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Date: OCT 2 9 2015
Symbol: ENV-DO-15-0305
LA-UR: 15-28198
Locates Action No.: N/A

Mr. John E. Kieling
Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313

Dear Mr. Kieling:

Subject: **TA-63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Los Alamos Nation Laboratory, EPA Id. No. NM0890010515**

The National Nuclear Security Administration (NNSA) and Los Alamos National Security, LLC (LANS), (collectively the Permittees) are submitting this report to the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) in accordance with Section 3.14.3 of the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit). The Permit requires that a soil vapor monitoring system be developed at the LANL Technical Area (TA)-63 Transuranic Waste Facility (TWF). This report provides information regarding the construction of the soil vapor monitoring network and the first sampling and analysis event. The monitoring network was constructed to meet the Permit conditions and the sampling results have established that vapor concentrations at the site do not exceed the levels established by the Permit.

This submittal represents the first of the sampling reports that will be submitted for the TWF soil vapor monitoring network. Once operations at the TA-63 TWF begin, the soil vapor wells will be sampled at the quarterly intervals specified by the Permit and this data will be used to determine whether a potential risk to site workers is present and corrective actions needed.

If you have questions or comments concerning this submittal, please contact Gene E. Turner of the Department of Energy (DOE) at (505) 667-5794 or Mark P. Haagenstad (LANS) at (505) 665-2014.

Sincerely,

Anthony R. Grieggs
Group Leader
Environmental Compliance Programs
Los Alamos National Security, LLC

Sincerely,

Gene E. Turner
Environmental Permitting Manager
National Security Missions
Los Alamos Field Office
U.S. Department of Energy

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Enclosures: (1) TA-63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Los Alamos National Laboratory

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RECEIVED
OCT 29 2015
NMED
Hazardous Waste Bureau

Dear Mr. Kieling:

Subject: **TA-63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Los Alamos Nation Laboratory, EPA Id. No. NM0890010515**

The National Nuclear Security Administration (NNSA) and Los Alamos National Security, LLC (LANS), (collectively the Permittees) are submitting this report to the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) in accordance with Section 3.14.3 of the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit). The Permit requires that a soil vapor monitoring system be developed at the LANL Technical Area (TA)-63 Transuranic Waste Facility (TWF). This report provides information regarding the construction of the soil vapor monitoring network and the first sampling and analysis event. The monitoring network was constructed to meet the Permit conditions and the sampling results have established that vapor concentrations at the site do not exceed the levels established by the Permit.

This submittal represents the first of the sampling reports that will be submitted for the TWF soil vapor monitoring network. Once operations at the TA-63 TWF begin, the soil vapor wells will be sampled at the quarterly intervals specified by the Permit and this data will be used to determine whether a potential risk to site workers is present and corrective actions needed.

ENCLOSURE 1

TA-63 TRANSURANIC WASTE FACILITY SOIL VAPOR MONITORING SYSTEM REPORT LOS ALAMOS NATIONAL LABORATORY

ENV-D0-15-0305

LAUR-15-28198

Date: OCT 2 9 2015

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TA-63 TRANSURANIC WASTE FACILITY
SOIL VAPOR MONITORING SYSTEM REPORT
LOS ALAMOS NATIONAL LABORATORY

I. Introduction

This report describes the development of a soil vapor monitoring system for the Technical Area (TA)-63 Transuranic Waste Facility (TWF) at Los Alamos National Laboratory (LANL). Construction of the TWF was approved by the New Mexico Environment Department-Hazardous Waste Bureau (NMED-HWB) as a modification to the LANL Hazardous Waste Facility Permit (Permit) on December 23, 2013. The permit modification requires monitoring for subsurface vapors at the TWF. This report provides information regarding the construction of the soil vapor monitoring network and the first sampling and analysis event. The monitoring network was constructed to meet the Permit conditions and the sampling and analysis has established that soil vapor concentrations at the site do not exceed the levels established by the Permit.

The LANL Permit is issued to the United States Department of Energy (DOE), the owner and co-operator of LANL, and Los Alamos National Security, LLC (LANS), the co-operator of LANL (collectively described as the Permittees). The Permit contains conditions for hazardous waste management activities at LANL necessary to protect human health and the environment. These include the requirements for monitoring subsurface vapors to prevent worker exposure to potentially harmful levels of volatile organic compounds (VOCs) at the TWF (Permit Section 3.14.3 and Attachment A.6.10).

This submittal includes a description of the soil vapor monitoring network that has been constructed by the Permittees to meet those Permit conditions. A well completion report, sampling report, and analytical results are attached to this report to describe the construction, sampling and analysis activities. This document also contains figures, summary tables, and references as needed to support the discussion.

II. Soil Vapor Monitoring Well Network

The following section describes the background and activities completed to construct and sample the soil vapor monitoring wells at the TA-63 TWF.

A. Work Plan

As required by the Permit, the TA-63 TWF Soil Vapor Monitoring Work Plan (Work Plan) was submitted to the NMED-HWB on April 17, 2014 (LANL, 2014). The Work Plan describes activities needed to install new vapor-monitoring wells and vapor sampling systems during

construction of the new TA-63 TWF. The Work Plan described the installation of five new vapor-monitoring wells, sampling requirements, required methodology to determine soil gas screening levels, and additional actions to be taken if constituents in the vapor-monitoring wells are detected that exceed screening levels (Permit Section 3.14.3). The Work Plan addressed the technical issues for the installation of the new vapor monitoring wells and sampling requirements and referenced the LANL procedures used to perform the activities.

B. Site Background

The TWF is located south-east of the TA-50 Material Disposal Area C, Solid Waste Management Unit 50-009, (MDA-C) at LANL. MDA-C is the primary source near the TWF for potential soil vapor intrusion. MDA-C is the site of past waste disposal activities.

MDA-C is under investigation and potential remediation by the LANL Environmental Remediation Program (ER) subject to the Compliance Order on Consent issued by the New Mexico Environment Department on March 1, 2005. The source of soil vapor in pore gas at MDA-C is VOC contamination from the wastes disposed at the site as determined by ER studies. The mechanism for transport of VOCs from the source is vapor diffusion through the surrounding media. VOC vapors will diffuse from areas of high concentration (i.e., near the source) to areas of low concentration (e.g., the ground surface, canyon walls, and uncontaminated pore gas at depth). This appears to be the main factor determining the distribution of VOC soil gas vapors from MDA-C.

LANL has collected on-going data by sampling the soil vapor at MDA-C to provide information on the characteristics of the soil vapor plume and evaluate the conceptual site model factors. On July 15, 2011, the *Phase III Investigation Report for Material Disposal Area C, Solid Waste Management Unit 50-009 at Technical Area 50* (LANL, 2011) was submitted by LANL to the NMED and subsequently approved by the NMED on December 8, 2011. The report discussed the sampling performed to define the horizontal and vertical extent of the vapor plume made up of VOCs beneath MDA-C. In particular, the concentration data for the most prevalent VOC, trichloroethylene (TCE), was modeled to illustrate the shape and extent of the vapor plume. The Phase III model indicated that the boundary of the soil vapor plume extended to a position under the northwest section of the proposed TWF site.

In subsequent discussions between the NMED-HWB and the Permittees related to the TA-63 TWF permit modification request, the need for and design of a soil vapor monitoring network was developed resulting in the specific conditions contained in the Permit. The approved Permit requires that the Permittees monitor subsurface vapors to evaluate for potential future vapor intrusions into the TWF storage buildings resulting from releases from MDA-C and contains criteria for detection and subsequent actions, if necessary, to protect human health (Permit Section 3.14.3). The Permit requirements referred to the EPA's technical guidance in "User's Guide to Evaluating Subsurface Vapor Intrusion into Buildings" (USEPA, 2004).

C. Monitoring Well Position Requirements

In response to the Permit conditions and the work plan, the Permittees installed a subsurface vapor monitoring network consisting of five vapor monitoring wells in or near the TWF facility, as specified in Permit Section A.6.10 and the Work Plan. Two of the monitoring wells are located as close as possible to the building foundations that are adjacent to the unit boundary facing MDA-C and the utility corridor on Puye Road as depicted by locations VMW-1 and VMW-2 in Figure 56 of Attachment N, *Figures*, of the Permit (see Figure 1 of this submittal). A third monitoring well within the permitted unit is located at a point on the western edge of the permitted unit close to the utility corridor on Pajarito Road, as depicted by location VMW-3 on Figure 56. Two monitoring wells are located between MDA-C and Puye Road, as depicted by locations VMW-4 and VMW-5 on Figure 56.

D. Well Construction

The five soil vapor monitoring wells were constructed as specified in Attachment A.6.10 of the Permit and Section D of the Work Plan (for details, see Attachment 1). Vapor monitoring wells VMW-1, VMW-2, and VMW-3 were constructed with a single vapor monitoring port located in the center of a sampling interval between 5 ft and 10 ft bgs. Vapor monitoring wells VMW-4 and VMW-5 were constructed with two vapor monitoring ports located at 25 ft and 60 ft bgs.

Boreholes were completed using hollow stem auger drilling methods. A continuous stainless steel sampling tube with a screened end opening for the vapor monitoring port was placed in the borehole centered in 5 ft sampling intervals and clean sand filter pack added as the auger(s) were withdrawn to create a vapor permeable medium in the intervals in the well boreholes. Layers of bentonite were placed above and below the sampling intervals as impermeable plugs. Bentonite chips fill the borehole between the bentonite plugs for the sampling intervals. This is overlain by a 5 ft bentonite cement grout surface seal. Surface casings were installed and cemented in place.

Monitoring well surface completions were constructed as raised steel casings. The Permittees have placed traffic bollards within the permitted unit to ensure that the surface completions will be protected from damage by snow removal or other maintenance equipment.

E. Post Installation Vapor Sampling

Sampling procedures and VOC analyses of the obtained samples were performed and scheduled in compliance with the conditions contained in the Permit and the Work Plan (see Attachment 2). Sample results were compared to the soil gas screening levels (SGSLs) contained in the Permit. The sample results appear to be consistent with the basic model proposed for the site and do not indicate exceedances of the SGSLs.

The sampling of the new vapor-monitoring wells was performed using the same procedures as the ongoing vapor monitoring conducted at MDA-C. Sampling was performed by extracting formation air through the sand layer and into the stainless steel tubing. Samples were collected from all sampling ports. All samples for VOC analysis were collected in SUMMA canisters and submitted for laboratory analysis of VOCs using U.S. Environmental Protection Agency (EPA)

Method TO-15. The samples were analyzed for the constituents identified in Tables 3.14.3.1, 3.14.3.2 and 3.14.3.3 in Permit Section 3.14.3.

Before samples are collected, the screened interval and sample collection system were purged and measurements of percent oxygen, percent carbon dioxide, and percent methane were collected from the sample train exhaust every several minutes to ensure that all ambient air was evacuated from the system. Static subsurface pressure was measured. Once these gas concentrations were stable, vapor sampling proceeded.

Analysis of samples was performed subject to EPA Method TO-15 and the most current version of LANL procedures specified in the Work Plan. Field sampling and instrumentation were performed in accordance with the most current version of LANL fieldwork planning and authorization procedures in the Work Plan. The analytical results for the soil vapor and quality assurance samples are included as Attachment 3 of this document.

F. Investigation Derived Waste Management

Investigation-derived waste (IDW) was managed in accordance with the Work Plan (see Attachment 2). The primary waste streams included drill cuttings and contact waste. Drill cuttings were managed in accordance with the NMED-approved Notice of Intent Decision Tree for Land Application of IDW Solids from Construction of Wells and Boreholes (November 2007). Drill cuttings will be containerized and characterized with direct sampling. If they cannot be land-applied, the cuttings will be sent to an authorized treatment, storage, or disposal facility. Contact waste will be containerized and characterized based on the waste determination of the drill cuttings.

G. Quality Assurance

Quality assurance activities for the soil vapor monitoring well network were performed using the same procedures as the ongoing vapor monitoring conducted at MDA-C in accordance with the most recent versions of the LANL procedures specified in the Work Plan. These procedures describe the process for identifying, developing, and scheduling all applicable and relevant activities and logistics associated with fieldwork planning and fieldwork authorization to ensure compliance with applicable Laboratory, local, state, and Federal procedural requirements, standards, and regulations regarding quality, health, safety, security, and the environment. Quality assurance procedures for the analyses and validation of data for the collected samples were managed with EPA Method TO-15 and the most current version of the LANL data validation procedures in the Work Plan.

III. Sampling Results

Analytical results for this sampling event are presented in Attachment 3 and summarized for VOCs above detection limits in Table 1. As discussed, none of the VOC concentrations exceed the relevant SGSLs contained in Permit Section 3.14.3, Tables 3.14.3.1 through 3. Table 1

shows detected VOCs and includes the calculated percentage of the SGSL as an indicator of the relative concentrations.

Four of the five monitoring well locations include detected concentrations of trichloroethene (TCE). The VMW-4 and VMW-5 locations contain the highest concentrations at 8.1% and 1.4% of the SGSL. These are the sites closest to MDA-C and are not in the permitted storage unit site at TA-63. Two of the three sites within the permitted unit (VMW-2, VMW-3) have detected concentrations of TCE of less than 1% of the SGSL. TCE is the highest concentration VOC detected in the previous MDA-C investigations.

The well locations within the boundary of the TWF permitted unit (VMW-1, -2, and -3) did not detect any other VOCs. The well locations north of Puye Road (VMW-4, -5) detected additional VOCs matching the constituents of concern in the Permit and the results are included in Table 1. None of these additional detections exceeded 1% of the SGSLs listed in the Permit.

IV. Variances

A couple of minor construction variances occurred between the final soil vapor sampling network and the project description originally proposed in the Permit and Work Plan. Each soil vapor monitoring well has been positioned as closely as possible to its corresponding location as specified in Figure 56 of the Permit. Some flexibility was needed in order to adjust for design factors including construction requirements such as foundation supports and siting restrictions. In each case, the final location of each well meets the intent of the associated Permit condition and the EPA guidance. Figure 56 may require some minor modification associated with Sampling Well VMW-4 to reflect that the original position was located within a utility path where drilling was not possible and another position was chosen nearby. Additionally, the surface completion of the soil vapor wells within the permitted unit involves raised casings rather than flush mounting. The change was made to prevent the potential for surface water intrusion into the well and the casings are protected from damage from facility operations by surrounding bollards. The revision for the figure and facility description changes will be included in a subsequent permit modification by LANL for the TWF project.

There were no variances in the sampling procedures from the Permit and Work Plan requirements as indicated in the Sampling Plan in Attachment 2.

V. Summary

The TWF soil vapor monitoring network has been constructed and sampled pursuant to the Permit conditions. This first sampling event for the network demonstrates that the soil vapor concentrations in the vadose zone do not currently exceed the SGSLs contained in the Permit. Once operations at the TA-63 TWF begin, the soil vapor well network will be sampled at the quarterly intervals specified by the Permit and this data will be used to help determine whether a potential risk to site workers is present and corrective actions needed. As allowed by the Permit, the Permittees may propose an alternate sampling frequency for subsequent years in a permit modification request after the first year of quarterly sampling. This will be based on the

evaluation of data from this pre-operational event and quarterly samples as well as relevant vapor monitoring data collected from nearby MDA-C vapor monitoring locations.

References

LANL, 2011. *Phase III Investigation Report for Material Disposal Area C, Solid Waste Management Unit 50-009, at Technical Area 50*, LA-UR-11-3429, July, 2011, Los Alamos National Laboratory, Los Alamos, New Mexico. http://permalink.lanl.gov/object/tr?what=info:lanl-repo/eprr/ERID-204370

LANL, 2014. *Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring Work Plan*, LA-UR-14-22500, Los Alamos National Laboratory, Los Alamos, New Mexico. http://permalink.lanl.gov/object/tr?what=info:lanl-repo/eprr/ERID-255549

USEPA, 2004. *User's Guide For Evaluating Subsurface Vapor Intrusion Into Buildings*, February 22, 2004, U.S. Environmental Protection Agency, Washington, D.C.

Notice of Intent Decision Tree for Land Application of IDW Solids from Construction of Wells and Boreholes (approved November 2007). From correspondence to Mr. James Bearzi and Mr. William C. Olsen, New Mexico Environment Department, from Mr. Anthony R. Grieggs, Los Alamos National Laboratory, October 2007.

Acronyms

Los Alamos National Laboratory	LANL
Transuranic Waste Facility	TWF
New Mexico Environment Department – Hazardous Waste Bureau	NMED-HWB
Department of Energy	DOE
Los Alamos National Security	LANS
Material Disposal Area	MDA
Technical Area	TA
Resource Conservation and Recovery Act	RCRA
Volatile organic compounds	VOC
Investigation Report	IR
Trichloroethylene	TCE
Soil gas screening levels	SGSL
U.S. Environmental Protection Agency	EPA
Permit Modification Request	PMR
Investigation-derived waste	IDW
Environmental Programs-Environmental Remediation Group	EP-ER
Foot or feet	ft
Below ground surface	bgs

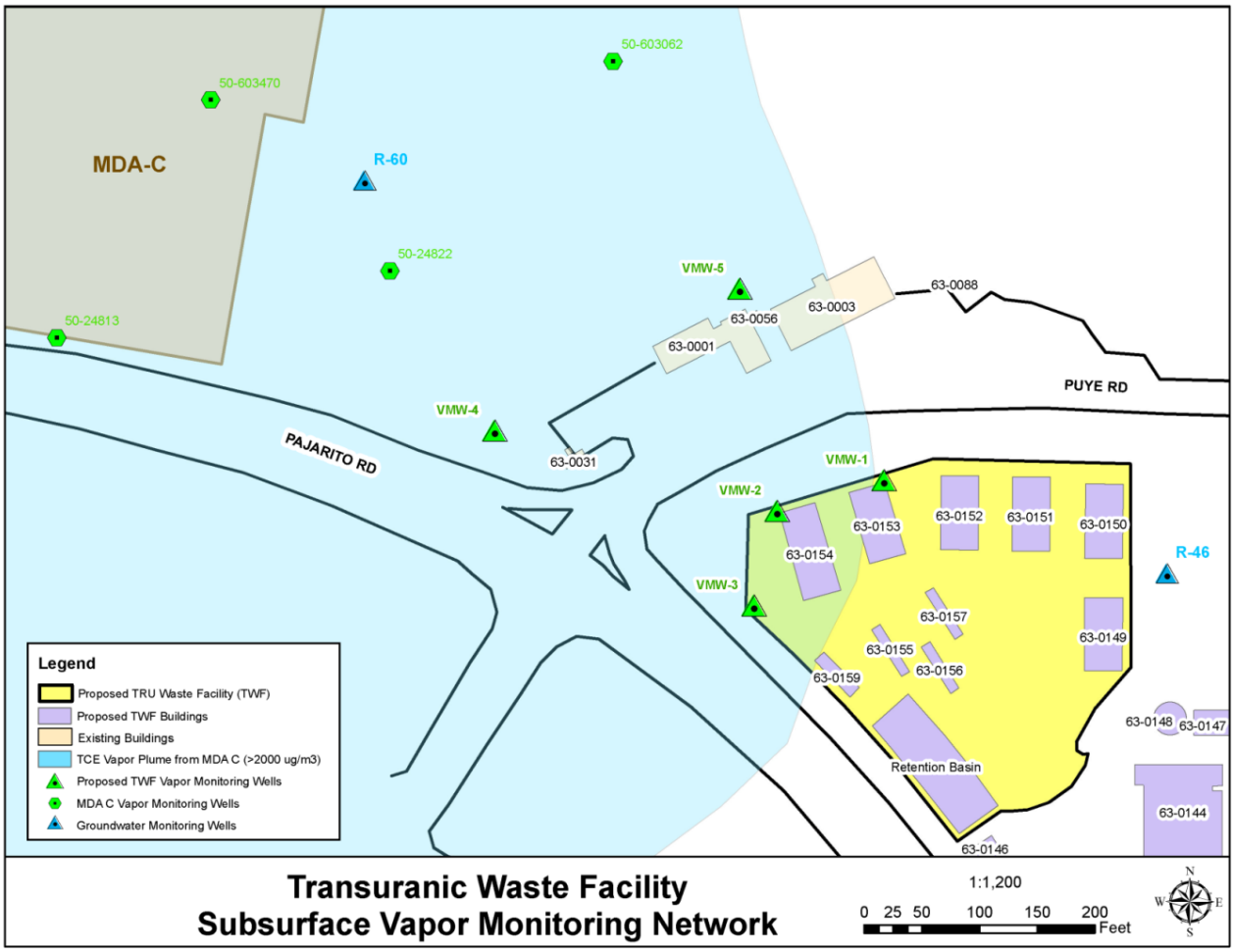

Figure 1

Soil Vapor Monitoring Well Locations at TA-63 TWF

(Source: Los Alamos National Laboratory Hazardous Waste Facility Permit, December, 2010, Figure 56 [Added December 2013])

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Table 1 Detected volatile organic compounds

Well	Sample	Depth (ft)	Analyte/Constituent	Result (ug/m3)	Soil-Gas Screening Level (ug/m3)	Percentage Of SGSL (%)
VMW-1	VMW1-15-104285	5	ND		1.94E+4	NA
VMW-2	VMW2-15-104275	5	Trichloroethene	75.2	1.94E+4	0.4
VMW-3	VMW3-15-104276	5	Trichloroethene	51.0	1.94E+4	0.3
VMW-4	VMW4-15-104277	25	Chloroform	102.5	2.3E+4	0.4
			Dichlorofluoromethane	88.9	2.61E+6	<0.1
			Trichloroethene	2846	1.57E+5	1.8
	VMW4-15-104278	60	Tetrachloroethene	81.3	2.05E+6	<0.1
			Carbon Tetrachloride	88	2.13E+5	<0.1
			Chloroform	224.5	4.44E+4	0.5
			Dichlorofluoromethane	192.7	5.38E+6	<0.1
			Trichloroethene	7519	9.27E+4	8.1
VMW-5	VMW5-15-104279	25	Carbon Disulfide	43.6	1.35E+7	<0.1
			Dichlorofluoromethane	54.4	2.61E+6	<0.1
			Trichloroethene	290	1.57E+5	0.2
	VMW5-15-104280	60	Trichloroethane [1,1,1-]	65.4	2.34E+8	<0.1
			Dichlorofluoromethane	98.8	5.38E+6	<0.1
			Trichloroethene	1289	9.27E+4	1.4
VMW-2 Field Dup	VMW2-15-104281	5	Trichloroethene	69.8	1.94E+4	0.4

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Document: LANL TA-63 TWF SVM Report
Date: October 30, 2015

CERTIFICATION

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.

A R Grieggs

10/27/15

Anthony R. Grieggs
Group Leader
Environmental Compliance Group
Environmental Protection Division
Los Alamos National Laboratory

Date Signed

Gene E Turner

10/28/15

Gene E. Turner
Los Alamos Site Office
National Nuclear Security Administration
U.S. Department of Energy
Owner/Operator

Date Signed

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Attachment 1

Well Completion Report for TWF Vapor Well Installation at TA-63

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September 2015

Well Completion Report for TWF VAPOR WELL INSTALLATION AT TA-63

Los Alamos
NATIONAL LABORATORY
EST. 1943

Well Completion Report for TWF Vapor Well Installation at TA-63

September 2015

Responsible LANS representative:

Printed Name	Signature	Title	Organization	Date
Mark Shepard	M. Shepard	Project Leader	Environmental & Waste MGT Facility OPS	10/21/2015

Primary LANS STR:

Printed Name	Signature	Title	Organization	Date
Tracy McFarland	Tracy McFarland	STR	Environmental Programs	10/21/15

Responsible subcontractor representatives:

Printed Name	Signature	Title	Organization	Date
Peter Gram	Peter E.M. Gram	Program Manager	TerranearPMC	10/14/15
Andrew Crowder	Andrew W. Crowder	Project Manager	TerranearPMC	10/14/15

EXECUTIVE SUMMARY

This report details the drilling and installation of five vapor monitoring wells within TA-63 in accordance with the LANL Transuranic Waste Facility (TWF) Hazardous Waste Permit. Vapor monitoring wells VMW-1, VMW-2 and VMW-3 were installed on-site at the TWF. The remaining two vapor monitoring wells, VMW-4 and VMW-5, were installed between Material Disposal Area C (MDA C) and the TWF.

Drilling and vapor monitoring well installation took place during the time period August 18 - 25, 2015, using a CME-75 HT hollow-stem auger (HSA) drill rig, with 4.25-in inside-diameter (ID)/8-in outside-diameter (OD) hollow-stem augers and continuous core sampling system for geologic logging. Wells VMW-1, VMW-2 and VMW-3 and were installed to a total depth of 10 ft below ground surface (ft bgs) with a single sample port and wells VMW-4 and VMW-5 were installed to a total depth of 68 ft bgs with two sample ports.

CONTENTS

Figures

Tables

ACRONYM LIST

bgs	Below ground surface
DOE	Department of Energy
EPA	Environmental Protection Agency
ERP	Environmental Remediation Program
EP (ADEP)	Environmental Programs Directorate
ES&H	Environment, Safety and Health
FIP	Field Implementation Plan
ft	Feet or foot
FTL	Field Team Leader
FOD	Facility Operations Director
GSI	Geomechanics Southwest, Inc
HSA	Hollow-stem Auger
ID	Inside diameter
IDW	Investigation Derived Waste
in	inch
IWD	Integrated Work Document
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security
MDA	Material Disposal Area
NMED-HWB	New Mexico Environment Department-Hazardous Waste Bureau
OD	Outside diameter
OSHA	Occupational Safety and Health Administration
PIC	Person in charge
PM	Project manager
POC	Primary Point of Contact
ppm	Parts per million
PS	Project Specialist
PVC	Polyvinyl chloride
QA	Quality Assurance
RLM	Responsible Line Manager
RP-1/ RP-3	Radiological protection group(s)
SGSL	Soil gas screening levels
SMO	Sample management office
SOP	Standard Operating Procedure
SOW	Statement of Work
STR	Subcontract Technical Representative

TA	Technical Area
TD	Total Depth
TPMC	TerranearPMC
TRU	Transuranic
TWF	Transuranic Waste Facility
VOC	Volatile organic compounds/contaminants
WCSF	Waste Characterization Strategy Form

1.0 INTRODUCTION

1.1 Background

TerranearPMC (TPMC) was contracted to install a total of five vapor monitoring wells by Los Alamos National Security (LANS) Environmental Programs (EP) Directorate. The wells, designated as VMW-1, VMW-2, VMW-3, VMW-4 and VMW-5, are located within Los Alamos National Laboratory (LANL) Technical Area (TA) 63 in Los Alamos County, New Mexico (Figure 1). All work was performed under the statement of work (SOW) and in accordance with the Compliance Order on Consent (March 2005, revised 2008 and 2012) between the New Mexico Environment Department - Hazardous Waste Bureau (NMED-HWB) and the United States Department of Energy (DOE)/LANL, and the approved TA-63 Transuranic Waste Facility (TWF) Soil Vapor Monitoring Work Plan (April 18, 2014). Geomechanics Southwest, Inc. (GSI) performed the drilling and well installations.

The TWF is being constructed south and east of the TA-50 Material Disposal Area C (MDA C), Solid Waste Management Unit 50-009 at LANL. MDA C is the site of past waste disposal activities and is under investigation and potential remediation by the LANL Environmental Remediation Program (ERP) subject to the above Compliance Order.

This completion report provides details for the following activities: drilling, vapor monitoring well installation, and investigation derived waste management.

2.0 FIELD ACTIVITIES

Field activities, including drilling, lithologic logging, permanent vapor monitoring well installation, surface completion and waste management followed an approved Integrated Work Document (IWD). The TA-63 TWF Soil Vapor Monitoring Work Plan (LANL 2014, 255549) and December 2014 Hazardous Waste Permit were used to guide field operations and ensure all objectives were met. During installation of VMW-1, VMW-2 and VMW-3, TPMC and GSI coordinated drilling activities with on-going TWF construction.

2.1 Mobilization

On Tuesday August 18, 2015, GSI mobilized a CME-75 HT HSA drill rig and support equipment to the TPMC office parking lot, at which time the rig was inspected by the LANL project ES&H representative and subcontract technical representative (STR). Subsequent to approval for use by the ES&H representative and STR, the drill rig and support equipment were taken to TA-52, for pre-admittance radiological screening.

2.2 Decontamination

Subsequent to mobilizing the HSA rig to the site, the rig and all down-hole tools were inspected for cleanliness. Following completion of drilling activities, augers and sampling tools were decontaminated with a wire brush followed by spraying with Fantastik® and wiping clean with paper towels. Investigation derived waste (IDW) accumulated during decontamination activities was staged on site and characterized as determined by the Waste Characterization Strategy Form (WCSF). Decontamination was cconducted in accordance with TPMC SOP-7007,R0, *Field Decontamination of Equipment*.

2.3 Drilling Methods

The five boreholes were drilled with an HSA drill rig, following the most current version of TPMC SOP-10001, R1, *Installation of Vadose Zone Monitoring Wells for Vapor Sampling and Moisture Monitoring*. A drill string comprised of 4.25-in ID/8-in OD hollow-stem augers, in 5-ft-long sections, was used to advance all the boreholes.

2.4 Lithologic Logging

Continuous core samples were collected for examination to determine lithologic characteristics and recorded on lithologic logs as per TPMC SOP-7006, *Field Logging, Handling, and Documentation of Borehole Materials*. The lithology for each borehole is shown as part of the well as-built diagrams in Figures 2 and 3.

2.5 Well Installation and Construction

Boreholes for VMW-1, VMW-2, and VMW-3 were advanced to the design total depth of 10 ft below ground surface (bgs) while collecting continuous core. Following completion of drilling to 10 ft bgs, 2.5 ft of 10/20 silica sand was emplaced through the augers. Subsequently, a 1-ft-long stainless steel screen was attached to a continuous 0.25-in ID stainless steel sampling tube and placed in the boreholes with the screen-interval located from 6.5 - 7.5 ft bgs. The 4.5-in ID augers served to centralize the tubing and screen. Following placement of the well screen and tubing, the remaining 10/20 sand filter pack was added as the augers were withdrawn, creating a vapor permeable medium in the interval 5 ft to 10 ft bgs. The top of the vapor permeable intervals were then sealed by placing 2.5 ft of bentonite chips, hydrated with municipal water poured through the auger flight(s), at the rate of approximately 2 gal of water per foot of bentonite chip seal emplacement. After allowing the bentonite seal to sit undisturbed and hydrate for a minimum of 1 hour, 4-in. ID Polyvinyl Chloride (PVC) surface casings were cemented in place with Type I/II Portland cement grout. The surface casings were installed with a stickup of 2.5 ft above ground surface.

Boreholes for VMW-4 and VMW-5 were advanced to approximately 68 ft bgs. A bentonite chip bottom seal was emplaced from 62.5 - 68 ft bgs and was allowed to sit undisturbed for a minimum of 1 hour to hydrate. Subsequently, 2.5 ft of 10/20 silica sand was emplaced through the augers from 60 - 62.5 ft bgs. Following emplacement of the 10/20 sand filter pack, a 1-ft-long stainless steel screen was attached to a continuous 0.25-in ID stainless steel sampling tube and placed in the boreholes with the screen-interval located from 59 - 60 ft bgs. The tubing was labeled with the port numbers before installation. The 4.5-in ID augers served to centralize the tubing and screen. Once the screen and tubing were placed at depth, the remaining 10/20 sand filter pack was added as the augers were withdrawn creating a vapor permeable medium in the interval 57.5 ft to 62.5 ft bgs. Hydrated bentonite chips were then emplaced from 27.5 - 67.5 ft bgs, and allowed to sit undisturbed for 1 hour to hydrate. Following bentonite seal installation, 2.5 ft of 10/20 silica sand was emplaced through the augers from 25 - 27.5 ft bgs. Subsequently, a 1-ft-long stainless steel screen was attached to a continuous 0.25-in ID stainless steel sampling tube and placed in the boreholes with the screen-interval located from 24 - 25 ft bgs. Once the screen and tubing were placed at depth, the remaining 10/20 sand filter pack was added as the augers were withdrawn, creating a vapor permeable medium in the interval 22.5 ft to 27.5 ft bgs. Hydrated bentonite chips were then emplaced in the boreholes from 5.5 - 22.5 ft bgs. After allowing the upper bentonite seals to hydrate undisturbed for 1 hour, 4-in. PVC surface casings were cemented in place with Type I/II Portland cement grout. The surface casings were installed with a stickup of 2.5 ft above ground surface.

Well completion specifications for VMW-4 and VMW-5 are shown in Figure 3.

2.6 Surface Completion

The wellhead surface completions include 8-in. ID steel outer protective casings to protect the PVC surface casings and stainless steel sampling connections. The protective casings extend into the borehole to approximately 2.5-ft bgs. The wellheads were completed above ground with a stick-up, including riser cap, of approximately 2 ft above ground surface. The wellhead is surrounded by a 2-ft by 2-ft by 0.5-ft-thick reinforced concrete pad, with an aluminum survey pin embedded in the concrete pad surface. The PVC surface casing and stainless steel sampling connections have an approximate height of 2 ft above ground surface. Weep holes were installed in the base of the protective steel casings to prevent water collection inside the casing. The top of the protective casing will be fitted with a LANL-supplied tamper-proof well cover plate (still to be provided). Each wellhead is protected by three painted, steel traffic bollards installed near the concrete pads. TPMC constructed wellhead surface completions for VMW-4 and VMW-5 in accordance with SOP-7012, R0, *Well Construction*. At wells VMW-1, VMW-2 and VMW-3, within the TWF construction site, the final concrete surface has not been finished to grade, so the protective casings and painted bollards were provided to the TWF construction manager for the construction crew to install when the concrete is finished to grade. To protect these wells prior to casing and bollard installation, the TWF construction crew will place orange traffic cones around them for visibility to construction traffic.

All well surface seals were allowed to cure for more than 24 hours before vapor samples were collected.

2.7 Demobilization

Demobilization activities included:

- Final decontamination and screening for radioactivity by RP-1 of the drill rig, tools, and support equipment.
- Loading and removal of the drilling tools, including alternative tools, from the site.
- Removal of the drill rig and support vehicles from the site.
- Staging and securing of IDW for future disposition.
- Removal of municipal waste (e.g. materials packaging).
- Final site cleanup.

3.0 INVESTIGATION DERIVED WASTE

A waste characterization strategy form (WCSF) was prepared by LANS in accordance with EP-DIR-SOP-10021 and all wastes generated during the TWF Vapor Well Installation project were managed according to the WCSF.

This procedure incorporated the requirements of all applicable EPA and NMED regulations, DOE orders and Laboratory requirements. The primary waste streams included drill cuttings and contact waste. Drill cuttings were managed in accordance with the NMED-approved *Notice of Intent Decision Tree for Land Application of IDW Solids from Construction of Wells and Boreholes*

(November 2007). Drill cuttings were containerized in 55-gal DOT-approved drums and characterized with direct sampling. As of the submittal of this completion report, laboratory analytical results for drill cutting samples were not available. If the drill cuttings cannot be land-applied, the cuttings will be sent to an authorized treatment, storage, or disposal facility. Contact waste will be managed and characterized based on the waste determination of the drill cuttings.

4.0 SURVEYING

Locations and elevations of all wells were surveyed by a New Mexico licensed professional land surveyor in accordance with applicable New Mexico statutes. Northing and easting coordinates are surveyed on the New Mexico State Plane Coordinate System with respect to NAD83 with horizontal positions measured to the nearest 0.1 ft at a minimum. Elevations are measured in feet above mean sea level with respect to NGVD29. Vertical elevations are measured to the nearest 0.01 ft at a minimum. For off-site wells, VMW-4 and VMW-5, survey points include: ground surface elevation near the concrete pad, the top of the survey pin in the concrete pad, the top of the PVC casing, and the top of the protective casing. For on-site locations VMW-1, VMW-2 and VMW-3 survey points comprise only the location and elevation of the top of the PVC risers. Survey markers were provided to the TWF construction manager for installation by the construction crew when the TWF surface slab is finished to final grade. The locations and elevations will then be surveyed by LANL. All survey pins for onsite and offsite wells will be stamped with well numbers and elevations. Survey coordinates for TWF vapor wells at TA-63 are included in Table 1.

Table 1
TWF Vapor Well Coordinates at TA-63

Identification	Northing	Easting	Elevation
VMW-1 aluminum cap embedded in pad	TBD	TBD	TBD
VMW-1 ground surface near pad	TBD	TBD	TBD
VMW-1 top of PVC casing	1768255.1868	1627195.9881	7219.30
VMW-1 top of 8-in. protective casing	TBD	TBD	TBD
VMW-2 aluminum cap embedded in pad	TBD	TBD	TBD
VMW-2 ground surface near pad	TBD	TBD	TBD
VMW-2 top of PVC casing	1768222.4051	1627089.5057	7219.02
VMW-2 top of 8-in. protective casing	TBD	TBD	TBD
VMW-3 aluminum cap embedded in pad	TBD	TBD	TBD
VMW-3 ground surface near pad	TBD	TBD	TBD
VMW-3 top of PVC casing	1768146.4583	1627070.4992	7218.60
VMW-3 top of 8-in. protective casing	TBD	TBD	TBD
VMW-4 aluminum cap embedded in pad	1768332.7558	1626816.4011	7232.59
VMW-4 ground surface near pad	1768333.2858	1626815.6787	7232.08
VMW-4 top of PVC casing	1768331.9528	1626817.1176	7233.82

VMW-4 top of 8-in. protective casing	1768332.1682	1626816.7462	7234.08
VMW-5 aluminum cap embedded in pad	1768398.9491	1627038.3111	7226.70
VMW-5 ground surface near pad	1768398.8569	1627037.6600	7226.41
VMW-5 top of PVC casing	1768398.7080	1627039.3635	7228.18
VMW-5 top of 8-in. protective casing	1768398.9722	1627039.3616	7228.54

TBD: To Be Determined.

Note: All coordinates are expressed as New Mexico State Plane Coordinate System Central Zone (NAD 83); elevation is expressed in ft amsl using the National Geodetic Vertical Datum of 1929.

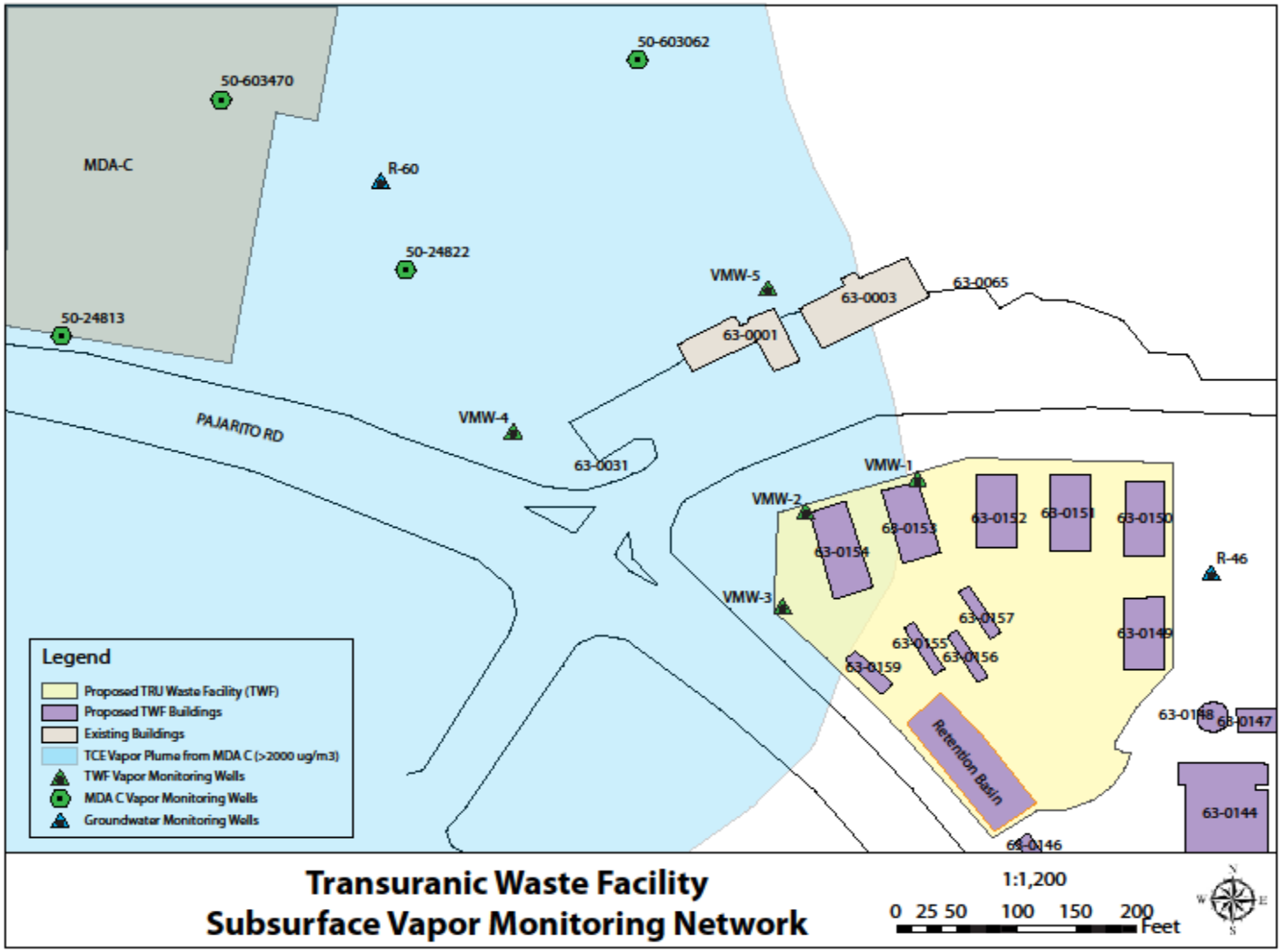

Figure 1 Soil Vapor Monitoring Well Locations at TA-63 TWF

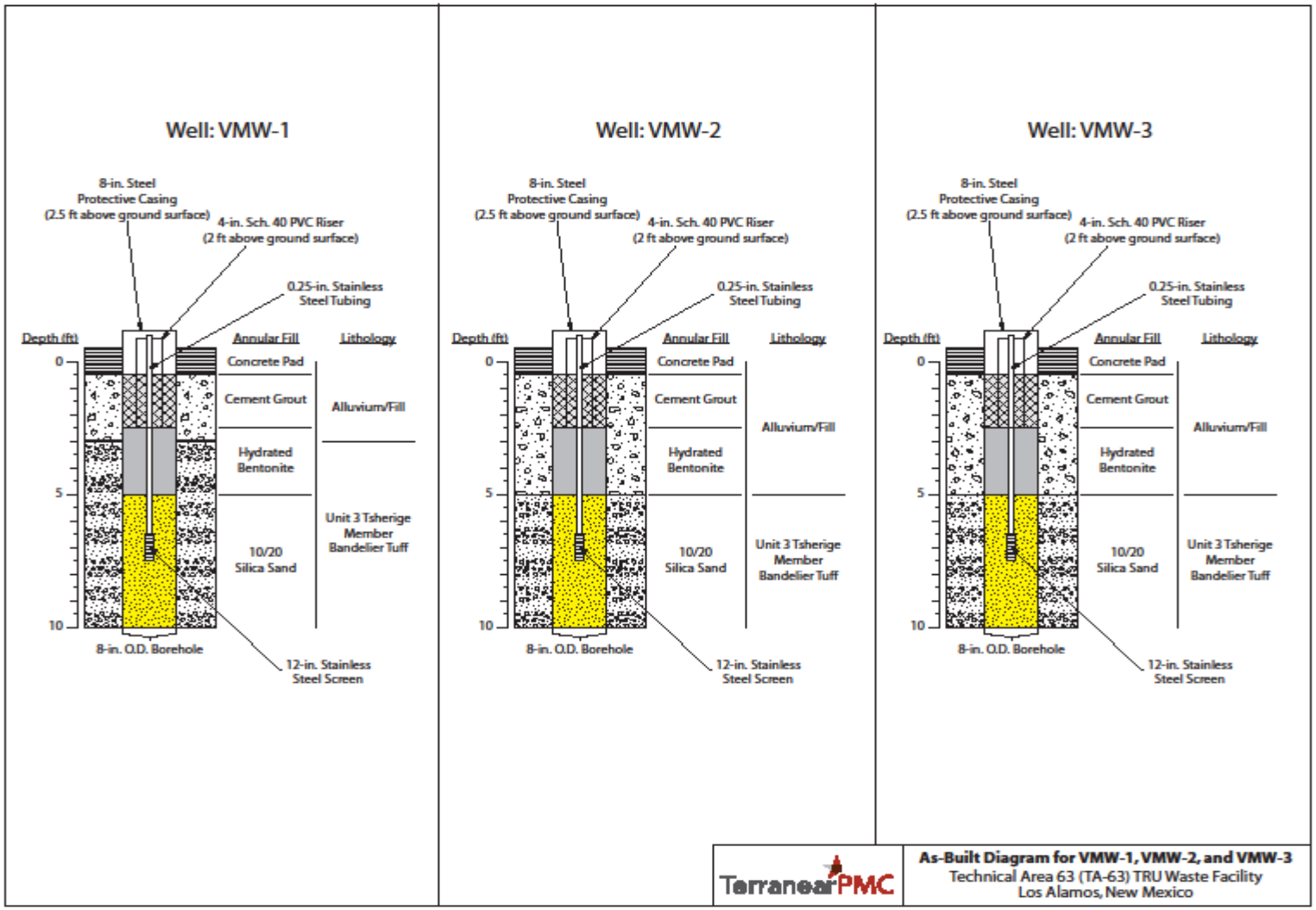

Figure 2 VMW-1, VMW-2 and VMW-3 Well Construction and Lithologic Details.

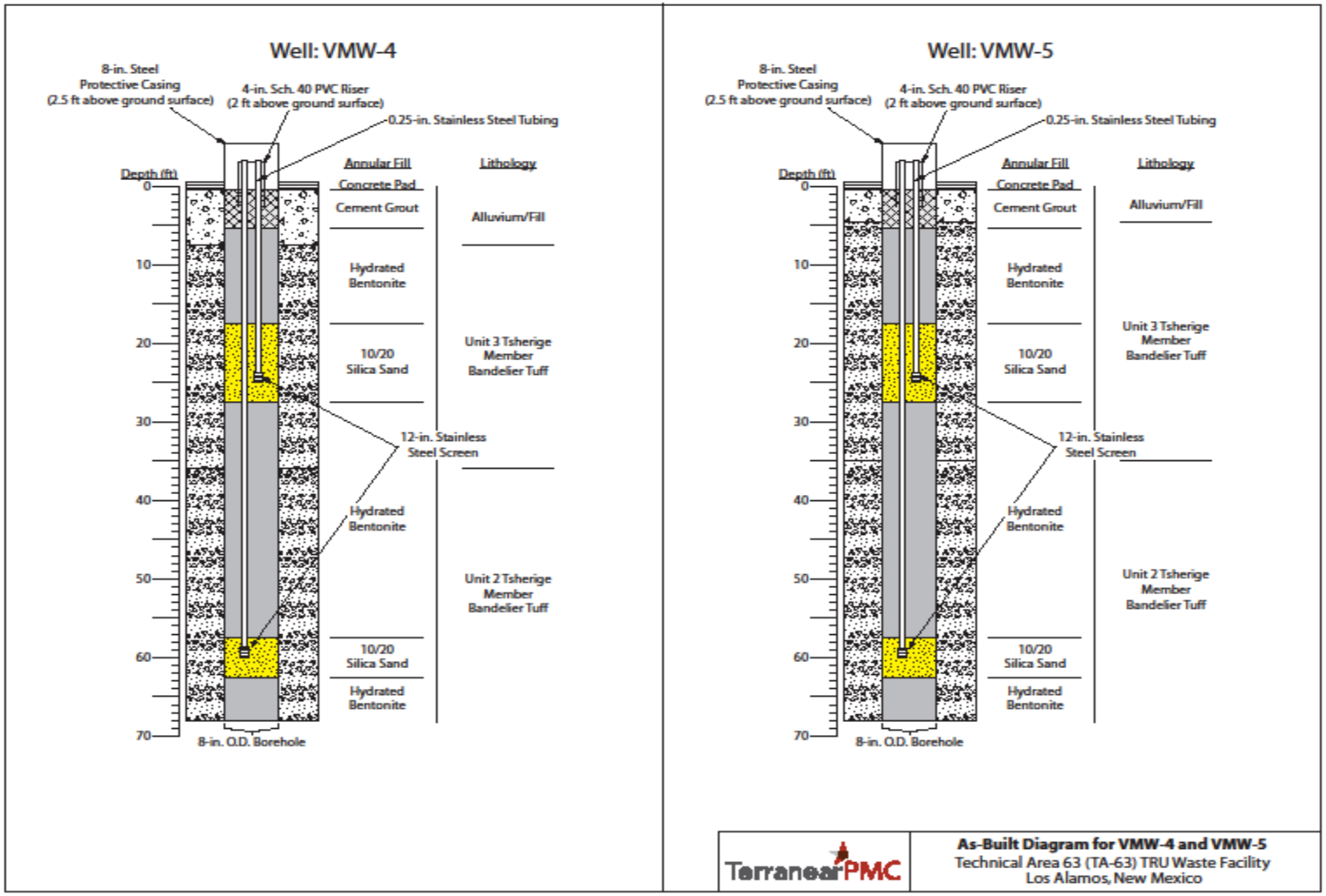

Figure 3 VMW-4 and VMW-5 Well Construction and Lithologic Details.

Attachment 2

Sampling Report for Post-Installation Sampling of Vapor Wells at TA-63 Transuranic Waste Facility

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September 2015

SAMPLING REPORT FOR POST-INSTALLATION SAMPLING OF VAPOR WELLS AT TA-63 TRANSURANIC WASTE FACILITY

Los Alamos
NATIONAL LABORATORY
EST. 1943

Sampling Report for Post-Installation Sampling of Vapor Wells at TA-63 Transuranic Waste Facility

September 2015

Responsible LANS representative:

Printed Name	Signature	Title	Organization	Date
Mark Shepard	M.D. Shepard	Project Leader	Environmental & Waste MGT Facility OPS	10/21/15

Primary LANS STR:

Printed Name	Signature	Title	Organization	Date
Tracy McFarland	Tracy McFarland	STR	Environmental Programs	10/21/15

Responsible subcontractor representatives:

Printed Name	Signature		Title	Organization	Date
Peter Gram	A.W. Crowder	for	Program Manager	TerranearPMC	9/29/15
Andrew Crowder	A.W. Crowder		Project Manager	TerranearPMC	9/29/15

1.0 Sampling Procedure

Five vapor monitoring wells, designated as VMW-1, VMW-2, VMW-3, VMW-4 and VMW-5, were installed at the TA-63 Transuranic Waste Facility (TWF) from August 18 to August 24, 2015. Initial vapor-monitoring samples from the five wells were collected on September 1, 2015 by TerranearPMC.

Vapor sampling procedures were conducted in accordance with LANL procedure EP-ERSS-SOP-5074. Wells VMW-1, VMW-2, and VMW-3 are single-port wells. Wells VMW-4 and VMW-5 are dual-port wells. Each port was purged for a minimum of 10 minutes before sampling. Purge screening was performed with a MultiRAE IR Multigas Monitor to measure percent oxygen, percent carbon dioxide, and percent methane. The gas concentrations were stable prior to sampling.

Each port was sampled for Volatile Organic Compounds (VOC) using a SUMMA canister and submitted for laboratory analysis of VOCs using U.S. EPA Method TO-15. A field duplicate and field blank were collected while sampling well VMW-2.

2.0 ANALYTICAL RESULTS

Analytical results are shown in Table 2.0-1. Screening measurements during purging are presented on the attached purge forms for each well.

3.0 DEVIATIONS FROM THE MONITORING WORK PLAN

Vapor sampling at wells VMW-1, VMW-2, VMW-3, VMW-4, and VMW-5 was conducted as directed in the TA-63 Transuranic Waste Facility Soil Vapor Monitoring Work Plan with no deviations. Sampling followed LANL procedure EP-ERSS-SOP-5074, *Sampling Subsurface Vapor*. One field duplicate and one field blank were collected for quality control during sampling.

Table 2.0-1. Analytical Results of VOC Samples at TWF Vapor Wells

Vapor Well	Sampling Date/Time	Sample ID	Port Depth (ft)	Quality Control Type	VOC Results
VMW-1	9/1/15 12:47	VMW1-15-104285	7	REG	Awaiting Results
VMW-2	9/1/15 11:51	VMW2-15-104275	7	REG	Awaiting Results
VMW-3	9/1/15 12:17	VMW3-15-104276	7	REG	Awaiting Results
VMW-4 (port 1)	9/1/15 09:38	VMW4-15-104277	25	REG	Awaiting Results
VMW-4 (port 2)	9/1/15 09:58	VMW4-15-104278	60	REG	Awaiting Results
VMW-5 (port 1)	9/1/15 10:51	VMW5-15-104279	25	REG	Awaiting Results
VMW-5 (port 2)	9/1/15 11:08	VMW5-15-104280	60	REG	Awaiting Results
VMW-2	9/1/15 11:52	VMW2-15-104281	7	FD	Awaiting Results
VMW-2	9/1/15 11:53	VMW2-15-104282	7	PEB	Awaiting Results

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW2-15-104281

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):		9/1/15	**FIELD MATRIX:**	GAS	QC
TIME COLLECTED (HH:MM):		1152-1515 9/1/15	**MEDIA:**		GAS
PRS ID:	NA	QC	**SAMPLE TECH CODE:**	AM	QC
LOCATION ID:	63-2010		**FIELD PREP:**	NA	
LOCATION TYPE:	Vapor well		**FIELD QC TYPE:**	FD	
TOP DEPTH:	5 ft		**SAMPLE USAGE:**	QC	
BOTTOM DEPTH:	10 ft		**EXCAVATED:**		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE	Y	6 Liter Summa

SAMPLE COMMENTS: with VMW2-15-104275

LOCATION COMMENTS: Port depth 7 ft bgs Summa #5654

FIELD PARAMETERS:

COLLECTED BY (PRINT): M. Arendo

RELINQUISHED BY (Printed Name) (Signature) P Bannon	**Date/Time** 9/1/15 1340	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time** 9/1/15 1340
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

Report Date: 08/26/2015

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW2-15-104282

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):		9/1/15	FIELD MATRIX:	GAS	OK
TIME COLLECTED (HH:MM):		1153	MEDIA:		gas
PRS ID:	NA	OK	SAMPLE TECH CODE:	AM	OK
LOCATION ID:	63-2010	OK	FIELD PREP:	NA	↓
LOCATION TYPE:	Vapor well		FIELD QC TYPE:	PEB	FB
TOP DEPTH:	5 ft		SAMPLE USAGE:	QC	OK
BOTTOM DEPTH:	10 ft		EXCAVATED:		YES / NO (NA)

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE	Y	6 Liter Summa

SAMPLE COMMENTS: w/ VMW2-15-104275

LOCATION COMMENTS: Port depth 7 ft bgs

Summa # 12679

FIELD PARAMETERS:

COLLECTED BY (PRINT): M. Shando

RELINQUISHED BY (Printed Name) (Signature)	**Date/Time** 9/1/15 1340	**RECEIVED BY (Printed Name) (Signature)** M. Montoya	**Date/Time** 9/1/15 1340
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

Report Date: 08/26/2015

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW4-15-104283

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):			**FIELD MATRIX:**	GAS	
TIME COLLECTED (HH:MM):			**MEDIA:**		
PRS ID:	NA		**SAMPLE TECH CODE:**	AM	
LOCATION ID:	63-2012		**FIELD PREP:**		
LOCATION TYPE:	Vapor well		**FIELD QC TYPE:**	FD	
TOP DEPTH:	22.5 ft		**SAMPLE USAGE:**	QC	
BOTTOM DEPTH:	27.5 ft		**EXCAVATED:**	YES / NO / NA	

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE		6 Liter Summa

SAMPLE COMMENTS: w/ ~~Kaswell~~ JDS 8/26/15 VMW4-15-104277

LOCATION COMMENTS: Port depth 25 ft bgs

FIELD PARAMETERS:

COLLECTED BY (PRINT):

RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 08/26/2015

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW4-15-104284

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):			**FIELD MATRIX:**	GAS	
TIME COLLECTED (HH:MM):			**MEDIA:**	AIR	
PRS ID:	NA		**SAMPLE TECH CODE:**	AM	
LOCATION ID:	63-2012		**FIELD PREP:**		
LOCATION TYPE:	vapor well		**FIELD QC TYPE:**	PEB	
TOP DEPTH:	22.5 ft		**SAMPLE USAGE:**	QC	
BOTTOM DEPTH:	27.5 ft		**EXCAVATED:**	YES / NO / NA	

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE		6 Liter Summa

SAMPLE COMMENTS: w/ VMW4-15-104277

LOCATION COMMENTS: port depth 25 ft bgs

FIELD PARAMETERS:

COLLECTED BY (PRINT):

RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

Report Date: 08/26/2015

QC2

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW1-15-104285

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):		9/1/15	**FIELD MATRIX:**	GAS	AF
TIME COLLECTED (HH:MM):		1247	**MEDIA:**		SAS
PRS ID:	NA	AF	**SAMPLE TECH CODE:**	AM	AF
LOCATION ID:	63-2009		**FIELD PREP:**		NA
LOCATION TYPE:	Vapor monitoring well		**FIELD QC TYPE:**	REG	
TOP DEPTH:	5 ft		**SAMPLE USAGE:**	INV	
BOTTOM DEPTH:	10 ft		**EXCAVATED:**		YES / NO / (NA)

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE	Y	6 Liter Summa

SAMPLE COMMENTS:

LOCATION COMMENTS: Port depth 7 ft bgs Summa #5748

FIELD PARAMETERS: CH4% = 0.0 VOCppm = 1.6 O2% = 19.8 CO = 3596

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature) P Ballon	**Date/Time** 9/1/15 1340	**RECEIVED BY (Printed Name) (Signature)** S. Sherwood	**Date/Time** 9/1/15 1340
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

Report Date: 08/26/2015

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW2-15-104275

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):		9/1/15	FIELD MATRIX:	GAS	OK
TIME COLLECTED (HH:MM):		1151	MEDIA:		GAS
PRS ID:	NA	OK	SAMPLE TECH CODE:	AM	
LOCATION ID:	63-2010	OK	FIELD PREP:	NA	
LOCATION TYPE:	Vapor monitoring well	OK	FIELD QC TYPE:	REG	
TOP DEPTH:	5 ft		SAMPLE USAGE:	INV	
BOTTOM DEPTH:	10 ft		EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE	Y	6 Liter Summa

SAMPLE COMMENTS:

LOCATION COMMENTS: port depth 7 ft bgs Summa # L61300

FIELD PARAMETERS: $CH_4\% = 0.0$ CO_2 ppm = 2110 VOC ppm = 2.1 $O_2\%$ = 20.

COLLECTED BY (PRINT): M. Shonde

RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
P. Ballard	9/1/15 1340	S. Sherwood	9/1/15 1340
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 08/26/2015

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW3-15-104276

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):		9/1/15	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):		1217	**MEDIA:**		gas
PRS ID:		na	**SAMPLE TECH CODE:**	AM	
LOCATION ID:	63-2011	OK	**FIELD PREP:**	NA	
LOCATION TYPE:		Vapor Monitoring well	**FIELD QC TYPE:**	REG	
TOP DEPTH:	5 ft		**SAMPLE USAGE:**	INV	
BOTTOM DEPTH:	10 ft		**EXCAVATED:**		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE	Y	6 Liter Summa

SAMPLE COMMENTS:

LOCATION COMMENTS: Sample port 7 ft bgs Summa # 02503

FIELD PARAMETERS: CH4% = 0.0 VOC ppm = 2.3 O2 ppm = 2450 O2% = 20.1

COLLECTED BY (PRINT): M Sherwood

RELINQUISHED BY (Printed Name) (Signature) P Ballard	**Date/Time** 9/1/15 1340	**RECEIVED BY (Printed Name) (Signature)** S Sherwood S Sherwood	**Date/Time** 9/1/15 1340
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

Report Date: 08/26/2015

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW4-15-104277

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):		9/01/15	FIELD MATRIX:	GAS	OK
TIME COLLECTED (HH:MM):		0938	MEDIA:		GAS
PRS ID:	NA	OK	SAMPLE TECH CODE:	AM	QC
LOCATION ID:	63-2012	QC	FIELD PREP:	NA	
LOCATION TYPE:	Vapor well		FIELD QC TYPE:	REG	
TOP DEPTH:	22.5 ft		SAMPLE USAGE:	INV	
BOTTOM DEPTH:	27.5 ft		EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE	Y	6 Liter Summa

SAMPLE COMMENTS:

Summa # 32115

LOCATION COMMENTS: put depth 25 ft bgs

FIELD PARAMETERS: CH_4 % = 0.0 CO_2 ppm = 6560 O_2 % = 19.3 VOC ppm = 0.3

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature) R Baughman	Date/Time 9/1/15 1340	**RECEIVED BY** (Printed Name) S. Sherwood (Signature) S. Sherwood	Date/Time 9/1/15 1340
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	**RECEIVED BY** (Printed Name) (Signature)	Date/Time

Report Date: 08/26/2015

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW4-15-104278

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):		9/1/15	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):		0958	**MEDIA:**		GAS
PRS ID:	NA	OK	**SAMPLE TECH CODE:**	AM	OK
LOCATION ID:	63-2012		**FIELD PREP:**	NA	
LOCATION TYPE:	Vapor well		**FIELD QC TYPE:**	REG	
TOP DEPTH:	57.5 ft		**SAMPLE USAGE:**	INV	
BOTTOM DEPTH:	62.5 ft		**EXCAVATED:**		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE	Y	6 Liter Summa

SAMPLE COMMENTS: Summa # 20945

LOCATION COMMENTS: pump depth 60 ft bgs

FIELD PARAMETERS: $CH_4\% = 0.0$ $CO_2 ppm = 7580$ $O_2\% = 19.4$ $VOC ppm = 4.2$

COLLECTED BY (PRINT): M. Shojda

RELINQUISHED BY (Printed Name) (Signature) P. Bullcom	**Date/Time** 9/1/15 1340	**RECEIVED BY (Printed Name) (Signature)** S. Sherwood	**Date/Time** 9/1/15 1340
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

Report Date: 08/26/2015

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW5-15-104279

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):		9/1/15	**FIELD MATRIX:**	GAS	GAS
TIME COLLECTED (HH:MM):		1051	**MEDIA:**		GAS
PRS ID:	NA	GAS	**SAMPLE TECH CODE:**	AM	GAS
LOCATION ID:	63-2013		**FIELD PREP:**	NA	
LOCATION TYPE:	Vapor well		**FIELD QC TYPE:**	REG	
TOP DEPTH:	22.5 ft		**SAMPLE USAGE:**	INV	
BOTTOM DEPTH:	27.5 ft		**EXCAVATED:**		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE	Y	6 Liter Summa

SAMPLE COMMENTS:

LOCATION COMMENTS: port depth 25 ft bgs Summa# 12077

FIELD PARAMETERS: CH_4 % = 0.0 CO_2 = 1.56 % O_2 % = 17.9 Vkppm - 23

COLLECTED BY (PRINT): M. Sherwood

RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
K Baldwin	9/1/15 1340	S Sherwood	9/1/15 1340
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

Report Date: 08/26/2015

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 10403

EVENT NAME: Vapor Monitoring TA-63 for TRU Waste Facility 2015

SAMPLE ID: VMW5-15-104280

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):		9/1/15	FIELD MATRIX:	GAS	GAS
TIME COLLECTED (HH:MM):		1108	MEDIA:		SUS
PRS ID:	NA	OK	SAMPLE TECH CODE:	AM	AM
LOCATION ID:	63-2013		FIELD PREP:	NA	
LOCATION TYPE:	vapor well		FIELD QC TYPE:	REG	
TOP DEPTH:	57.5 ft		SAMPLE USAGE:	INV	
BOTTOM DEPTH:	62.5 ft		EXCAVATED:		YES / NO / NA

PRIORITY	ORDER	CONTAINER	#	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	TO15	6 Liter Summa Canister	1	NONE	Y	6 Liter Summa

SAMPLE COMMENTS:

LOCATION COMMENTS: port depth 60 ft bgs Summa # 1618

FIELD PARAMETERS: $CH_4\% = 0.0$ $CO_2\% = 1.16$ $VOC = 3.5$ $O_2\% = 21$

COLLECTED BY (PRINT): M. Maez

RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time
P. Baggum	9/1/15 1340	M. Martinez	9/1/15 1340
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Report Date: 08/26/2015

Daily QA/QC Operational Checks for Landtec or MulitRAE IR Multigas Monitor and B&K Instruments

Sampling Date 9/01/2015 B&K Instrument Name/Number MultiRaeIR/3375 Sampler M. Shemeko

Cal Gas Lot # 0-300-81 Reviewed by: _____ Date _____

Standard	Time	~~ICA~~ (ppm) VOC	~~ICE~~ (ppm) CO_2	Calibration Verified? (>80%)
Isobutylene ~~Standard 1~~ 100 ppm	805	80	0	✓
Standard 2				
Standard 3				

Sampling Date _____ B&K Instrument Name/Number _____ Sampler _____

Instrument is checked against ambient air Reviewed by: _____ Date _____

Standard	Time	Reading 1	Reading 2	Reading 3	Expected Value	Calibration Verified?
Methane	805	0%	0%	0%	0%	
CO_2	↓	0%	0%	0%	0%	
Oxygen	↓	20.9%	20.9%	20.9%	20.9% +/- 1%	

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID: VMW-1 MultiRae No: 2375 Sampler: Brendo, Barcom

Sampling Date: 9/1/15 Static Pressure of Port (KpA): -0.015 Reviewed by: _____ Date _____

Purge Flow Rate (slpm): 2.0 Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) Different H/O

Port #	Depth (ft bgs)	Screening Time	CH_4 %	CO_2 ppm	O_2%	VOC (ppm)	Comments
5-10	7'	1245	0.0	3590	19.8	1.5	Ambient Air: CH_4%= 0.0, CO_2(ppm)= 200, O_2 20.9, VOC (ppm) 0.0 Start Port Purge = 1235
↓	↓	1246	0.0	3620	19.8	1.5	
↓	↓	1247	0.0	3590	19.8	1.6	
							Summa # = 5748
							Sample ID # = VMW1-15-104285
							Total Purge (SL) = 26
							Vac pressure of Summa Canister (psi) = -26

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID: VMW-2 MultiRae No: 2375 Sampler: Shanelo, Bucio

Sampling Date: 9/1/15 Static Pressure of Port (KpA): 0.0 Reviewed by: _____ Date _____

Purge Flow Rate (slpm): 0.0 Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) _____

Port #	Depth (ft bgs)	Screening Time	CH_4 %	CO_2 ppm	O_2%	VOC (ppm)	Comments
5-10'	7'	1149	0.0	2110	20.1	1.9	Ambient Air: CH_4%= 0.0, CO_2(ppm)= 200, O_2 20.9, VOC (ppm) 0.0 Start Port Purge = 1139
↓	↓	1150	0.0	2110	20.0	2.0	
		1151	0.0	2110	20.0	2.1	
							Summa # = 6L1300
							Sample ID # = VMW2-15-104275
							Total Purge (SL) = 26
							Vac pressure of Summa Canister (psi) = -26

1152 FD VMW2-15-104281

1153 FB VMW2-15-104282

-28

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID VMW-3 MultiRae No 2375 Sampler: Shanda Bauer

Sampling Date 9/1/15 Static Pressure of Port (KpA): 0.0 Reviewed by: _____ Date _____

Purge Flow Rate (slpm): 2.0 Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) _____

Port #	Depth (ft bgs)	Screening Time	CH_4 %	CO_2 ppm	O_2%	VOC (ppm)	Comments
5-10'	7'	1215	0.0	2420	20.1	2.1	Ambient Air: CH_4%= 0.0, CO_2(ppm)= 200, O_2 20.9, VOC (ppm) 0.0 Start Port Purge = 1205
↓	↓	1216	0.0	2450	20.1	2.1	
↓	↓	1217	0.0	2450	20.1	2.3	
							Summa # = 22503
							Sample ID # = VMW3-15-104276
							Total Purge (SL) = 26
							Vac pressure of Summa Canister (psi) =

VMW-4 PB 9/1/15

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID ~~VMW-4~~ MultiRae No 2375 Sampler: Shenda, Baron

Sampling Date 9/01/15 Static Pressure of Port (KpA): -0.046 Reviewed by: _____ Date _____

Purge Flow Rate (slpm): 2.0 Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) Depart to Conn

Port #	Depth (ft bgs)	Screening Time	CH_4 %	CO_2 ppm	O_2%	VOC (ppm)	Comments
TD	25	0936	0.0	6560	19.3	2.1	Ambient Air: CH_4%=0.0, CO_2(ppm)=450, O_2 20.9, VOC (ppm) 0.0 Start Port Purge = 0926
↓	25	0937	0.0	6560	19.3	2.2	
↓	25	0938	0.0	6560	19.3	2.3	
							Summa # = 32115
							Sample ID # = ~~VMW-14~~ PB 9/1/15 VMW4-15-104277
							Total Purge (SL) = 26
							Vac pressure of Summa Canister (psi) = -28

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID: VMW-4 MultiRae No: 2375 Sampler: Shandy Bauer

Sampling Date: 9/1/15 Static Pressure of Port (KpA): -0.088 Reviewed by: _____ Date _____

Purge Flow Rate (slpm): 2.0 Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) default to 10min

Port #	Depth (ft bgs)	Screening Time	CH_4 %	CO_2 ppm	O_2%	VOC (ppm)	Comments
Bottom	60	0956	0.0	7530	19.5	4.1	Ambient Air: CH_4%=0.0, CO_2(ppm)=450, O_2 20.9, VOC (ppm) 0.0 Start Port Purge = 0946
↓	↓	0957	0.0	7580	19.4	4.2	
↓	↓	0958	0.0	7580	19.4	4.2	
							~~Sample ID # Summa # =~~ VMW4-15-104278
							~~Sample ID # =~~ Summa # 20945
							Total Purge (SL) = 26
							Vac pressure of Summa Canister (psi) = -28

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID VMW-5 MultiRae No 2375 Sampler: P. Baucom, M. Shands

Sampling Date 9/10/15 Static Pressure of Port (KpA): -0.037 Reviewed by: _____ Date _____

Purge Flow Rate (slpm): 1.9 Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) default to 10s

Port #	Depth (ft bgs)	Screening Time	CH_4 %	CO_2 ~~ppm~~ %	O_2%	VOC (ppm)	Comments
"TOP"	25'	1049	0.0	1.55	17.9	2.1	Ambient Air: CH_4%= 0.0, CO_2(ppm)= ~~200~~, O_2 20.9, VOC (ppm) 0.0 Start Port Purge = 1039
↓	↓	1050	0.0	1.56	17.9	2.2	
↓	↓	1051	0.0	1.56	17.9	23	
							Summa # = 12077
							~~Sample ID # = VMW-5-MS-15~~ - 104279
							~~Total~~ Purge (SL) = 24.7
							Vac pressure of Summa Canister (psi) = -26

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID: VMW-5 MultiRae No: 2379 Sampler: Shenda Bauerm

Sampling Date: 9/1/15 Static Pressure of Port (KpA): -0.102 Reviewed by: _____ Date: _____

Purge Flow Rate (slpm): 1.9 Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) 10 default min

Port #	Depth (ft bgs)	Screening Time	CH_4 %	CO_2 ~~ppm~~ %	O_2%	VOC (ppm)	Comments
Bottom	60	1106	0.0	1.15	19.1	3.4	Ambient Air: CH_4%= 0.0, CO_2(ppm)= 200, O_2 20.9, VOC (ppm) 0.0, Start Port Purge = 1056
↓	↓	1107	0.0	1.16	19.1	3.6	
↓	↓	1108	0.0	1.16	19.1	3.5	
							Summa # = 1618
							Sample ID # = VMW5-15-104280
							Total Purge (SL) = 24.7
							Vac pressure of Summa Canister (psi) = -26

Attachment 3

Analytical Results for Soil Vapor Monitoring Wells at TA-63 Transuranic Waste Facility

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Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW1-15-104285	5	10	GAS	EPA:TO15	100-41-4	Ethylbenzene	N	39.0567	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	100-42-5	Styrene	N	38.3136	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	100-44-7	Benzyl Chloride	N	46.5649	ug/m3	U	UJ
VMW1-15-104285	5	10	GAS	EPA:TO15	10061-01-5	Dichloropropene[cis-1,3-]	N	40.8225	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	10061-02-6	Dichloropropene[trans-1,3-]	N	40.8225	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	103-65-1	Propylbenzene[1-]	N	44.2142	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	106-46-7	Dichlorobenzene[1,4-]	N	54.0805	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	106-93-4	Dibromoethane[1,2-]	N	69.108	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	106-99-0	Butadiene[1,3-]	N	19.8987	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	107-05-1	Chloro-1-propene[3-]	N	112.598	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	107-06-2	Dichloroethane[1,2-]	N	36.4044	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	108-10-1	Methyl-2-pentanone[4-]	N	36.8458	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	108-67-8	Trimethylbenzene[1,3,5-]	N	44.2142	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	108-88-3	Toluene	N	33.8948	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	108-90-7	Chlorobenzene	N	41.4074	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	109-99-9	Tetrahydrofuran	N	26.5271	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	110-54-3	Hexane	N	31.703	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	110-82-7	Cyclohexane	N	30.9599	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	120-82-1	Trichlorobenzene[1,2,4-]	N	267	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	123-91-1	Dioxane[1,4-]	N	129.652	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	124-48-1	Chlorodibromomethane	N	76.6199	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	127-18-4	Tetrachloroethene	N	61.0038	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	142-82-5	n-Heptane	N	36.8605	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	156-59-2	Dichloroethene[cis-1,2-]	N	35.6613	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	156-60-5	Dichloroethene[trans-1,2-]	N	35.6613	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	1634-04-4	Methyl tert-Butyl Ether	N	32.4277	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	540-84-1	Isooctane	N	42.0217	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	541-73-1	Dichlorobenzene[1,3-]	N	54.0805	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	56-23-5	Carbon Tetrachloride	N	56.5857	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	591-78-6	Hexanone[2-]	N	147.383	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	622-96-8	Ethyltoluene[4-]	N	44.2142	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	64-17-5	Ethanol	N	67.791	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	67-63-0	Propanol[2-]	N	88.4358	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	67-64-1	Acetone	N	85.4635	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	67-66-3	Chloroform	N	43.9163	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	71-43-2	Benzene	N	28.7343	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	71-55-6	Trichloroethane[1,1,1-]	N	49.0738	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	74-83-9	Bromomethane	N	34.9255	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	74-87-3	Chloromethane	N	74.2949	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-00-3	Chloroethane	N	94.9251	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-01-4	Vinyl Chloride	N	22.9911	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-09-2	Methylene Chloride	N	31.2432	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-15-0	Carbon Disulfide	N	28.0092	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-25-2	Bromoform	N	92.9717	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-27-4	Bromodichloromethane	N	60.257	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-34-3	Dichloroethane[1,1-]	N	36.4044	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-35-4	Dichloroethene[1,1-]	N	35.6613	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-69-4	Trichlorofluoromethane	N	50.5342	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	75-71-8	Dichlorodifluoromethane	N	44.4791	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	N	68.9299	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	76-14-2	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	N	62.8763	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW1-15-104285	5	10	GAS	EPA:TO15	78-87-5	Dichloropropane[1,2-]	N	41.5656	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	78-93-3	Butanone[2-]	N	106.108	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	79-00-5	Trichloroethane[1,1,2-]	N	49.0738	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	79-01-6	Trichloroethene	N	48.3344	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	79-34-5	Tetrachloroethane[1,1,2,2-]	N	61.7469	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	87-68-3	Hexachlorobutadiene	N	383.703	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	95-47-6	Xylene[1,2-]	N	39.053	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	95-50-1	Dichlorobenzene[1,2-]	N	54.0805	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	95-63-6	Trimethylbenzene[1,2,4-]	N	44.2142	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	98-82-8	Isopropylbenzene	N	44.2142	ug/m3	U	U
VMW1-15-104285	5	10	GAS	EPA:TO15	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	N	39.053	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	100-41-4	Ethylbenzene	N	41.2265	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	100-42-5	Styrene	N	40.4422	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	100-44-7	Benzyl Chloride	N	49.1519	ug/m3	U	UJ
VMW2-15-104275	5	10	GAS	EPA:TO15	10061-01-5	Dichloropropene[cis-1,3-]	N	43.0904	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	10061-02-6	Dichloropropene[trans-1,3-]	N	43.0904	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	103-65-1	Propylbenzene[1-]	N	46.6706	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	106-46-7	Dichlorobenzene[1,4-]	N	57.085	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	106-93-4	Dibromoethane[1,2-]	N	72.9473	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	106-99-0	Butadiene[1,3-]	N	21.0041	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	107-05-1	Chloro-1-propene[3-]	N	118.853	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	107-06-2	Dichloroethane[1,2-]	N	38.4268	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	108-10-1	Methyl-2-pentanone[4-]	N	38.8928	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	108-67-8	Trimethylbenzene[1,3,5-]	N	46.6706	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	108-88-3	Toluene	N	35.7779	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	108-90-7	Chlorobenzene	N	43.7078	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	109-99-9	Tetrahydrofuran	N	28.0008	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	110-54-3	Hexane	N	33.4643	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	110-82-7	Cyclohexane	N	32.6799	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	120-82-1	Trichlorobenzene[1,2,4-]	N	281.833	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	123-91-1	Dioxane[1,4-]	N	136.855	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	124-48-1	Chlorodibromomethane	N	80.8765	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	127-18-4	Tetrachloroethene	N	64.3929	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	142-82-5	n-Heptane	N	38.9083	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	156-59-2	Dichloroethene[cis-1,2-]	N	37.6425	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	156-60-5	Dichloroethene[trans-1,2-]	N	37.6425	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	1634-04-4	Methyl tert-Butyl Ether	N	34.2292	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	540-84-1	Isooctane	N	44.3563	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	541-73-1	Dichlorobenzene[1,3-]	N	57.085	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	56-23-5	Carbon Tetrachloride	N	59.7294	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	591-78-6	Hexanone[2-]	N	155.571	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	622-96-8	Ethyltoluene[4-]	N	46.6706	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	64-17-5	Ethanol	N	71.5572	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	67-63-0	Propanol[2-]	N	93.349	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	67-64-1	Acetone	N	90.2114	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	67-66-3	Chloroform	N	46.3561	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	71-43-2	Benzene	N	30.3306	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	71-55-6	Trichloroethane[1,1,1-]	N	51.8001	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	74-83-9	Bromomethane	N	36.8658	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	74-87-3	Chloromethane	N	78.4224	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW2-15-104275	5	10	GAS	EPA:TO15	75-00-3	Chloroethane	N	100.199	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	75-01-4	Vinyl Chloride	N	24.2684	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	75-09-2	Methylene Chloride	N	32.9789	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	75-15-0	Carbon Disulfide	N	29.5653	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	75-25-2	Bromoform	N	98.1368	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	75-27-4	Bromodichloromethane	N	63.6047	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	75-34-3	Dichloroethane[1,1-]	N	38.4268	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	75-35-4	Dichloroethene[1,1-]	N	37.6425	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	75-69-4	Trichlorofluoromethane	N	53.3417	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	75-71-8	Dichlorodifluoromethane	N	46.9502	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	N	72.7594	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	76-14-2	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	N	66.3694	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	78-87-5	Dichloropropane[1,2-]	N	43.8748	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	78-93-3	Butanone[2-]	N	112.003	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	79-00-5	Trichloroethane[1,1,2-]	N	51.8001	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	79-01-6	Trichloroethene	Y	75.1868	ug/m3		NQ
VMW2-15-104275	5	10	GAS	EPA:TO15	79-34-5	Tetrachloroethane[1,1,2,2-]	N	65.1773	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	87-68-3	Hexachlorobutadiene	N	405.02	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	95-47-6	Xylene[1,2-]	N	41.2226	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	95-50-1	Dichlorobenzene[1,2-]	N	57.085	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	95-63-6	Trimethylbenzene[1,2,4-]	N	46.6706	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	98-82-8	Isopropylbenzene	N	46.6706	ug/m3	U	U
VMW2-15-104275	5	10	GAS	EPA:TO15	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	N	41.2226	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	100-41-4	Ethylbenzene	N	39.9246	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	100-42-5	Styrene	N	39.165	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	100-44-7	Benzyl Chloride	N	47.5997	ug/m3	U	UJ
VMW2-15-104281	5	10	GAS	EPA:TO15	10061-01-5	Dichloropropene[cis-1,3-]	N	41.7297	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	10061-02-6	Dichloropropene[trans-1,3-]	N	41.7297	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	103-65-1	Propylbenzene[1-]	N	45.1968	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	106-46-7	Dichlorobenzene[1,4-]	N	55.2823	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	106-93-4	Dibromoethane[1,2-]	N	70.6437	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	106-99-0	Butadiene[1,3-]	N	20.3408	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	107-05-1	Chloro-1-propene[3-]	N	115.725	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	107-06-2	Dichloroethane[1,2-]	N	37.2134	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	108-10-1	Methyl-2-pentanone[4-]	N	37.6646	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	108-67-8	Trimethylbenzene[1,3,5-]	N	45.1968	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	108-88-3	Toluene	N	34.648	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	108-90-7	Chlorobenzene	N	42.3276	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	109-99-9	Tetrahydrofuran	N	27.1166	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	110-54-3	Hexane	N	32.4075	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	110-82-7	Cyclohexane	N	31.6479	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	120-82-1	Trichlorobenzene[1,2,4-]	N	274.416	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	123-91-1	Dioxane[1,4-]	N	133.253	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	124-48-1	Chlorodibromomethane	N	78.3225	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	127-18-4	Tetrachloroethene	N	62.3595	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	142-82-5	n-Heptane	N	37.6797	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	156-59-2	Dichloroethene[cis-1,2-]	N	36.4538	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	156-60-5	Dichloroethene[trans-1,2-]	N	36.4538	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	1634-04-4	Methyl tert-Butyl Ether	N	33.1483	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	540-84-1	Isooctane	N	42.9556	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW2-15-104281	5	10	GAS	EPA:TO15	541-73-1	Dichlorobenzene[1,3-]	N	55.2823	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	56-23-5	Carbon Tetrachloride	N	57.8432	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	591-78-6	Hexanone[2-]	N	151.477	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	622-96-8	Ethyltoluene[4-]	N	45.1968	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	64-17-5	Ethanol	N	69.6741	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	67-63-0	Propanol[2-]	N	90.8924	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	67-64-1	Acetone	N	87.8374	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	67-66-3	Chloroform	N	44.8922	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	71-43-2	Benzene	N	29.3728	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	71-55-6	Trichloroethane[1,1,1-]	N	50.1643	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	74-83-9	Bromomethane	N	35.7017	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	74-87-3	Chloromethane	N	76.3587	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-00-3	Chloroethane	N	97.5619	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-01-4	Vinyl Chloride	N	23.502	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-09-2	Methylene Chloride	N	31.9375	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-15-0	Carbon Disulfide	N	28.6316	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-25-2	Bromoform	N	95.0377	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-27-4	Bromodichloromethane	N	61.5961	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-34-3	Dichloroethane[1,1-]	N	37.2134	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-35-4	Dichloroethene[1,1-]	N	36.4538	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-69-4	Trichlorofluoromethane	N	51.6572	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	75-71-8	Dichlorodifluoromethane	N	45.4675	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	N	70.4617	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	76-14-2	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	N	64.2735	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	78-87-5	Dichloropropane[1,2-]	N	42.4893	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	78-93-3	Butanone[2-]	N	109.056	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	79-00-5	Trichloroethane[1,1,2-]	N	50.1643	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	79-01-6	Trichloroethene	Y	69.8163	ug/m3		NQ
VMW2-15-104281	5	10	GAS	EPA:TO15	79-34-5	Tetrachloroethane[1,1,2,2-]	N	63.1191	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	87-68-3	Hexachlorobutadiene	N	394.361	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	95-47-6	Xylene[1,2-]	N	39.9209	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	95-50-1	Dichlorobenzene[1,2-]	N	55.2823	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	95-63-6	Trimethylbenzene[1,2,4-]	N	45.1968	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	98-82-8	Isopropylbenzene	N	45.1968	ug/m3	U	U
VMW2-15-104281	5	10	GAS	EPA:TO15	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	N	39.9209	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	100-41-4	Ethylbenzene	N	60.7549	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	100-42-5	Styrene	N	59.599	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	100-44-7	Benzyl Chloride	N	72.4343	ug/m3	U	UJ
VMW2-15-104282	5	10	GAS	EPA:TO15	10061-01-5	Dichloropropene[cis-1,3-]	N	63.5017	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	10061-02-6	Dichloropropene[trans-1,3-]	N	63.5017	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	103-65-1	Propylbenzene[1-]	N	68.7777	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	106-46-7	Dichlorobenzene[1,4-]	N	84.1252	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	106-93-4	Dibromoethane[1,2-]	N	107.501	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	106-99-0	Butadiene[1,3-]	N	30.9535	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	107-05-1	Chloro-1-propene[3-]	N	181.407	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	107-06-2	Dichloroethane[1,2-]	N	56.629	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	108-10-1	Methyl-2-pentanone[4-]	N	57.3157	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	108-67-8	Trimethylbenzene[1,3,5-]	N	68.7777	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	108-88-3	Toluene	N	52.7253	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	108-90-7	Chlorobenzene	N	64.4115	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW2-15-104282	5	10	GAS	EPA:TO15	109-99-9	Tetrahydrofuran	N	41.2643	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	110-54-3	Hexane	N	49.3158	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	110-82-7	Cyclohexane	N	48.1599	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	120-82-1	Trichlorobenzene[1,2,4-]	N	430.166	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	123-91-1	Dioxane[1,4-]	N	208.884	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	124-48-1	Chlorodibromomethane	N	119.186	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	127-18-4	Tetrachloroethene	N	94.8948	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	142-82-5	n-Heptane	N	57.3386	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	156-59-2	Dichloroethene[cis-1,2-]	N	55.4731	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	156-60-5	Dichloroethene[trans-1,2-]	N	55.4731	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	1634-04-4	Methyl tert-Butyl Ether	N	50.4431	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	540-84-1	Isooctane	N	65.3672	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	541-73-1	Dichlorobenzene[1,3-]	N	84.1252	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	56-23-5	Carbon Tetrachloride	N	88.0222	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	591-78-6	Hexanone[2-]	N	237.451	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	622-96-8	Ethyltoluene[4-]	N	68.7777	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	64-17-5	Ethanol	N	109.219	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	67-63-0	Propanol[2-]	N	142.48	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	67-64-1	Acetone	N	137.691	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	67-66-3	Chloroform	N	68.3142	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	71-43-2	Benzene	N	44.6978	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	71-55-6	Trichloroethane[1,1,1-]	N	76.337	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	74-83-9	Bromomethane	N	54.3286	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	74-87-3	Chloromethane	N	119.697	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-00-3	Chloroethane	N	152.935	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-01-4	Vinyl Chloride	N	35.764	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-09-2	Methylene Chloride	N	48.6005	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-15-0	Carbon Disulfide	N	43.5699	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-25-2	Bromoform	N	144.623	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-27-4	Bromodichloromethane	N	93.7332	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-34-3	Dichloroethane[1,1-]	N	56.629	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-35-4	Dichloroethene[1,1-]	N	55.4731	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-69-4	Trichlorofluoromethane	N	78.6088	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	75-71-8	Dichlorodifluoromethane	N	69.1897	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	N	107.224	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	76-14-2	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	N	97.8075	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	78-87-5	Dichloropropane[1,2-]	N	64.6576	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	78-93-3	Butanone[2-]	N	170.952	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	79-00-5	Trichloroethane[1,1,2-]	N	76.337	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	79-01-6	Trichloroethene	N	75.1868	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	79-34-5	Tetrachloroethane[1,1,2,2-]	N	96.0508	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	87-68-3	Hexachlorobutadiene	N	618.188	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	95-47-6	Xylene[1,2-]	N	60.7492	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	95-50-1	Dichlorobenzene[1,2-]	N	84.1252	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	95-63-6	Trimethylbenzene[1,2,4-]	N	68.7777	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	98-82-8	Isopropylbenzene	N	68.7777	ug/m3	U	U
VMW2-15-104282	5	10	GAS	EPA:TO15	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	N	60.7492	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	100-41-4	Ethylbenzene	N	40.7926	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	100-42-5	Styrene	N	40.0164	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	100-44-7	Benzyl Chloride	N	48.6345	ug/m3	U	UJ

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW3-15-104276	5	10	GAS	EPA:TO15	10061-01-5	Dichloropropene[cis-1,3-]	N	42.6368	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	10061-02-6	Dichloropropene[trans-1,3-]	N	42.6368	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	103-65-1	Propylbenzene[1-]	N	46.1793	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	106-46-7	Dichlorobenzene[1,4-]	N	56.4841	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	106-93-4	Dibromoethane[1,2-]	N	72.1794	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	106-99-0	Butadiene[1,3-]	N	20.783	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	107-05-1	Chloro-1-propene[3-]	N	115.725	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	107-06-2	Dichloroethane[1,2-]	N	38.0223	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	108-10-1	Methyl-2-pentanone[4-]	N	38.4834	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	108-67-8	Trimethylbenzene[1,3,5-]	N	46.1793	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	108-88-3	Toluene	N	35.4012	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	108-90-7	Chlorobenzene	N	43.2477	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	109-99-9	Tetrahydrofuran	N	27.7061	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	110-54-3	Hexane	N	33.112	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	110-82-7	Cyclohexane	N	32.3359	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	120-82-1	Trichlorobenzene[1,2,4-]	N	274.416	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	123-91-1	Dioxane[1,4-]	N	133.253	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	124-48-1	Chlorodibromomethane	N	80.0252	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	127-18-4	Tetrachloroethene	N	63.7151	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	142-82-5	n-Heptane	N	38.4988	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	156-59-2	Dichloroethene[cis-1,2-]	N	37.2462	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	156-60-5	Dichloroethene[trans-1,2-]	N	37.2462	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	1634-04-4	Methyl tert-Butyl Ether	N	33.8689	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	540-84-1	Isooctane	N	43.8894	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	541-73-1	Dichlorobenzene[1,3-]	N	56.4841	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	56-23-5	Carbon Tetrachloride	N	59.1006	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	591-78-6	Hexanone[2-]	N	151.477	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	622-96-8	Ethyltoluene[4-]	N	46.1793	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	64-17-5	Ethanol	N	69.6741	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	67-63-0	Propanol[2-]	N	90.8924	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	67-64-1	Acetone	N	87.8374	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	67-66-3	Chloroform	N	45.8681	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	71-43-2	Benzene	N	30.0114	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	71-55-6	Trichloroethane[1,1,1-]	N	51.2549	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	74-83-9	Bromomethane	N	36.4778	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	74-87-3	Chloromethane	N	76.3587	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-00-3	Chloroethane	N	97.5619	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-01-4	Vinyl Chloride	N	24.0129	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-09-2	Methylene Chloride	N	32.6317	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-15-0	Carbon Disulfide	N	29.2541	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-25-2	Bromoform	N	97.1038	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-27-4	Bromodichloromethane	N	62.9351	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-34-3	Dichloroethane[1,1-]	N	38.0223	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-35-4	Dichloroethene[1,1-]	N	37.2462	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-69-4	Trichlorofluoromethane	N	52.7802	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	75-71-8	Dichlorodifluoromethane	N	46.456	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	N	71.9935	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	76-14-2	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	N	65.6708	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	78-87-5	Dichloropropane[1,2-]	N	43.4129	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	78-93-3	Butanone[2-]	N	109.056	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	79-00-5	Trichloroethane[1,1,2-]	N	51.2549	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW3-15-104276	5	10	GAS	EPA:TO15	79-01-6	Trichloroethene	Y	51.0196	ug/m3		NQ
VMW3-15-104276	5	10	GAS	EPA:TO15	79-34-5	Tetrachloroethane[1,1,2,2-]	N	64.4912	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	87-68-3	Hexachlorobutadiene	N	394.361	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	95-47-6	Xylene[1,2-]	N	40.7887	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	95-50-1	Dichlorobenzene[1,2-]	N	56.4841	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	95-63-6	Trimethylbenzene[1,2,4-]	N	46.1793	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	98-82-8	Isopropylbenzene	N	46.1793	ug/m3	U	U
VMW3-15-104276	5	10	GAS	EPA:TO15	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	N	40.7887	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	100-41-4	Ethylbenzene	N	39.9246	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	100-42-5	Styrene	N	39.165	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	100-44-7	Benzyl Chloride	N	47.5997	ug/m3	U	UJ
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	10061-01-5	Dichloropropene[cis-1,3-]	N	41.7297	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	10061-02-6	Dichloropropene[trans-1,3-]	N	41.7297	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	103-65-1	Propylbenzene[1-]	N	45.1968	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	106-46-7	Dichlorobenzene[1,4-]	N	55.2823	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	106-93-4	Dibromoethane[1,2-]	N	70.6437	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	106-99-0	Butadiene[1,3-]	N	20.3408	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	107-05-1	Chloro-1-propene[3-]	N	115.725	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	107-06-2	Dichloroethane[1,2-]	N	37.2134	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	108-10-1	Methyl-2-pentanone[4-]	N	37.6646	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	108-67-8	Trimethylbenzene[1,3,5-]	N	45.1968	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	108-88-3	Toluene	N	34.648	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	108-90-7	Chlorobenzene	N	42.3276	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	109-99-9	Tetrahydrofuran	N	27.1166	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	110-54-3	Hexane	N	32.4075	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	110-82-7	Cyclohexane	N	31.6479	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	120-82-1	Trichlorobenzene[1,2,4-]	N	274.416	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	123-91-1	Dioxane[1,4-]	N	133.253	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	124-48-1	Chlorodibromomethane	N	78.3225	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	127-18-4	Tetrachloroethene	N	62.3595	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	142-82-5	n-Heptane	N	37.6797	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	156-59-2	Dichloroethene[cis-1,2-]	N	36.4538	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	156-60-5	Dichloroethene[trans-1,2-]	N	36.4538	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	1634-04-4	Methyl tert-Butyl Ether	N	33.1483	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	540-84-1	Isooctane	N	42.9556	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	541-73-1	Dichlorobenzene[1,3-]	N	55.2823	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	56-23-5	Carbon Tetrachloride	N	57.8432	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	591-78-6	Hexanone[2-]	N	151.477	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	622-96-8	Ethyltoluene[4-]	N	45.1968	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	64-17-5	Ethanol	N	69.6741	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	67-63-0	Propanol[2-]	N	90.8924	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	67-64-1	Acetone	N	87.8374	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	67-66-3	Chloroform	Y	102.471	ug/m3		NQ
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	71-43-2	Benzene	N	29.3728	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	71-55-6	Trichloroethane[1,1,1-]	N	50.1643	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	74-83-9	Bromomethane	N	35.7017	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	74-87-3	Chloromethane	N	76.3587	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-00-3	Chloroethane	N	97.5619	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-01-4	Vinyl Chloride	N	23.502	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-09-2	Methylene Chloride	N	31.9375	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-15-0	Carbon Disulfide	N	28.6316	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-25-2	Bromoform	N	95.0377	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-27-4	Bromodichloromethane	N	61.5961	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-34-3	Dichloroethane[1,1-]	N	37.2134	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-35-4	Dichloroethene[1,1-]	N	36.4538	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-69-4	Trichlorofluoromethane	N	51.6572	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	75-71-8	Dichlorodifluoromethane	Y	88.9582	ug/m3		NQ
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	N	70.4617	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	76-14-2	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	N	64.2735	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	78-87-5	Dichloropropane[1,2-]	N	42.4893	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	78-93-3	Butanone[2-]	N	109.056	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	79-00-5	Trichloroethane[1,1,2-]	N	50.1643	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	79-01-6	Trichloroethene	Y	2846.36	ug/m3		NQ
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	79-34-5	Tetrachloroethane[1,1,2,2-]	N	63.1191	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	87-68-3	Hexachlorobutadiene	N	394.361	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	95-47-6	Xylene[1,2-]	N	39.9209	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	95-50-1	Dichlorobenzene[1,2-]	N	55.2823	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	95-63-6	Trimethylbenzene[1,2,4-]	N	45.1968	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	98-82-8	Isopropylbenzene	N	45.1968	ug/m3	U	U
VMW4-15-104277	22.5	27.5	GAS	EPA:TO15	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	N	39.9209	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	100-41-4	Ethylbenzene	N	39.4907	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	100-42-5	Styrene	N	38.7393	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	100-44-7	Benzyl Chloride	N	47.0823	ug/m3	U	UJ
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	10061-01-5	Dichloropropene[cis-1,3-]	N	41.2761	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	10061-02-6	Dichloropropene[trans-1,3-]	N	41.2761	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	103-65-1	Propylbenzene[1-]	N	44.7055	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	106-46-7	Dichlorobenzene[1,4-]	N	54.6814	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	106-93-4	Dibromoethane[1,2-]	N	69.8759	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	106-99-0	Butadiene[1,3-]	N	20.1198	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	107-05-1	Chloro-1-propene[3-]	N	112.598	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	107-06-2	Dichloroethane[1,2-]	N	36.8089	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	108-10-1	Methyl-2-pentanone[4-]	N	37.2552	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	108-67-8	Trimethylbenzene[1,3,5-]	N	44.7055	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	108-88-3	Toluene	N	34.2714	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	108-90-7	Chlorobenzene	N	41.8675	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	109-99-9	Tetrahydrofuran	N	26.8218	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	110-54-3	Hexane	N	32.0553	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	110-82-7	Cyclohexane	N	31.3039	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	120-82-1	Trichlorobenzene[1,2,4-]	N	267	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	123-91-1	Dioxane[1,4-]	N	129.652	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	124-48-1	Chlorodibromomethane	N	77.4712	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	127-18-4	Tetrachloroethene	Y	81.3384	ug/m3		NQ
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	142-82-5	n-Heptane	N	37.2701	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	156-59-2	Dichloroethene[cis-1,2-]	N	36.0575	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	156-60-5	Dichloroethene[trans-1,2-]	N	36.0575	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	1634-04-4	Methyl tert-Butyl Ether	N	32.788	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	540-84-1	Isooctane	N	42.4887	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	541-73-1	Dichlorobenzene[1,3-]	N	54.6814	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	56-23-5	Carbon Tetrachloride	Y	88.0222	ug/m3		NQ
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	591-78-6	Hexanone[2-]	N	147.383	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	622-96-8	Ethyltoluene[4-]	N	44.7055	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	64-17-5	Ethanol	N	67.791	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	67-63-0	Propanol[2-]	N	88.4358	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	67-64-1	Acetone	N	85.4635	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	67-66-3	Chloroform	Y	224.461	ug/m3		NQ
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	71-43-2	Benzene	N	29.0536	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	71-55-6	Trichloroethane[1,1,1-]	N	49.6191	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	74-83-9	Bromomethane	N	35.3136	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	74-87-3	Chloromethane	N	74.2949	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-00-3	Chloroethane	N	94.9251	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-01-4	Vinyl Chloride	N	23.2466	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-09-2	Methylene Chloride	N	31.5903	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-15-0	Carbon Disulfide	N	28.3204	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-25-2	Bromoform	N	94.0047	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-27-4	Bromodichloromethane	N	60.9266	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-34-3	Dichloroethane[1,1-]	N	36.8089	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-35-4	Dichloroethene[1,1-]	N	36.0575	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-69-4	Trichlorofluoromethane	N	51.0957	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	75-71-8	Dichlorodifluoromethane	Y	192.743	ug/m3		NQ
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	N	69.6958	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	76-14-2	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	N	63.5749	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	78-87-5	Dichloropropane[1,2-]	N	42.0274	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	78-93-3	Butanone[2-]	N	106.108	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	79-00-5	Trichloroethane[1,1,2-]	N	49.6191	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	79-01-6	Trichloroethene	Y	7518.68	ug/m3		NQ
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	79-34-5	Tetrachloroethane[1,1,2,2-]	N	62.433	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	87-68-3	Hexachlorobutadiene	N	383.703	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	95-47-6	Xylene[1,2-]	N	39.487	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	95-50-1	Dichlorobenzene[1,2-]	N	54.6814	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	95-63-6	Trimethylbenzene[1,2,4-]	N	44.7055	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	98-82-8	Isopropylbenzene	N	44.7055	ug/m3	U	U
VMW4-15-104278	57.5	62.5	GAS	EPA:TO15	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	N	39.487	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	100-41-4	Ethylbenzene	N	38.1888	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	100-42-5	Styrene	N	37.4622	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	100-44-7	Benzyl Chloride	N	45.5302	ug/m3	U	UJ
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	10061-01-5	Dichloropropene[cis-1,3-]	N	39.9153	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	10061-02-6	Dichloropropene[trans-1,3-]	N	39.9153	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	103-65-1	Propylbenzene[1-]	N	43.2317	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	106-46-7	Dichlorobenzene[1,4-]	N	52.8787	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	106-93-4	Dibromoethane[1,2-]	N	67.5723	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	106-99-0	Butadiene[1,3-]	N	19.4565	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	107-05-1	Chloro-1-propene[3-]	N	109.47	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	107-06-2	Dichloroethane[1,2-]	N	35.5954	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	108-10-1	Methyl-2-pentanone[4-]	N	36.027	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	108-67-8	Trimethylbenzene[1,3,5-]	N	43.2317	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	108-88-3	Toluene	N	33.1416	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	108-90-7	Chlorobenzene	N	40.4872	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	109-99-9	Tetrahydrofuran	N	25.9376	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	110-54-3	Hexane	N	30.9985	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	110-82-7	Cyclohexane	N	30.2719	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	120-82-1	Trichlorobenzene[1,2,4-]	N	259.583	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	123-91-1	Dioxane[1,4-]	N	126.051	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	124-48-1	Chlorodibromomethane	N	74.9172	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	127-18-4	Tetrachloroethene	N	59.6482	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	142-82-5	n-Heptane	N	36.0414	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	156-59-2	Dichloroethene[cis-1,2-]	N	34.8688	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	156-60-5	Dichloroethene[trans-1,2-]	N	34.8688	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	1634-04-4	Methyl tert-Butyl Ether	N	31.7071	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	540-84-1	Isooctane	N	41.0879	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	541-73-1	Dichlorobenzene[1,3-]	N	52.8787	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	56-23-5	Carbon Tetrachloride	N	55.3282	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	591-78-6	Hexanone[2-]	N	143.289	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	622-96-8	Ethyltoluene[4-]	N	43.2317	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	64-17-5	Ethanol	N	65.9079	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	67-63-0	Propanol[2-]	N	85.9793	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	67-64-1	Acetone	N	83.0895	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	67-66-3	Chloroform	N	42.9404	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	71-43-2	Benzene	N	28.0958	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	71-55-6	Trichloroethane[1,1,1-]	N	47.9833	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	74-83-9	Bromomethane	N	34.1494	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	74-87-3	Chloromethane	N	72.2312	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-00-3	Chloroethane	N	92.2883	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-01-4	Vinyl Chloride	N	22.4802	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-09-2	Methylene Chloride	N	30.5489	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-15-0	Carbon Disulfide	Y	43.5699	ug/m3		NQ
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-25-2	Bromoform	N	90.9056	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-27-4	Bromodichloromethane	N	58.918	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-34-3	Dichloroethane[1,1-]	N	35.5954	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-35-4	Dichloroethene[1,1-]	N	34.8688	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-69-4	Trichlorofluoromethane	N	49.4113	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	75-71-8	Dichlorodifluoromethane	Y	54.3634	ug/m3		NQ
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	N	67.3982	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	76-14-2	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	N	61.479	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	78-87-5	Dichloropropane[1,2-]	N	40.6419	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	78-93-3	Butanone[2-]	N	103.161	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	79-00-5	Trichloroethane[1,1,2-]	N	47.9833	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	79-01-6	Trichloroethene	Y	290.006	ug/m3		NQ
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	79-34-5	Tetrachloroethane[1,1,2,2-]	N	60.3748	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	87-68-3	Hexachlorobutadiene	N	373.044	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	95-47-6	Xylene[1,2-]	N	38.1852	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	95-50-1	Dichlorobenzene[1,2-]	N	52.8787	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	95-63-6	Trimethylbenzene[1,2,4-]	N	43.2317	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	98-82-8	Isopropylbenzene	N	43.2317	ug/m3	U	U
VMW5-15-104279	22.5	27.5	GAS	EPA:TO15	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	N	38.1852	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	100-41-4	Ethylbenzene	N	39.0567	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	100-42-5	Styrene	N	38.3136	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	100-44-7	Benzyl Chloride	N	46.5649	ug/m3	U	UJ
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	10061-01-5	Dichloropropene[cis-1,3-]	N	40.8225	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	10061-02-6	Dichloropropene[trans-1,3-]	N	40.8225	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	103-65-1	Propylbenzene[1-]	N	44.2142	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	106-46-7	Dichlorobenzene[1,4-]	N	54.0805	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	106-93-4	Dibromoethane[1,2-]	N	69.108	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	106-99-0	Butadiene[1,3-]	N	19.8987	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	107-05-1	Chloro-1-propene[3-]	N	112.598	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	107-06-2	Dichloroethane[1,2-]	N	36.4044	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	108-10-1	Methyl-2-pentanone[4-]	N	36.8458	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	108-67-8	Trimethylbenzene[1,3,5-]	N	44.2142	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	108-88-3	Toluene	N	33.8948	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	108-90-7	Chlorobenzene	N	41.4074	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	109-99-9	Tetrahydrofuran	N	26.5271	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	110-54-3	Hexane	N	31.703	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	110-82-7	Cyclohexane	N	30.9599	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	120-82-1	Trichlorobenzene[1,2,4-]	N	267	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	123-91-1	Dioxane[1,4-]	N	129.652	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	124-48-1	Chlorodibromomethane	N	76.6199	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	127-18-4	Tetrachloroethene	N	61.0038	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	142-82-5	n-Heptane	N	36.8605	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	156-59-2	Dichloroethene[cis-1,2-]	N	35.6613	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	156-60-5	Dichloroethene[trans-1,2-]	N	35.6613	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	1634-04-4	Methyl tert-Butyl Ether	N	32.4277	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	540-84-1	Isooctane	N	42.0217	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	541-73-1	Dichlorobenzene[1,3-]	N	54.0805	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	56-23-5	Carbon Tetrachloride	N	56.5857	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	591-78-6	Hexanone[2-]	N	147.383	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	622-96-8	Ethyltoluene[4-]	N	44.2142	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	64-17-5	Ethanol	N	67.791	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	67-63-0	Propanol[2-]	N	88.4358	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	67-64-1	Acetone	N	85.4635	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	67-66-3	Chloroform	N	43.9163	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	71-43-2	Benzene	N	28.7343	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	71-55-6	Trichloroethane[1,1,1-]	Y	65.4317	ug/m3		NQ
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	74-83-9	Bromomethane	N	34.9255	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	74-87-3	Chloromethane	N	74.2949	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-00-3	Chloroethane	N	94.9251	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-01-4	Vinyl Chloride	N	22.9911	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-09-2	Methylene Chloride	N	31.2432	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-15-0	Carbon Disulfide	N	28.0092	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-25-2	Bromoform	N	92.9717	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-27-4	Bromodichloromethane	N	60.257	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-34-3	Dichloroethane[1,1-]	N	36.4044	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-35-4	Dichloroethene[1,1-]	N	35.6613	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-69-4	Trichlorofluoromethane	N	50.5342	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	75-71-8	Dichlorodifluoromethane	Y	98.8425	ug/m3		NQ
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	N	68.9299	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	76-14-2	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	N	62.8763	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	78-87-5	Dichloropropane[1,2-]	N	41.5656	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	78-93-3	Butanone[2-]	N	106.108	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	79-00-5	Trichloroethane[1,1,2-]	N	49.0738	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	79-01-6	Trichloroethene	Y	1288.92	ug/m3		NQ
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	79-34-5	Tetrachloroethane[1,1,2,2-]	N	61.7469	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	87-68-3	Hexachlorobutadiene	N	383.703	ug/m3	U	U

Sample	Sample Start Depth (ft)	Sample End Depth (ft)	Lab Matrix	Method	CAS	Analyte	Detect Flag	Result	Units	Lab Qual	Val Qual
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	95-47-6	Xylene[1,2-]	N	39.053	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	95-50-1	Dichlorobenzene[1,2-]	N	54.0805	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	95-63-6	Trimethylbenzene[1,2,4-]	N	44.2142	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	98-82-8	Isopropylbenzene	N	44.2142	ug/m3	U	U
VMW5-15-104280	57.5	62.5	GAS	EPA:TO15	Xylene[m+p]	Xylene[1,3-]+Xylene[1,4-]	N	39.053	ug/m3	U	U