105BLDG5-SS001DUP-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS001D-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 SPS 1105BLDG5-SS001TRIP-SO	1105BLDG5-SS002D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS002D-SO	1105BLDG5-SS003D-SO 2010/03/18 2 - 3 N 1105BLDG5-SS003D-SO	1105BLDG5-SS004D-SO 2010/03/18 0_5 - 1 N 1105BLDG5-SS004D-SO	1105BLDG5-SS005D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS005D-SO
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	0.002 U	-	-	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	0.00035 U	-	-	-	-
8260B	Benzene	71-43-2	mg/kg	0.00039 U	0.0004 UJ	0.00041 U	0.00025 U	0.00038 UJ	0.0003 UJ	0.00035 U
8260B	Bromobenzene	108-86-1	mg/kg	0.00041 U	0.00041 UJ	-	0.00026 U	0.00039 UJ	0.00031 UJ	0.00037 U
8260B	Bromochloromethane	74-97-5	mg/kg	0.00025 U	0.00025 UJ	-	0.00016 U	0.00024 UJ	0.00019 UJ	0.00022 U
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00018 U	0.00019 UJ	0.0004 U	0.00012 U	0.00018 UJ	0.00014 UJ	0.00016 U
8260B	Bromoform	75-25-2	mg/kg	0.00019 U	0.00019 UJ	0.00051 U	0.00012 U	0.00019 UJ	0.00015 UJ	0.00017 U
8260B	Bromomethane	74-83-9	mg/kg	0.00042 U	0.00042 UJ	0.00049 U	0.00027 U	0.0004 UJ	0.00032 UJ	0.00037 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00047 U	0.00047 UJ	-	0.0003 U	0.00045 UJ	0.00036 UJ	0.00042 U
8260B	Carbon disulfide	75-15-0	mg/kg	0.00035 U	0.00036 UJ	0.00034 U	0.00023 U	0.00034 UJ	0.00027 UJ	0.00031 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00052 U	0.00053 UJ	0.00038 U	0.00034 U	0.00051 UJ	0.0004 UJ	0.00047 U
8260B	Chlorobenzene	108-90-7	mg/kg	0.00045 U	0.00046 UJ	0.00037 U	0.00029 U	0.00044 UJ	0.00034 UJ	0.0004 U
8260B	Chloroethane	75-00-3	mg/kg	0.00074 U	0.00075 UJ	0.00038 U	0.00048 U	0.00072 UJ	0.00057 UJ	0.00066 U
8260B	Chloroform	67-66-3	mg/kg	0.00024 U	0.00025 UJ	0.00044 U	0.00016 U	0.00023 UJ	0.00018 UJ	0.00022 U
8260B	Chloromethane	74-87-3	mg/kg	0.00064 U	0.00065 UJ	0.00034 U	0.00041 U	0.00062 UJ	0.00049 UJ	0.00057 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00047 U	0.00047 UJ	-	0.0003 U	0.00045 UJ	0.00036 UJ	0.00042 U
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0011 U	0.0011 UJ	0.00029 U	0.00069 U	0.001 UJ	0.00082 UJ	0.00096 U
8260B	Cumene	98-82-8	mg/kg	0.00049 U	0.0005 UJ	-	0.00032 U	0.00048 UJ	0.00037 UJ	0.00044 U
8260B	Cyclohexane	110-82-7	mg/kg	0.00033 U	0.00034 U	-	0.00021 U	0.00032 UJ	0.00025 U	0.0003 U
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00047 U	0.00048 UJ	0.00036 U	0.00031 U	0.00046 UJ	0.00036 UJ	0.00042 U
8260B	Dibromomethane	74-95-3	mg/kg	0.0007 U	0.00071 UJ	0.00043 U	0.00045 U	0.00068 UJ	0.00053 UJ	0.00063 U
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00043 U	0.00044 UJ	0.00031 U	0.00028 U	0.00042 UJ	0.00033 UJ	0.00039 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	0.0037 U	-	-	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	0.00025 U	-	-	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00056 U	0.00057 UJ	0.00036 U	0.00036 U	0.00054 UJ	0.00043 UJ	0.0005 U
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00046 UJ	0.00047 UJ	-	0.0003 UJ	0.00044 UJ	0.00035 UJ	0.00041 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	0.00048 U	-	-	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	0.0078 U	-	-	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	0.0018 U	-	-	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0023 U	0.0023 U	-	0.0015 U	0.0022 UJ	0.0017 U	0.002 U
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	0.00053 U	-	-	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00035 U	0.00036 U	-	0.00023 U	0.00034 UJ	0.00027 U	0.00031 U
8260B	Methylene chloride	75-09-2	mg/kg	0.00062 U	**0.0012 J**	0.0029 U	0.0004 U	**0.0011 J**	0.00048 UJ	0.00056 U
8260B	Naphthalene	91-20-3	mg/kg	0.00052 U	0.00053 UJ	-	0.00034 U	0.00051 UJ	0.0004 UJ	0.00047 U
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00042 U	0.00043 UJ	-	0.00027 U	0.00041 UJ	0.00032 UJ	0.00038 U
8260B	Propylbenzene	103-65-1	mg/kg	0.00048 U	0.00049 UJ	-	0.00031 U	0.00047 UJ	0.00037 UJ	0.00043 U
8260B	Styrene	100-42-5	mg/kg	0.00052 U	0.00053 UJ	0.00026 U	0.00034 U	0.00051 UJ	0.0004 UJ	0.00047 U
8260B	Tetrachloroethene	127-18-4	mg/kg	**0.0011 J**	**0.0031 J**	**0.0015 J**	0.00032 U	0.00048 UJ	**0.004 J**	0.00044 U
8260B	Toluene	108-88-3	mg/kg	0.00057 U	0.00058 UJ	0.0003 U	0.00037 U	0.00056 UJ	0.00044 UJ	0.00051 U

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1105BLDG5-SS006D-SO 2010/03/18 0 - 0_5 N 1105BLDG5-SS006D-SO	1105BLDG5-SS007D-SO 2010/04/23 0 - 0_5 N 1105BLDG5-SS007D-SO	1105BLDG5-SS019D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS019D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 FD 1105BLDG5-SS020DUP-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 N 1105BLDG5-SS020D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 SPS 1105BLDG5-SS020TRIP-S	1105BLDG5-SS021D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS021D-SO
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	-	-	-	0.002 U	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	-	-	-	0.00034 U	-
8260B	Benzene	71-43-2	mg/kg	0.00028 U	0.00028 U	0.00038 UJ	0.00029 UJ	0.00035 UJ	0.0004 U	0.00036 UJ
8260B	Bromobenzene	108-86-1	mg/kg	0.00029 U	0.00029 UJ	0.00039 UJ	0.0003 UJ	0.00036 UJ	-	0.00037 UJ
8260B	Bromochloromethane	74-97-5	mg/kg	0.00018 U	0.00018 U	0.00024 U	0.00019 U	0.00022 U	-	0.00023 U
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00013 U	0.00013 U	0.00018 UJ	0.00014 UJ	0.00016 UJ	0.00039 U	0.00017 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00014 U	0.00014 UJ	0.00019 U	0.00014 U	0.00017 U	0.0005 U	0.00017 U
8260B	Bromomethane	74-83-9	mg/kg	0.0003 U	0.00029 U	0.0004 U	0.00031 U	0.00037 U	0.00048 U	0.00038 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00033 U	0.00033 UJ	0.00045 UJ	0.00035 UJ	0.00042 UJ	-	0.00042 UJ
8260B	Carbon disulfide	75-15-0	mg/kg	0.00025 U	0.00025 U	0.00034 U	0.00026 U	0.00031 U	0.00034 U	0.00032 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00037 U	0.00037 U	0.00051 U	0.00039 U	0.00047 U	0.00037 U	0.00048 U
8260B	Chlorobenzene	108-90-7	mg/kg	0.00032 U	0.00032 UJ	0.00044 UJ	0.00033 UJ	0.0004 UJ	0.00037 U	0.00041 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.00053 U	0.00052 U	0.00072 U	0.00055 U	0.00066 U	0.00038 U	0.00067 U
8260B	Chloroform	67-66-3	mg/kg	0.00017 U	0.00017 U	0.00023 U	0.00018 U	0.00022 U	0.00043 U	0.00022 U
8260B	Chloromethane	74-87-3	mg/kg	0.00045 U	0.00045 U	0.00062 U	0.00047 U	0.00057 U	0.00033 U	0.00058 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00033 U	0.00033 U	0.00045 U	0.00035 U	0.00042 U	-	0.00042 U
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00076 U	0.00076 U	0.001 UJ	0.0008 UJ	0.00096 UJ	0.00028 U	0.00098 UJ
8260B	Cumene	98-82-8	mg/kg	0.00035 U	0.00035 UJ	0.00048 UJ	0.00036 UJ	0.00044 UJ	-	0.00045 UJ
8260B	Cyclohexane	110-82-7	mg/kg	0.00024 U	0.00024 U	0.00032 U	0.00025 U	0.0003 U	-	0.0003 U
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00034 U	0.00034 UJ	0.00046 UJ	0.00035 UJ	0.00042 UJ	0.00035 U	0.00043 UJ
8260B	Dibromomethane	74-95-3	mg/kg	0.0005 U	0.0005 U	0.00068 UJ	0.00052 UJ	0.00062 UJ	0.00042 U	0.00064 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00031 U	0.00031 U	0.00042 U	0.00032 U	0.00039 U	0.0003 U	0.00039 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	-	-	-	0.0036 U	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	-	-	-	0.00024 U	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.0004 U	0.0004 UJ	0.00054 UJ	0.00041 UJ	0.0005 UJ	0.00035 U	0.00051 UJ
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00032 UJ	0.00032 UJ	0.00044 UJ	0.00034 UJ	0.00041 UJ	-	0.00042 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	-	-	-	0.00047 U	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	-	-	-	0.0077 U	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	-	-	-	0.0017 U	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0016 U	0.0016 U	0.0022 U	0.0017 U	0.002 U	-	0.0021 U
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	-	-	-	0.00052 U	-
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00025 U	0.00025 U	0.00034 U	0.00026 U	0.00031 U	-	0.00032 U
8260B	Methylene chloride	75-09-2	mg/kg	0.00044 U	0.00044 U	**0.002 J**	**0.0015 J**	**0.0019 J**	0.0028 U	0.00057 U
8260B	Naphthalene	91-20-3	mg/kg	0.00037 U	**0.00039 J**	0.00051 UJ	0.00039 UJ	0.00047 UJ	-	0.00048 UJ
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.0003 U	0.0003 UJ	0.00041 UJ	0.00031 UJ	0.00038 UJ	-	0.00039 UJ
8260B	Propylbenzene	103-65-1	mg/kg	0.00034 U	0.00034 UJ	0.00047 UJ	0.00036 UJ	0.00043 UJ	-	0.00044 UJ
8260B	Styrene	100-42-5	mg/kg	0.00037 U	0.00037 UJ	0.00051 UJ	0.00039 UJ	0.00047 UJ	0.00025 U	0.00048 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00035 U	**0.011 J**	**0.0024 J**	**0.0045 J**	**0.0024 J**	**0.0014 J**	0.00045 UJ
8260B	Toluene	108-88-3	mg/kg	0.00041 U	0.00041 U	0.00056 UJ	0.00043 UJ	0.00051 UJ	0.00029 U	0.00052 UJ

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-001D-S	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 FD 1151BLDG6-15-001DU	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 SPS 1151BLDG6-15-001T	1145BLDG6-SB01-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-002D-S	1145BLDG6-SB01-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-003D-S	1145BLDG6-SB02-15D-SO 2010/03/30 15 - 15_5 N 1151BLDG6-15-004D-S	1145BLDG6-SB02-30D-SO 2010/03/30 30 - 30_5 N 1151BLDG6-30-005D-S
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00022 UJ	0.00023 U	0.0002 U	0.00022 UJ	0.00019 UJ	0.00027 UJ	0.0002 UJ
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00038 UJ	0.0004 U	0.00038 U	0.00038 UJ	0.00033 UJ	0.00046 UJ	0.00035 UJ
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	0.00044 U	-	-	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00013 UJ	0.00014 U	0.00032 U	0.00013 UJ	0.00011 UJ	0.00016 UJ	0.00012 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.0006 UJ	0.00062 U	0.00018 U	0.00059 UJ	0.00052 UJ	0.00071 UJ	0.00054 UJ
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	0.00034 U	-	-	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00077 UJ	0.0008 U	0.00047 U	0.00077 UJ	0.00066 UJ	0.00091 UJ	0.00069 UJ
8260B	Xylene, m+p	179601-23-1	mg/kg	0.0006 UJ	0.00062 UJ	-	0.00059 UJ	0.00052 UJ	**2.1 J**	**1.3 J**
8260B	Xylene, o	95-47-6	mg/kg	0.00035 UJ	0.00036 UJ	-	**0.0015 J**	0.0003 UJ	**0.98 J**	**0.71 J**
8260B	Xylenes, total	1330-20-7	mg/kg	0.00035 UJ	0.00036 U	0.00094 U	**0.0015 J**	0.0003 UJ	**3.1 J**	**2 J**

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB02-45D-SO 2010/03/30 45 - 45_5 N 1151BLDG6-45-006D-S	1145BLDG6-SB03-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-007D-S	1145BLDG6-SB03-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-008D-S	1145BLDG6-SB03-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-009D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 N 1151BLDG6-15-010D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 FD 1151BLDG6-15-010DU	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 SPS 1151BLDG6-15-010T
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00019 U	0.00025 UJ	0.00024 UJ	0.00021 UJ	0.0002 U	0.00026 U	0.0099 U
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00033 U	0.00042 UJ	0.00042 UJ	0.00037 UJ	0.00034 U	0.00045 U	0.012 U
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	-	-	-	-	0.039 U
8260B	Trichloroethene	79-01-6	mg/kg	0.00011 U	0.00014 UJ	0.00014 UJ	0.00013 UJ	0.00012 U	0.00015 U	0.021 U
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00051 U	0.00065 UJ	0.00065 UJ	0.00057 UJ	0.00052 U	0.0007 U	0.017 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	-	-	-	-	0.012 U
8260B	Vinyl chloride	75-01-4	mg/kg	0.00066 U	0.00084 UJ	0.00084 UJ	0.00073 UJ	0.00067 U	0.0009 U	0.034 U
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00051 U	0.00065 UJ	0.00065 UJ	0.00057 UJ	0.00052 U	0.0007 U	-
8260B	Xylene, o	95-47-6	mg/kg	0.0003 U	0.00038 UJ	**0.0023 J**	0.00033 UJ	0.00031 U	0.00041 U	-
8260B	Xylenes, total	1330-20-7	mg/kg	0.0003 U	0.00038 UJ	**0.0023 J**	0.00033 UJ	0.00031 U	0.00041 U	0.035 U

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB04-30D-SO 2010/04/02 30 - 30_5 N 1151BLDG6-30-011D-S	1145BLDG6-SB04-45D-SO 2010/04/02 45 - 45_5 N 1151BLDG6-45-012D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 N 1151BLDG6-15-013D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 FD 1151BLDG6-15-013DU	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 SPS 1151BLDG6-15-013T	1145BLDG6-SB05-30D-SO 2010/04/06 30 - 30_5 N 1151BLDG6-30-014D-S	1145BLDG6-SB05-45D-SO 2010/04/06 45 - 45_5 N 1151BLDG6-45-015D-S
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00024 U	0.00021 U	0.00026 U	0.00025 U	0.00021 U	0.00035 UJ	0.00024 U
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00042 U	0.00036 U	0.00045 U	0.00043 U	0.00042 U	0.00059 UJ	0.00041 U
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	-	-	0.00048 U	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00014 U	0.00012 U	0.00015 UJ	0.00015 UJ	0.00035 U	0.0002 UJ	0.00014 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00065 U	0.00055 U	0.00069 U	0.00066 U	0.0002 U	0.00092 UJ	0.00064 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	-	-	0.00037 U	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00084 U	0.00071 U	0.00089 U	0.00086 U	0.00051 U	0.0012 UJ	0.00083 U
8260B	Xylene, m+p	179601-23-1	mg/kg	**0.038**	0.00055 U	0.00069 UJ	0.00066 UJ	-	**0.82 J**	0.00064 UJ
8260B	Xylene, o	95-47-6	mg/kg	**0.046**	0.00032 U	0.00041 UJ	0.00039 UJ	-	**0.29 J**	0.00038 UJ
8260B	Xylenes, total	1330-20-7	mg/kg	**0.084**	0.00032 U	0.00041 UJ	0.00039 UJ	0.001 U	**1.1 J**	0.00038 UJ

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1145BLDG6-SB06-15D-SO 2010/04/01 15 - 15_5 N 1151BLDG6-15-016D-S	1145BLDG6-SB06-30D-SO 2010/04/01 30 - 30_5 N 1151BLDG6-30-017D-S	1145BLDG6-SB06-45D-SO 2010/04/01 45 - 45_5 N 1151BLDG6-45-018D-S	1145BLDG6-SB07-15D-SO 2010/04/05 15 - 15_5 N 1151BLDG6-15-019D-S	1145BLDG6-SB07-30D-SO 2010/04/05 30 - 30_5 N 1151BLDG6-30-020D-S	1145BLDG6-SB07-45D-SO 2010/04/05 45 - 45_5 N 1151BLDG6-45-021D-S	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS001D-SO
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00022 U	0.00027 UJ	0.00021 UJ	0.00034 U	0.027 U	0.00024 U	0.00021 UJ
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00038 U	0.00047 UJ	0.00035 U	0.00058 U	0.025 U	0.00041 U	0.00036 UJ
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	-	-	-	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00013 U	0.00016 UJ	0.00012 UJ	0.0002 U	0.014 U	0.00014 U	0.00012 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00059 U	0.00072 UJ	0.00055 U	0.0009 U	0.031 U	0.00064 U	0.00055 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	-	-	-	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00075 U	0.00093 UJ	0.00071 U	0.0012 U	0.017 U	0.00082 U	0.00071 UJ
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00059 U	**2.8 J**	0.00055 UJ	**120 J**	**19**	0.00064 U	0.00055 UJ
8260B	Xylene, o	95-47-6	mg/kg	0.00034 U	**0.98 J**	0.00032 UJ	**35 J**	**6**	0.00037 U	0.00032 UJ
8260B	Xylenes, total	1330-20-7	mg/kg	0.00034 U	**3.8 J**	0.00032 UJ	**150 J**	**25**	0.00037 U	0.00032 UJ

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 FD 1149AOC49-SS001DUP-SO	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 SPS 1149AOC49-SS001TRIP-	1149DOCK-SB01-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-002D-SO	1149DOCK-SB01-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-003D-SO	1149DOCK-SB02-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS004D-SO	1149DOCK-SB02-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-005D-SO	1149DOCK-SB02-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-006D-SO
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00024 UJ	0.00021 U	0.00032 UJ	0.00029 UJ	0.00028 UJ	0.00024 UJ	0.00024 UJ
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00041 UJ	0.00041 U	0.00055 UJ	0.0005 UJ	0.00048 UJ	0.00042 UJ	0.00041 UJ
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	0.00046 U	-	-	-	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00014 UJ	0.00034 U	0.00019 UJ	0.00017 UJ	0.00016 UJ	0.00014 UJ	0.00014 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00063 U	0.0002 U	0.00085 UJ	0.00078 U	0.00074 U	0.00065 U	0.00063 UJ
8260B	Vinyl acetate	108-05-4	mg/kg	-	0.00036 U	-	-	-	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00082 UJ	0.0005 U	0.0011 UJ	0.001 UJ	0.00095 UJ	0.00083 UJ	0.00082 UJ
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00063 UJ	-	**0.071 J**	0.00078 UJ	0.00074 UJ	0.00065 UJ	**2.2 J**
8260B	Xylene, o	95-47-6	mg/kg	0.00037 UJ	-	0.0005 UJ	0.00046 UJ	0.00043 UJ	0.00038 UJ	0.00037 UJ
8260B	Xylenes, total	1330-20-7	mg/kg	0.00037 UJ	0.001 U	**0.071 J**	0.00046 UJ	0.00043 UJ	0.00038 UJ	**1.2 J**

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 FD 1105BLDG5-SS001DUP-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS001D-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 SPS 1105BLDG5-SS001TRIP-SO	1105BLDG5-SS002D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS002D-SO	1105BLDG5-SS003D-SO 2010/03/18 2 - 3 N 1105BLDG5-SS003D-SO	1105BLDG5-SS004D-SO 2010/03/18 0_5 - 1 N 1105BLDG5-SS004D-SO	1105BLDG5-SS005D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS005D-SO
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00032 U	0.00033 UJ	0.00042 U	0.00021 U	0.00031 UJ	0.00025 UJ	0.00029 U
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00056 U	0.00057 UJ	0.00022 U	0.00036 U	0.00054 UJ	0.00043 UJ	0.0005 U
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	0.00059 U	-	-	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00019 U	0.00019 UJ	0.00033 U	0.00012 U	0.00019 UJ	0.00015 UJ	0.00017 U
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00087 U	0.00088 UJ	0.00038 U	0.00056 U	0.00084 UJ	0.00066 UJ	0.00077 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	0.00047 U	-	-	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.0011 U	0.0011 UJ	0.00079 U	0.00072 U	0.0011 UJ	0.00085 UJ	0.001 U
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00087 U	0.00088 UJ	-	0.00056 U	0.00084 UJ	0.00066 UJ	0.00077 U
8260B	Xylene, o	95-47-6	mg/kg	0.00051 U	0.00052 UJ	-	0.00033 U	0.00049 UJ	0.00039 UJ	0.00045 U
8260B	Xylenes, total	1330-20-7	mg/kg	0.00051 U	0.00052 UJ	0.00079 U	0.00033 U	0.00049 UJ	0.00039 UJ	0.00045 U

Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation

Method	Chemical	CASRN	Units	1105BLDG5-SS006D-SO 2010/03/18 0 - 0_5 N 1105BLDG5-SS006D-SO	1105BLDG5-SS007D-SO 2010/04/23 0 - 0_5 N 1105BLDG5-SS007D-SO	1105BLDG5-SS019D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS019D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 FD 1105BLDG5-SS020DUP-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 N 1105BLDG5-SS020D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 SPS 1105BLDG5-SS020TRIP-S	1105BLDG5-SS021D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS021D-SO
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00023 U	0.00023 U	0.00031 U	0.00024 U	0.00029 U	0.00041 U	0.0003 U
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0004 U	0.0004 U	0.00054 U	0.00041 U	0.0005 U	0.00022 U	0.00051 U
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	-	-	-	0.00058 U	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00014 U	0.00014 U	0.00019 UJ	0.00014 UJ	0.00017 UJ	0.00032 U	0.00017 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00061 U	0.00061 U	0.00084 U	0.00064 U	0.00077 U	0.00037 U	0.00079 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	-	-	-	0.00046 U	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00079 U	0.00079 U	0.0011 U	0.00083 U	0.00099 U	0.00078 U	0.001 U
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00061 U	0.00061 UJ	0.00084 UJ	0.00064 UJ	0.00077 UJ	-	0.00079 UJ
8260B	Xylene, o	95-47-6	mg/kg	0.00036 U	0.00036 UJ	0.00049 UJ	0.00038 UJ	0.00045 UJ	-	0.00046 UJ
8260B	Xylenes, total	1330-20-7	mg/kg	0.00036 U	0.00036 U	0.00049 UJ	0.00038 UJ	0.00045 UJ	0.00078 U	0.00046 UJ

Acronyms and Definitions:

Bold = chemical detected at the indicated concentration
CASRN = Chemical Abstracts Service Registry Number
FD = Field duplicate
N = normal sample
RCRA = Resource Conservation and Recovery Act
J = estimated concentration
U = not deleted at the indicated method detection limit
UJ = not deleted at the indicated method detection limit, However, the associated numerical value is approximate
VOC = volatile organic compound
mg/kg = migrogams per kilogram

Column headers are given in this format:	**Example (for the first sample in the table):**
Boring ID	1145BLDG6-SB01-15D-SO
Sample date	3/31/2010
Depth Interval (ft bgs)	15 - 15_5
Sample type (N/FD)	N
Sample ID	1151BLDG6-15-001D-S

Sources:

USACE. 2014. RCRA Facility Investigation Report, Parcel 11, Revision 2.0. Final May.

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Table 2.5 – Soil Data from the Northern Area Groundwater

Method	Chemical	CASRN	Units	MW29 2019/07/08 10 - 11 N 11VAL-MW29SB-D10-11SO	MW29 2019/07/09 40 - 41 N 11VAL-MW29SB-D40-41SO	MW30 2019/07/10 10 - 12 FD 11VAL-MW30SB-D10-12SO-DUP	MW30 2019/07/10 10 - 12 N 11VAL-MW30SB-D10-12SO	MW30 2019/07/11 40 - 42 N 11VAL-MW30SB-D40-42SO	MW31 2019/07/12 10 - 12 N 11VAL-MW31SB-D10-12SO	MW31 2019/07/12 40 - 42 N 11VAL-MW31SB-D40-42SO	MW32 2019/07/13 10 - 12 N 11VAL-MW32SB-D10-12SO	MW32 2019/07/13 40 - 42 N 11VAL-MW32SB-D40-42SO
8260C	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00088 U	0.00062 U	0.00061 UJ	0.00059 UJ	0.00057 U	0.00067 U	0.00069 U	0.00078 U	0.00047 U
8260C	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.0012 U	0.00086 U	0.00085 UJ	0.00082 UJ	0.00079 U	0.00093 U	0.00096 U	0.0011 U	0.00065 U
8260C	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00067 U	0.00047 U	0.00047 UJ	0.00045 UJ	0.00043 U	0.00051 U	0.00052 U	0.00059 U	0.00035 U
8260C	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00059 UJ	0.00041 U	0.00041 UJ	0.00039 UJ	0.00038 U	0.00045 U	0.00046 U	0.00052 U	0.00031 U
8260C	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0011 U	0.00078 U	0.00077 UJ	0.00074 UJ	0.00072 U	0.00084 U	0.00087 U	0.00098 U	0.00059 U
8260C	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.0014 UJ	0.00095 U	0.00094 UJ	0.00091 UJ	0.00088 U	0.001 U	0.0011 U	0.0012 U	0.00072 U
8260C	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00072 U	0.00051 U	0.0005 UJ	0.00048 UJ	0.00046 U	0.00054 U	0.00056 U	0.00064 U	0.00038 U
8260C	1,1-Dichloroethane	75-34-3	mg/kg	0.00047 UJ	0.00033 U	0.00033 UJ	0.00032 UJ	0.00031 U	0.00036 U	0.00037 U	0.00042 U	0.00025 U
8260C	1,1-Dichloroethene	75-35-4	mg/kg	0.00042 UJ	0.0003 U	0.0003 UJ	0.00028 UJ	0.00027 U	0.00032 U	0.00033 U	0.00038 U	0.00023 U
8260C	1,1-Dichloropropene	563-58-6	mg/kg	0.0006 UJ	0.00042 U	0.00042 UJ	0.0004 UJ	0.00039 U	0.00046 U	0.00047 U	0.00054 U	0.00032 U
8260C	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0012 U	0.00086 U	0.00085 UJ	0.00082 UJ	0.00079 U	0.00093 U	0.00096 U	0.0011 U	0.00065 U
8260C	1,2,3-Trichloropropane	96-18-4	mg/kg	0.0012 U	0.00087 U	0.00086 UJ	0.00083 UJ	0.0008 U	0.00094 U	0.00097 U	0.0011 U	0.00066 U
8260C	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0012 U	0.00086 U	0.00085 UJ	0.00082 UJ	0.00079 U	0.00093 U	0.00096 U	0.0011 U	0.00065 U
8260C	1,2,4-Trimethylbenzene	95-63-6	mg/kg	**0.001 J**	0.00059 U	0.00058 UJ	0.00056 UJ	**0.0008 J**	**0.00063 J**	0.00065 U	0.00074 U	0.00044 U
8260C	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.0014 U	0.001 U	0.001 UJ	0.00096 UJ	0.00093 U	0.0011 U	0.0011 U	0.0013 U	0.00076 U
8260C	1,2-Dibromoethane	106-93-4	mg/kg	0.00044 U	0.00031 U	0.00031 UJ	0.0003 UJ	0.00029 U	0.00033 U	0.00034 U	0.00039 U	0.00023 U
8260C	1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 U	0.00073 U	0.00073 UJ	0.0007 UJ	0.00068 U	0.00079 U	0.00082 U	0.00093 U	0.00055 U
8260C	1,2-Dichloroethane	107-06-2	mg/kg	0.0012 UJ	0.00084 U	0.00083 UJ	0.0008 UJ	0.00077 U	0.0009 U	**0.0028 J**	0.0011 U	0.00063 U
8260C	1,2-Dichloropropane	78-87-5	mg/kg	0.00098 U	0.00069 U	0.00068 UJ	0.00066 UJ	0.00063 U	0.00074 U	0.00076 U	0.00087 U	0.00052 U
8260C	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00057 U	0.0004 U	0.0004 UJ	0.00038 UJ	**0.0004 J**	0.00043 U	0.00045 U	0.00051 U	0.0003 U
8260C	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00049 U	0.00034 U	0.00034 UJ	0.00033 UJ	0.00032 U	0.00037 U	0.00038 U	0.00043 U	0.00026 U
8260C	1,3-Dichloropropane	142-28-9	mg/kg	0.00093 U	0.00065 U	0.00065 UJ	0.00062 UJ	0.0006 U	0.00071 U	0.00073 U	0.00082 U	0.00049 U
8260C	1,4-Dichlorobenzene	106-46-7	mg/kg	0.0013 U	0.0009 U	0.00089 UJ	0.00085 UJ	0.00082 U	0.00097 U	0.00099 U	0.0011 U	0.00068 U
8260C	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.0014 U	0.00099 U	0.00098 UJ	0.00094 UJ	0.00091 U	0.0011 U	0.0011 U	0.0012 U	0.00074 U
8260C	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.001 U	0.00072 U	0.00071 UJ	0.00069 UJ	0.00067 U	0.00078 U	0.0008 U	0.00091 U	0.00055 U
8260C	2,2-Dichloropropane	594-20-7	mg/kg	0.00062 UJ	0.00044 U	0.00043 UJ	0.00042 UJ	0.0004 U	0.00047 U	0.00048 U	0.00055 U	0.00033 U
8260C	2-Butanone	78-93-3	mg/kg	0.0023 UJ	0.0016 U	0.0016 UJ	0.0015 UJ	0.0015 U	0.0017 U	0.0018 U	0.002 U	0.0012 U
8260C	2-Hexanone	591-78-6	mg/kg	0.0012 U	0.00085 U	0.00084 UJ	0.00081 UJ	0.00078 U	0.00092 U	0.00094 U	0.0011 U	0.00064 U
8260C	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00098 UJ	0.00069 U	0.00068 UJ	0.00066 UJ	0.00063 U	0.00074 U	0.00076 U	0.00087 U	0.00052 U
8260C	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0015 U	0.0011 U	0.001 UJ	0.001 UJ	0.00097 U	0.0011 U	0.0012 U	0.0013 U	0.0008 U
8260C	Acetone	67-64-1	mg/kg	**0.032 J**	0.0016 U	**0.005 J**	**0.0019 J**	**0.0074 J**	**0.04**	0.0018 U	**0.015 J**	**0.004 J**
8260C	Benzene	71-43-2	mg/kg	**0.0073 J**	**0.0022 J**	**0.00098 J**	**0.0013 J**	**0.0058**	**0.0037 J**	**0.0044 J**	**0.00073 J**	**0.0051**
8260C	Bromobenzene	108-86-1	mg/kg	0.00085 U	0.0006 U	0.00059 UJ	0.00057 UJ	0.00055 U	0.00064 U	0.00066 U	0.00075 U	0.00045 U
8260C	Bromochloromethane	74-97-5	mg/kg	0.0015 UJ	0.0011 U	0.0011 UJ	0.001 UJ	0.00099 U	0.0012 U	0.0012 U	0.0014 U	0.00081 U
8260C	Bromodichloromethane	75-27-4	mg/kg	0.00086 U	0.00061 U	0.0006 UJ	0.00058 UJ	0.00056 U	0.00066 U	0.00068 U	0.00077 U	0.00046 U
8260C	Bromoform	75-25-2	mg/kg	0.00065 U	0.00046 U	0.00045 UJ	0.00044 UJ	0.00042 U	0.0005 U	0.00051 U	0.00058 U	0.00035 U
8260C	Bromomethane	74-83-9	mg/kg	0.0014 UJ	0.00099 U	0.00098 UJ	0.00094 UJ	0.00091 U	0.0011 U	0.0011 U	0.0012 U	0.00074 U
8260C	Butylbenzene	104-51-8	mg/kg	0.0011 U	0.00076 U	0.00075 UJ	0.00072 UJ	0.0007 U	0.00082 U	0.00084 U	0.00095 U	0.00057 U
8260C	Carbon disulfide	75-15-0	mg/kg	0.0008 UJ	0.00056 U	0.00056 UJ	0.00054 UJ	0.00052 U	0.00061 U	0.00062 U	0.00071 U	0.00042 U

Table 2.5 – Soil Data from the Northern Area Groundwater

Method	Chemical	CASRN	Units	MW29 2019/07/08 10 - 11 N 11VAL-MW29SB-D10-11SO	MW29 2019/07/09 40 - 41 N 11VAL-MW29SB-D40-41SO	MW30 2019/07/10 10 - 12 FD 11VAL-MW30SB-D10-12SO-DUP	MW30 2019/07/10 10 - 12 N 11VAL-MW30SB-D10-12SO	MW30 2019/07/11 40 - 42 N 11VAL-MW30SB-D40-42SO	MW31 2019/07/12 10 - 12 N 11VAL-MW31SB-D10-12SO	MW31 2019/07/12 40 - 42 N 11VAL-MW31SB-D40-42SO	MW32 2019/07/13 10 - 12 N 11VAL-MW32SB-D10-12SO	MW32 2019/07/13 40 - 42 N 11VAL-MW32SB-D40-42SO
8260C	Carbon tetrachloride	56-23-5	mg/kg	0.00086 UJ	0.00061 U	0.0006 UJ	0.00058 UJ	0.00056 U	0.00066 U	0.00068 U	0.00077 U	0.00046 U
8260C	Chlorobenzene	108-90-7	mg/kg	0.00047 U	0.00033 U	0.00033 UJ	0.00032 UJ	0.00031 U	0.00036 U	0.00037 U	0.00042 U	0.00025 U
8260C	Chloroethane	75-00-3	mg/kg	0.00073 UJ	0.00052 U	0.00051 UJ	0.00049 UJ	0.00048 U	0.00056 U	0.00057 U	0.00065 U	0.00039 U
8260C	Chloroform	67-66-3	mg/kg	0.00042 UJ	0.0003 U	0.0003 UJ	0.00028 UJ	0.00027 U	0.00032 U	0.00033 U	0.00038 U	0.00023 U
8260C	Chloromethane	74-87-3	mg/kg	0.00082 UJ	0.00057 U	0.00057 UJ	0.00055 UJ	0.00053 U	0.00062 U	0.00064 U	0.00072 U	0.00043 U
8260C	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0015 UJ	0.001 U	0.001 UJ	0.00097 UJ	0.00094 U	0.0011 U	0.0011 U	0.0013 U	0.00077 U
8260C	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001 U	0.00073 U	0.00073 UJ	0.0007 UJ	0.00068 U	0.00079 U	0.00082 U	0.00093 U	0.00055 U
8260C	Cumene	98-82-8	mg/kg	0.00085 U	0.0006 U	0.00059 UJ	0.00057 UJ	0.00055 U	0.00064 U	0.00066 U	0.00075 U	0.00045 U
8260C	Dibromochloromethane	124-48-1	mg/kg	0.00042 U	0.0003 U	0.0003 UJ	0.00028 UJ	0.00027 U	0.00032 U	0.00033 U	0.00038 U	0.00023 U
8260C	Dibromomethane	74-95-3	mg/kg	0.00095 U	0.00067 U	0.00066 UJ	0.00063 UJ	0.00061 U	0.00072 U	0.00074 U	0.00084 U	0.0005 U
8260C	Dichlorodifluoromethane	75-71-8	mg/kg	0.0015 UJ	0.001 U	0.001 UJ	0.00097 UJ	0.00094 U	0.0011 U	0.0011 U	0.0013 U	0.00077 U
8260C	Ethyl methacrylate	97-63-2	mg/kg	0.00024 U	0.00017 U	0.00017 UJ	0.00016 UJ	0.00016 U	0.00019 U	0.00019 U	0.00022 U	0.00013 U
8260C	Ethylbenzene	100-41-4	mg/kg	**0.0016 J**	0.00039 U	0.00039 UJ	0.00037 UJ	**0.0011 J**	**0.00084 J**	**0.0007 J**	0.00049 U	**0.00052 J**
8260C	Hexachlorobutadiene	87-68-3	mg/kg	0.00054 U	0.00038 U	0.00037 UJ	0.00036 UJ	0.00035 U	0.00041 U	0.00042 U	0.00048 U	0.00029 U
8260C	Methylene chloride	75-09-2	mg/kg	0.0014 UJ	0.00096 U	0.00095 UJ	0.00092 UJ	0.00089 U	0.001 U	0.0011 U	0.0012 U	0.00073 U
8260C	Naphthalene	91-20-3	mg/kg	0.001 U	0.00072 U	0.00071 UJ	0.00069 UJ	0.00067 U	0.00078 U	0.0008 U	0.00091 U	0.00055 U
8260C	o-Chlorotoluene	95-49-8	mg/kg	0.001 U	0.00071 U	0.0007 UJ	0.00068 UJ	0.00065 U	0.00077 U	0.00079 U	0.0009 U	0.00054 U
8260C	Propylbenzene	103-65-1	mg/kg	0.00047 U	0.00033 U	0.00033 UJ	0.00032 UJ	0.00031 U	0.00036 U	0.00037 U	0.00042 U	0.00025 U
8260C	Styrene	100-42-5	mg/kg	0.00051 U	0.00036 U	0.00035 UJ	0.00034 UJ	0.00033 U	0.00038 U	0.00039 U	0.00045 U	0.00027 U
8260C	Tetrachloroethene	127-18-4	mg/kg	**0.0022 J**	0.0007 U	0.00069 UJ	0.00067 UJ	0.00064 U	0.00076 U	0.00078 U	0.00088 U	0.00053 U
8260C	Toluene	108-88-3	mg/kg	**0.006 J**	**0.0016 J**	**0.00071 J**	**0.00079 J**	**0.0054**	**0.0035 J**	**0.0033 J**	**0.00097 J**	**0.0027 J**
8260C	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00062 UJ	0.00044 U	0.00043 UJ	0.00042 UJ	0.0004 U	0.00047 U	0.00048 U	0.00055 U	0.00033 U
8260C	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0012 U	0.00086 U	0.00085 UJ	0.00082 UJ	0.00079 U	0.00093 U	0.00096 U	0.0011 U	0.00065 U
8260C	Trichloroethene	79-01-6	mg/kg	0.00098 U	0.00069 U	0.00068 UJ	0.00066 UJ	0.00063 U	0.00074 U	0.00076 U	0.00087 U	0.00052 U
8260C	Trichlorofluoromethane	75-69-4	mg/kg	0.00055 UJ	0.00039 U	0.00039 UJ	0.00037 UJ	0.00036 U	0.00042 U	0.00043 U	0.00049 U	0.00029 U
8260C	Vinyl chloride	75-01-4	mg/kg	0.00059 UJ	0.00041 U	0.00041 UJ	0.00039 UJ	0.00038 U	0.00045 U	0.00046 U	0.00052 U	0.00031 U
8260C	Xylene, m+p	179601-23-1	mg/kg	**0.0023 J**	0.00093 U	0.00092 UJ	0.00089 UJ	**0.0022 J**	**0.0011 J**	**0.0016 J**	0.0012 U	**0.0011 J**
8260C	Xylene, o	95-47-6	mg/kg	**0.00074 J**	0.00038 U	0.00037 UJ	0.00036 UJ	**0.00072 J**	0.00041 U	**0.00051 J**	0.00048 U	**0.00046 J**
8260C	Xylenes, total	1330-20-7	mg/kg	**0.003 J**	0.00093 U	0.00092 UJ	0.00089 UJ	**0.0029 J**	**0.0011 J**	**0.0021 J**	0.0012 U	**0.0016 J**

Acronyms and Definitions:
Bold = chemical detected at the indicated concentration
CASRN = Chemical Abstracts Service Registry Number
FD = Field duplicate
N = normal sample
RCRA = Resource Conservation and Recovery Act
J = estimated concentration
U = not deleted at the indicated method detection limit
UJ = not deleted at the indicated method detection limit, However, the associated numerical value is approximate
VOC = volatile organic compound
mg/kg = migrogams per kilogram

Column headers are given in this format:	Example (for the first sample in the table):
Well	MW29
Sample date	7/8/2019
Depth Interval (ft bgs)	10-11
Sample type (N/FD)	N
Sample ID	11VAL-MW29SB-D10-11SO

Sources:
HDR. 2023. Northern Area Groundwater RCRA Facility Investigation Report, Fort Wingate Depot Activity. Final. June.

Table 2.6 – 1,2-Dichloroethane Soil Vapor Results (µg/m^3) from the Northern Area Groundwater RCRA Facility Investigation

Sample Location	Depth (ft bgs)	Sample Type	Sample Date	Result (µg/m^3)
SG01	30	N	7/1/2019	0.089
SG06	30	N	7/2/2019	0.018
SG08	30	N	6/26/2019	0.054
SG09	30	N	7/1/2019	5.32
SG16	30	N	7/2/2019	0.201
SG20	30	N	6/26/2019	0.136
SG22	30	N	7/1/2019	0.158
SG27	30	N	6/25/2019	0.034
SG27	30	FD	6/25/2019	0.017
SG28	30	N	6/29/2019	0.405
SG30	30	N	6/28/2019	0.151
SG31	30	N	6/29/2019	0.327
SG36	30	N	6/30/2019	13.3
SG36	30	FD	6/30/2019	0.046
SG38R	30	N	6/29/2019	0.048
SG38R	30	FD	6/29/2019	0.179
SG39	30	N	6/25/2019	9.71
SG40	30	N	6/27/2019	0.553
SG41	30	N	6/28/2019	0.036
SG42	30	N	6/25/2019	0.185
SG43	30	N	6/28/2019	0.117
SG44	30	N	6/26/2019	0.979
SG44	30	FD	6/26/2019	1.82
SG45	30	N	6/28/2019	0.619
SG45	30	FD	6/28/2019	0.745
SG46R	30	N	7/1/2019	0.018
SG46R	30	FD	7/1/2019	0.023
SG47	30	N	7/1/2019	**88**
SG47	30	FD	7/1/2019	**91.4**
SG48	30	N	6/27/2019	**748**
SG50	30	N	6/27/2019	2.27
SG51	30	N	6/24/2019	**351**
SG54	30	N	7/1/2019	2.09
SG56	30	N	6/27/2019	4.89
SG59	30	N	6/24/2019	**3,325**
SG64	30	N	6/29/2019	0.798
SG65	30	N	6/27/2019	0.398
SG68R	30	N	7/1/2019	0.688
SG69	30	N	6/26/2019	0.28
SG70	30	N	6/25/2019	25.6

Table 2.6 – 1,2-Dichloroethane Soil Vapor Results (µg/m^3) from the Northern Area Groundwater RCRA Facility Investigation

Sample Location	Depth (ft bgs)	Sample Type	Sample Date	Result (µg/m^3)
SG71	22	N	7/1/2019	0.027
SG74	30	N	6/29/2019	2.4
SG75	30	N	6/27/2019	31.7
SG75	30	FD	6/27/2019	35.3
SG78	30	N	7/2/2019	5.64
SG79	30	N	6/30/2019	5.59
SG80	30	N	6/28/2019	3.57
SG81	30	N	6/26/2019	8.59
SG83	30	N	7/2/2019	**36.1**
SG83	30	FD	7/2/2019	**36.9**
SG84	30	N	6/25/2019	**275**
SG85	30	N	7/2/2019	6.62
SG90R	30	N	6/30/2019	0.124
SG91	30	N	6/26/2019	1.28
SG92	30	N	6/28/2019	2.73
SG93	30	N	6/30/2019	0.374
SG93	30	FD	6/30/2019	0.388
SG95	30	N	7/1/2019	0.465
SG96	30	N	7/2/2019	3.67
SG98RR	30	N	7/2/2019	1.96
SG99	30	N	6/30/2019	0.02
SG100	30	N	6/26/2019	1.67

Notes:
Cells shaded in yelllow indicate results greater than the NMED residential vapor intrusion screening level.
of 36 µg/m^3. Taken from NMED *Risk Assessment Guidance for Site Investigations and Remediation* , November 2022 Revised (Appendix A, Table A-4).

Acronyms and Abbreviations:
FD = Field duplicate
N = normal sample
NMED = New Mexico Environment Department
RCRA = Resource Conservation and Recovery Act
µg/m^3 = micrograms per cubmic meter

Source:
HDR Environmental, Operations and Construction. 2023. Northern Area Groundwater RCRA Facility Investigation Report, Fort Wingate Depot Activity, McKinley County, New Mexico. June. Final

Table 2.7 – 2022 Groundwater Data

Method	Chemical	CASRN	Units	VISL	MW18D 2022/04/20 N MW18D042022	MW18D 2022/10/12 N MW18D102022	MW20 2022/04/20 N MW20042022	MW20 2022/10/12 N MW20102022	MW22D 2022/04/21 N MW22D042022	MW22D 2022/10/13 N MW22D102022	MW29 2022/04/14 N MW29042022	MW29 2022/10/05 N MW29102022	MW30 2022/04/20 N MW30042022	MW30 2022/10/07 N MW30102022	MW31 2022/04/21 N MW31042022	MW31 2022/10/07 N MW31102022	MW32 2022/04/11 N MW32042022
8015C	Diesel fuel	68334-30-5	µg/L	N/A	100 U	100 U	**130 J**	97 U	110 U	110 U	150 U	100 U	110 U	100 U	97 U	**65 J**	**73 J**
8015C	Gasoline	8006-61-9	µg/L	N/A	**31 J**	**52 J**	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
8260C	(1,1-Dimethylethyl)benzene	98-06-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	(1-Methylpropyl)benzene	135-98-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,1,1,2-Tetrachloroethane	630-20-6	µg/L	37	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,1-Trichloroethane	71-55-6	µg/L	7,400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	32	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/L	1,500	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,1,2-Trichloroethane	79-00-5	µg/L	6.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloroethane	75-34-3	µg/L	76	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloroethene	75-35-4	µg/L	190	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloropropene	563-58-6	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2,3-Trichlorobenzene	87-61-6	µg/L	36	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	1,2,3-Trichloropropane	96-18-4	µg/L	22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2,4-Trichlorobenzene	120-82-1	µg/L	36	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	1,2,4-Trimethylbenzene	95-63-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2-Dibromo-3-chloropropane	96-12-8	µg/L	0.28	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2-Dibromoethane	106-93-4	µg/L	1.8	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2-Dichlorobenzene	95-50-1	µg/L	2,600	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2-Dichloroethane	107-06-2	µg/L	22	**63**	**91**	**0.8 J**	**1.5**	**0.29 J**	**0.34 J**	0.2 U	0.2 U	0.2 U	0.2 U	**27**	**24**	0.2 U
8260C	1,3,5-Trimethylbenzene	108-67-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,3-Dichlorobenzene	541-73-1	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,3-Dichloropropane	142-28-9	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,4-Dichlorobenzene	106-46-7	µg/L	8,400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1-Chloro-4-methylbenzene	106-43-4	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1-Methyl-4-(1-methylethyl)benzene	99-87-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	2,2-Dichloropropane	594-20-7	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	2-Butanone	78-93-3	µg/L	2,200,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	2-Hexanone	591-78-6	µg/L	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	2-Methoxy-2-methylpropane	1634-04-4	µg/L	N/A	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	**0.18 J**	0.3 U	0.3 U
8260C	4-Methyl-2-pentanone	108-10-1	µg/L	550,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	Acetone	67-64-1	µg/L	23,000,000	**6.7 J**	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	Benzene	71-43-2	µg/L	16	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromobenzene	108-86-1	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromochloromethane	74-97-5	µg/L	N/A	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Bromodichloromethane	75-27-4	µg/L	8.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromoform	75-25-2	µg/L	1,200	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Bromomethane	74-83-9	µg/L	17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Butylbenzene	104-51-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Carbon disulfide	75-15-0	µg/L	1,200	**0.31 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Carbon tetrachloride	56-23-5	µg/L	4.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chlorobenzene	108-90-7	µg/L	410	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chloroethane	75-00-3	µg/L	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Chloroform	67-66-3	µg/L	8.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chloromethane	74-87-3	µg/L	43	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	cis-1,2-Dichloroethene	156-59-2	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	cis-1,3-Dichloropropene	10061-01-5	µg/L	48	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Cumene	98-82-8	µg/L	880	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Dibromochloromethane	124-48-1	µg/L	32	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Dibromomethane	74-95-3	µg/L	120	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table 2.7 – 2022 Groundwater Data

Method	Chemical	CASRN	Units	VISL	MW32 2022/10/03 N MW32102022	TMW10 2022/04/14 N TMW10042022	TMW10 2022/10/06 N TMW10102022	TMW33 2022/04/15 N TMW33042022	TMW33 2022/10/07 N TMW33102022	TMW34 2022/04/19 FD TMW34042022D	TMW34 2022/04/19 N TMW34042022	TMW34 2022/10/11 FD TMW34102022D	TMW34 2022/10/11 N TMW34102022	TMW35 2022/04/20 N TMW35042022	TMW35 2022/10/11 N TMW35102022
8015C	Diesel fuel	68334-30-5	µg/L	N/A	**60 J**	100 U	100 U	100 U	**320 J**	**89 J**	120 UJ	**71 J**	**110 J**	110 U	120 U
8015C	Gasoline	8006-61-9	µg/L	N/A	20 U	20 U	20 U	**23 J**	**16 J**	20 U	20 U	20 U	20 U	20 U	20 U
8260C	(1,1-Dimethylethyl)benzene	98-06-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	(1-Methylpropyl)benzene	135-98-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,1,1,2-Tetrachloroethane	630-20-6	µg/L	37	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,1-Trichloroethane	71-55-6	µg/L	7,400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	32	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/L	1,500	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,1,2-Trichloroethane	79-00-5	µg/L	6.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloroethane	75-34-3	µg/L	76	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloroethene	75-35-4	µg/L	190	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloropropene	563-58-6	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2,3-Trichlorobenzene	87-61-6	µg/L	36	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	1,2,3-Trichloropropane	96-18-4	µg/L	22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2,4-Trichlorobenzene	120-82-1	µg/L	36	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	1,2,4-Trimethylbenzene	95-63-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2-Dibromo-3-chloropropane	96-12-8	µg/L	0.28	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2-Dibromoethane	106-93-4	µg/L	1.8	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2-Dichlorobenzene	95-50-1	µg/L	2,600	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2-Dichloroethane	107-06-2	µg/L	22	0.2 U	0.2 U	0.2 U	**38**	**43**	0.2 U	0.2 U	0.2 U	0.2 U	**0.64 J**	**0.53 J**
8260C	1,3,5-Trimethylbenzene	108-67-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,3-Dichlorobenzene	541-73-1	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,3-Dichloropropane	142-28-9	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,4-Dichlorobenzene	106-46-7	µg/L	8,400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1-Chloro-4-methylbenzene	106-43-4	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1-Methyl-4-(1-methylethyl)benzene	99-87-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	2,2-Dichloropropane	594-20-7	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	2-Butanone	78-93-3	µg/L	2,200,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	2-Hexanone	591-78-6	µg/L	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	2-Methoxy-2-methylpropane	1634-04-4	µg/L	N/A	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	4-Methyl-2-pentanone	108-10-1	µg/L	550,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	Acetone	67-64-1	µg/L	23,000,000	10 U	10 U	**5.2 J**	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	Benzene	71-43-2	µg/L	16	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromobenzene	108-86-1	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromochloromethane	74-97-5	µg/L	N/A	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Bromodichloromethane	75-27-4	µg/L	8.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromoform	75-25-2	µg/L	1,200	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Bromomethane	74-83-9	µg/L	17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Butylbenzene	104-51-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Carbon disulfide	75-15-0	µg/L	1,200	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Carbon tetrachloride	56-23-5	µg/L	4.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chlorobenzene	108-90-7	µg/L	410	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chloroethane	75-00-3	µg/L	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Chloroform	67-66-3	µg/L	8.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chloromethane	74-87-3	µg/L	43	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	cis-1,2-Dichloroethene	156-59-2	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	cis-1,3-Dichloropropene	10061-01-5	µg/L	48	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Cumene	98-82-8	µg/L	880	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Dibromochloromethane	124-48-1	µg/L	32	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Dibromomethane	74-95-3	µg/L	120	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table 2.7 – 2022 Groundwater Data

Method	Chemical	CASRN	Units	VISL	MW18D 2022/04/20 N MW18D042022	MW18D 2022/10/12 N MW18D102022	MW20 2022/04/20 N MW20042022	MW20 2022/10/12 N MW20102022	MW22D 2022/04/21 N MW22D042022	MW22D 2022/10/13 N MW22D102022	MW29 2022/04/14 N MW29042022	MW29 2022/10/05 N MW29102022	MW30 2022/04/20 N MW30042022	MW30 2022/10/07 N MW30102022	MW31 2022/04/21 N MW31042022	MW31 2022/10/07 N MW31102022	MW32 2022/04/11 N MW32042022
8260C	Dichlorodifluoromethane	75-71-8	µg/L	7.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Ethylbenzene	100-41-4	µg/L	35	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Hexachlorobutadiene	87-68-3	µg/L	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methyl acetate	79-20-9	µg/L	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methylcyclohexane	108-87-2	µg/L	180	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methylene chloride	75-09-2	µg/L	4,700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Naphthalene	91-20-3	µg/L	46	1 U	1 U	1 U	**0.59 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	o-Chlorotoluene	95-49-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Propylbenzene	103-65-1	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Styrene	100-42-5	µg/L	9,200	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Toluene	108-88-3	µg/L	19,000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	trans-1,2-Dichloroethene	156-60-5	µg/L	250	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	trans-1,3-Dichloropropene	10061-02-6	µg/L	48	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Trichloroethene	79-01-6	µg/L	5.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Trichlorofluoromethane	75-69-4	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Vinyl chloride	75-01-4	µg/L	1.5	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Xylene, m+p	179601-23-1	µg/L	370	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Xylene, o	95-47-6	µg/L	490	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table 2.7 – 2022 Groundwater Data

Method	Chemical	CASRN	Units	VISL	MW32 2022/10/03 N MW32102022	TMW10 2022/04/14 N TMW10042022	TMW10 2022/10/06 N TMW10102022	TMW33 2022/04/15 N TMW33042022	TMW33 2022/10/07 N TMW33102022	TMW34 2022/04/19 FD TMW34042022D	TMW34 2022/04/19 N TMW34042022	TMW34 2022/10/11 FD TMW34102022D	TMW34 2022/10/11 N TMW34102022	TMW35 2022/04/20 N TMW35042022	TMW35 2022/10/11 N TMW35102022
8260C	Dichlorodifluoromethane	75-71-8	µg/L	7.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Ethylbenzene	100-41-4	µg/L	35	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Hexachlorobutadiene	87-68-3	µg/L	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methyl acetate	79-20-9	µg/L	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methylcyclohexane	108-87-2	µg/L	180	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methylene chloride	75-09-2	µg/L	4,700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Naphthalene	91-20-3	µg/L	46	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	o-Chlorotoluene	95-49-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Propylbenzene	103-65-1	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Styrene	100-42-5	µg/L	9,200	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Toluene	108-88-3	µg/L	19,000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	trans-1,2-Dichloroethene	156-60-5	µg/L	250	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	trans-1,3-Dichloropropene	10061-02-6	µg/L	48	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Trichloroethene	79-01-6	µg/L	5.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Trichlorofluoromethane	75-69-4	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Vinyl chloride	75-01-4	µg/L	1.5	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Xylene, m+p	179601-23-1	µg/L	370	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Xylene, o	95-47-6	µg/L	490	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Acronyms and Definitions:

Bold = chemical detected at the indicated concentration
CASRN = Chemical Abstracts Service Registry Number
FD = Field duplicate
N = normal sample
N/A = not applicable
TPH = total petroleum hydrocarbons
J = estimated concentration
U = not deleted at the indicated limit of detection
VOC = volatile organic compound
VISL = vapor intrusion screening level
µg/L = migrogams per liter
Cells shaded in yelllow indicate results greater than the NMED residential VISL. Taken from NMED Risk Assessment Guidance for Site Investigations and Remediation, November 2022 Revised.

Column headers are given in this format:	Example:
Well Number	MW18D
Sample date	4/20/2022
Sample type (N/FD)	N
Sample ID	MW18D042022

Sources:

Eco and Associates. 2023. Northern Area Groundwater RCRA Facility Investigation Report, Groundwater Periodic Monitoring Report, January through June 2022, Fort Wingate Depot Activity, McKinley County, New Mexico. March.

Eco and Associates. 2023. Northern Area Groundwater RCRA Facility Investigation Report, Groundwater Periodic Monitoring Report, July through December 2022, Fort Wingate Depot Activity, McKinley County, New Mexico. November.

Table 3.1 – Summary of Samples to be Collected

Proposed Location	Proposed Sample Name [1]	Sample Matrix	# of Sampling Events	Depth	Analysis [2]
1145BLDG6-SV01	1145BLDG6-SV01-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV01-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV01-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV01-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead
1145BLDG6-SV02	1145BLDG6-SV02-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV02-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV02-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV02-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead
1145BLDG6-SV03	1145BLDG6-SV03-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV03-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV03-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV03-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead
1145BLDG6-SV04	1145BLDG6-SV04-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV04-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV04-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV04-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead
1145BLDG6-SV05	1145BLDG6-SV05-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV05-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV05-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV05-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead
1145BLDG6-SV06	1145BLDG6-SV06-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV06-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV06-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV06-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead

Table 3.1 – Summary of Samples to be Collected

Proposed Location	Proposed Sample Name [1]	Sample Matrix	# of Sampling Events	Depth	Analysis [2]
1145BLDG6-SV07	1145BLDG6-SV07-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV07-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV07-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV07-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead
1145BLDG6-SV08	1145BLDG6-SV08-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV08-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV08-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV08-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead
1145BLDG6-SV09	1145BLDG6-SV09-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV09-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV09-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV09-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead
1145BLDG6-SV10	1145BLDG6-SV10-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV10-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV10-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV10-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead
1145BLDG6-SV11	1145BLDG6-SV11-5D-SV-date	Soil Vapor	2	5 ft bgs	VOCs, TPH
	1145BLDG6-SV11-(DEPTH)D-SV-date	Soil Vapor	2	native/clean fill interface or highest PID reading in upper 15 ft of soil	VOCs, TPH
	1145BLDG6-SV11-(DEPTH)D-SV-date	Soil Vapor	2	depth of highest PID reading	VOCs, TPH
	1145BLDG6-SV11-(DEPTH)D-SO-date	Soil	1	depth of highest PID reading	VOCs, TPH, total lead

ABBREVIATIONS & ACRONYMS:

bgs = below ground surface
PID = Photoionization Detector
TPH = Petroleum Hydrocarbons
VOCs = Volatile Organic Compounds

Notes:

1. see Section 4.9 for the derivation of sample nomenclature
2. VOCs will be analyzed by TO-15 in soil vapor and 8260F in soil, TPH will be analyzed by TO-3 in soil vapor and 8015D in soil, and total lead will be analyzed by 6010

Table 4.1 – Summary of Analytical Methods, Sample Containers, Preservation, and Holding Times

Matrix	Analyte/ Analytical Group	Analytical Method	Sample Volume/Container	Preservation	Preparation Holding Time	Maximum Holding Time (collection until extraction/extraction until analysis)
Soil Vapor	VOCs	TO-15	1L/6L Summa Canister	None	N/A	30 days
	TPH	TO-3	1L/6L Summa Canister	None	N/A	30 days
Soil	VOCs	8260D	2 x Terracore, 40-mL VOA Vials with septa cap, pre-tared with stir bar and DI water or sodium bisulfate 1 x Terracore, 40-mL VOA vial with closed cap, pre-tared with methanol	Cool to ≤ 6°C (methanol)	N/A	14 days if preserved with sodium bisulfate and methanol 48-hours if frozen and preserved with DI water
	TPH – Gasoline-Range Organics	8015D	2 x Terra core, 40-mL VOA vials with closed cap, pre-tared with methanol	Cool to ≤ 6°C (methanol)	N/A	14 days
	TPH – Diesel-Range Organics	8015D	4-oz or 8-oz Glass Jar	Cool to ≤ 6°C	14 days	14/40 days

Definitions:

°C = degrees Celsius
DI = deionized
L = liter
mL - milliliter
N/A = not applicable
oz = ounces
TPH = total petroleum hydrocarbons
TO = toxic organic
VOA = volatile organic analysis
VOC = volatile organic compound

Table 4.2 – Summary of Samples Collected per Sampling Event

Matrix	Analyte/ Analytical Group	Sample Locations	Sample Depths	Number of Primary Samples/Event	Number of FDs/Event	Total Number of Samples/Event
Soil Vapor	VOCs	11	5 feet bgs, at the native soil/clean fill interface or the highest PID reading in the upper 15 ft of soil, and at the highest PID reading in the boring	33	4	37
	TPH	11	5 feet bgs, at the native soil/clean fill interface or the highest PID reading in the upper 15 ft of soil, and at the highest PID reading in the boring	33	4	37
Soil	VOCs	Up to 11	One sample per boring at depth of highest PID reading	Up to 11	2	13
	TPH	Up to 11	One sample per boring at depth of highest PID reading	Up to 11	2	13
	Total lead	Up to 11	One sample per boring at depth of highest PID reading	Up to 11	2	13

Definitions:
bgs = below ground surface
FD = field duplicate
PID = photoionization detector
TPH = total petroleum hydrocarbons
VOCs = volatile organic compounds

Table 4.3 – Quality Control Samples for Precision and Accuracy

Applicable Matrices	Data Quality Indicator	Quality Control Type	Minimum Frequency	Measurement Performance Criteria (MPC)
Soil, soil vapor	Precision	Field Duplicate Sample	One every 10 samples (10%)	RPD ≤ 50%
Soil, soil vapor	Accuracy/ Contamination	Equipment Blank	One per week for reusable equipment	No analytes detected > ½ LOQ or > 1/10th the amount measured in any sample or 1/10th the regulatory limit, whichever is greater
Soil	Accuracy/ Contamination	Trip Blank	One set (two VOAs) per each cooler containing VOC samples	No analytes detected > ½ LOQ or > 1/10th the amount measured in any sample or 1/10th the regulatory limit, whichever is greater
Soil	Accuracy/ Contamination	Method Blank	One per preparation or analytical batch, at least one every 20 samples (rounded up) (5%)	No analytes detected > ½ LOQ or > 1/10th the amount measured in any sample or 1/10th the regulatory limit, whichever is greater
Soil	Accuracy/ Precision	Laboratory Control Sample or Blank Spike	One per preparation or analytical batch, at least one every 20 samples (rounded up) (5%)	Per QSM criteria. Control limits for each method included in Worksheet #28 of the UFP-QAPP.
Soil	Accuracy/ Precision	MS Percent Recovery (QSM Percent Recovery Goals)	One every 20 samples (rounded up) (5%)	Per QSM criteria. Control limits for each method included in Worksheet #28 of the UFP-QAPP.
Soil, soil vapor	Accuracy/ Precision	Surrogate Spike (for organics only)	All samples and QC	Per QSM criteria. Control limits for each method included in Worksheet #28 of the UFP-QAPP.

Notes:
Additional Laboratory QC specific to each analytical method and as required by the QSM are discussed in the UFP-QAPP worksheets 24 and 28.

Definitions:

LOQ = Limit of Quantitation
MS = matrix spike
MSD = matrix spike duplicate
QAPP = Quality Assurance Project Plan
QC = quality control
QSM = Quality Systems Manual (U.S. Department of Defense)
RPD = relative percent difference
VOA = volatile organic analysis
VOC = volatile organic compound

Table 4.4 – Data Validation Codes and Definitions

Data Qualifiers	Definitions
U	The analyte was not detected and was reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.
J	The reported result was an estimated value with an unknown bias.
J+	The result was an estimated quantity, but the result may be biased high.
J-	The result was an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected and was reported as less than the LOD. However, the associated numerical value is approximate.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance (J-flag) or rejection (R-flag) of the data will be decided by the project team during the data usability assessment and will be documented in the data validation report

Note: Analytical data will report all detections at or above the Detection Limit (DL) and qualify all results between the DL and limit of quantitation (LOQ) "J" as estimated. All non-detect results will be reported at the LOD and qualified "U", per DoD (2021) QSM.

Table 4.5 – Comparison of VISLs to Laboratory Quantitation Limits for Soil Vapor

Method	Chemical	Surrogate [(1)]	CASRN	Human Health Screening Levels (µg/m^3)			Laboratory Quantitation Limits [5] (µg/m^3)		
				Residential NMED [(2)]	VISL USEPA [(3)]	Selected [(4)]	LOQ	LOD	DL
TO-3	TPH (gasoline range)		GRO	217,000		217,000	102.5	61.35	28.63
TO-15	1,1,1-Trichloroethane		71-55-6	174,000		174,000	2.72	1.36	0.51
TO-15	1,1,2,2-Tetrachloroethane		79-34-5	16.1		16.1	3.43	2.57	0.63
TO-15	1,1,2-Trichloroethane		79-00-5	6.95		6.95	2.72	2.04	0.4
TO-15	1,1-Dichloroethane		75-34-3	585		585	2.02	1.01	0.42
TO-15	1,1-Dichloroethene		75-35-4	6,950		6,950	1.98	1.48	0.5
TO-15	1,2,4-Trichlorobenzene		120-82-1	69.5		69.5	14.8	12.6	5.3
TO-15	1,2,4-Trimethylbenzene		95-63-6	--	6,950	6,950	9.83	1.84	0.86
TO-15	1,2-Dibromoethane (EDB) [6]		106-93-4	1.56		1.56	0.77	0.53	0.054
TO-15	1,2-Dichlorobenzene		95-50-1	6,950		6,950	3	2.25	0.98
TO-15	1,2-Dichloroethane		107-06-2	36		36	2.02	1.51	0.46
TO-15	1,2-Dichloropropane		78-87-5	93.6		93.6	2.31	1.73	0.45
TO-15	1,3,5-Trimethylbenzene		108-67-8	--	6,950	6,950	9.83	1.84	0.83
TO-15	1,3-Dichlorobenzene	1,4-Dichlorobenzene	541-73-1	85.1		85.1	3	2.25	0.64
TO-15	1,3-Butadiene		106-99-0	31.2		31.2	1.1	0.82	0.45
TO-15	1,4-Dichlorobenzene		106-46-7	85.1		85.1	3	2.25	1
TO-15	1,4-Dioxane		123-91-1	187		187	7.2	2.7	0.4
TO-15	2,2,4-Trimethylpentane		540-84-1	--	--	--	2.33	1.75	0.51
TO-15	2-Butanone (Methyl Ethyl Ketone)		78-93-3	174,000		174,000	5.89	5.01	0.7
TO-15	2-Hexanone		591-78-6	--	1,040	1,040	8.19	6.96	2.9
TO-15	2-Propanol		67-63-0	--	243,000	243,000	4.91	4.17	1.5
TO-15	3-Chloropropene		107-05-1	--	156	156	6.26	2.34	0.84
TO-15	4-Ethyltoluene		622-96-8	--	--	--	2.45	1.84	0.6
TO-15	4-Methyl-2-pentanone		108-10-1	104,000		104,000	2.04	1.53	1.2
TO-15	Acetone		67-64-1	1,080,000		1,080,000	11.8	5.93	4.3
TO-15	alpha-Chlorotoluene		100-44-7	--	19.1	19.1	2.58	1.94	0.87
TO-15	Benzene		71-43-2	120		120	1.59	1.19	0.35

Table 4.5 – Comparison of VISLs to Laboratory Quantitation Limits for Soil Vapor

Method	Chemical	Surrogate (1)	CASRN	Human Health Screening Levels (µg/m³)			Laboratory Quantitation Limits 5 (µg/m³)		
				Residential	VISL				
				NMED (2)	USEPA (3)	Selected (4)	LOQ	LOD	DL
TO-15	Bromodichloromethane		75-27-4	25.3		25.3	3.35	1.67	0.59
TO-15	Bromoform		75-25-2	851		851	5.16	3.87	1.3
TO-15	Bromomethane		74-83-9	174		174	19.4	6.6	5.7
TO-15	Carbon Disulfide		75-15-0	24,300		24,300	6.22	5.29	4.7
TO-15	Carbon Tetrachloride		56-23-5	156		156	3.14	2.35	0.57
TO-15	Chlorobenzene		108-90-7	1740		1740	2.3	1.15	0.35
TO-15	Chloroethane		75-00-3	348,000		348,000	5.27	4.48	1.7
TO-15	Chloroform		67-66-3	40.7		40.7	2.44	1.22	0.37
TO-15	Chloromethane		74-87-3	520		520	10.3	3.51	1.5
TO-15	cis-1,2-Dichloroethene		156-59-2	--	13,900	13,900	1.98	1.48	0.44
TO-15	cis-1,3-Dichloropropene	1,3-Dichloropropene	10061-01-5	234		234	2.26	1.7	0.57
TO-15	Cumene		98-82-8	13,900		13,900	2.45	1.84	0.88
TO-15	Cyclohexane		110-82-7	34,800		34,800	1.72	1.29	0.33
TO-15	Dibromochloromethane		124-48-1	34.7		34.7	4.25	3.19	0.88
TO-15	Ethanol		64-17-5	--	--	--	9.42	4.71	3.9
TO-15	Ethyl Benzene		100-41-4	374		374	2.17	1.62	0.48
TO-15	Freon 11		75-69-4	24,300		24,300	2.8	2.1	0.55
TO-15	Freon 113		76-13-1	1,040,000		1,040,000	3.83	2.87	0.88
TO-15	Freon 114		76-14-2	--	--	--	3.49	2.62	1
TO-15	Freon 12		75-71-8	3,480		3,480	2.47	1.85	0.36
TO-15	Heptane		142-82-5	--	139,000	139,000	8.19	1.53	0.57
TO-15	Hexachlorobutadiene		87-68-3	42.5		42.5	21.3	18.1	7.7
TO-15	Hexane		110-54-3	24,300		24,300	1.76	1.32	0.5
TO-15	m,p-Xylene	Xylenes	108-38-3	3,480		3,480	2.17	1.62	0.76
TO-15	Methyl tert-butyl ether		1634-04-4	3,600		3,600	7.21	2.7	0.44
TO-15	Methylene Chloride		75-09-2	20,900		20,900	17.3	5.9	1.2
TO-15	o-Xylene		95-47-6	3,480		3,480	2.17	1.62	0.4

Table 4.5 – Comparison of VISLs to Laboratory Quantitation Limits for Soil Vapor

Method	Chemical	Surrogate (1)	CASRN	Human Health Screening Levels (µg/m³)			Laboratory Quantitation Limits 5 (µg/m³)		
				Residential VISL					
				NMED (2)	USEPA (3)	Selected (4)	LOQ	LOD	DL
TO-15	Propylbenzene		103-65-1	--	34,800	34,800	2.45	1.84	0.31
TO-15	Styrene		100-42-5	34,800		34,800	2.12	1.59	0.43
TO-15	Tetrachloroethene		127-18-4	1,390		1,390	3.39	2.54	0.63
TO-15	Tetrahydrofuran		109-99-9	--	69,500	69,500	1.47	1.1	0.45
TO-15	Toluene		108-88-3	174,000		174,000	1.88	1.41	0.48
TO-15	trans-1,2-Dichloroethene		156-60-5	1,390		1,390	1.98	1.48	0.44
TO-15	trans-1,3-Dichloropropene	1,3-Dichloropropene	10061-02-6	234		234	2.26	1.7	0.39
TO-15	Trichloroethene		79-01-6	69.5		69.5	2.68	2.01	0.58
TO-15	Vinyl Chloride		75-01-4	55.9		55.9	1.27	0.95	0.3

ABBREVIATIONS & ACRONYMS:
CASRN = Chemical Abstracts Service Registry Number
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
NMED = New Mexico Environment Department
TO = toxic organic
USEPA = US Environmental Protection Agency
VISL = Vapor Intrusion Screening Level
µg/m³ = migrogams per cubic meter

Notes:
1. For chemicals without a VISL, provides the surrogate chemical used for the screening level. Does not indicate laboratory surrogates.
2. NMED *Risk Assessment Guidance for Site Investigations and Remediation* , November 2022 Revised (Tables 6-5 and A-4, residential). Lesser of cancer and noncancer values given.
3. Calculated using EPA's *Vapor Intrusion Screening Level Calculator* (TR=1E-05, HQ=1). January 2024. Lesser of cancer and noncancer values given.
4. Selected value is the NMED VISL. If there is no NMED VISL, the EPA VISL was selected.
5. The laboratory quantitation limits provided assume a dilution factor of 1. If higher dilution factors are necessary, the laboratory quantitation limits (LOQ, LOD, and DL) shown will increase.
6. TO-15 low-level will be used by the laboratory to achieve acceptable LOQs and LODs that are less than the VISL for 1,2-Dibromomethane

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Table 4.6 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil

Analyte	SL Surrogate	Analytical Method [1]	CASRN	Units	NMED Table A-1 and Table 6-2 Human Health Screening Levels Direct Contact [2]						EPA-RSL Table Human Health Screening Levels Direct Contact [3]			
					Residential		Industrial/ Occupational		Construction Worker		Residential		Industrial	
					cancer	noncancer	cancer	noncancer	cancer	noncancer	cancer adj to 1x10^{-5}	noncancer HQ=1	cancer adj to 1x10^{-5}	noncancer HQ=1
Total Petroleum Hydrocarbons														
GRO	-	SW8015D	8006-61-1	mg/kg	NS	100	NS	500	NS	500	-	-	-	-
DRO	-	SW8015D	68334-30-5	mg/kg	NS	1000	NS	3000	NS	3000	-	-	-	-
RRO	-	SW8015D	21274-30-0	mg/kg	NS	1000	NS	3000	NS	3000	-	-	-	-
Volatile Organic Compounds														
1,1,1,2-Tetrachloroethane	-	SW8260D	630-20-6	mg/kg	28.1	2350	137	38900	659	10600	-	-	-	-
1,1,1-Trichloroethane	-	SW8260D	71-55-6	mg/kg	NS	14400	NS	72500	NS	13600	-	-	-	-
1,1,2,2-Tetrachloroethane	-	SW8260D	79-34-5	mg/kg	7.98	1560	39.4	26000	197	7080	-	-	-	-
1,1,2-Trichloroethane	-	SW8260D	79-00-5	mg/kg	18.8	2.61	92.1	12.4	4300	2.30	-	-	-	-
1,1-Dichloroethane	-	SW8260D	75-34-3	mg/kg	78.6	15600	383	260000	1820	70800	-	-	-	-
1,1-Dichloroethene	-	SW8260D	75-35-4	mg/kg	NS	440	NS	2260	NS	424	-	-	-	-
1,1-Dichloropropene	1,3-Dichloropropene	SW8260D	563-58-6	mg/kg	29.3	141	146	695	781	130	-	-	-	-
1,2,3-Trichlorobenzene	-	SW8260D	87-61-6	mg/kg	NS	NS	NS	NS	NS	NS	NS	63	NS	930
1,2,3-Trichloropropane	-	SW8260D	96-18-4	mg/kg	0.0510	7.09	1.21	34.0	8.26	6.31	-	-	-	-
1,2,4-Trichlorobenzene	-	SW8260D	120-82-1	mg/kg	240	82.9	1250	423	8540	79.1	-	-	-	-
1,2,4-Trimethylbenzene	-	SW8260D	95-63-6	mg/kg	NS	NS	NS	NS	NS	NS	NS	300	NS	1800
1,2-Dibromo-3-Chloropropane	-	SW8260D	96-12-8	mg/kg	0.0858	5.88	1.18	41.1	5.53	8.29	-	-	-	-
1,2-Dibromoethane	-	SW8260D	106-93-4	mg/kg	0.672	135	3.31	738	16.3	140	-	-	-	-
1,2-Dichlorobenzene	-	SW8260D	95-50-1	mg/kg	NS	2150	NS	13000	NS	2500	-	-	-	-
1,2-Dichloroethane	-	SW8260D	107-06-2	mg/kg	8.32	55.6	40.7	286	195	53.8	-	-	-	-
1,2-Dichloropropane	-	SW8260D	78-87-5	mg/kg	17.8	29.0	86.8	137	415	25.4	-	-	-	-
1,3,5-Trimethylbenzene	-	SW8260D	108-67-8	mg/kg	NS	NS	NS	NS	NS	NS	NS	270	NS	1500
1,3-Dichloropropane	-	SW8260D	142-28-9	mg/kg	NS	NS	NS	NS	NS	NS	NS	1600	NS	23000
1,3-Dichlorobenzene	1,4-Dichlorobenzene	SW8260D	541-73-1	mg/kg	1290	5480	6730	90800	45900	24800	-	-	-	-
1,4-Dichlorobenzene	-	SW8260D	106-46-7	mg/kg	1290	5480	6730	90800	45900	24800	-	-	-	-
2,2-Dichloropropane	1,2-Dichloropropane	SW8260D	594-20-7	mg/kg	17.8	29.0	86.8	137	415	25.4	-	-	-	-
2-Butanone (MEK)	-	SW8260D	78-93-3	mg/kg	NS	37400	NS	411000	NS	91700	-	-	-	-
2-Chlorotoluene	-	SW8260D	95-49-8	mg/kg	NS	1560	NS	26000	NS	7080	-	-	-	-
2-Hexanone	-	SW8260D	591-78-6	mg/kg	NS	NS	NS	NS	NS	NS	NS	200	NS	1300
4-Chlorotoluene	-	SW8260D	106-43-4	mg/kg	NS	NS	NS	NS	NS	NS	NS	1600	NS	23000
4-Methyl-2-Pentanone (MIBK)	-	SW8260D	108-10-1	mg/kg	NS	5810	NS	81600	NS	20200	-	-	-	-
Acetone	-	SW8260D	67-64-1	mg/kg	NS	66300	NS	960000	NS	242000	-	-	-	-
Benzene	-	SW8260D	71-43-2	mg/kg	17.8	114	87.2	729	423	142	-	-	-	-
Bromobenzene	-	SW8260D	108-86-1	mg/kg	NS	NS	NS	NS	NS	NS	NS	290	NS	1800
Bromochloromethane	-	SW8260D	74-97-5	mg/kg	NS	NS	NS	NS	NS	NS	NS	150	NS	630
Bromodichloromethane	-	SW8260D	75-27-4	mg/kg	6.19	1560	30.2	26000	143	7080	-	-	-	-
Bromoform	-	SW8260D	75-25-2	mg/kg	674	1230	1760	18300	23700	5380	-	-	-	-
Bromomethane	-	SW8260D	74-83-9	mg/kg	NS	17.7	NS	94.5	NS	17.9	-	-	-	-
Carbon Disulfide	-	SW8260D	75-15-0	mg/kg	NS	1550	NS	8540	NS	1620	-	-	-	-
Carbon Tetrachloride	-	SW8260D	56-23-5	mg/kg	10.7	144	52.5	1020	252	202	-	-	-	-
Chlorobenzene	-	SW8260D	108-90-7	mg/kg	NS	378	NS	2160	NS	412	-	-	-	-
Chloroethane	-	SW8260D	75-00-3	mg/kg	NS	19000	NS	89500	NS	16600	-	-	-	-
Chloroform	-	SW8260D	67-66-3	mg/kg	5.90	306	28.7	2000	134	391	-	-	-	-
Chloromethane	-	SW8260D	74-87-3	mg/kg	41.1	268	201	1260	956	235	-	-	-	-
cis-1,2-Dichloroethene	-	SW8260D	156-59-2	mg/kg	NS	156	NS	2600	NS	708	-	-	-	-
cis-1,3-Dichloropropene	1,3-Dichloropropene	SW8260D	10061-01-5	mg/kg	29.3	141	146	695	781	130	-	-	-	-

Table 4.6 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil

Analyte	SL Surrogate	Analytical Method (1)	CASRN	Units	Lowest Human Health Screening Level Direct Contact (4)	Lowest Human Health Screening Level Direct Contact Source (4)	Human Health Screening Levels - Groundwater Protection			Achievable Laboratory Limits		
							NMED Table A-3 and Table 6-4 Risk-based SSL (5)	NMED Table A-3 NMGW/MCL based SSL (5)	EPA-RSL Calculator Risk-based SSL (6)	LOQ	LOD	DL
							DAF = 20	DAF = 20	adjusted to DAF = 20			
Total Petroleum Hydrocarbons												
GRO	-	SW8015D	8006-61-1	mg/kg	100	NMED SSL	4.94	NS	-	2	1.5	0.759
DRO	-	SW8015D	68334-30-5	mg/kg	1000	NMED SSL	13.2	NS	-	8	7	3.64
RRO	-	SW8015D	21274-30-0	mg/kg	1000	NMED SSL	13.2	NS	-	24	23.4	7.82
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	-	SW8260D	630-20-6	mg/kg	28.1	NMED SSL	0.0360	NS	-	0.005	0.004	0.00222
1,1,1-Trichloroethane	-	SW8260D	71-55-6	mg/kg	13600	NMED SSL	51.1	1.28	-	0.005	0.004	0.00198
1,1,2,2-Tetrachloroethane	-	SW8260D	79-34-5	mg/kg	7.98	NMED SSL	0.00481	NS	-	0.005	0.0008	0.000285
1,1,2-Trichloroethane	-	SW8260D	79-00-5	mg/kg	2.30	NMED SSL	0.00223	0.0268	-	0.005	0.0032	0.00088
1,1-Dichloroethane	-	SW8260D	75-34-3	mg/kg	78.6	NMED SSL	0.136	NS	-	0.005	0.0008	0.00021
1,1-Dichloroethene	-	SW8260D	75-35-4	mg/kg	424	NMED SSL	1.95	0.0479	-	0.005	0.0016	0.00059
1,1-Dichloropropene	1,3-Dichloropropene	SW8260D	563-58-6	mg/kg	29.3	NMED SSL	0.0281	NS	-	0.005	0.0004	0.000164
1,2,3-Trichlorobenzene	-	SW8260D	87-61-6	mg/kg	63.0	EPA RSL	NS	NS	0.418	0.005	0.0032	0.00081
1,2,3-Trichloropropane	-	SW8260D	96-18-4	mg/kg	0.0510	NMED SSL	0.0000582	NS	-	0.005	0.0008	0.000218
1,2,4-Trichlorobenzene	-	SW8260D	120-82-1	mg/kg	79.1	NMED SSL	0.176	3.10	-	0.005	0.0016	0.00073
1,2,4-Trimethylbenzene	-	SW8260D	95-63-6	mg/kg	300	EPA RSL	NS	NS	1.62	0.005	0.004	0.00231
1,2-Dibromo-3-Chloropropane	-	SW8260D	96-12-8	mg/kg	0.0858	NMED SSL	0.0000233	0.00139	-	0.01	0.009	0.00366
1,2-Dibromoethane	-	SW8260D	106-93-4	mg/kg	0.672	NMED SSL	0.000352	0.000236	-	0.005	0.0016	0.00052
1,2-Dichlorobenzene	-	SW8260D	95-50-1	mg/kg	2150	NMED SSL	4.58	9.08	-	0.005	0.004	0.00187
1,2-Dichloroethane	-	SW8260D	107-06-2	mg/kg	8.32	NMED SSL	0.00814	0.0238	-	0.005	0.0016	0.0007
1,2-Dichloropropane	-	SW8260D	78-87-5	mg/kg	17.8	NMED SSL	0.0243	0.0277	-	0.005	0.0016	0.00055
1,3,5-Trimethylbenzene	-	SW8260D	108-67-8	mg/kg	270	EPA RSL	NS	NS	1.73	0.005	0.004	0.00242
1,3-Dichloropropane	-	SW8260D	142-28-9	mg/kg	1600	EPA RSL	NS	NS	2.57	0.005	0.0004	0.000173
1,3-Dichlorobenzene	1,4-Dichlorobenzene	SW8260D	541-73-1	mg/kg	1290	NMED SSL	0.0720	1.12	-	0.005	0.0016	0.00048
1,4-Dichlorobenzene	-	SW8260D	106-46-7	mg/kg	1290	NMED SSL	0.0720	1.12	-	0.005	0.0008	0.000245
2,2-Dichloropropane	1,2-Dichloropropane	SW8260D	594-20-7	mg/kg	17.8	NMED SSL	0.0243	0.0277	-	0.005	0.0016	0.00044
2-Butanone (MEK)	-	SW8260D	78-93-3	mg/kg	37400	NMED SSL	20.1	NS	-	0.02	0.0128	0.00389
2-Chlorotoluene	-	SW8260D	95-49-8	mg/kg	1560	NMED SSL	3.56	NS	-	0.005	0.0016	0.00051
2-Hexanone	-	SW8260D	591-78-6	mg/kg	200	EPA RSL	NS	NS	0.175	0.02	0.0128	0.00489
4-Chlorotoluene	-	SW8260D	106-43-4	mg/kg	1600	EPA RSL	NS	NS	4.83	0.005	0.0008	0.000361
4-Methyl-2-Pentanone (MIBK)	-	SW8260D	108-10-1	mg/kg	5810	NMED SSL	4.80	NS	-	0.02	0.0128	0.00436
Acetone	-	SW8260D	67-64-1	mg/kg	66300	NMED SSL	49.8	NS	-	0.072	0.07	0.0356
Benzene	-	SW8260D	71-43-2	mg/kg	17.8	NMED SSL	0.0380	0.0418	-	0.005	0.0004	0.000151
Bromobenzene	-	SW8260D	108-86-1	mg/kg	290	EPA RSL	NS	NS	0.842	0.005	0.0016	0.00049
Bromochloromethane	-	SW8260D	74-97-5	mg/kg	150	EPA RSL	NS	NS	0.415	0.005	0.004	0.00246
Bromodichloromethane	-	SW8260D	75-27-4	mg/kg	6.19	NMED SSL	0.00621	NS	-	0.005	0.004	0.00213
Bromoform	-	SW8260D	75-25-2	mg/kg	674	NMED SSL	0.147	NS	-	0.0051	0.005	0.00255
Bromomethane	-	SW8260D	74-83-9	mg/kg	17.7	NMED SSL	0.0343	NS	-	0.01	0.0032	0.00135
Carbon Disulfide	-	SW8260D	75-15-0	mg/kg	1550	NMED SSL	4.42	NS	-	0.005	0.004	0.00166
Carbon Tetrachloride	-	SW8260D	56-23-5	mg/kg	10.7	NMED SSL	0.0334	0.0367	-	0.005	0.004	0.00201
Chlorobenzene	-	SW8260D	108-90-7	mg/kg	378	NMED SSL	0.836	1.08	-	0.005	0.004	0.00206
Chloroethane	-	SW8260D	75-00-3	mg/kg	16600	NMED SSL	107	NS	-	0.01	0.0064	0.00199
Chloroform	-	SW8260D	67-66-3	mg/kg	5.90	NMED SSL	0.0109	NS	-	0.01	0.0008	0.00029
Chloromethane	-	SW8260D	74-87-3	mg/kg	41.1	NMED SSL	0.0952	NS	-	0.01	0.0016	0.00077
cis-1,2-Dichloroethene	-	SW8260D	156-59-2	mg/kg	156	NMED SSL	0.184	0.352	-	0.005	0.0008	0.000201
cis-1,3-Dichloropropene	1,3-Dichloropropene	SW8260D	10061-01-5	mg/kg	29.3	NMED SSL	0.0281	NS	-	0.005	0.0004	0.0001

Table 4.6 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil

Analyte	SL Surrogate	Analytical Method (1)	CASRN	Units	NMED Table A-1 and Table 6-2 Human Health Screening Levels Direct Contact (2)						EPA-RSL Table Human Health Screening Levels Direct Contact (3)			
					Residential		Industrial/ Occupational		Construction Worker		Residential		Industrial	
					cancer	noncancer	cancer	noncancer	cancer	noncancer	cancer adj to $1x10^{-5}$	noncancer HQ=1	cancer adj to $1x10^{-5}$	noncancer HQ=1
Dibromochloromethane	-	SW8260D	124-48-1	mg/kg	13.9	1230	67.4	18300	340	5380	-	-	-	-
Dibromomethane	-	SW8260D	74-95-3	mg/kg	NS	57.9	NS	288	NS	53.9	-	-	-	-
Dichlorodifluoromethane	-	SW8260D	75-71-8	mg/kg	NS	182	NS	865	NS	161	-	-	-	-
Ethylbenzene	-	SW8260D	100-41-4	mg/kg	75.1	3930	368	29000	1770	5800	-	-	-	-
Hexachlorobutadiene	-	SW8260D	87-68-3	mg/kg	68.3	61.6	52.1	916	2400	269	-	-	-	-
Isopropylbenzene	-	SW8260D	98-82-8	mg/kg	NS	2360	NS	14200	NS	2740	-	-	-	-
m,p-Xylenes	Xylenes	SW8260D	179601-23-1	mg/kg	NS	871	NS	4280	NS	798	-	-	-	-
Methyl Tert-Butyl Ether	-	SW8260D	1634-04-4	mg/kg	975	37800	4820	178000	24200	33100	-	-	-	-
Methylene Chloride	-	SW8260D	75-09-2	mg/kg	766	409	14400	5130	89600	1210	-	-	-	-
Naphthalene	-	SW8260D	91-20-3	mg/kg	22.6	162	108	843	633	159	-	-	-	-
n-Butylbenzene	-	SW8260D	104-51-8	mg/kg	NS	NS	NS	NS	NS	NS	NS	3900	NS	58000
n-Propylbenzene	-	SW8260D	103-65-1	mg/kg	NS	NS	NS	NS	NS	NS	NS	3800	NS	24000
o-Xylene	-	SW8260D	95-47-6	mg/kg	NS	805	NS	3940	NS	736	-	-	-	-
4-Isopropyltoluene	Isopropylbenzene	SW8260D	99-87-6	mg/kg	NS	2360	NS	14200	NS	2740	-	-	-	-
Sec-Butylbenzene	-	SW8260D	135-98-8	mg/kg	NS	NS	NS	NS	NS	NS	NS	7800	NS	120000
Styrene	-	SW8260D	100-42-5	mg/kg	NS	7260	NS	51300	NS	10200	-	-	-	-
Tert-Butylbenzene	-	SW8260D	98-06-6	mg/kg	NS	NS	NS	NS	NS	NS	NS	7800	NS	120000
Tetrachloroethene	-	SW8260D	127-18-4	mg/kg	337	111	1650	629	7910	120	-	-	-	-
Toluene	-	SW8260D	108-88-3	mg/kg	NS	5230	NS	61300	NS	14000	-	-	-	-
Trans-1,2-Dichloroethene	-	SW8260D	156-60-5	mg/kg	NS	210	NS	1100	NS	206	-	-	-	-
Trans-1,3-Dichloropropene	1,3-Dichloropropene	SW8260D	10061-02-6	mg/kg	29.3	141	146	695	781	130	-	-	-	-
Trichloroethene	-	SW8260D	79-01-6	mg/kg	15.5	6.77	112	36.5	5370	6.90	-	-	-	-
Trichlorofluoromethane	-	SW8260D	75-69-4	mg/kg	NS	1230	NS	6030	NS	1130	-	-	-	-
Vinyl Chloride	-	SW8260D	75-01-4	mg/kg	0.742	113	28.4	816	161	162	-	-	-	-

Table 4.6 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil

Analyte	SL Surrogate	Analytical Method (1)	CASRN	Units	Lowest Human Health Screening Level Direct Contact (4)	Lowest Human Health Screening Level Direct Contact Source (4)	Human Health Screening Levels - Groundwater Protection			Achievable Laboratory Limits		
							NMED Table A-3 and Table 6-4 Risk-based SSL (5)	NMED Table A-3 NMGW/MCL based SSL (5)	EPA-RSL Calculator Risk-based SSL (6)	LOQ	LOD	DL
							DAF = 20	DAF = 20	adjusted to DAF = 20			
Dibromochloromethane	-	SW8260D	124-48-1	mg/kg	13.9	NMED SSL	0.00755	NS	-	0.005	0.004	0.00227
Dibromomethane	-	SW8260D	74-95-3	mg/kg	53.9	NMED SSL	0.0335	NS	-	0.005	0.0008	0.000317
Dichlorodifluoromethane	-	SW8260D	75-71-8	mg/kg	161	NMED SSL	7.23	NS	-	0.01	0.0064	0.00274
Ethylbenzene	-	SW8260D	100-41-4	mg/kg	75.1	NMED SSL	0.264	12.3	-	0.005	0.0008	0.000305
Hexachlorobutadiene	-	SW8260D	87-68-3	mg/kg	52.1	NMED SSL	0.0413	NS	-	0.005	0.004	0.00217
Isopropylbenzene	-	SW8260D	98-82-8	mg/kg	2360	NMED SSL	11.4	NS	-	0.005	0.004	0.00241
m,p-Xylenes	Xylenes	SW8260D	179601-23-1	mg/kg	798	EPA RSL	2.98	154	-	0.0032	0.003	0.00104
Methyl Tert-Butyl Ether	-	SW8260D	1634-04-4	mg/kg	975	NMED SSL	0.553	NS	-	0.02	0.0064	0.00211
Methylene Chloride	-	SW8260D	75-09-2	mg/kg	409	NMED SSL	0.471	0.0221	-	0.005	0.0032	0.0016
Naphthalene	-	SW8260D	91-20-3	mg/kg	22.6	NMED SSL	0.0583	NS	-	0.0067	0.005	0.00331
n-Butylbenzene	-	SW8260D	104-51-8	mg/kg	3900	EPA RSL	NS	NS	64.6	0.005	0.0016	0.00056
n-Propylbenzene	-	SW8260D	103-65-1	mg/kg	3800	EPA RSL	NS	NS	24.5	0.005	0.0016	0.00058
o-Xylene	-	SW8260D	95-47-6	mg/kg	736	NMED SSL	2.98	NS	-	0.005	0.0008	0.000266
4-Isopropyltoluene	Isopropylbenzene	SW8260D	99-87-6	mg/kg	2360	NMED SSL	11.4	NS	-	0.005	0.0032	0.00114
Sec-Butylbenzene	-	SW8260D	135-98-8	mg/kg	7800	EPA RSL	NS	NS	117	0.005	0.0016	0.00077
Styrene	-	SW8260D	100-42-5	mg/kg	7260	NMED SSL	20.6	1.71	-	0.005	0.0008	0.00028
Tert-Butylbenzene	-	SW8260D	98-06-6	mg/kg	7800	EPA RSL	NS	NS	31.1	0.005	0.0016	0.0005
Tetrachloroethene	-	SW8260D	127-18-4	mg/kg	111	NMED SSL	0.321	0.0398	-	0.005	0.004	0.00191
Toluene	-	SW8260D	108-88-3	mg/kg	5230	NMED SSL	12.1	11.1	-	0.005	0.0008	0.000227
Trans-1,2-Dichloroethene	-	SW8260D	156-60-5	mg/kg	206	NMED SSL	0.342	0.503	-	0.005	0.0008	0.00039
Trans-1,3-Dichloropropene	1,3-Dichloropropene	SW8260D	10061-02-6	mg/kg	29.3	NMED SSL	0.0281	NS	-	0.005	0.0002	0.000083
Trichloroethene	-	SW8260D	79-01-6	mg/kg	6.77	NMED SSL	0.0161	0.0310	-	0.005	0.004	0.00191
Trichlorofluoromethane	-	SW8260D	75-69-4	mg/kg	1130	NMED SSL	15.7	NS	-	0.01	0.009	0.0032
Vinyl Chloride	-	SW8260D	75-01-4	mg/kg	0.742	NMED SSL	0.00217	0.0134	-	0.005	0.0032	0.00134

Table 4.6 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil

Analyte	SL Surrogate	Analytical Method (1)	CASRN	Units	NMED Table A-1 and Table 6-2 Human Health Screening Levels Direct Contact (2)						EPA-RSL Table Human Health Screening Levels Direct Contact (3)			
					Residential		Industrial/ Occupational		Construction Worker		Residential		Industrial	
					cancer	noncancer	cancer	noncancer	cancer	noncancer	cancer adj to $1x10^{-5}$	noncancer HQ=1	cancer adj to $1x10^{-5}$	noncancer HQ=1

Notes:
1. Analytical Method - USEPA Test Methods for Evaluating Solid Waste latest edition (the most current version of each method the laboratory is accredited to will be used).
2. NMED *Risk Assessment Guidance for Site Investigations and Remediation* , November 2022 Revised (Appendix A, Table A-1, residential, commercial/industrial, construction worker).
3. USEPA RSL Summary Table (TR=1E-06, HQ=1), November 2023 (resident soil and industrial soil). The RSLs for carcinogenic analytes are adjusted to a TR=1E-05. Provided for analytes without a NMED SSL.
4. The lesser of the NMED screening levels for residents, industrial/occupational workers, and construction workers (or EPA RSL (target excess cancer risk level of 1 x 10-5) if there is no NMED screening level.
5. NMED *Risk Assessment Guidance for Site Investigations and Remediation* , November 2022 Revised (Appendix A, Table A-3, risk-based SSL and NMGW/MCL-based SSL, and Table 6-4 for petroleum hydrocarbon mixtures; DAF=20).
6. USEPA RSL Calculator (TR=1E-05, HQ=1), November 2023 (protection of groundwater risk-based SSL). All analytes are adjusted to a DAF of 20.

Cells shaded in blue show that the screening level is lower than the achievable LOQ. If identified as a chemical of potential concern, these analytes will be addressed in the uncertainty discussion.

Acronyms and Abbreviations:
CASRN = Chemical Abstracts Service Registry Number
DAF = Dilution attenuation factor
DL = Detection limit
DRO = Diesel-range organics
FWDA = Fort Wingate Depot Activity
GRO = Gasoline-range organics
HQ = Hazard quotient
LOD = Limit of detection
LOQ = Limit of quantitation
MCL = Maximum contaminant level
mg/kg = Milligram per kilogram
N/A = Not applicable
NMED = New Mexico Environment Department
NMGW = New Mexico groundwater
NS = No standard
RRO = Residual-range organics
RSL = Regional screening level
SIM = Selected ion mode
SL-SSL = soil leachate-based SSL
SSL = Soil screening level
USEPA = United States Environmental Protection Agency

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FIGURES

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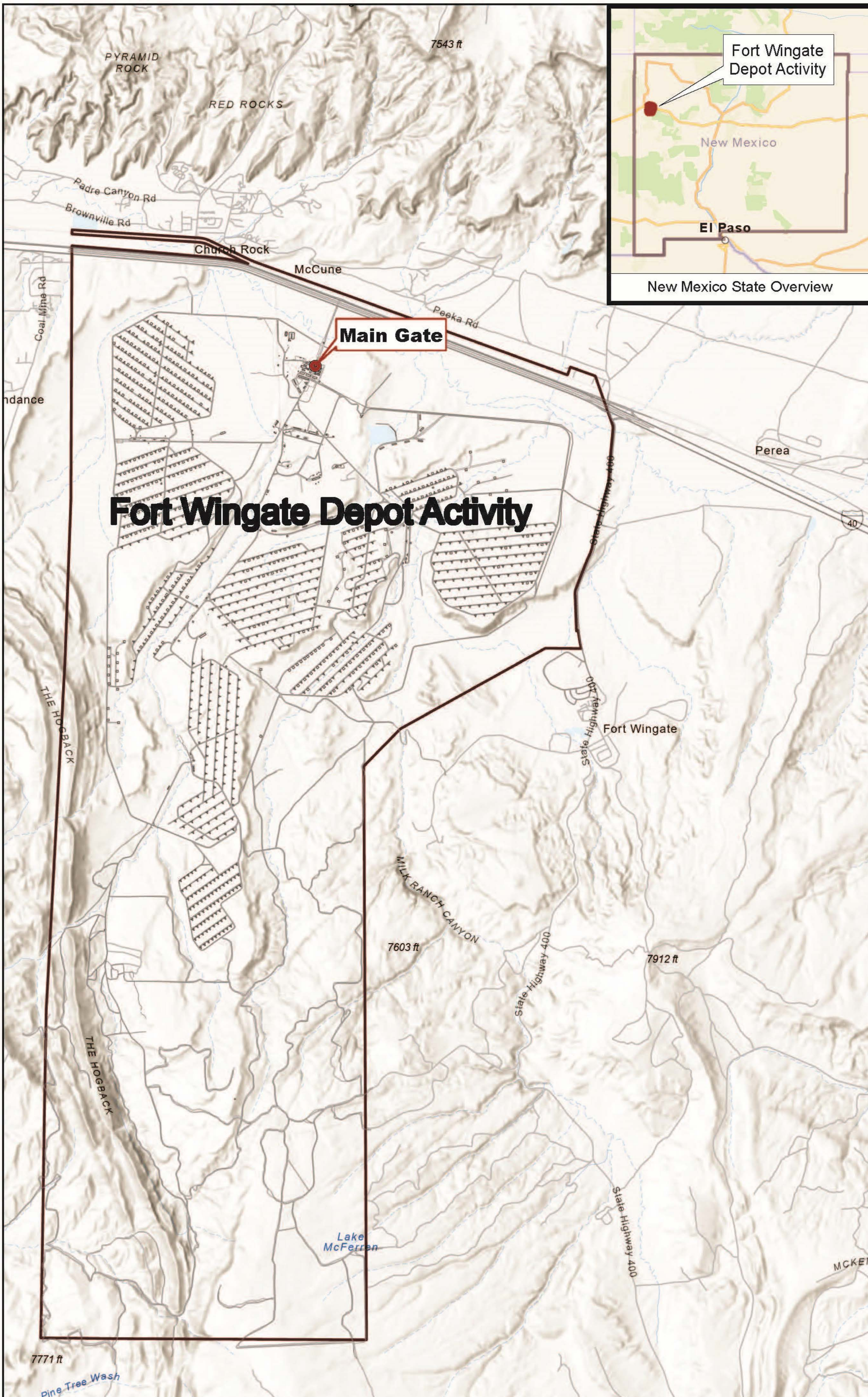

Client	USACE, Albuquerque District				FIGURE 1.1
Notes	Administration Area Soil Vapor Investigation Work Plan, Fort Wingate Depot Activity, McKinley County, New Mexico				
Revised	1/26/2024	GIS by	AM	1/26/2024	Facility Location Map
Scale	1:55,000	Checked by	MR	1/26/2024	
Basemap: Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies,		PM	CR	1/26/2024	

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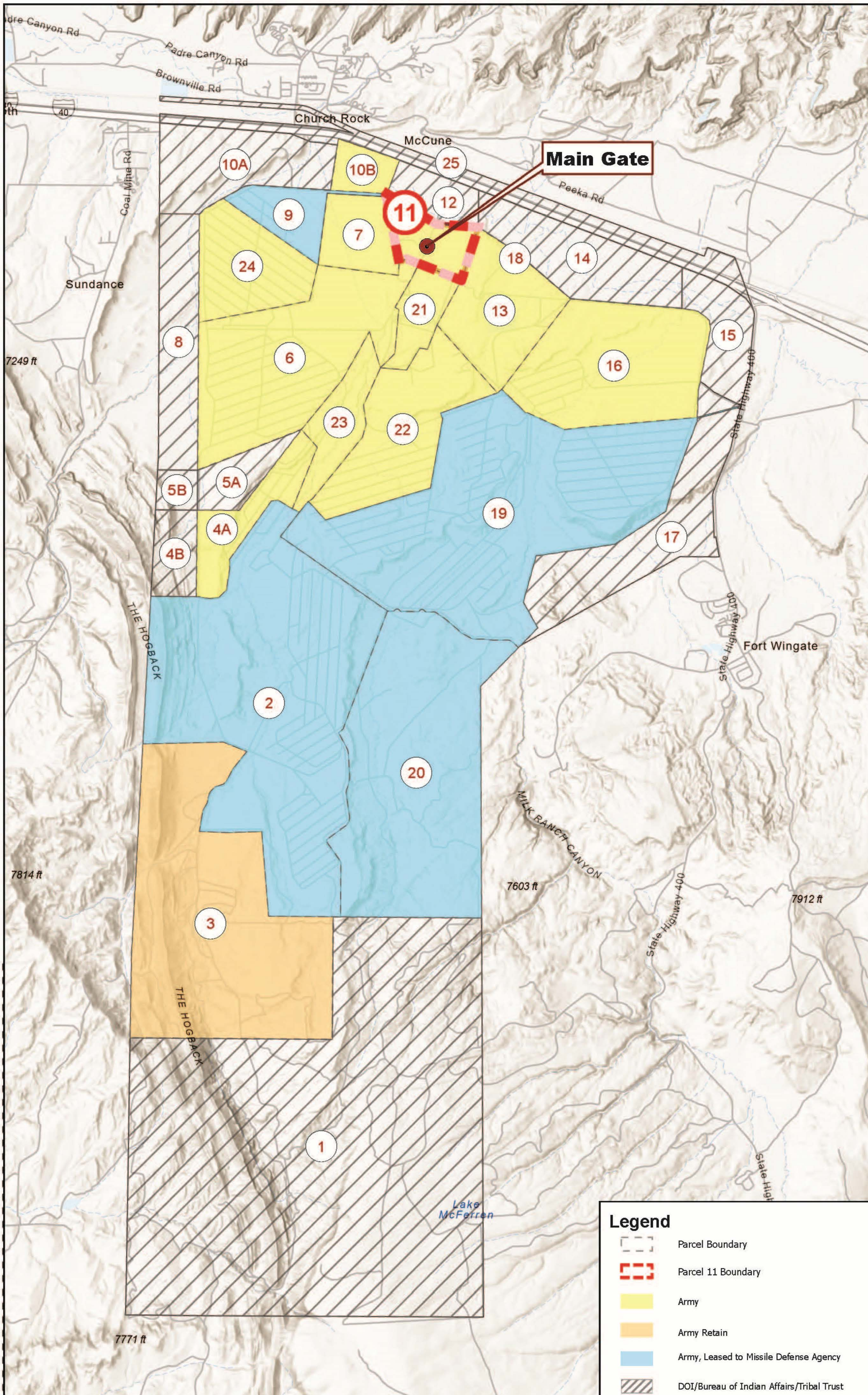

Client	USACE, Albuquerque District			
Notes	Administration Area Soil Vapor Investigation Work Plan, Fort Wingate Depot Activity, McKinley County, New Mexico			
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Scale	1:50,000	Checked by	MR	1/26/2024
Basemap: Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA,		CR	CR	1/26/2024

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FIGURE 1.2

Parcel Map

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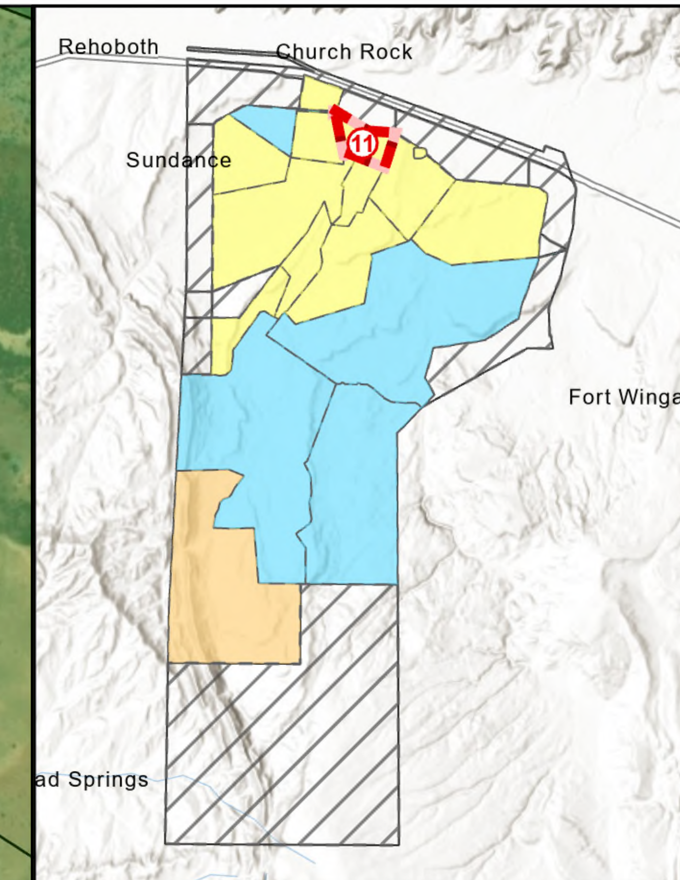

Legend

AOC/SWMU Boundary

Parcel 11 Boundary

0 250 500 Feet

N

Administration Area Soil Vapor Investigation Work Plan,
Fort Wingate Depot Activity,
McKinley County, New Mexico

FIGURE 1.3

Parcel 11 AOC and SWMU Locations

Client	USACE, Albuquerque District	GIS by	AM	1/20/2025
		Checked by	JB	1/20/2025
		PM	CR	1/20/2025

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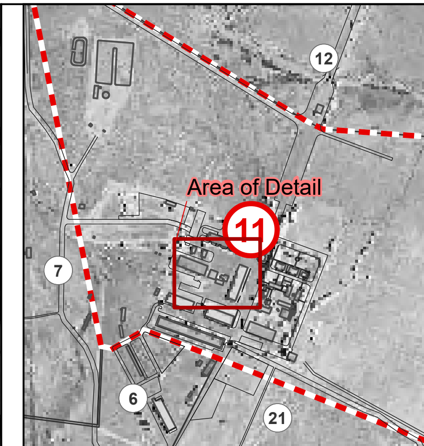

Parcel 11 Detail

Legend

- Monitoring Well
- Approximate UST Excavation
- Soil Vapor Investigation Area

Data in this figure was taken from the following sources:

Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

0 50 100 Feet

N

Administration Area Soil Vapor Investigation Work Plan,
Fort Wingate Depot Activity,
McKinley County, New Mexico

Figure 1.4

Soil Vapor Investigation Area

Client	USACE, Albuquerque District	GIS by	AM	1/20/2025
		Checked by	MR	1/20/2025
		PM	CR	1/20/2025

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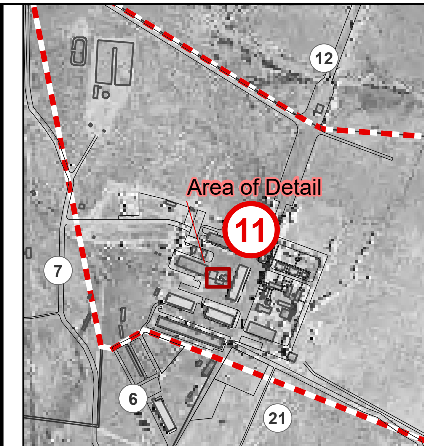

Parcel 11 Detail

Legend

- ⊗ Confirmation sample (Envirotech 1993)
- Piping
- Former UST
- Approximate UST Excavation

Estimated Depth of Excavation

- 4 ft bgs
- 14 ft bgs
- 15 ft bgs

Data in this figure was taken from the following sources:

Excavation/UST outlines and sample locations: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot, Fort Wingate. February.

Piping locations: USACE, 2014. Final RCRA Facility Investigation Report, Parcel 11, Revision 2, Fort Wingate Depot Activity McKinley County, New Mexico. May 23, 2014.

0 10 20 Feet

N

Administration Area Soil Vapor Investigation Work Plan, Fort Wingate Depot Activity, McKinley County, New Mexico

Figure 2.1

Former USTs, Piping, and Excavation Extent at Building 06

Client	USACE, Albuquerque District	GIS by	AM	1/20/2025
		Checked by	MR	1/20/2025
		PM	CR	1/20/2025

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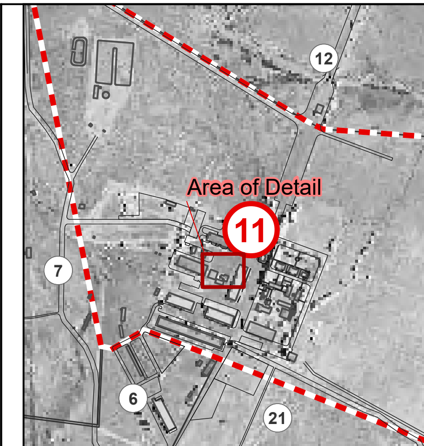

Parcel 11 Detail

Legend

- Monitoring Well

Soil borings locations (USACE 1993) and maximum photoionization detector readings (ppmv) and interpretations, as follows:

- >150 ppmv, elevated
- 51-150 ppmv, slightly elevated
- 0-50 ppmv, not elevated
- Approximate UST Excavation

Data in this figure was taken from the following sources:

Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

Boring locations and photoionization detector readings: USACE, 1993. Investigation of Soils Contamination, Fort Wingate Army Depot Activity. Draft. June.

0 25 50 Feet

N

Administration Area Soil Vapor Investigation Work Plan,
Fort Wingate Depot Activity,
McKinley County, New Mexico

Figure 2.2

Maximum Photoionization Detector Reading from USACE (1993) Investigation

Client	USACE, Albuquerque District	GIS by	AM	1/20/2025
		Checked by	MR	1/20/2025
		PM	CR	1/20/2025

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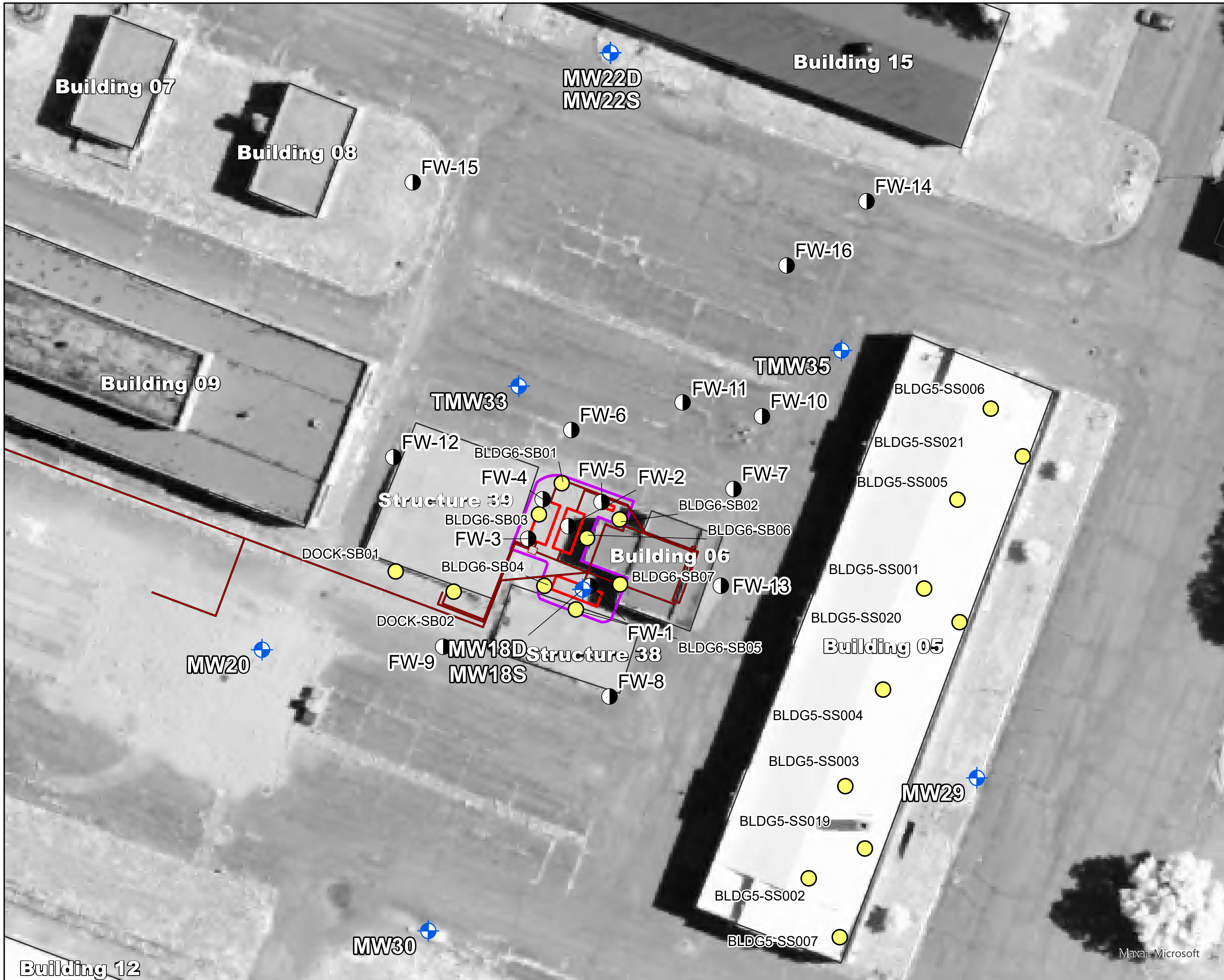

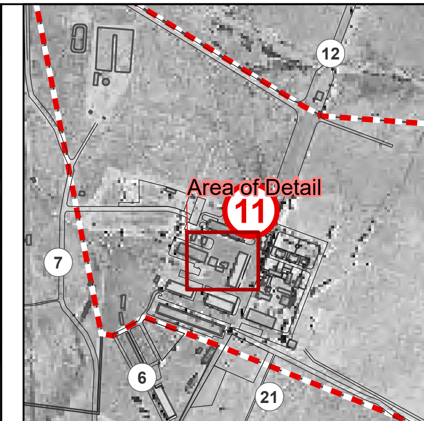

Parcel 11 Detail

Legend

- Monitoring Well
- Soil Boring (USACE 1993)
- Soil Boring (USACE 2014)
- Piping
- Former UST
- Approximate UST Excavation

USACE (2014) sample location IDs have been abbreviated. Full location IDs are as follows:

BLDG5-SS### = 1105BLDG5-SS###D-SO
BLDG6-SB### = 1145BLDG6-SB###D-SO
DOCK-SB## = 1149DOCK-SB##

Data in this figure was taken from the following sources:

Excavation and UST outlines: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

Piping and boring locations: USACE, 2014. Final RCRA Facility Investigation Report, Parcel 11, Revision 2, Fort Wingate Depot. May 23, 2014.

Boring locations: USACE, 1993. Investigation of Soils Contamination, Fort Wingate Army Depot Activity. Draft. June.

0 25 50 Feet

N

Administration Area Soil Vapor Investigation Work Plan, Fort Wingate Depot Activity, McKinley County, New Mexico

Figure 2.3

Historical Soil Boring Locations

Client	USACE, Albuquerque District	GIS by	AM	1/20/2025
		Checked by	MR	1/20/2025
		PM	CR	1/20/2025

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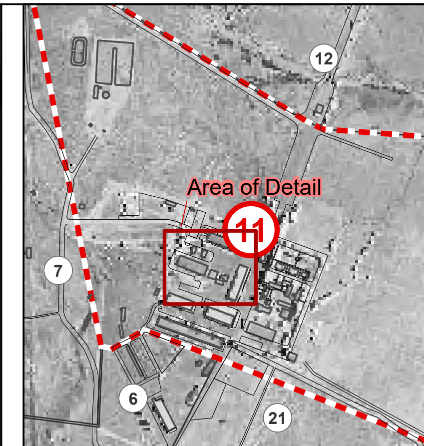

Parcel 11 Detail

Legend

- Monitoring Well (Groundwater elevation, feet above mean sea level)
- Groundwater elevation contour (feet above mean sea level)
- Groundwater Flow Direction
- Approximate UST Excavation

Data in this figure was taken from the following sources:

Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

Groundwater elevations: Eco and Associates. 2023. Groundwater Periodic Monitoring Report, July through December 2022, Fort Wingate Depot Activity. November.

0 50 100 Feet

N

Administration Area Soil Vapor Investigation Work Plan,
Fort Wingate Depot Activity,
McKinley County, New Mexico

Figure 2.4

Groundwater Monitoring Well Locations

Client	USACE, Albuquerque District	GIS by	AM	1/20/2025
		Checked by	MR	1/20/2025
		PM	CR	1/20/2025

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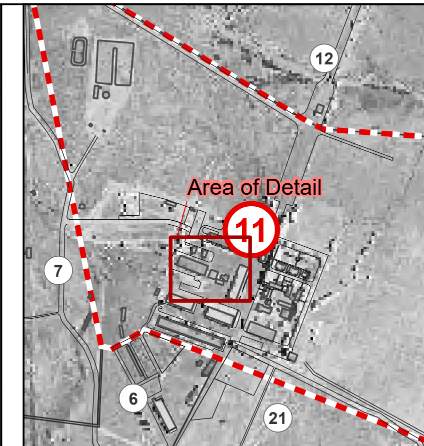

Parcel 11 Detail

Legend

Monitoring Well

Temporary soil vapor probe locations (HDR 2023), 1,2-dichloroethane soil vapor concentrations (μg/m^3), and comparisons to VISLs (NMED 2022), as follows:

- exceeds VISL with target hazard quotient of 1 (243 μg/m^3)
- exceeds VISL with target risk 1E-5 (36 μg/m^3)
- below VISL

Approximate UST Excavation

Definitions:
NS: not sampled
VISL = New Mexico Residential Vapor Intrusion Screening Level

Data in this figure was taken from the following sources:

Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

Soil vapor probe locations and results: HDR, 2023. Final Northern Area Groundwater RCRA Facility Investigation Report, Revision 3. June 30.

VISLs: NMED, 2022. Risk Assessment Guidance for Site Investigations and Remediation. Volume I Soil Screening Guidance for Human Health Risk Assessments. November.

0 50 100 Feet

N

Administration Area Soil Vapor Investigation Work Plan,
Fort Wingate Depot Activity,
McKinley County, New Mexico

Figure 2.5

Northern Area Groundwater RFI
1,2-Dichloroethane Soil Vapor Results

Client	USACE, Albuquerque District	GIS by	AM	1/20/2025
		Checked by	MR	1/20/2025
		PM	CR	1/20/2025

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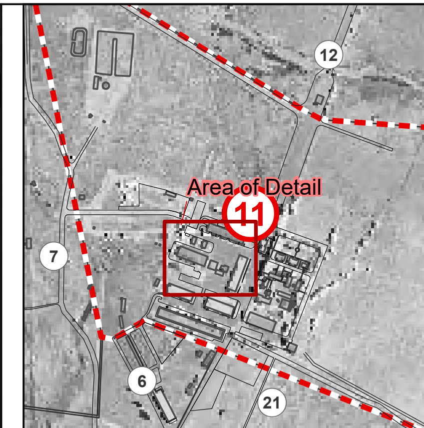

Parcel 11 Detail

Legend

Monitoring well locations, analytical results from October 2022 (Eco 2023), and comparisons of 1,2-DCA concentrations to VISLs (NMED 2022), as follows:

- exceeds VISL
- below VISL

Results separated by a "/" indicate parent and field duplicate results

New Mexico Residential Groundwater VISL (NMED 2022) for 1,2-DCA (22.3 μg/L). There are no groundwater VISLs for TPH-GRO and TPH-DRO

All Results are given in μg/L
Definitions:

J = Estimated Value
U = non-detect at the indicated limit of detection
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
TPH = Total Petroleum Hydrocarbons
VISL = Vapor Intrusion Screening Level
1,2-DCA = 1,2-dichloroethane

Approximate UST Excavation

Data in this figure was taken from the following sources:

Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

Groundwater analytical results: Eco, 2023. Groundwater Periodic Monitoring Report, July through December 2022, Fort Wingate Depot Activity. November.

VISLs: NMED, 2022. Risk Assessment Guidance for Site Investigations and Remediation. Volume I Soil Screening Guidance for Human Health Risk Assessments. November.

0 50 100 Feet
N

Administration Area Soil Vapor Investigation Work Plan,
Fort Wingate Depot Activity,
McKinley County, New Mexico

Figure 2.6

1,2-DCA and TPH (μg/L) in Groundwater, October 2022

Client	USACE, Albuquerque District	GIS by	AM	1/20/2025
		Checked by	MR	1/20/2025
		PM	CR	1/20/2025

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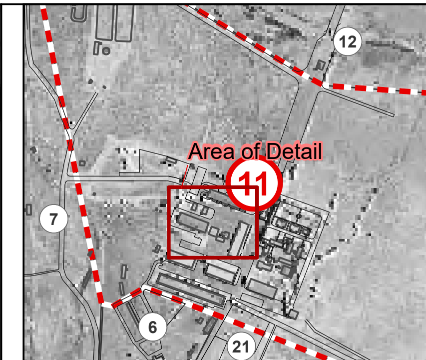

Parcel 11 Detail

Legend

1,2-DCA soil source area (dashed where inferred)

Approximate UST Excavation

Proposed Soil Vapor Probe Locations

Monitoring well locations, analytical results from October 2022 (Eco 2023); and comparisons of 1,2-DCA concentrations to NMED (2022) VISLs, as follows:

- exceeds VISL
- below VISL

Results separated by a “/” indicate parent and field duplicate results

New Mexico Residential Groundwater VISL (NMED 2022) for 1,2-DCA (22.3 µg/L). There are no groundwater VISLs for TPH-GRO and TPH-DRO

Soil borings locations (USACE 1993) and maximum photoionization detector readings (ppmv) and interpretations, as follows:

- >150 ppmv, elevated
- 51-150 ppmv, slightly elevated
- 0-50 ppmv, not elevated

Temporary soil vapor probe locations (HDR 2023) locations, 1,2-dichloroethane soil vapor concentrations (µg/m3), and comparisons to VISLs (NMED 2022), as follows:

- exceeds VISL with target hazard quotient of 1 (243 µg/m^3)
- exceeds VISL with target risk 1E-5 (36 µg/m^3)
- below VISL

Definitions:

1,2-DCA = 1,2-dichloroethane
VISL = New Mexico Residential Vapor Intrusion Screening Level

Data in this figure was taken from the following sources:

Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

Boring locations and photoionization detector readings: USACE, 1993. Investigation of Soils Contamination, Fort Wingate Army Depot Activity. Draft. June.

Soil vapor probe locations and results: HDR, 2023. Final Northern Area Groundwater RCRA Facility Investigation Report, Revision 3. June 30.

Groundwater analytical results: Eco, 2023. Groundwater Periodic Monitoring Report, July through December 2022, Fort Wingate Depot Activity. November.

VISLs: NMED, 2022. Risk Assessment Guidance for Site Investigations and Remediation. Volume I Soil Screening Guidance for Human Health Risk Assessments. November.

0 50 100 Feet

N

Administration Area Soil Vapor Investigation Work Plan,
Fort Wingate Depot Activity,
McKinley County, New Mexico

Figure 3.1
1,2-DCA Source Area Evaluation and Proposed Soil Vapor Probe Locations

Client	USACE, Albuquerque District	GIS by	AM	1/21/2025
		Checked by	MR	1/21/2025
		PM	CR	1/21/2025

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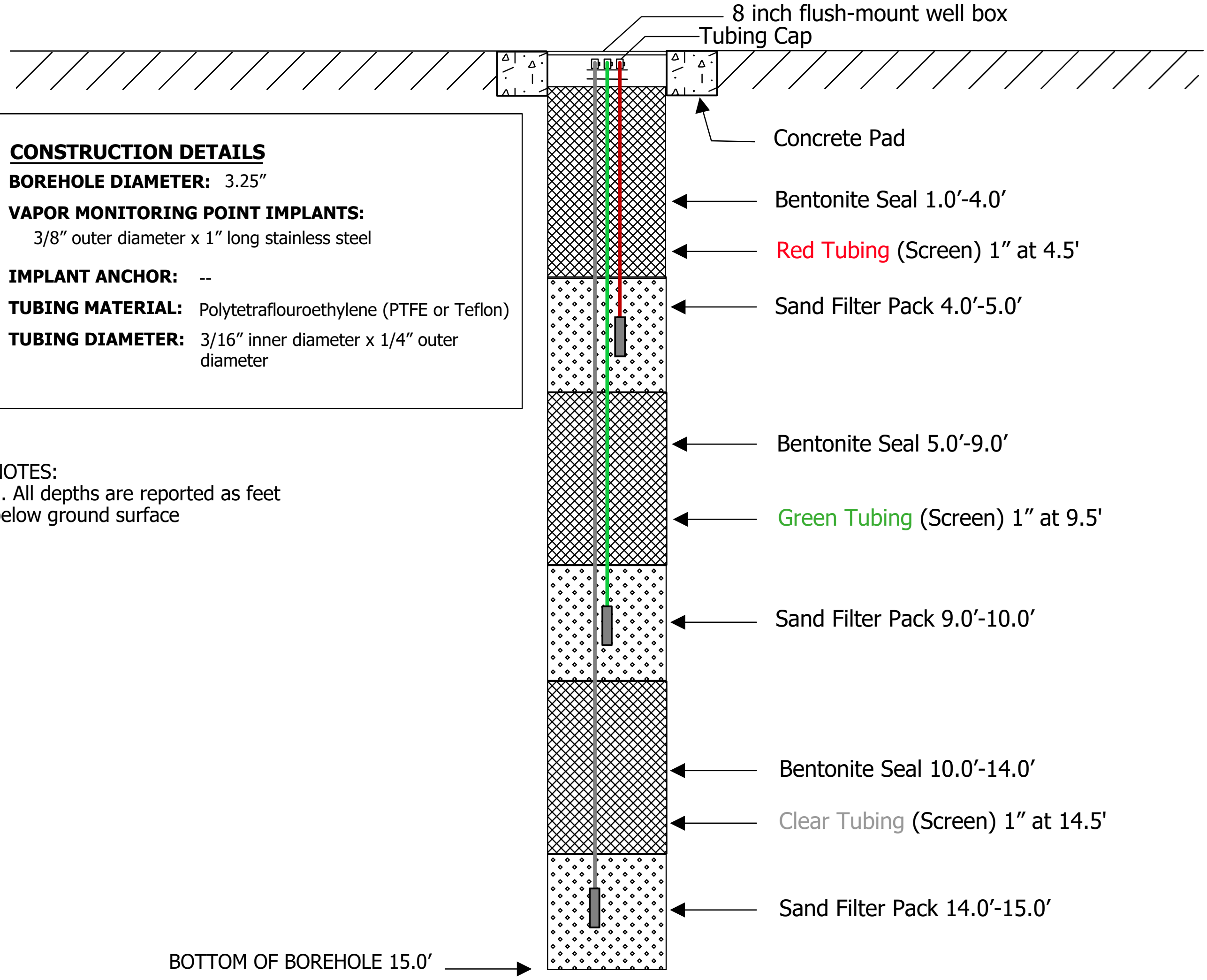

CONSTRUCTION DETAILS

BOREHOLE DIAMETER: 3.25″

VAPOR MONITORING POINT IMPLANTS:
3/8″ outer diameter x 1″ long stainless steel

IMPLANT ANCHOR: --

TUBING MATERIAL: Polytetraflouroethylene (PTFE or Teflon)

TUBING DIAMETER: 3/16″ inner diameter x 1/4″ outer diameter

NOTES:
1. All depths are reported as feet below ground surface

DIAGRAM IS NOT TO SCALE

Administration Area Soil Vapor Investigation Work Plan, Fort Wingate Depot Activity, McKinley County, New Mexico				
Figure 4.1 **Example Soil Vapor Probe Diagram**				
Client	USACE, Albuquerque District	Drawn by	ER	3/7/2024
		Checked by	MR	3/7/2024
		PM	CR	3/7/2024

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APPENDIX A
RESPONSE TO NMED COMMENTS

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NMED Comments
Final Northern Area Groundwater RCRA Facility Investigation Report
Fort Wingate Depot Activity, McKinley County, New Mexico

Comment No.	Page	Section or Topic	Comment / Recommendation	Parsons Response/Action
Disapproval Letter, January 25, 2022, HWB-FWDA-21-004				
27	4-1	Section 4.1.2, Soil Vapor Analytical Results	**Permittee Statement:** "1,2-DCA analytical results are presented on Figure 4-1.1 and Table 4-1.1." **NMED Comment:** Figure 4-1.1 (1,2-DCA Soil Vapor Plume) depicts the boundary of the plume; however, the extent of the plume (e.g., north, south and east of Building B00S) is not delineated. Since the data indicates that the soil vapor concentration of 1,2-DCA beneath Building B005 potentially exceeds applicable vapor intrusion screening levels, the Permittee must propose to investigate the risk associated with vapor intrusion within Building B005 in the revised Report. Submit a work plan to investigate risks associated with vapor intrusion within Building B005 no later than June 30, 2022, as applicable.	Concur. A Soil Vapor Investigation Work Plan has been developed for the Administration Area.
42	5-3 and 5-4	Sections 5.2.2 and 5.3.1.2, Fate and Transport,	**Permittee Statements:** "This figure illustrates the relationship between these two plumes as follows: the groundwater VOC plume originates in the same vicinity as the soil vapor plume." And, "Based upon soil vapor results, the groundwater plume has a continuing source of contamination (Figure 5-2.1). If the soil vapor source exists, the groundwater plume will persist." **NMED Comment:** VOCs detected as soil vapor continue to partition into groundwater and act as a source of the groundwater plume. Submit a work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building B006 no later than June 30, 2022.	Concur. A Soil Vapor Investigation Work Plan has been developed for the Administration Area.
50	6-1	Section 6.2, Soil Vapor VOC Plume	**Permittee Statement:** "To design a remedy for the soil vapor plume, it is recommended that the horizontal limits of the plume be defined by collection and analysis of additional soil vapor samples to the north, south and east of Building B005." **NMED Comment:** NMED concurs with the recommendation. Submit a work plan to investigate the extent of the soil vapor plume no later than June 30, 2022 (see Comment 42).	Concur. A Soil Vapor Investigation Work Plan has been developed for the Administration Area.

Comment No.	Page	Section or Topic	Comment / Recommendation	Parsons Response/Action
Second Disapproval Letter, July 25, 2022, HWB-FWDA-21-004				
17		Permittee's Response to NMED's Disapproval Comment 27, dated January 25, 2022	**Permittee Statement:** "The Army proposes to address potential soil contamination associated with Building B005 as part of a separate work plan to further investigate data gaps in the Administration Area. Furthermore, B005 is not occupied and is not suitable for occupancy due to the dilapidated interior. Signage will be posted at each entrance indicating that the building is not suitable for occupancy. Therefore, due to the lack of potential for indoor air exposure, the Army does not consider there to be a vapor intrusion hazard at B005." **NMED Comment:** It is possible that Building B005 may be used for occupancy in the future. Posting signage alone does not ensure safety for future occupants. Submit a separate work plan to investigate risks associated with vapor intrusion within Building B005, as required by NMED's previous Disapproval Comment 27 no later than July 30, 2023.	Concur. A Soil Vapor Investigation Work Plan has been developed for the Administration Area.
25		Permittee's Response to NMED's Disapproval Comment 42, dated January 25, 2022	**Permittee Statement:** "The Army plans to submit a separate work plan to assess the extent of the soil vapor plume as part of a separate effort to further investigate data gaps in the Administration Area. The Army respectfully requests that this effort be treated independently from the Northern Area Groundwater RFI that is the subject of this report." **NMED Comment:** NMED concurs to treat the work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building B006 independently from the Northern Area Groundwater RFI. The work plan must be submitted to NMED no later than July 30, 2023. No revision is required to the Report.	Concur. A Soil Vapor Investigation Work Plan has been developed for the Administration Area.

Comment No.	Page	Section or Topic	Comment / Recommendation	Parsons Response/Action
Third Disapproval Letter, March 27, 2023, HWB-FWDA-21-004				
18		Permittee's Response to NMED's Second Disapproval Comment 25, dated July 25, 2022	**Permittee Statement:** "The Army will propose to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building B006, as [a] work plan to further investigate data gaps in the Administration Area. The Army is pursuing a comprehensive approach to contracting for upcoming related requirements at FWDA that is requiring additional time to develop. The Army is therefore respectfully requesting to revise the proposed submittal date for the work plan to November 30, 2023." **NMED Comment:** The work plan is required to be submitted by **July 30, 2023**. Submit a separate letter work plan for this investigation no later than **July 30, 2023**. Extension requests are not appropriate in a Disapproval response. If an extension is required and the Permittee can show good cause, the extension request must be submitted in a separate letter and in accordance with Permit Section I.M.	Concur. A Soil Vapor Investigation Work Plan has been developed for the Administration Area.
Approval with Modifications Letter, October 19, 2023, HWB-FWDA-21-004				
25		Permittee's Response to NMED's Third Disapproval Comment 18, dated March 27, 2023	**Permittee Statement:** "As proposed in the Army's April 24, 2023, letter to NMED regarding outstanding documents, the Army plans to submit a Phase 2 Groundwater RFI Work Plan by March 15, 2024, to address this requirement." **NMED Comment:** The Permittee's April 24, 2023 letter is not an approved document and does not explain why the submittal due date is to be deferred to March 15, 2024 for the submission of the work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building B006. Submit a formal extension request detailing the reasons for an extension as required by Section I.M of the Permit; otherwise, submit the required document upon receipt of this letter since the required date for submittal of the work plan of July 30, 2023 has already passed, which has resulted in the Permittee being out of compliance.	Concur. A Soil Vapor Investigation Work Plan has been developed for the Administration Area.

Certified Mail - Return Receipt Requested

August 29, 2024

George H. Cushman
Headquarters, Department of the Army
Office of the DCS, G-9
Army Environmental Office, Room 5C140
600 Army Pentagon
Washington, DC 20310-0600

RE: DISAPPROVAL
FINAL ADMINISTRATION AREA SOIL VAPOR INVESTIGATION WORK PLAN
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO
EPA ID# NM6213820974
HWB-FWDA-24-004

Dear Mr. Cushman:

The New Mexico Environment Department (NMED) is in receipt of the Fort Wingate Depot Activity (Permittee) *Final Administration Area Soil Vapor Investigation Work Plan* (Work Plan), dated March 15, 2024. NMED has reviewed the Work Plan and hereby issues this Disapproval with the following comments.

COMMENTS

1. **Section 2.2.4, Soils, lines 29-34, page 22**

   Permittee Statement: "The primary soil type in the southern portion of Parcel 11 is the Aquima-Hawaikuh silt loams (soil map unit 225; 1 to 5 percent slopes), and the primary soil type in the northern portion of Parcel 11 is the Rehobeth silty clay loam (soil map unit 212; 0 to 1 percent slopes). A small area of Zia sandy loam (soil map unit 352; 1 to 5 percent slopes) is present in the western portion of the parcel, and a small area of Bamac extremely gravelly sandy loam (soil map unit 566; 5 to 50 percent slopes) is present on the eastern portion of the parcel (USACE, 2014)."

   NMED Comment: There are descriptions of the soil map unit and percent slope for each soil type within Parcel 11. However, these descriptions are not explained so it is not clear what they mean. Explain the significance of soil map unit and percent slope in the appropriate section(s), or remove these descriptions (i.e., soil map unit and percent slope) from the revised Work Plan.

2. Section 2.4.3.1, Building 5 (SWMU 5), lines 23-25, and 27-30, page 26

Permittee Statements: "In 2010, 10 borings were advanced within Building 5 (Figure 2.3). From those borings, 14 soil samples were collected at up to 8 feet bgs and were analyzed for VOCs and TPH (Table 2.4; USACE, 2014)."
and,
"As TPH was not detected above the current indicator concentrations (100 mg/kg for TPH-GRO, 1,000 mg/kg for TPH-DRO, and 1,000 mg/kg for TPH ORO) and 1,2-DCA was not detected in any samples, it is assumed that soil at Building 5 is not a significant source of VOCs or TPH in soil vapor."

NMED Comment: The soil borings within Building 5 were advanced up to eight (8) feet below ground surface (bgs). According to Table 2-3, *1993 UST Investigation PID Results*, the elevated Photoionization Detector (PID) readings were observed in depth intervals greater than eight (8) feet bgs. Therefore, the presence/absence of Total Petroleum Hydrocarbon (TPH) below eight (8) feet bgs is still unknown within the footprint of Building 5. It should be noted that boring FW-13 was advanced east of Building 6 and the highest PID reading was observed at the depth interval of 30 – 35 feet bgs. In addition, according to Table 2.6, *1,2-Dichloroethane Soil Vapor Results (µg/m^3) from the Northern Area Groundwater RCRA Facility Investigation*, the highest concentration of 1,2-dichloroethane (1,2-DCA) (3,325 µg/m^3) was detected in soil vapor probe SG59 at a depth of 30 feet bgs. Since soil vapor probe SG59 was advanced in the close vicinity of Building 5 and the high level of 1,2-DCA concentration was detected, the soil in depth intervals greater than eight (8) feet bgs within the footprint of Building 5 may potentially be contaminated. Therefore, the Permittee's statement "soil at Building 5 is not a significant source of VOCs or TPH" may not be accurate. Revise the statement for accuracy or remove the statement from the revised Work Plan.

3. Section 2.4.3.3, Building 39 (AOC 49), lines 4-7, page 27

Permittee Statement: "In 2010, two soil borings (1149DOCK-SB01 and 1149DOCK-SB02; Figure 2.3) were advanced on the south side of Building 39. Samples were collected at depths 1, 2, and 5 feet bgs and analyzed for VOCs and TPH (Table 2.4). As samples were not analyzed for TPH, comparisons to the current indicator levels cannot be made."

NMED Comment: The statement appears to be contradictory. Although TPH samples were collected, the last sentence states that the samples were not analyzed for TPH. Resolve the discrepancy and clarify the statement in the revised Work Plan.

4. Section 2.4.3.3, Building 39 (AOC 49), lines 9-10, page 27

Permittee Statement: "Therefore, it is assumed that soil on the south side of Building 39 is not a significant source of VOCs or TPH in soil vapor."

NMED Comment: The Permittee's assertion was supported by the low PID readings observed in boring FW-9 which was advanced south of Building 39. However, in must be noted that the soil within the footprint of Building 39 has not previously been investigated for the potential of soil vapor intrusion risk. If the Permittee intends to demolish Building 39 in the future, potential risks to future occupants will be eliminated by demolition of the building. If the Permittee intends to demolish Building 39, clearly state the intent in the revised Work Plan.

5. Section 3.0, SWMU-45 Soil Vapor Investigation Rationale, lines 11-13, page 31

Permittee Statement: "Although BTEX was detected in soil samples collected from the tank excavation at concentrations exceeding saturation (Table 2.2), BTEX has not been detected in recent groundwater samples (Table 2.7)."

NMED Comment: The statement is not clear because Table 2.2, *1993 UST Removal Confirmation Sample Results*, does not provide the information regarding the saturation levels of Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX). Revise Table 2.2 to include the missing information and/or clarify the statement by providing the correct reference for the BTEX results in the revised Work Plan.

6. Section 3.0, SWMU-45 Soil Vapor Investigation Rationale, lines 21-23, page 31

Permittee Statement: "The available data indicates that the primary release of 1,2-DCA and TPH is associated with Building 6 and that Building 5 is not a source."

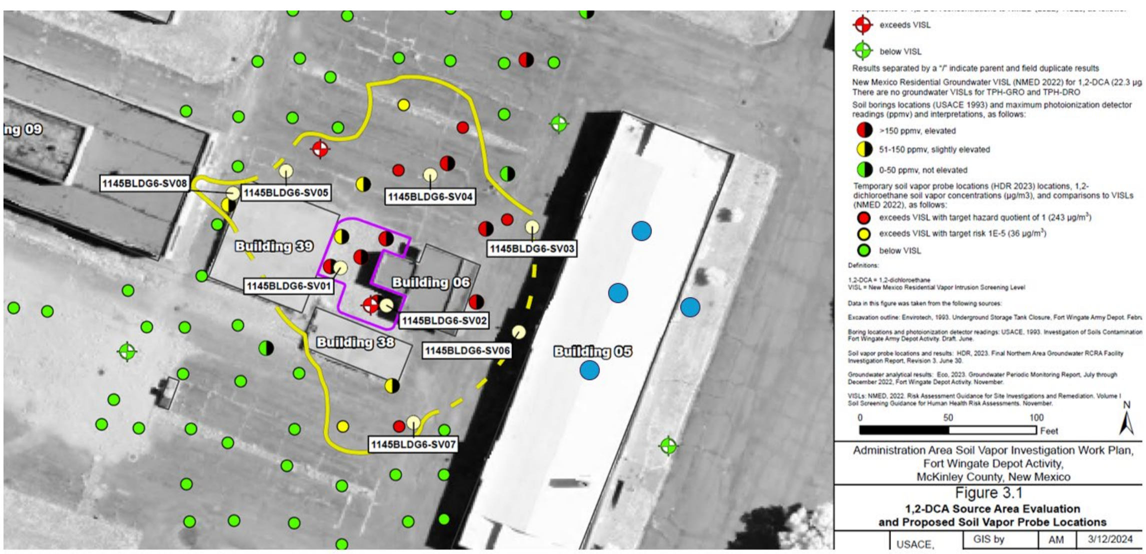
NMED Comment: The soil beneath Building 5 has not been adequately investigated as stated in Comment 2 above. Therefore, residual contamination beneath Building 5 potentially remains and acts as a source. In addition, based on the available data presented in Figures 2.2, 2.6, and 3.1, residual contamination beneath Building 6 likely remains and potentially acts as a vapor intrusion source. Correct the statement or provide data that supports the assertion in the revised Work Plan. Note that if the Permittee intends to demolish Buildings 5 and 6 in the future, potential risks to future occupants will be eliminated by demolition of these buildings. If the Permittee intends to demolish these buildings, clearly state the intent in the revised Work Plan.

7. Section 3.0, SWMU-45 Soil Vapor Investigation Rationale, lines 28-30, page 31

Permittee Statement: "Soil vapor samples are proposed to refine the previous soil contamination data and to evaluate the soil vapor migration pathway and the potential for vapor intrusion from past releases."

NMED Comment: Figure 3.1, *1,2-DCA Source Area Evaluation and Proposed Soil Vapor Probe Locations*, depicts the proposed locations for the soil vapor samples. It is NMED's opinion that the proposed sampling locations are insufficient because the potential for vapor intrusion risk has not been adequately investigated at Building 5. Comment 13 of NMED's March 27, 2023 *Third Disapproval Final Northern Area Groundwater RCRA Facility Investigation Report [Revision 2]* states, "[s]ince the Permittee intends to demolish the Building B005 in the future, potential risks to future occupants will be eliminated by demolition of the building; therefore, the work plan to investigate vapor intrusion risk at the Building B005 is not necessary at this time."

However, since the Work Plan does not clearly state that Building 5 will be demolished within the timeframe of the upcoming investigation, the vapor intrusion risk at Building 5 presumes to remain at this time. If Building 5 will continue to be used for future occupants, additional soil vapor sampling will be necessary and the additional blue sampling locations proposed by NMED depicted below within the footprint of Building 5 will likely address the data gap. Include the additional sampling locations depicted in the map below in the revised Work Plan, as applicable. The sampling locations depicted below may be adjusted depending on accessibility. Alternatively, provide a statement of when the building will be demolished in the revised Work Plan.



Additional Sampling Locations

8. **Section 3.0, SWMU-45 Soil Vapor Investigation Rationale, lines 36-39, page 31**

   Permittee Statement: "[Proposed vapor probe] 1145BLDG6-SV04 was placed near what is assumed to be the northern edge of the source zone, but moved slightly closer to the UST as the PID data used to evaluate the extent of the soil source zone is from 1993 and the extent may have shrunk since then."

NMED Comment: According to Figure 2.5, *Administration Area Soil Vapor Investigation Work Plan,* the 1,2-DCA concentrations in soil vapor probes SG47, SG48, and SG 52 exceeded the respective Vapor Intrusion Screening Levels (VISLs). These exceedances indicate that the extent of the contamination has not shrunk since 1993. In addition, since the 1,2-DCA concentrations in soil vapor probes SG36 through SG42 that are located north of proposed vapor probe 1145BLDG6-SV04 did not exceed the respective VISLs, the northern boundary of the soil vapor plume has already been defined. Therefore, the data collected from soil vapor probe 1145BLDG6-SV04 may not be useful. Change the proposed location of the vapor probe to investigate the soil directly within the footprint of Building 6, as practicable, to focus on evaluating the potential vapor intrusion in Building 6, or provide more detailed justification for the proposed location of soil vapor probe 1145BLDG6-SV04 in the revised Work Plan.

9. Section 3.0, SWMU-45 Soil Vapor Investigation Rationale, lines 39-42, page 31

Permittee Statement: "The other proposed locations will help to address the lack of soil vapor data immediately east (1145BLDG6-SV06) of Building 6, as well as the potential western extent (1145BLDG6-SV05 and 1145BLDG6-SV08) and southern extent (1145BLDG6-SV07) of the soil source area."

NMED Comment: NMED agrees with the vapor probe location of 1145BLDG6-SV06. However, it is unlikely that vapor probes 1145BLDG6-SV05, 1145BLDG6-SV08, and 1145BLDG6-SV07 will provide useful data because the western and southern boundaries of the plume have already been defined as described below:

a) The western boundary of the plume has already been defined by the 1,2-DCA concentrations in soil vapor probes SG50, SG56, and SG 65 which did not exceed the respective VISLs. Therefore, the data collected from proposed vapor probe 1145BLDG6-SV08 would minimally contribute to the existing data.

b) The northwestern boundary of the plume has already been defined by the 1,2-DCA concentrations in soil vapor probes SG43 through SG45 which did not exceed the respective VISLs. Therefore, the data collected from proposed vapor probe 1145BLDG6-SV05 would minimally contribute to the existing data.

c) The southern boundary of the plume has already been defined by the 1,2-DCA concentrations in soil vapor probes SG91 through SG93 which did not exceed the respective VISLs. Therefore, the data collected from proposed vapor probe

1145BLDG6-SV07 would minimally contribute to the existing data.

It is essential to evaluate the potential of whether soil vapor can intrude and affect the health of future occupants in Buildings 05, 06, 38, and 39 if the Permittee intends to continue using these buildings in the future. Change the proposed locations of vapor probes 1145BLDG6-SV05 and 1145BLDG6-SV08 directly within the footprint of Building 39, as practicable, or adjust the proposed locations to focus on evaluating potential vapor intrusion in Building 39 in the revised Work Plan, as applicable. Similarly, move the proposed location of vapor probe 1145BLDG6-SV07 directly within the footprint of Building 38, as practicable, or adjust the proposed location to focus on evaluating potential vapor intrusion in Building 38 in the revised Work Plan, as applicable.

10. Section 3.0, SWMU-45 Soil Vapor Investigation Rationale, lines 3-7, page 32

Permittee Statement: "Soil vapor probes will be installed at 5, 10 and 15 feet bgs in all eight locations. The probes at 5 feet bgs are most useful for evaluating the potential for vapor intrusion for the nearby buildings (Building 5, Building 6, and Building 39), while the probes at 15 feet bgs should be positioned above the potential soil source zone(s) to evaluate off-gassing."

NMED Comment: Section 2.4.1 states, "[a]lthough not explicitly stated in the report, based on the depths of the photoionization detector (PID) readings from the excavation bottoms, it is assumed that the soils were excavated to 15 feet bgs beneath UST #1, the north half of UST #2, and UST #3; 14 feet bgs on the south half of UST #2; and 4 feet bgs beneath UST #4 (Table 2.2, Figure 2.1)." This statement implies that shallow soil up to 15 feet bgs were excavated and clean fill material were potentially backfilled in the former Underground Storage Tank (UST) area. Some of the vapor probes (i.e., 1145BLDG6-SV01, 1145BLDG6-SV02) are proposed to be installed within the matrix of clean fill because the depths to be installed (5, 10 and 15 feet bgs) correlate with the excavation depths. If the vapor probes were installed within the clean fill, the soil gas samples collected from these probes may not be representative of the site conditions.

In addition, if shallow soil contamination resulting in vapor sources is found at significant levels within 10 feet bgs in the vicinity of the nearby buildings, removal of such vapor sources (i.e., remediation), or implementation of institutional controls (e.g., vapor barrier/liner, indoor air monitoring program) would be warranted to eliminate/reduce vapor intrusion risk at the buildings. As stated in Comment 2 above, the soil may be more contaminated at depths greater than 15 feet bgs. Since primary Contaminants of Concern (COCs) are volatile organic compounds (VOCs) that are known to be mobile in the subsurface environment, soil that is present at the depths greater than 15 feet bgs can pose a vapor intrusion risk through several transport mechanisms (e.g., upward diffusion). The proposed vapor probe depths must be extended, as necessary, to the depth intervals where soil is likely to be contaminated. Include the provision to extend the vapor sampling depths in the revised Work Plan.

11. Section 3.0, SWMU-45 Soil Vapor Investigation Rationale, lines 8-11, page 32

Permittee Statement: "Select soil samples are also planned to confirm the extent of impacts in the source area. Soil samples will be collected from the two borings in the former UST excavation area (1145BDG-SV01 and 1145BLDG6-SV02) to assess remaining impacted soil that may contribute to the soil migration pathway."

NMED Comment: The collection of soil samples from all proposed vapor probe locations is essential to evaluate the extent of the impacts. Include the provision to collect soil samples and PID readings from all proposed vapor probe locations in the revised Work Plan.

12. Section 4.2.2, Drilling, Soil Sampling, and Soil Vapor Probe Construction, lines 5-7, page 34

Permittee Statement: "Continuous cores will be collected for lithologic logging and soils will be screened at least every five feet in depth using a PID. The results will be recorded in a boring log (Section 4.2.4)."

NMED Comment: The PID data is useful to evaluate the vertical profile of contaminant distribution. The PID readings must also be discussed, tabulated and presented in a table in the investigation report. No revision is required to the Work Plan.

13. Section 4.2.2, Drilling, Soil Sampling, and Soil Vapor Probe Construction, lines 8-12, page 34

Permittee Statement: "The two borings located in the former UST excavation area (1145BLDG6-SV01 and 1145BLDG6-SV02) will be advanced to 25 feet bgs and one soil sample will be collected from each boring at the depth with the highest PID reading. The remaining borings will be advanced to 15 ft bgs. If PID readings exceed 100 ppmv at 15 feet bgs, the boring will be drilled deeper, until there are two consecutive PID readings of less than 100 ppmv or until the DPT rig reaches refusal."

NMED Comment: As stated in Comments 10 and 11 above, "[t]he proposed vapor probe depths must be extended, as necessary, to the depth intervals where soil is likely to be contaminated," and "[i]nclude the provision to collect soil samples and PID readings from all proposed vapor probe locations." Based on the previous data presented in Tables 2.3 and 2.6, soil contamination may likely be found at a depth interval of 30 to 35 feet bgs. Include a provision to extend all of the soil borings to a minimum depth of 35 feet bgs in the revised Work Plan.

14. Section 4.2.2, Drilling, Soil Sampling, and Soil Vapor Probe Construction, line 17, page 34

Permittee Statement: "Soil samples will be analyzed for TPH and VOCs."

NMED Comment: Section 3.0 states, "[a]lthough the release at Building 6 was gasoline and diesel fuels, the USTs were installed at a time when most gasoline was leaded and 1,2-DCA was used as a lead scavenger in leaded gasoline." The released gasoline may have contained lead; thus, the soil where elevated PID readings are detected may contain elevated lead concentrations as well. Include lead analysis for the soil samples in addition to the proposed analyses in the revised Work Plan.

15. Section 4.2.2, Drilling, Soil Sampling, and Soil Vapor Probe Construction, lines 18-19, page 34

Permittee Statement: "At each location, nested soil vapor probes will be installed at the depths listed in Table 3.1. The nested probes will be used to evaluate the vertical distribution of VOCs and TPH in soil vapor."

NMED Comment: Comment 13 above states, "[i]nclude a provision to extend the soil borings to a minimum depth of 35 feet bgs." In addition, a minimum of two vapor probes must be installed per location. One of the probes must be installed at the depth where the highest PID reading is observed at all of the probe locations. The other one must be installed at one of the three depths listed below:

a) a few inches below the interface between native soil and clean fill so that the probes may be installed within the vicinity of the former UST location. The interface may visually be identified by the core sample or by changes in PID readings, as applicable.

b) the depth where the highest PID reading is observed within 15 feet sub-slab level within the footprint of the buildings.

c) the depth where the highest PID reading is observed within 15 feet bgs for all of the remaining probe locations.

An additional probe may be installed at the Permittee's discretion, as necessary. Include the provisions in the revised Work Plan.

16. Section 4.2.3.1, Soil Vapor Sampling Procedures, lines 2-5, page 35

Permittee Statement: "Soil vapor sampling will be performed in two (2) monitoring events to collect data during both the hot (May-September) and cold (October-April) seasons, or as close as possible, to evaluate seasonal variation."

NMED Comment: The temperature varies significantly within the specified hot and cold seasons (i.e., May-September and October-April). Potential seasonal variation may better be evaluated when the data is collected during the hottest and coldest months of year (i.e., January and July). In addition, the temperature also significantly changes between daytime and nighttime in New Mexico. While sampling in the hottest month, sampling should be conducted during the daytime. Conversely, while sampling in the coldest month, sampling should be conducted during the nighttime. This provision would demonstrate the best- and worst-case scenarios for vapor intrusion risk, if any. Incorporate the provision in the revised Work Plan, as practicable.

17. Section 4.2.3.2.1, Direct Push or Hand Auger Method for Subsurface Soil, lines 3-6, page 37

Permittee Statement: "Transfer the sample from the auger bucket or trowel into a large disposable or stainless-steel bowl and mix the combined soil thoroughly to ensure a representative sample. EXCEPTION: If collecting subsurface samples for VOC analysis, the sample will be collected directly from the sample equipment (e.g., auger bucket or acetate sleeve) using a Terra Core® sampler as described in Section 4.2.3.2.3."

NMED Comment: While soil sampling is being conducted for TPH analysis, volatile organic compounds (VOCs) contained in TPH may also be lost at the time when the soil sample is being mixed. TPH samples must be collected as discrete samples before the soil sample is being mixed. The soil mixing method may only be used for the collection of the lead samples as directed by Comment 14 above. Revise the Work Plan accordingly.

In addition, Section 4.2.3.2.1 and other relevant sections where the discussion of the soil sampling procedure is included do not include a description of the PID screening. Include the description of the PID screening in the revised Work Plan.

18. Section 4.3.1.2, Quality Control Analyses Originated by the Field Team, Equipment Blanks, lines 13-14, page 42

Permittee Statement: "Equipment blanks will be collected at a frequency of approximately one per week for hand augering activities and other reusable equipment."

NMED Comment: Equipment blanks must be collected on a daily basis rather than weekly basis unless the Permittee can explain why the equipment blanks should be collected weekly. Revise the Work Plan accordingly, as applicable.

19. Section 4.3.2, Data Accuracy, Representativeness, Comparability and Completeness, Sensitivity, lines 27-29, page 44

Permittee Statement: "Only the laboratory's LOQ and LOD (Table 4.6) for 1,2-

dibromoethane in soil vapor exceeds the screening level (LOQ = 3.84 μg/m^3, LOD = 2.88 μg/m^3, VISL = 1.56 μg/m^3, Table 4.6). The analytical laboratory's DL for 1,2-dibromoethane (0.87 μg/m^3) is below the VISL."

NMED Comment: The laboratory's Limit of Quantitation (LOQ) and Limit of Detection (LOD) may vary depending on the dilutions utilized for the analysis. Therefore, it is inappropriate to present the fixed values of LOQ and LOD in the Work Plan. Remove the values of LOQ and LOD from the revised Work Plan. In addition, the laboratory's Detection Limits (DL) must not be directly compared to the VISL. Revise the Work Plan accordingly.

20. Section 4.3.2, Data Accuracy, Representativeness, Comparability and Completeness, Sensitivity, lines 30-36, page 44

Permittee Statement: "Therefore, the VISL for 1,2-dibromomethane will become the LOQ value. As noted in Table 4.6, this is acceptable when:

- The analytical lab is not capable of reaching VISL.
- 1,2-Dibromoethane has not been detected in soil and groundwater and, is, therefore, unlikely in soil vapor.

The above justification is consistent with Tables 1h and 1i in Enclosure 1 of the Phase 3, LOD LOQ Submission (US Army, 2023)."

NMED Comment: The statement contains recurring issues that are also identified in other submittals. Address the following:

a) The referenced document (US Army, 2023) is titled "*Phase 3, Limit of Detection / Limit of Quantitation Submission in Support of Analytical Performance Concerns at FWDA*" in Section 7.0, *References*. However, NMED is not aware that Phase 3 Memorandum was formally submitted to NMED. Refer to Comment 10 of NMED's August 19, 2024 *Disapproval Final Work Plan Northern Area Sewer Line Investigation* for the direction to resolve the LOQ issue.

b) Since the Permittee's April 24, 2023 letter is not an approved document, it must not be referenced for any decision-making purpose. Remove the reference from the Work Plan.

c) The stated justifications to assume the VISL for 1,2-dibromomethane to be the laboratory's LOQ are unacceptable. An approval of the Work Plan will be followed by resolution of the LOQ issue described in Comment 10 of NMED's August 19, 2024 Disapproval.

21. Section 4.3.2, Data Accuracy, Representativeness, Comparability and Completeness, Sensitivity, lines 2-3, page 45

Permittee Statement: "A complete evaluation of the soil data and risk screening will be presented in the Parcel 11 Phase 2 RFI."

NMED Comment: The Permittee submitted the *Final Phase 2 RCRA Facility Investigation Work Plan Parcel 11* (Parcel 11 Phase 2 RFI Work Plan) on April 30, 2024. The Parcel 11 Phase 2 RFI report must solely report the investigation results associated with the Parcel 11 Phase 2 RFI Work Plan. Similarly, the investigation results associated with this Work Plan must be reported in a dedicated standalone investigation report. An investigation pertinent to one work plan must not be reported in another investigation report. If the content of the investigation report is not consistent with the associated investigation work plan, it will create confusion for reviewers. Acknowledge this provision in the response letter and revise all applicable sections of the Work Plan accordingly.

22. Section 4.3.2, Data Accuracy, Representativeness, Comparability and Completeness, Sensitivity, lines 4-6, page 45

Permittee Statement: "Highlighted values in Tables 4.5 and 4.7 indicate achievable laboratory LOQs, limits of detection (LODs), and/or detection limits (DLs) that are greater than the Project Quantitation Limit Goals (PQLGs)."

NMED Comment: It is inappropriate to present the fixed values of LOQs and LODs. Remove the fixed values of LOQs and LODs and revise the Work Plan accordingly. See also Comment 19 above.

23. Section 4.3.2, Data Accuracy, Representativeness, Comparability and Completeness, Sensitivity, lines 6-8, page 45

Permittee Statement: "In these cases, the LOQ will become the de facto PQLG. If the analyte is never detected, it would not be considered a chemical of potential concern and would not be included in the quantitative risk assessment."

NMED Comment: The statement is not acceptable. When the LOQ exceeds the respective screening levels, the LOQ must not be considered as the Project Quantitation Limit Goals (PQLGs) since the LOQ that exceeds the screening levels may underestimate risks. Revise the statement based on Comments 20a and 20c above.

24. Section 4.3.2, Data Accuracy, Representativeness, Comparability and Completeness, Sensitivity, lines 12-19, page 45

Permittee Statement: "If the sensitivity requirements are not met for a particular analyte, the team will evaluate whether the data can still be used for project decisions. If non-detect values exceed the PQLGs, data are considered usable if the analyte is not a site-related compound. Analytes that are not site-related chemicals, and thus are not expected to be found, do not impact decision making. For analytes that are site-related, the team will use a "weight of evidence" approach to evaluate the likelihood of the chemical's presence. This approach uses available data that does meet sensitivity requirements to evaluate the presence or absence of the compound in other samples or other similar compounds and/or degradation products for the analyte in question."

NMED Comment: The proposed method appears to resemble the evaluation approach proposed in the Permittee's April 24, 2023 letter. A line of evidence (LOE) approach is not acceptable unless the Permittee adequately demonstrates unavailability of the laboratories' capability. As stated in Comment 20b, the April 24, 2023 letter is not an approved document. Refer to Comments 20 and 23 above and revise the Work Plan accordingly.

25. Section 4.3.3, Data Verification and Data Review Procedures, Stage 3, lines 10-15, page 46

Permittee Statement: "Appropriate selection of curve fit type, weighting factors, and with or without forcing through zero, continuing calibration verifications and blanks, and percent ratios of tunes and performance checks including calculation of dichlorodiphenyltrichloroethane (DDT)/endrin breakdown and column peak tailing, and preparatory batch QC results (such as spike percent recoveries and serial dilution percent differences) from instrument response."

NMED Comment: It is unclear why the laboratory used pesticides (i.e., DDT/endrin) to check the performance of the proposed analyses (i.e., VOCs and TPH). Provide an explanation in the response letter or correct the statement to be relevant to the proposed analyses for this investigation in the revised Work Plan.

26. Section 5.1, Conceptual Site Model, lines 15-16, page 49

Permittee Statement: "While impacted soil remails (sic) in place, it is generally below 15 ft bgs and, therefore, is too deep for the direct contact soil exposure pathway to be complete."

NMED Comment: Although NMED agrees that impacted soil below 15 feet bgs is too deep for the direct contact soil exposure pathway to be complete, soil gas potentially migrates with upward diffusion and may cause vapor intrusion in the buildings where the soil gas plume is present in the future (see also Comments 2 and 10 above). In addition, the impacted soil in the vadose zone poses risk to the soil-to-groundwater pathway regardless of depth. Revise the conceptual site model to address the potential issues of the impacted soil present below 15 feet bgs in the revised Work Plan.

27. Section 5.1, Conceptual Site Model, lines 26-27, page 49

Permittee Statement: "In the future, this pathway may be potentially complete if buildings were to be constructed without a vapor barrier."
NMED Comment: Due to the age of the buildings, there may be multiple potential pathways for the vapor to enter the buildings (e.g., cracks). NMED agrees that the installation of appropriate vapor barriers may eliminate the risk of potential vapor intrusion. Clarify which buildings are intended to be demolished or utilized in the revised Work Plan.

28. Section 5.2, Selection of Screening Levels, lines 29-30, page 49

Permittee Statement: "Soil vapor is the only sample matrix that will be evaluated in the Administration Area Soil Vapor Investigation Report."

NMED Comment: All of the investigation results associated with this Work Plan (not just soil vapor results) must be reported in a dedicated standalone investigation report as stated in Comment 21. This Work Plan also includes the investigation of potential soil impacts; therefore, the investigation results pertaining to soil impacts must also be included in the investigation report (See Comment 14 above). Revise the Work Plan accordingly.

29. Section 5.3, Preliminary Data Evaluation, lines 10-13, page 50

Permittee Statement: "If volatiles are detected in soil vapor at concentrations exceeding residential VISLs, step-out sampling will be required to delineate the extent. If step-out sampling is warranted, the field sampling approach will be modified for additional field sampling prior to initiation of reporting."

NMED Comment: If step-out sampling is determined to be necessary, submit a figure depicting the proposed step-out sampling location(s) along with the observed soil gas concentrations at the original sampling location(s) prior to installing the extra soil vapor probe(s) for NMED's review and approval.

In addition, installation of step-out sampling will only be necessary for the soil samples where the soil concentrations from the previous investigation exceed the respective screening levels. If this is the case, submit a figure depicting the proposed step-out sampling location(s) along with the observed soil concentrations at the original sampling location(s) prior to installing the extra soil boring(s) for NMED's review and approval. Include these provisions in the revised Work Plan.

The Permittee must submit a revised Work Plan that addresses all of the comments contained in this letter. Two hard copies and two copies of the electronic version of the revised Work Plan must be submitted to the NMED. The Permittee must also include a redline-strikeout version in electronic format showing where all revisions to the Work Plan have been made. The revised Work Plan must be accompanied with a response letter that details where all revisions have been made to the Work Plan, cross-referencing NMED's numbered comments. The revised Work Plan must be submitted to NMED no later than **January 29, 2025**.

Should you have any questions, please contact Michiya Suzuki of my staff at (505) 690-6930.

Sincerely,

JohnDavid Nance
Chief
Hazardous Waste Bureau

cc: N. Dhawan, NMED HWB
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File: FWDA 2024 and Reading

APPENDIX B
SOIL VAPOR PROBE SAMPLING FORM

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SOIL VAPOR SAMPLING SHEET

Project #:	Site: *Fort Wingate Depot Activity, Administration Area*
Sampler:	Sampling Date:
Soil Vapor Probe ID: 1145BLDG6-SV____-___D	
Ambient Temp (°F):	Ambient Barometric Pressure (inHg):
Monitoring Equipment: ☐ Multi Rae (PID) ☐ ____________________ (Other)	
PID Reading (ppmv):	

SAMPLE PURGE INFORMATION

1. Pre-Purge Check for presence of measurable water: ______________ .
2. Vacuum Shut In Test ☐ PASS ☐ FAIL Start inHg: _______ End inHg: ______
3. Purged 3 casing volumes prior to sample collection. Total Volume Purged: _______ ml
4. Leak Testing Compound: _______________

Borehole radius:_____(in)/12 = _____ Br (decimal ft)

Probe radius:_____(in)/12 = _____ Pr (decimal ft)

Probe height:___(in)/12 = ____ Ph (decimal ft)

Probe Tubing internal radius:_____(in)/12 = _____ PTr (decimal ft)

Probe Tubing Length: ____ft

Sample Tubing internal radius:_____(in)/12 = _____ STr (decimal ft)

Sample Tubing Length: ____ft

Probe Tip Vol. = 3.14 x Probe radius(______)^2 x Probe height(______) x 28316.8(conversion from ft3 to mL) = ___________ mL

Probe Tubing Vol. = 3.14 PTr(______)^2 x Probe tubing length (______) x 28316.8(conversion from ft3 to mL) = ___________ mL

Sample Tubing Vol. = 3.14 STr(______)^2 x Sample tubing length (______) x 28316.8(conversion from ft3 to mL) = ___________mL

Sandpack Vol. = 3.14 x Br(_____)^2 x Sandpack Length(_____) x 28316.8(conversion from ft3 to mL) x 0.3(porosity) = ________ mL

Purge Vol. = 3 x [Probe Tip Vol. (______) + Probe Tubing Vol (_______) + Sample Tubing Vol (_____) + Sandpack Vol. (______)]

Purge Vol. = ________________ mL

Sample I.D.: 1145BLDG6-SV____-___D-SV-______________		
Canister Vacuum Test: ☐ PASS ☐ FAIL inHg: _______		
Canister Serial/ID #:	Sample Manifold #:	Flow Rate: _______ ml/min
Sample Time: Start:	End:	Duration: ______ min
Canister Volume: Initial: ______ inHg	Final: ______ inHg	

Dup. Sample I.D. (if applicable):1145BLDG6-SV____-___D-SV-______________		
Canister Vacuum Test: ☐ PASS ☐ FAIL inHg: _______		
Canister Serial/ID #:	Sample Manifold #:	Flow Rate: _______ ml/min
Sample Time: Start:	End:	Duration: ______ min
Canister Volume: Initial: ______ inHg	Final: ______ inHg	
Laboratory: Eurofins Air Toxics		
Analyzed For: TO-3 and TO-15		

Samplers Signature:____________________________