Los Alamos NATIONAL LABORATORY EST. 1943

ESHID-603446

Environmental Protection & Compliance Division
P.O. Box 1663, MS K491
Los Alamos, New Mexico 87545
(505) 667-2211

National Nuclear Security Administration
Los Alamos Field Office
3747 West Jemez Road, MS A316
Los Alamos, New Mexico 87544
(505) 667-5105/Fax (505) 667-5948

Date: JUN 2 6 2019
Symbol: EPC-DO: 19-203
LA-UR: 19-25727
Locates Action No.: NA

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

Subject: **Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 7, Los Alamos National Laboratory EPA ID #NM0890010515**

The United States Department of Energy (DOE) National Nuclear Security Administration, Los Alamos Field Office and the Triad National Security, LLC (Triad) 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 (the Permit). The Permit requires that a soil vapor monitoring system for the LANL Technical Area (TA)-63 Transuranic Waste Facility (TWF) be sampled for various volatile organic compounds (VOCs) and evaluated on a quarterly basis after operations at the facility commence. This report provides analytical data for the seventh quarter period following the start of operations on October 11, 2017. The sampling results indicate that vapor concentrations at the site do not exceed the soil gas screening levels established by the Permit.

The enclosure to this report includes a discussion of the history and analytical findings for the seventh quarter, a figure of the LANL TWF permitted unit with the soil vapor monitoring well locations, a summary table of detected volatile organic compounds for the wells, a table of analytical results, a quarterly data comparison table and sample collection logs. Table 1 is a summary of the analytical results for the seventh quarter and includes detected VOCs, detection limits, the appropriate soil gas screening levels from Permit Tables 3.14.3.1-3 and a percentage comparison of the detected levels of VOCs with the screening levels. Table 2 is a listing of the analytical results for the sampling event. Table 3 is a comparison table of the detected VOCs for the seven quarters of sampling currently collected for the soil vapor monitoring wells.

This report also presents a statistical evaluation to support a request that NMED-HWB allow LANL to alter the sampling frequency for the monitoring system as provided by the Permit. A permit

modification request would be needed to make this revision per Permit Section 3.14.3. A consideration of this statistical analysis is requested to allow preliminary discussion of NMED-HWB concerns or suggestions regarding the technical basis for such a permit modification.

A report certification is included with this submittal in compliance with Permit Section 1.9.16. A compact disc with copies of this submittal and the analytical data in Excel format is also included to facilitate the review of the monitoring results by NMED-HWB.

If you have questions or comments concerning this report, please contact Karen E. Armijo, DOE, at (505) 665-7314 or Patrick L. Padilla, Triad, at (505) 667-3932.

Sincerely,

Enrique Torres
Division Leader
Environmental Protection & Compliance Division
Triad National Security, LLC

Sincerely,

Karen E. Armijo
Permitting and Compliance Program Manager
National Nuclear Security Administration
U.S. Department of Energy

ET/KEA/PLP:gab

Enclosure: 1) Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 7, Los Alamos National Laboratory EPA ID #NM0890010515

Copy: Laurie King, USEPA/Region 6, Dallas, TX, (E-File)
Neelam Dhawan, NMED-HWB, Santa Fe, NM, (E-File)
Siona Briley, NMED-HWB, Santa Fe, NM, (E-File)
William S. Goodrum, NA-LA, (E-File)
Peter Maggiore, NA-LA, (E-File)
Jody M. Pugh, NA-LA, (E-File)
Karen E. Armijo, NA-LA, (E-File)
Gabriel M. Pugh, NA-LA, (E-File)
Louis E. Jalbert, TA-55-RLW, (E-File)
Michael W. Hazen, ESHQSS, (E-File)
Enrique Torres, EPC-DO, (E-File)
Jennifer E. Payne, EPC-DO, (E-File)
Peter H. Carson, EPC-WMP, (E-File)
Patrick L. Padilla, EPC-WMP, (E-File)
Catherine L. Juarez, EPC-WMP, (E-File)
Jaime Rodriguez, EPC-WMP, (E-File)
adesh-records@lanl.gov (E-File)
epccorrespondence@lanl.gov, (E-File)
rcra-prr@lanl.gov, (E-File)

Los Alamos NATIONAL LABORATORY EST. 1943

COPY

Environmental Protection & Compliance Division
P.O. Box 1663, MS K491
Los Alamos, New Mexico 87545
(505) 667-2211

National Nuclear Security Administration
Los Alamos Field Office
3747 West Jemez Road, MS A316
Los Alamos, New Mexico 87544
(505) 667-5105/Fax (505) 667-5948

Date: JUN 2 6 2019
Symbol: EPC-DO: 19-203
LA-UR: 19-25727
Locates Action No.: NA

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

Subject: **Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 7, Los Alamos National Laboratory EPA ID #NM0890010515**

The United States Department of Energy (DOE) National Nuclear Security Administration, Los Alamos Field Office and the Triad National Security, LLC (Triad) 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 (the Permit). The Permit requires that a soil vapor monitoring system for the LANL Technical Area (TA)-63 Transuranic Waste Facility (TWF) be sampled for various volatile organic compounds (VOCs) and evaluated on a quarterly basis after operations at the facility commence. This report provides analytical data for the seventh quarter period following the start of operations on October 11, 2017. The sampling results indicate that vapor concentrations at the site do not exceed the soil gas screening levels established by the Permit.

The enclosure to this report includes a discussion of the history and analytical findings for the seventh quarter, a figure of the LANL TWF permitted unit with the soil vapor monitoring well locations, a summary table of detected volatile organic compounds for the wells, a table of analytical results, a quarterly data comparison table and sample collection logs. Table 1 is a summary of the analytical results for the seventh quarter and includes detected VOCs, detection limits, the appropriate soil gas screening levels from Permit Tables 3.14.3.1-3 and a percentage comparison of the detected levels of VOCs with the screening levels. Table 2 is a listing of the analytical results for the sampling event. Table 3 is a comparison table of the detected VOCs for the seven quarters of sampling currently collected for the soil vapor monitoring wells.

This report also presents a statistical evaluation to support a request that NMED-HWB allow LANL to alter the sampling frequency for the monitoring system as provided by the Permit. A permit

ENCLOSURE 1

TA-63 Transuranic Waste Facility
Soil Vapor Monitoring System Report,
Quarter 7,
Los Alamos National Laboratory
EPA ID #NM0890010515

EPC-DO-19-203

LAUR-19-25727
Unclassified

Date: JUN 2 6 2019

[This page has been left intentionally blank.]

Technical Area 63 Transuranic Waste Facility
Soil Vapor Monitoring System Report
Quarter 7
Los Alamos National Laboratory
EPA ID #NM0890010515

I. Introduction

This report describes the seventh quarterly sampling 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 included 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). Sampling and analysis for the seventh quarter of waste management operations at TWF has established that soil vapor concentrations at the site do not exceed the screening levels established by the Permit. This report also presents a statistical approach to potentially support a permit modification request that NMED-HWB allow LANL to alter the sampling frequency for the monitoring system as provided by the Permit.

II. TWF Soil Vapor Monitoring Wells

The TWF subsurface vapor monitoring network consists of five vapor monitoring wells in or near the permitted storage unit as specified in Permit Section A.6.10. The TWF is located south-east of the TA-50 Material Disposal Area C, Solid Waste Management Unit 50-009, (MDA-C) at LANL, which appears to be the source of the soil vapor constituents being monitored. Two of the monitoring wells are located close to the storage building foundations adjacent to the unit boundary facing MDA-C and the utility corridor on Puye Road as depicted by well locations VMW-1 (LANL Structure Number 63-2009) and VMW-2 (63-2010) 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 unit close to the utility corridor on Pajarito Road, as depicted by well location VMW-3 (64-2011) on Figure 56. The sampling ports for these three wells are located at a 5 foot nominal depth below the concrete pad of the TWF permitted storage unit. Two monitoring wells are located outside the permitted unit across Puye Road to the north and closer to MDA-C, as depicted by well locations VMW-4 (63-2012) and VMW-5 (63-2013) on Figure 56. There are two sampling ports for both these wells located at depths of 25 and 60 feet.

III. Soil Vapor Sampling

Sampling of the wells was completed on May 1, 2019 for the seventh quarter of waste management operations at the TA-63 TWF. Sampling procedures and VOC analyses of the obtained samples were scheduled and performed in compliance with the conditions contained in the Permit. Analytical results for the samples were compared to the soil gas screening levels (SGSLs) for individual VOC constituents in Section 3.14.3 of the Permit.

The sampling of the vapor-monitoring wells was performed using the same procedures as other vapor monitoring conducted at MDA-C. Sampling was performed by extracting formation air through sand layers and into the stainless steel tubing of the sampling ports of the wells. Samples were collected from all sampling ports. All samples for VOC analysis were collected in stainless steel 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 the Permit. There were no variances in the sampling procedures from the Permit requirements.

IV. Analytical Results

A summary of the analytical results for the relevant VOCs detected for this sampling event is presented in Table 1 of this report. While analyses of the samples indicated some positive results for trichloroethene (TCE) and other VOCs, none of the concentrations exceed the relevant SGSLs contained in Permit Tables 3.14.3.1 through 3. Table 1 of this report lists the detected VOCs and includes the calculated percentage of the SGSL as an indicator of the relative concentrations. A complete listing of the full analytical results is included in Table 2.

TCE is the highest concentration VOC detected in this sample event and in previous TA-63 TWF quarterly sampling analyses. TCE concentrations were detected in all of the five monitoring well locations. The VMW-4 and VMW-5 locations at the 60 foot depth contain the highest concentrations for these wells at 8.1% and 1.8% of the SGSL respectively. These are the sites closest to MDA-C and are not located within the permitted storage unit site at TA-63. The three monitoring wells within the permitted unit (VMW-1, VMW-2 and VMW-3) have detected concentrations for TCE of less than 1.0% of the SGSL.

Additional VOC constituents of concern (e.g., chloroform, acetone) included in the soil gas monitoring screening level tables in the Permit were detected in the soil vapor monitoring wells. The well locations north of Puye Road (VMW-4 and VMW-5) detected additional VOC results that are included in Table 1. None of the additional VOC detections at these two locations exceeded 1.0% of the SGSLs listed in the Permit. Two well locations within the boundary of the TWF permitted unit (VMW-2 and VMW-3) indicated the additional detection of acetone at concentrations less than 0.1% of the SGSL. No VOCs listed in the Permit other than TCE were detected at Well VMW-1.

The TA-63 TWF soil vapor monitoring wells were originally installed in August 2015. Baseline soil vapor monitoring samples were taken in September 2015 and the results submitted to NMED

on October 29, 2015 (LANL, 2015). Reports were submitted with analytical results for the six previous quarters of waste management operations at the TWF and are listed in the references following this discussion. In reply to a letter from NMED-HWB dated May 23, 2018 (NMED, 2018), Table 3 is included in this report to show the current and previous quarterly soil gas screening level results at the facility for tracking purposes. The sampling results reported herein for the seventh quarter of operations at TWF are consistent with the previous results and do not appear to indicate additional contaminant concerns pending further analyses subject to the Permit.

V. Additional Discussion

This section of the report discusses several additional issues related to the analytical results presented. The fifth quarter report for the TA-63 TWF soil vapor monitoring results (LANL, 2018d) indicated that a new VOC constituent (tetrahydrofuran) had been potentially detected in the samples taken that quarter and the concentration was estimated at the detection limit for the compound. Tetrahydrofuran is not included in the lists of monitored constituents in Permit Section 3.14.3, *Subsurface Vapor Monitoring*, or in the original EPA guidance used to derive the soil gas screening levels for the monitoring. There have been no additional analytical results above detection limits for tetrahydrofuran as discussed in the sixth quarter report or this seventh quarter.

However, two VOC constituents included in the Permit tables (ethylbenzene and xylene isomers) were detected above the report detection limit in the field blank sample (TWF63-19-175127) for this quarter that were not detected in any samples taken from the actual soil vapor monitoring wells. This also occurred in the data for the sixth quarter sampling (LANL, 2019a). Review of the analytical laboratory data does not indicate a data quality error and this may be an equipment or procedural anomaly. The field duplicate for well VMW-1 (TWF63-19-175126) also included detections of trichlorobenzene (not included in Permit Section 3.14.3) and dichlorodifluoromethane at a level well below 0.1% of the SGSL. These VOC constituents were not detected in the other VMW-1 sample taken in this quarter although dichlorodifluoromethane was detected in this well in the first quarter of sampling (LANL, 2017). The evaluation of these VOC constituent data issues will continue with future sampling events.

Permit Section 3.14.3 states that an alternate sampling frequency may be proposed as a permit modification request after the first year of sampling based on evaluation of relevant sampling data. The following statistical discussion is used to demonstrate that the sampling data collected for TCE as the main soil vapor constituent detected during the TA-63 TWF operating period has been relatively stable. This is presented to provide a basis for discussion with NMED-HWB that the sampling frequency for the soil vapor monitoring wells can be revised prior to submitting a permit modification request.

The mean and standard deviation for the quarterly TCE concentrations in each port in the soil vapor monitoring wells during facility waste operations is presented in Table 4 of this submittal to determine whether the concentrations for the major constituent detected by this project can be described statistically as within a range of defined concentrations. As shown in Table 4, the TCE

concentrations analyzed for the soil vapor monitoring wells for the seven quarters have remained within the limits of a two standard deviation interval of the sample above or below the mean analytical values with a confidence probability of 95%. Therefore, no deviations have been observed for the average TCE concentrations for each sampling port or well that are considered statistically significant to that level of confidence.

Simple linear regression plots for the wells have also been included in Figures 2 and 3 to evaluate whether any significant trends are readily discernable regarding constituent concentration changes over quarters. The line plots for the concentrations determined for separate sampling locations are relatively flat and there does not appear to be a data relationship between the well results that would indicate a consistent effect in increasing or decreasing constituent concentrations such as seasonal variations. The concentrations detected are also far below the permitted maximum SGSL constituent concentrations for TCE, which indicates that any trend in positive changes that would be of concern according to the Permit conditions for reporting would not occur in a short time interval. The TCE concentrations for the quarters collected to this date appear stable.

The analytical samples taken for TCE in the TA-63 TWF soil vapor monitoring wells during the pre-operational facility phase were also consistent with the concentrations reported for the operational quarters (LANL, 2015). This data would support that these concentration levels have not substantially changed for approximately two years prior to the beginning of the operational period soil vapor monitoring in addition to the seven quarters of data collected after and that the TCE concentrations have been relatively stable for almost four years.

LANL is requesting that the use of this statistical data or approach be considered as the basis for revising the sampling frequency as allowed through a permit modification request. The distribution of the sampling data to this point does not indicate that the soil vapor constituents detected to this point are subject to much variability and they have not approached the threshold concentrations that would trigger the additional concerns or remedial actions required in the Permit.

References

LANL, 2015. *TA-63 Transuranic Waste Facility Soil Vapor Monitoring System Report*, (ENV-DO-15-0305), October 29, 2015. Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2017. *Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 1, Los Alamos National Laboratory EPA ID #NM0890010515*, (EPC-DO:17-560), December 21, 2017. Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2018a. *Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 2, Los Alamos National Laboratory EPA ID #NM0890010515*, (EPC-DO:18-139) of March 30, 2018. Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2018b. *Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 3, Los Alamos National Laboratory EPA ID #NM0890010515*, (EPC-DO:18-245) of March 30, 2018. Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2018c. *Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 4, Los Alamos National Laboratory EPA ID #NM0890010515*, (EPC-DO:18-349) of September 26, 2018. Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2018d. *Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 5, Los Alamos National Laboratory EPA ID #NM0890010515*, (EPC-DO:18-448) of December 27, 2018. Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2019a. *Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 6, Los Alamos National Laboratory EPA ID #NM0890010515*, (EPC-DO:19-103) of April 4, 2019. Los Alamos National Laboratory, Los Alamos, New Mexico.

NMED, 2010. *Los Alamos National Laboratory Hazardous Waste Facility Permit*, issued by New Mexico Environment Department, Hazardous Waste Bureau, November 30, 2010 and subsequent revisions.

NMED, 2018. Letter: "*Technical Area 63 Transuranic Waste Facility Soil Vapor Monitoring System Report, Quarter 2, Los Alamos National Laboratory EPA ID#NM0890010515, HWB-LANL-18-016,*" dated May 23, 2018. New Mexico Environment Department, Hazardous Waste Bureau, Santa Fe, New Mexico.

[This page has been left intentionally blank.]

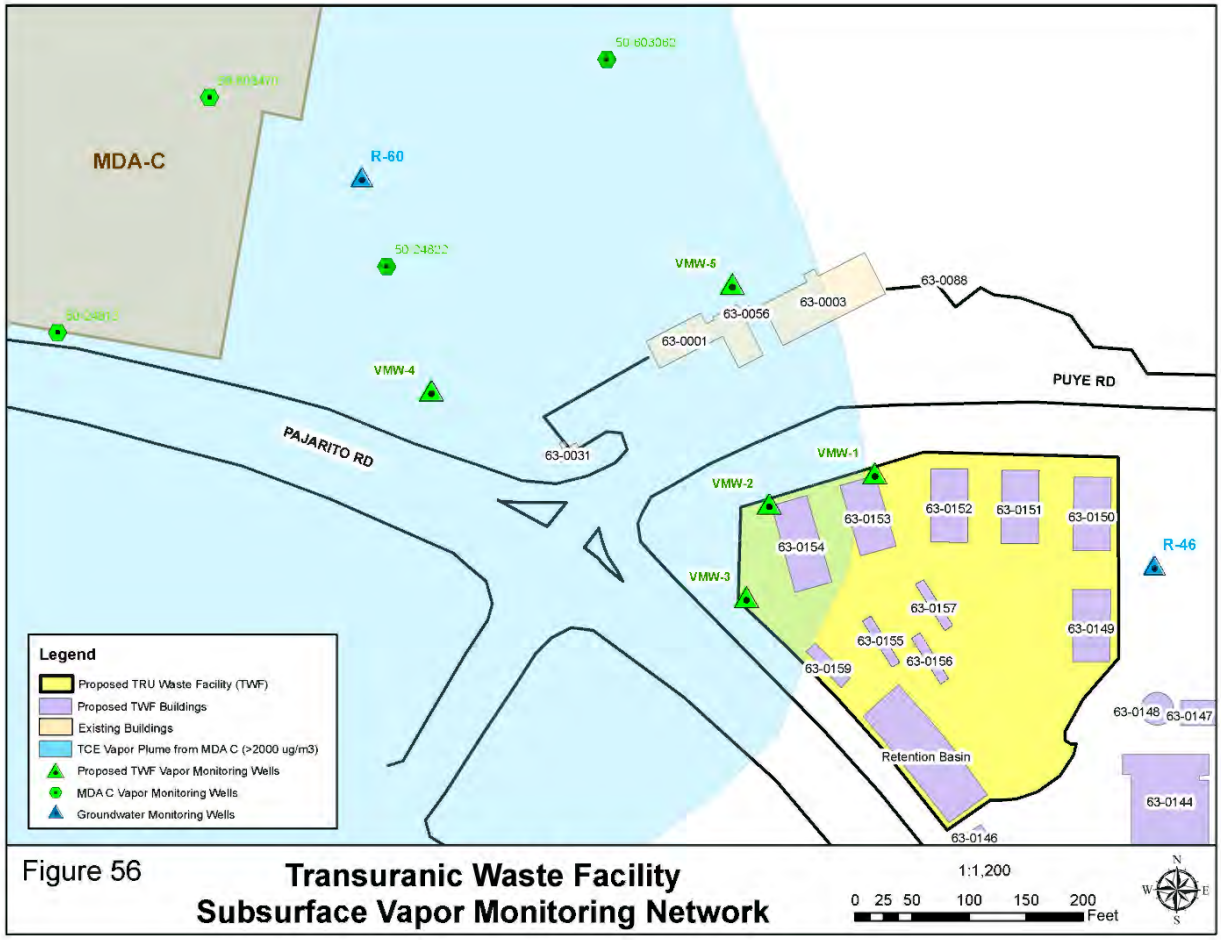


Figure 1

Soil Vapor Monitoring Well Locations at TA-63 TWF

(Source: Los Alamos National Laboratory Hazardous Waste Facility Permit, November, 2010, Figure 56 [as revised by *Notification of Class 1 Permit Modification Construction Updates for the Technical Area 63 Transuranic Waste Facility Container Storage Unit, Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID # NM0890010515,* March 11, 2016, EPC-DO-16-055])

[This page has been left intentionally blank.]

Table 1. Detected Volatile Organic Compounds
at TA-63 Transuranic Waste Facility – Quarter 7

[This page has been left intentionally blank.]

Table 1: Detected Volatile Organic Compounds
at TA-63 Transuranic Waste Facility Soil Vapor Monitoring System– Quarter 7

Well	Sample ID	Sample Port Depth (ft)	Analyte/Constituent	Listing in Permit Tables	Result (ug/m3)	EPA Data Qualifier	Report Detection Limit (ug/m^3)	Soil-Gas Screening Level (ug/m^3)	Percentage Of SGSL (%)
VMW-1 63-2009	TWF63-19-175119	5	Trichloroethene	Trichloroethylene	44.0	J	48.9	1.94E+04	0.2
VMW-2 63-2010	TWF63-19-175120	5	Acetone	Acetone	20.2	J	83.1	2.73E+08	<0.1
			Trichloroethene	Trichloroethylene	118		47.3	1.94E+04	0.6
VMW-3 63-2011	TWF63-19-175121	5	Acetone	Acetone	12.3	J	83.1	2.73E+08	<0.1
			Trichloroethene	Trichloroethylene	107		47.3	1.94E+04	0.6
VMW-4 63-2012	TWF63-19-175122	25	Tetrachloroethene	Tetrachloroethylene	34.6	J	58.3	2.63E+06	<0.1
			Carbon tetrachloride	Carbon tetrachloride	42.1	J	54.1	1.06E+05	<0.1
			Chloroform	Chloroform	97.6		42.0	2.30E+04	0.4
			Dichlorodifluoromethane	Dichlorodifluoromethane	84.0		42.5	2.61E+06	<0.1
			Trichloro-1,2,2-trifluoroethane[1,1,2-]	1,1,2-Trichloro-1,2,2-trifluoroethane	16.1	J	65.9	6.86E+08	<0.1
			Trichloroethene	Trichloroethylene	2790		46.2	1.57E+05	1.8
VMW-4 63-2012	TWF63-19-175123	60	Tetrachloroethene	Tetrachloroethylene	81.3		59.6	2.05E+06	<0.1
			Dichloroethene[cis-1,-2]	cis-1,2-Dichloroethylene	19.8	J	34.9	2.91E+06	<0.1
			Carbon tetrachloride	Carbon tetrachloride	101		55.3	2.13E+05	<0.1
			Chloroform	Chloroform	215		42.9	4.44E+04	0.5
			Trichloroethane[1,1,1-]	1,1,1-Trichloroethane	13.6	J	48.0	2.34E+08	<0.1
			Dichlorodifluoromethane	Dichlorodifluoromethane	183		43.5	5.38E+06	<0.1
			Trichloro-1,2,2-trifluoroethane[1,1,2-]	1,1,2-Trichloro-1,2,2-trifluoroethane	28.3	J	67.4	1.38E+09	<0.1
			Trichloroethene	Trichloroethylene	7520		47.3	9.27E+04	8.1
VMW-5 63-2013	TWF63-19-175124	25	Acetone	Acetone	12.3	J	80.7	5.44E+08	<0.1
			Chloroform	Chloroform	32.2	J	42.0	2.30E+04	0.1
			Trichloroethane[1,1,1-]	1,1,1-Trichloroethane	23.4	J	46.9	1.16E+08	<0.1
			Dichlorodifluoromethane	Dichlorodifluoromethane	54.4		42.5	2.61E+06	<0.1
			Trichloroethene	Trichloroethylene	360		46.2	1.57E+05	0.2

Table 1: Detected Volatile Organic Compounds
at TA-63 Transuranic Waste Facility Soil Vapor Monitoring System– Quarter 7

Well	Sample ID	Sample Port Depth (ft)	Analyte/Constituent	Listing in Permit Tables	Result (ug/m3)	EPA Data Qualifier	Report Detection Limit (ug/m^3)	Soil-Gas Screening Level (ug/m^3)	Percentage Of SGSL (%)
VMW-5 63-2013	TWF63-19-175125	60	Tetrachloroethene	Tetrachloroethylene	12.9	J	60.3	2.05E+06	<0.1
			Carbon tetrachloride	Carbon tetrachloride	18.2	J	56.0	2.13E+05	<0.1
			Chloroform	Chloroform	21.5	J	43.4	4.44E+04	<0.1
			Trichloroethane[1,1,1-]	1,1,1-Trichloroethane	45.3	J	48.5	2.34E+08	<0.1
			Dichlorodifluoromethane	Dichlorodifluoromethane	79.1		44.0	5.38E+06	<0.1
			Trichloro-1,2,2-trifluoroethane[1,1,2-]	1,1,2-Trichloro-1,2,2-trifluoroethane	15.3	J	68.2	1.38E+09	<0.1
			Trichloroethene	Trichloroethylene	1560		47.8	9.27E+04	1.7
VMW-1 63-2009	TWF63-19-175126 Field Duplicate	5	Trichlorobenzene	NA	282	UJ	282	NA	NA
			Dichlorodifluoromethane	Dichlorodifluoromethane	6.9	J	46.5	1.03E+06	<0.1
			Trichloroethene	Trichloroethylene	59.1		50.5	1.94E+04	0.3
VMW-5 63-2013	TWF63-19-175127 Field Blank	25	Ethylbenzene	Ethylbenzene	47.7	J	69.4	2.66E+05	<0.1
			Xylene[1,2-]	o-Xylene	56.4	J	69.4	2.15E+05	<0.1
			Xylene[1,3-] +Xylene[1,4-]	m-Xylene + p-Xylene	164.9		69.4	2.35E+06	<0.1

EPA Data Qualifier "J" indicates analytes that are detected but results are estimated as less than the report detection limit.
EPA Data Qualifier "UJ" indicates analytes that are not detected above the report detection limit but the reported quantitation limit is estimated at the report detection limit.
"NA" indicates the analyte is not included in the LANL Hazardous Waste Facility Permit, Tables 3.14.3.1-3 for soil-gas screening levels.

Table 2. Analytical Results for Soil Vapor Monitoring Wells
at TA-63 Transuranic Waste Facility – Quarter 7

[This page has been left intentionally blank.]

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175119	63-2009	05/01/2019	Ethylbenzene	39.4907	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.81134	39.4907
TWF63-19-175119	63-2009	05/01/2019	Styrene	38.7393	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.23702	38.7393
TWF63-19-175119	63-2009	05/01/2019	Benzyl Chloride	47.0823	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.8652	47.0823
TWF63-19-175119	63-2009	05/01/2019	Dichloropropene[cis-1,3-]	41.2761	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.25733	41.2761
TWF63-19-175119	63-2009	05/01/2019	Dichloropropene[trans-1,3-]	41.2761	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.53583	41.2761
TWF63-19-175119	63-2009	05/01/2019	Propylbenzene[1-]	44.7055	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.40396	44.7055
TWF63-19-175119	63-2009	05/01/2019	Dichlorobenzene[1,4-]	54.6814	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.01342	54.6814
TWF63-19-175119	63-2009	05/01/2019	Dibromoethane[1,2-]	69.8759	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2859	69.8759
TWF63-19-175119	63-2009	05/01/2019	Butadiene[1,3-]	20.1198	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.19069	20.1198
TWF63-19-175119	63-2009	05/01/2019	Chloro-1-propene[3-]	112.598	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.3961	112.598
TWF63-19-175119	63-2009	05/01/2019	Dichloroethane[1,2-]	36.8089	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.28087	36.8089
TWF63-19-175119	63-2009	05/01/2019	Methyl-2-pentanone[4-]	37.2552	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	18.0135	37.2552
TWF63-19-175119	63-2009	05/01/2019	Trimethylbenzene[1,3,5-]	44.7055	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.36904	44.7055
TWF63-19-175119	63-2009	05/01/2019	Toluene	34.2714	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.02574	34.2714
TWF63-19-175119	63-2009	05/01/2019	Chlorobenzene	41.8675	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.5021	41.8675
TWF63-19-175119	63-2009	05/01/2019	Tetrahydrofuran	26.8218	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.43185	26.8218
TWF63-19-175119	63-2009	05/01/2019	Hexane	32.0553	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.74962	32.0553
TWF63-19-175119	63-2009	05/01/2019	Cyclohexane	31.3039	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87998	31.3039
TWF63-19-175119	63-2009	05/01/2019	Trichlorobenzene[1,2,4-]	267	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	111.25	267
TWF63-19-175119	63-2009	05/01/2019	Dioxane[1,4-]	129.652	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	36.0144	129.652
TWF63-19-175119	63-2009	05/01/2019	Chlorodibromomethane	77.4712	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.1753	77.4712
TWF63-19-175119	63-2009	05/01/2019	Tetrachloroethene	61.6816	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.6902	61.6816
TWF63-19-175119	63-2009	05/01/2019	n-Heptane	37.2701	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.6964	37.2701
TWF63-19-175119	63-2009	05/01/2019	Dichloroethene[cis-1,2-]	36.0575	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.0946	36.0575
TWF63-19-175119	63-2009	05/01/2019	Dichloroethene[trans-1,2-]	36.0575	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.8683	36.0575
TWF63-19-175119	63-2009	05/01/2019	Methyl tert-Butyl Ether	32.788	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.35086	32.788
TWF63-19-175119	63-2009	05/01/2019	Isooctane	42.4887	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.80507	42.4887
TWF63-19-175119	63-2009	05/01/2019	Dichlorobenzene[1,3-]	54.6814	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.41252	54.6814
TWF63-19-175119	63-2009	05/01/2019	Carbon Tetrachloride	57.2144	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.8321	57.2144
TWF63-19-175119	63-2009	05/01/2019	Hexanone[2-]	147.383	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	57.3157	147.383
TWF63-19-175119	63-2009	05/01/2019	Ethyltoluene[4-]	44.7055	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	44.7055
TWF63-19-175119	63-2009	05/01/2019	Ethanol	67.791	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.0647	67.791
TWF63-19-175119	63-2009	05/01/2019	Propanol[2-]	88.4358	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.3001	88.4358
TWF63-19-175119	63-2009	05/01/2019	Acetone	85.4635	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.5821	85.4635
TWF63-19-175119	63-2009	05/01/2019	Chloroform	44.4042	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.80734	44.4042
TWF63-19-175119	63-2009	05/01/2019	Benzene	29.0536	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.15051	29.0536
TWF63-19-175119	63-2009	05/01/2019	Trichloroethane[1,1,1-]	49.6191	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.72423	49.6191
TWF63-19-175119	63-2009	05/01/2019	Bromomethane	139.702	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	62.0898	139.702
TWF63-19-175119	63-2009	05/01/2019	Chloromethane	74.2949	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.6845	74.2949
TWF63-19-175119	63-2009	05/01/2019	Chloroethane	94.9251	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	26.3681	94.9251
TWF63-19-175119	63-2009	05/01/2019	Vinyl Chloride	23.2466	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.91916	23.2466
TWF63-19-175119	63-2009	05/01/2019	Methylene Chloride	124.973	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	19.4402	124.973
TWF63-19-175119	63-2009	05/01/2019	Carbon Disulfide	112.037	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.1167	112.037
TWF63-19-175119	63-2009	05/01/2019	Bromoform	94.0047	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.3962	94.0047
TWF63-19-175119	63-2009	05/01/2019	Bromodichloromethane	60.9266	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.09266	60.9266
TWF63-19-175119	63-2009	05/01/2019	Dichloroethane[1,1-]	36.8089	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.1123	36.8089
TWF63-19-175119	63-2009	05/01/2019	Dichloroethene[1,1-]	36.0575	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.75484	36.0575
TWF63-19-175119	63-2009	05/01/2019	Trichlorofluoromethane	51.0957	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.29939	51.0957
TWF63-19-175119	63-2009	05/01/2019	Dichlorodifluoromethane	44.9733	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.88425	44.9733
TWF63-19-175119	63-2009	05/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	69.6958	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2542	69.6958
TWF63-19-175119	63-2009	05/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	63.5749	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.767	63.5749
TWF63-19-175119	63-2009	05/01/2019	Dichloropropane[1,2-]	42.0274	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.0842	42.0274
TWF63-19-175119	63-2009	05/01/2019	Butanone[2-]	106.108	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.9376	106.108
TWF63-19-175119	63-2009	05/01/2019	Trichloroethane[1,1,2-]	49.6191	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.9937	49.6191
TWF63-19-175119	63-2009	05/01/2019	Trichloroethene	44.038	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	14.5003	48.8714
TWF63-19-175119	63-2009	05/01/2019	Tetrachloroethane[1,1,2,2-]	62.433	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.60507	62.433
TWF63-19-175119	63-2009	05/01/2019	Hexachlorobutadiene	383.703	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	234.485	383.703
TWF63-19-175119	63-2009	05/01/2019	Xylene[1,2-]	39.487	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.4141	39.487

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175119	63-2009	05/01/2019	Dichlorobenzene[1,2-]	54.6814	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2197	54.6814
TWF63-19-175119	63-2009	05/01/2019	Trimethylbenzene[1,2,4-]	44.7055	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.35158	44.7055
TWF63-19-175119	63-2009	05/01/2019	Isopropylbenzene	44.7055	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.14412	44.7055
TWF63-19-175119	63-2009	05/01/2019	Xylene[1,3-]+Xylene[1,4-]	39.487	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.37669	39.487
TWF63-19-175120	63-2010	05/01/2019	Ethylbenzene	38.1888	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.81134	38.1888
TWF63-19-175120	63-2010	05/01/2019	Styrene	37.4622	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.23702	37.4622
TWF63-19-175120	63-2010	05/01/2019	Benzyl Chloride	45.5302	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.8652	45.5302
TWF63-19-175120	63-2010	05/01/2019	Dichloropropene[cis-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.25733	39.9153
TWF63-19-175120	63-2010	05/01/2019	Dichloropropene[trans-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.49047	39.9153
TWF63-19-175120	63-2010	05/01/2019	Propylbenzene[1-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.40396	43.2317
TWF63-19-175120	63-2010	05/01/2019	Dichlorobenzene[1,4-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.01342	52.8787
TWF63-19-175120	63-2010	05/01/2019	Dibromoethane[1,2-]	67.5723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2859	67.5723
TWF63-19-175120	63-2010	05/01/2019	Butadiene[1,3-]	19.4565	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.19069	19.4565
TWF63-19-175120	63-2010	05/01/2019	Chloro-1-propene[3-]	109.47	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.7706	109.47
TWF63-19-175120	63-2010	05/01/2019	Dichloroethane[1,2-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87638	35.5954
TWF63-19-175120	63-2010	05/01/2019	Methyl-2-pentanone[4-]	36.027	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.6041	36.027
TWF63-19-175120	63-2010	05/01/2019	Trimethylbenzene[1,3,5-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.36904	43.2317
TWF63-19-175120	63-2010	05/01/2019	Toluene	33.1416	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.02574	33.1416
TWF63-19-175120	63-2010	05/01/2019	Chlorobenzene	40.4872	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.042	40.4872
TWF63-19-175120	63-2010	05/01/2019	Tetrahydrofuran	25.9376	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.1371	25.9376
TWF63-19-175120	63-2010	05/01/2019	Hexane	30.9985	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.74962	30.9985
TWF63-19-175120	63-2010	05/01/2019	Cyclohexane	30.2719	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87998	30.2719
TWF63-19-175120	63-2010	05/01/2019	Trichlorobenzene[1,2,4-]	259.583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	103.833	259.583
TWF63-19-175120	63-2010	05/01/2019	Dioxane[1,4-]	126.051	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	34.934	126.051
TWF63-19-175120	63-2010	05/01/2019	Chlorodibromomethane	74.9172	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.324	74.9172
TWF63-19-175120	63-2010	05/01/2019	Tetrachloroethene	59.6482	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.0124	59.6482
TWF63-19-175120	63-2010	05/01/2019	n-Heptane	36.0414	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2868	36.0414
TWF63-19-175120	63-2010	05/01/2019	Dichloroethene[cis-1,2-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6984	34.8688
TWF63-19-175120	63-2010	05/01/2019	Dichloroethene[trans-1,2-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.472	34.8688
TWF63-19-175120	63-2010	05/01/2019	Methyl tert-Butyl Ether	31.7071	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.24277	31.7071
TWF63-19-175120	63-2010	05/01/2019	Isooctane	41.0879	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.33817	41.0879
TWF63-19-175120	63-2010	05/01/2019	Dichlorobenzene[1,3-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.41252	52.8787
TWF63-19-175120	63-2010	05/01/2019	Carbon Tetrachloride	55.3282	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2033	55.3282
TWF63-19-175120	63-2010	05/01/2019	Hexanone[2-]	143.289	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	53.2217	143.289
TWF63-19-175120	63-2010	05/01/2019	Ethyltoluene[4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.773	43.2317
TWF63-19-175120	63-2010	05/01/2019	Ethanol	65.9079	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	14.6881	65.9079
TWF63-19-175120	63-2010	05/01/2019	Propanol[2-]	85.9793	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.0545	85.9793
TWF63-19-175120	63-2010	05/01/2019	Acetone	20.1789	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	12.3447	83.0895
TWF63-19-175120	63-2010	05/01/2019	Chloroform	42.9404	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.31938	42.9404
TWF63-19-175120	63-2010	05/01/2019	Benzene	28.0958	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.83124	28.0958
TWF63-19-175120	63-2010	05/01/2019	Trichloroethane[1,1,1-]	47.9833	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.17897	47.9833
TWF63-19-175120	63-2010	05/01/2019	Bromomethane	135.822	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	62.0898	135.822
TWF63-19-175120	63-2010	05/01/2019	Chloromethane	72.2312	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.2717	72.2312
TWF63-19-175120	63-2010	05/01/2019	Chloroethane	92.2883	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	26.3681	92.2883
TWF63-19-175120	63-2010	05/01/2019	Vinyl Chloride	22.4802	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.91916	22.4802
TWF63-19-175120	63-2010	05/01/2019	Methylene Chloride	121.501	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	19.093	121.501
TWF63-19-175120	63-2010	05/01/2019	Carbon Disulfide	108.925	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.8055	108.925
TWF63-19-175120	63-2010	05/01/2019	Bromoform	90.9056	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.3962	90.9056
TWF63-19-175120	63-2010	05/01/2019	Bromodichloromethane	58.918	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.8918	58.918
TWF63-19-175120	63-2010	05/01/2019	Dichloroethane[1,1-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.1123	35.5954
TWF63-19-175120	63-2010	05/01/2019	Dichloroethene[1,1-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.75484	34.8688
TWF63-19-175120	63-2010	05/01/2019	Trichlorofluoromethane	49.4113	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.29939	49.4113
TWF63-19-175120	63-2010	05/01/2019	Dichlorodifluoromethane	43.4907	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.88425	43.4907
TWF63-19-175120	63-2010	05/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	67.3982	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2542	67.3982
TWF63-19-175120	63-2010	05/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	61.479	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.0684	61.479
TWF63-19-175120	63-2010	05/01/2019	Dichloropropane[1,2-]	40.6419	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.0842	40.6419
TWF63-19-175120	63-2010	05/01/2019	Butanone[2-]	103.161	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.3481	103.161
TWF63-19-175120	63-2010	05/01/2019	Trichloroethane[1,1,2-]	47.9833	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.4485	47.9833

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175120	63-2010	05/01/2019	Trichloroethene	118.151	ug/m3		Y	GAS	REG	VOC	EPA:TO15	13.9633	47.2603
TWF63-19-175120	63-2010	05/01/2019	Tetrachloroethane[1,1,2,2-]	60.3748	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.60507	60.3748
TWF63-19-175120	63-2010	05/01/2019	Hexachlorobutadiene	373.044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	234.485	373.044
TWF63-19-175120	63-2010	05/01/2019	Xylene[1,2-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.4141	38.1852
TWF63-19-175120	63-2010	05/01/2019	Dichlorobenzene[1,2-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.6188	52.8787
TWF63-19-175120	63-2010	05/01/2019	Trimethylbenzene[1,2,4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.35158	43.2317
TWF63-19-175120	63-2010	05/01/2019	Isopropylbenzene	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.04587	43.2317
TWF63-19-175120	63-2010	05/01/2019	Xylene[1,3-]+Xylene[1,4-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.37669	38.1852
TWF63-19-175121	63-2011	05/01/2019	Ethylbenzene	38.1888	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.81134	38.1888
TWF63-19-175121	63-2011	05/01/2019	Styrene	37.4622	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.23702	37.4622
TWF63-19-175121	63-2011	05/01/2019	Benzyl Chloride	45.5302	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.3478	45.5302
TWF63-19-175121	63-2011	05/01/2019	Dichloropropene[cis-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.80375	39.9153
TWF63-19-175121	63-2011	05/01/2019	Dichloropropene[trans-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.44512	39.9153
TWF63-19-175121	63-2011	05/01/2019	Propylbenzene[1-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.40396	43.2317
TWF63-19-175121	63-2011	05/01/2019	Dichlorobenzene[1,4-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.01342	52.8787
TWF63-19-175121	63-2011	05/01/2019	Dibromoethane[1,2-]	67.5723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.518	67.5723
TWF63-19-175121	63-2011	05/01/2019	Butadiene[1,3-]	19.4565	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.9696	19.4565
TWF63-19-175121	63-2011	05/01/2019	Chloro-1-propene[3-]	109.47	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.4578	109.47
TWF63-19-175121	63-2011	05/01/2019	Dichloroethane[1,2-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87638	35.5954
TWF63-19-175121	63-2011	05/01/2019	Methyl-2-pentanone[4-]	36.027	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.1947	36.027
TWF63-19-175121	63-2011	05/01/2019	Trimethylbenzene[1,3,5-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87777	43.2317
TWF63-19-175121	63-2011	05/01/2019	Toluene	33.1416	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.02574	33.1416
TWF63-19-175121	63-2011	05/01/2019	Chlorobenzene	40.4872	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.042	40.4872
TWF63-19-175121	63-2011	05/01/2019	Tetrahydrofuran	25.9376	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.1371	25.9376
TWF63-19-175121	63-2011	05/01/2019	Hexane	30.9985	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.74962	30.9985
TWF63-19-175121	63-2011	05/01/2019	Cyclohexane	30.2719	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.53598	30.2719
TWF63-19-175121	63-2011	05/01/2019	Trichlorobenzene[1,2,4-]	259.583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	103.833	259.583
TWF63-19-175121	63-2011	05/01/2019	Dioxane[1,4-]	126.051	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	34.5739	126.051
TWF63-19-175121	63-2011	05/01/2019	Chlorodibromomethane	74.9172	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.324	74.9172
TWF63-19-175121	63-2011	05/01/2019	Tetrachloroethene	59.6482	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.0124	59.6482
TWF63-19-175121	63-2011	05/01/2019	n-Heptane	36.0414	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2868	36.0414
TWF63-19-175121	63-2011	05/01/2019	Dichloroethene[cis-1,2-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6984	34.8688
TWF63-19-175121	63-2011	05/01/2019	Dichloroethene[trans-1,2-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.0758	34.8688
TWF63-19-175121	63-2011	05/01/2019	Methyl tert-Butyl Ether	31.7071	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.20674	31.7071
TWF63-19-175121	63-2011	05/01/2019	Isooctane	41.0879	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.33817	41.0879
TWF63-19-175121	63-2011	05/01/2019	Dichlorobenzene[1,3-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.81163	52.8787
TWF63-19-175121	63-2011	05/01/2019	Carbon Tetrachloride	55.3282	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2033	55.3282
TWF63-19-175121	63-2011	05/01/2019	Hexanone[2-]	143.289	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	53.2217	143.289
TWF63-19-175121	63-2011	05/01/2019	Ethyltoluene[4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.773	43.2317
TWF63-19-175121	63-2011	05/01/2019	Ethanol	65.9079	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	14.4997	65.9079
TWF63-19-175121	63-2011	05/01/2019	Propanol[2-]	85.9793	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.0545	85.9793
TWF63-19-175121	63-2011	05/01/2019	Acetone	12.3447	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	12.1073	83.0895
TWF63-19-175121	63-2011	05/01/2019	Chloroform	42.9404	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.31938	42.9404
TWF63-19-175121	63-2011	05/01/2019	Benzene	28.0958	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.83124	28.0958
TWF63-19-175121	63-2011	05/01/2019	Trichloroethane[1,1,1-]	47.9833	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.17897	47.9833
TWF63-19-175121	63-2011	05/01/2019	Bromomethane	135.822	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	62.0898	135.822
TWF63-19-175121	63-2011	05/01/2019	Chloromethane	72.2312	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.2717	72.2312
TWF63-19-175121	63-2011	05/01/2019	Chloroethane	92.2883	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	26.3681	92.2883
TWF63-19-175121	63-2011	05/01/2019	Vinyl Chloride	22.4802	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.6637	22.4802
TWF63-19-175121	63-2011	05/01/2019	Methylene Chloride	121.501	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	18.7459	121.501
TWF63-19-175121	63-2011	05/01/2019	Carbon Disulfide	108.925	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.4943	108.925
TWF63-19-175121	63-2011	05/01/2019	Bromoform	90.9056	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.3962	90.9056
TWF63-19-175121	63-2011	05/01/2019	Bromodichloromethane	58.918	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.8918	58.918
TWF63-19-175121	63-2011	05/01/2019	Dichloroethane[1,1-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.70783	35.5954
TWF63-19-175121	63-2011	05/01/2019	Dichloroethene[1,1-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.75484	34.8688
TWF63-19-175121	63-2011	05/01/2019	Trichlorofluoromethane	49.4113	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.29939	49.4113
TWF63-19-175121	63-2011	05/01/2019	Dichlorodifluoromethane	43.4907	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.39003	43.4907
TWF63-19-175121	63-2011	05/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	67.3982	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2542	67.3982

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175121	63-2011	05/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	61.479	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.0684	61.479
TWF63-19-175121	63-2011	05/01/2019	Dichloropropane[1,2-]	40.6419	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6223	40.6419
TWF63-19-175121	63-2011	05/01/2019	Butanone[2-]	103.161	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.0534	103.161
TWF63-19-175121	63-2011	05/01/2019	Trichloroethane[1,1,2-]	47.9833	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.4485	47.9833
TWF63-19-175121	63-2011	05/01/2019	Trichloroethene	107.41	ug/m3		Y	GAS	REG	VOC	EPA:TO15	13.9633	47.2603
TWF63-19-175121	63-2011	05/01/2019	Tetrachloroethane[1,1,2,2-]	60.3748	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.60507	60.3748
TWF63-19-175121	63-2011	05/01/2019	Hexachlorobutadiene	373.044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	234.485	373.044
TWF63-19-175121	63-2011	05/01/2019	Xylene[1,2-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.4141	38.1852
TWF63-19-175121	63-2011	05/01/2019	Dichlorobenzene[1,2-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.6188	52.8787
TWF63-19-175121	63-2011	05/01/2019	Trimethylbenzene[1,2,4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.35158	43.2317
TWF63-19-175121	63-2011	05/01/2019	Isopropylbenzene	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	2.99674	43.2317
TWF63-19-175121	63-2011	05/01/2019	Xylene[1,3-]+Xylene[1,4-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.94276	38.1852
TWF63-19-175122	63-2012	05/01/2019	Ethylbenzene	37.3209	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.37738	37.3209
TWF63-19-175122	63-2012	05/01/2019	Styrene	36.6108	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.81131	36.6108
TWF63-19-175122	63-2012	05/01/2019	Benzyl Chloride	44.4954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.3478	44.4954
TWF63-19-175122	63-2012	05/01/2019	Dichloropropene[cis-1,3-]	39.0082	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.80375	39.0082
TWF63-19-175122	63-2012	05/01/2019	Dichloropropene[trans-1,3-]	39.0082	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.39976	39.0082
TWF63-19-175122	63-2012	05/01/2019	Propylbenzene[1-]	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.91269	42.2492
TWF63-19-175122	63-2012	05/01/2019	Dichlorobenzene[1,4-]	51.6769	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.01342	51.6769
TWF63-19-175122	63-2012	05/01/2019	Dibromoethane[1,2-]	66.0365	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.518	66.0365
TWF63-19-175122	63-2012	05/01/2019	Butadiene[1,3-]	19.0143	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.9696	19.0143
TWF63-19-175122	63-2012	05/01/2019	Chloro-1-propene[3-]	109.47	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.145	109.47
TWF63-19-175122	63-2012	05/01/2019	Dichloroethane[1,2-]	34.7864	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87638	34.7864
TWF63-19-175122	63-2012	05/01/2019	Methyl-2-pentanone[4-]	35.2082	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.1947	35.2082
TWF63-19-175122	63-2012	05/01/2019	Trimethylbenzene[1,3,5-]	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87777	42.2492
TWF63-19-175122	63-2012	05/01/2019	Toluene	32.3884	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.02574	32.3884
TWF63-19-175122	63-2012	05/01/2019	Chlorobenzene	39.5671	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.042	39.5671
TWF63-19-175122	63-2012	05/01/2019	Tetrahydrofuran	25.3481	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.1371	25.3481
TWF63-19-175122	63-2012	05/01/2019	Hexane	30.294	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.39737	30.294
TWF63-19-175122	63-2012	05/01/2019	Cyclohexane	29.5839	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.53598	29.5839
TWF63-19-175122	63-2012	05/01/2019	Trichlorobenzene[1,2,4-]	259.583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	103.833	259.583
TWF63-19-175122	63-2012	05/01/2019	Dioxane[1,4-]	126.051	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	34.2137	126.051
TWF63-19-175122	63-2012	05/01/2019	Chlorodibromomethane	73.2146	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.324	73.2146
TWF63-19-175122	63-2012	05/01/2019	Tetrachloroethene	34.5688	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	20.3346	58.2925
TWF63-19-175122	63-2012	05/01/2019	n-Heptane	35.2223	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.8773	35.2223
TWF63-19-175122	63-2012	05/01/2019	Dichloroethene[cis-1,2-]	34.0763	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6984	34.0763
TWF63-19-175122	63-2012	05/01/2019	Dichloroethene[trans-1,2-]	34.0763	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.0758	34.0763
TWF63-19-175122	63-2012	05/01/2019	Methyl tert-Butyl Ether	30.9865	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.17071	30.9865
TWF63-19-175122	63-2012	05/01/2019	Isooctane	40.1541	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.33817	40.1541
TWF63-19-175122	63-2012	05/01/2019	Dichlorobenzene[1,3-]	51.6769	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.81163	51.6769
TWF63-19-175122	63-2012	05/01/2019	Carbon Tetrachloride	42.1249	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	12.5746	54.0708
TWF63-19-175122	63-2012	05/01/2019	Hexanone[2-]	143.289	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	53.2217	143.289
TWF63-19-175122	63-2012	05/01/2019	Ethyltoluene[4-]	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.773	42.2492
TWF63-19-175122	63-2012	05/01/2019	Ethanol	65.9079	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	14.3114	65.9079
TWF63-19-175122	63-2012	05/01/2019	Propanol[2-]	85.9793	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.8088	85.9793
TWF63-19-175122	63-2012	05/01/2019	Acetone	83.0895	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.8699	83.0895
TWF63-19-175122	63-2012	05/01/2019	Chloroform	97.5917	ug/m3		Y	GAS	REG	VOC	EPA:TO15	7.31938	41.9644
TWF63-19-175122	63-2012	05/01/2019	Benzene	27.4572	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.83124	27.4572
TWF63-19-175122	63-2012	05/01/2019	Trichloroethane[1,1,1-]	46.8927	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.17897	46.8927
TWF63-19-175122	63-2012	05/01/2019	Bromomethane	135.822	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	58.2092	135.822
TWF63-19-175122	63-2012	05/01/2019	Chloromethane	72.2312	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.0654	72.2312
TWF63-19-175122	63-2012	05/01/2019	Chloroethane	92.2883	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	26.1044	92.2883
TWF63-19-175122	63-2012	05/01/2019	Vinyl Chloride	21.9693	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.6637	21.9693
TWF63-19-175122	63-2012	05/01/2019	Methylene Chloride	121.501	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	18.7459	121.501
TWF63-19-175122	63-2012	05/01/2019	Carbon Disulfide	108.925	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.1831	108.925
TWF63-19-175122	63-2012	05/01/2019	Bromoform	88.8396	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.3962	88.8396
TWF63-19-175122	63-2012	05/01/2019	Bromodichloromethane	57.579	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.7579	57.579
TWF63-19-175122	63-2012	05/01/2019	Dichloroethane[1,1-]	34.7864	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.70783	34.7864

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175122	63-2012	05/01/2019	Dichloroethene[1,1-]	34.0763	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.75484	34.0763
TWF63-19-175122	63-2012	05/01/2019	Trichlorofluoromethane	48.2883	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.29939	48.2883
TWF63-19-175122	63-2012	05/01/2019	Dichlorodifluoromethane	84.0161	ug/m3		Y	GAS	REG	VOC	EPA:TO15	9.39003	42.5023
TWF63-19-175122	63-2012	05/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	16.0837	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	11.4883	65.8664
TWF63-19-175122	63-2012	05/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	60.0818	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.0684	60.0818
TWF63-19-175122	63-2012	05/01/2019	Dichloropropane[1,2-]	39.7182	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6223	39.7182
TWF63-19-175122	63-2012	05/01/2019	Butanone[2-]	103.161	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.7586	103.161
TWF63-19-175122	63-2012	05/01/2019	Trichloroethane[1,1,2-]	46.8927	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.9032	46.8927
TWF63-19-175122	63-2012	05/01/2019	Trichloroethene	2792.65	ug/m3		Y	GAS	REG	VOC	EPA:TO15	13.9633	46.1862
TWF63-19-175122	63-2012	05/01/2019	Tetrachloroethane[1,1,2,2-]	59.0026	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.919	59.0026
TWF63-19-175122	63-2012	05/01/2019	Hexachlorobutadiene	373.044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	223.827	373.044
TWF63-19-175122	63-2012	05/01/2019	Xylene[1,2-]	37.3173	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.98022	37.3173
TWF63-19-175122	63-2012	05/01/2019	Dichlorobenzene[1,2-]	51.6769	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.6188	51.6769
TWF63-19-175122	63-2012	05/01/2019	Trimethylbenzene[1,2,4-]	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.86031	42.2492
TWF63-19-175122	63-2012	05/01/2019	Isopropylbenzene	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	2.94762	42.2492
TWF63-19-175122	63-2012	05/01/2019	Xylene[1,3-]+Xylene[1,4-]	37.3173	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.94276	37.3173
TWF63-19-175123	63-2012	05/01/2019	Ethylbenzene	38.1888	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.81134	38.1888
TWF63-19-175123	63-2012	05/01/2019	Styrene	37.4622	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.23702	37.4622
TWF63-19-175123	63-2012	05/01/2019	Benzyl Chloride	45.5302	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.3478	45.5302
TWF63-19-175123	63-2012	05/01/2019	Dichloropropene[cis-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.80375	39.9153
TWF63-19-175123	63-2012	05/01/2019	Dichloropropene[trans-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.44512	39.9153
TWF63-19-175123	63-2012	05/01/2019	Propylbenzene[1-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.40396	43.2317
TWF63-19-175123	63-2012	05/01/2019	Dichlorobenzene[1,4-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.01342	52.8787
TWF63-19-175123	63-2012	05/01/2019	Dibromoethane[1,2-]	67.5723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.518	67.5723
TWF63-19-175123	63-2012	05/01/2019	Butadiene[1,3-]	19.4565	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.9696	19.4565
TWF63-19-175123	63-2012	05/01/2019	Chloro-1-propene[3-]	109.47	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.4578	109.47
TWF63-19-175123	63-2012	05/01/2019	Dichloroethane[1,2-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87638	35.5954
TWF63-19-175123	63-2012	05/01/2019	Methyl-2-pentanone[4-]	36.027	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.1947	36.027
TWF63-19-175123	63-2012	05/01/2019	Trimethylbenzene[1,3,5-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87777	43.2317
TWF63-19-175123	63-2012	05/01/2019	Toluene	33.1416	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.02574	33.1416
TWF63-19-175123	63-2012	05/01/2019	Chlorobenzene	40.4872	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.042	40.4872
TWF63-19-175123	63-2012	05/01/2019	Tetrahydrofuran	25.9376	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.1371	25.9376
TWF63-19-175123	63-2012	05/01/2019	Hexane	30.9985	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.74962	30.9985
TWF63-19-175123	63-2012	05/01/2019	Cyclohexane	30.2719	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.53598	30.2719
TWF63-19-175123	63-2012	05/01/2019	Trichlorobenzene[1,2,4-]	259.583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	103.833	259.583
TWF63-19-175123	63-2012	05/01/2019	Dioxane[1,4-]	126.051	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	34.5739	126.051
TWF63-19-175123	63-2012	05/01/2019	Chlorodibromomethane	74.9172	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.324	74.9172
TWF63-19-175123	63-2012	05/01/2019	Tetrachloroethene	81.3384	ug/m3		Y	GAS	REG	VOC	EPA:TO15	21.0124	59.6482
TWF63-19-175123	63-2012	05/01/2019	n-Heptane	36.0414	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2868	36.0414
TWF63-19-175123	63-2012	05/01/2019	Dichloroethene[cis-1,2-]	19.8118	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	10.6984	34.8688
TWF63-19-175123	63-2012	05/01/2019	Dichloroethene[trans-1,2-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.0758	34.8688
TWF63-19-175123	63-2012	05/01/2019	Methyl tert-Butyl Ether	31.7071	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.20674	31.7071
TWF63-19-175123	63-2012	05/01/2019	Isooctane	41.0879	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.33817	41.0879
TWF63-19-175123	63-2012	05/01/2019	Dichlorobenzene[1,3-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.81163	52.8787
TWF63-19-175123	63-2012	05/01/2019	Carbon Tetrachloride	100.597	ug/m3		Y	GAS	REG	VOC	EPA:TO15	13.2033	55.3282
TWF63-19-175123	63-2012	05/01/2019	Hexanone[2-]	143.289	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	53.2217	143.289
TWF63-19-175123	63-2012	05/01/2019	Ethyltoluene[4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.773	43.2317
TWF63-19-175123	63-2012	05/01/2019	Ethanol	65.9079	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	14.4997	65.9079
TWF63-19-175123	63-2012	05/01/2019	Propanol[2-]	85.9793	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.0545	85.9793
TWF63-19-175123	63-2012	05/01/2019	Acetone	83.0895	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.1073	83.0895
TWF63-19-175123	63-2012	05/01/2019	Chloroform	214.702	ug/m3		Y	GAS	REG	VOC	EPA:TO15	7.31938	42.9404
TWF63-19-175123	63-2012	05/01/2019	Benzene	28.0958	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.83124	28.0958
TWF63-19-175123	63-2012	05/01/2019	Trichloroethane[1,1,1-]	13.6316	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	8.17897	47.9833
TWF63-19-175123	63-2012	05/01/2019	Bromomethane	135.822	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	62.0898	135.822
TWF63-19-175123	63-2012	05/01/2019	Chloromethane	72.2312	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.2717	72.2312
TWF63-19-175123	63-2012	05/01/2019	Chloroethane	92.2883	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	26.3681	92.2883
TWF63-19-175123	63-2012	05/01/2019	Vinyl Chloride	22.4802	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.6637	22.4802
TWF63-19-175123	63-2012	05/01/2019	Methylene Chloride	121.501	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	18.7459	121.501

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175123	63-2012	05/01/2019	Carbon Disulfide	108.925	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.4943	108.925
TWF63-19-175123	63-2012	05/01/2019	Bromoform	90.9056	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.3962	90.9056
TWF63-19-175123	63-2012	05/01/2019	Bromodichloromethane	58.918	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.8918	58.918
TWF63-19-175123	63-2012	05/01/2019	Dichloroethane[1,1-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.70783	35.5954
TWF63-19-175123	63-2012	05/01/2019	Dichloroethene[1,1-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.75484	34.8688
TWF63-19-175123	63-2012	05/01/2019	Trichlorofluoromethane	49.4113	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.29939	49.4113
TWF63-19-175123	63-2012	05/01/2019	Dichlorodifluoromethane	182.859	ug/m3		Y	GAS	REG	VOC	EPA:TO15	9.39003	43.4907
TWF63-19-175123	63-2012	05/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	28.3379	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	12.2542	67.3982
TWF63-19-175123	63-2012	05/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	61.479	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.0684	61.479
TWF63-19-175123	63-2012	05/01/2019	Dichloropropane[1,2-]	40.6419	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6223	40.6419
TWF63-19-175123	63-2012	05/01/2019	Butanone[2-]	103.161	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.0534	103.161
TWF63-19-175123	63-2012	05/01/2019	Trichloroethane[1,1,2-]	47.9833	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.4485	47.9833
TWF63-19-175123	63-2012	05/01/2019	Trichloroethene	7518.68	ug/m3		Y	GAS	REG	VOC	EPA:TO15	13.9633	47.2603
TWF63-19-175123	63-2012	05/01/2019	Tetrachloroethane[1,1,2,2-]	60.3748	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.60507	60.3748
TWF63-19-175123	63-2012	05/01/2019	Hexachlorobutadiene	373.044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	234.485	373.044
TWF63-19-175123	63-2012	05/01/2019	Xylene[1,2-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.4141	38.1852
TWF63-19-175123	63-2012	05/01/2019	Dichlorobenzene[1,2-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.6188	52.8787
TWF63-19-175123	63-2012	05/01/2019	Trimethylbenzene[1,2,4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.35158	43.2317
TWF63-19-175123	63-2012	05/01/2019	Isopropylbenzene	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	2.99674	43.2317
TWF63-19-175123	63-2012	05/01/2019	Xylene[1,3-]+Xylene[1,4-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.94276	38.1852
TWF63-19-175124	63-2013	05/01/2019	Ethylbenzene	37.3209	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.37738	37.3209
TWF63-19-175124	63-2013	05/01/2019	Styrene	36.6108	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.81131	36.6108
TWF63-19-175124	63-2013	05/01/2019	Benzyl Chloride	44.4954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.3478	44.4954
TWF63-19-175124	63-2013	05/01/2019	Dichloropropene[cis-1,3-]	39.0082	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.80375	39.0082
TWF63-19-175124	63-2013	05/01/2019	Dichloropropene[trans-1,3-]	39.0082	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.3544	39.0082
TWF63-19-175124	63-2013	05/01/2019	Propylbenzene[1-]	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.91269	42.2492
TWF63-19-175124	63-2013	05/01/2019	Dichlorobenzene[1,4-]	51.6769	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.01342	51.6769
TWF63-19-175124	63-2013	05/01/2019	Dibromoethane[1,2-]	66.0365	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.518	66.0365
TWF63-19-175124	63-2013	05/01/2019	Butadiene[1,3-]	19.0143	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.9696	19.0143
TWF63-19-175124	63-2013	05/01/2019	Chloro-1-propene[3-]	106.342	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.145	106.342
TWF63-19-175124	63-2013	05/01/2019	Dichloroethane[1,2-]	34.7864	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87638	34.7864
TWF63-19-175124	63-2013	05/01/2019	Methyl-2-pentanone[4-]	35.2082	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	17.1947	35.2082
TWF63-19-175124	63-2013	05/01/2019	Trimethylbenzene[1,3,5-]	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87777	42.2492
TWF63-19-175124	63-2013	05/01/2019	Toluene	32.3884	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.64913	32.3884
TWF63-19-175124	63-2013	05/01/2019	Chlorobenzene	39.5671	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.5819	39.5671
TWF63-19-175124	63-2013	05/01/2019	Tetrahydrofuran	25.3481	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.84236	25.3481
TWF63-19-175124	63-2013	05/01/2019	Hexane	30.294	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.39737	30.294
TWF63-19-175124	63-2013	05/01/2019	Cyclohexane	29.5839	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.53598	29.5839
TWF63-19-175124	63-2013	05/01/2019	Trichlorobenzene[1,2,4-]	252.166	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	103.833	252.166
TWF63-19-175124	63-2013	05/01/2019	Dioxane[1,4-]	122.449	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	34.2137	122.449
TWF63-19-175124	63-2013	05/01/2019	Chlorodibromomethane	73.2146	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.324	73.2146
TWF63-19-175124	63-2013	05/01/2019	Tetrachloroethene	58.2925	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	20.3346	58.2925
TWF63-19-175124	63-2013	05/01/2019	n-Heptane	35.2223	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.8773	35.2223
TWF63-19-175124	63-2013	05/01/2019	Dichloroethene[cis-1,2-]	34.0763	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.3021	34.0763
TWF63-19-175124	63-2013	05/01/2019	Dichloroethene[trans-1,2-]	34.0763	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.0758	34.0763
TWF63-19-175124	63-2013	05/01/2019	Methyl tert-Butyl Ether	30.9865	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.17071	30.9865
TWF63-19-175124	63-2013	05/01/2019	Isooctane	40.1541	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.33817	40.1541
TWF63-19-175124	63-2013	05/01/2019	Dichlorobenzene[1,3-]	51.6769	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.81163	51.6769
TWF63-19-175124	63-2013	05/01/2019	Carbon Tetrachloride	54.0708	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.5746	54.0708
TWF63-19-175124	63-2013	05/01/2019	Hexanone[2-]	139.195	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	53.2217	139.195
TWF63-19-175124	63-2013	05/01/2019	Ethyltoluene[4-]	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.773	42.2492
TWF63-19-175124	63-2013	05/01/2019	Ethanol	64.0248	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	14.1231	64.0248
TWF63-19-175124	63-2013	05/01/2019	Propanol[2-]	83.5227	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.8088	83.5227
TWF63-19-175124	63-2013	05/01/2019	Acetone	12.3447	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	11.8699	80.7155
TWF63-19-175124	63-2013	05/01/2019	Chloroform	32.2053	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	7.31938	41.9644
TWF63-19-175124	63-2013	05/01/2019	Benzene	27.4572	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.83124	27.4572
TWF63-19-175124	63-2013	05/01/2019	Trichloroethane[1,1,1-]	23.4464	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	8.17897	46.8927
TWF63-19-175124	63-2013	05/01/2019	Bromomethane	131.941	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	58.2092	131.941

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175124	63-2013	05/01/2019	Chloromethane	70.1674	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	14.859	70.1674
TWF63-19-175124	63-2013	05/01/2019	Chloroethane	89.6515	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	26.1044	89.6515
TWF63-19-175124	63-2013	05/01/2019	Vinyl Chloride	21.9693	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.6637	21.9693
TWF63-19-175124	63-2013	05/01/2019	Methylene Chloride	118.03	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	18.3988	118.03
TWF63-19-175124	63-2013	05/01/2019	Carbon Disulfide	105.813	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.1831	105.813
TWF63-19-175124	63-2013	05/01/2019	Bromoform	88.8396	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.3962	88.8396
TWF63-19-175124	63-2013	05/01/2019	Bromodichloromethane	57.579	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.7579	57.579
TWF63-19-175124	63-2013	05/01/2019	Dichloroethane[1,1-]	34.7864	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.70783	34.7864
TWF63-19-175124	63-2013	05/01/2019	Dichloroethene[1,1-]	34.0763	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.75484	34.0763
TWF63-19-175124	63-2013	05/01/2019	Trichlorofluoromethane	48.2883	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.29939	48.2883
TWF63-19-175124	63-2013	05/01/2019	Dichlorodifluoromethane	54.3634	ug/m3		Y	GAS	REG	VOC	EPA:TO15	9.39003	42.5023
TWF63-19-175124	63-2013	05/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	65.8664	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.4883	65.8664
TWF63-19-175124	63-2013	05/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	60.0818	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.0684	60.0818
TWF63-19-175124	63-2013	05/01/2019	Dichloropropane[1,2-]	39.7182	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6223	39.7182
TWF63-19-175124	63-2013	05/01/2019	Butanone[2-]	100.213	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.4639	100.213
TWF63-19-175124	63-2013	05/01/2019	Trichloroethane[1,1,2-]	46.8927	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.9032	46.8927
TWF63-19-175124	63-2013	05/01/2019	Trichloroethene	359.823	ug/m3		Y	GAS	REG	VOC	EPA:TO15	13.4262	46.1862
TWF63-19-175124	63-2013	05/01/2019	Tetrachloroethane[1,1,2,2-]	59.0026	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.919	59.0026
TWF63-19-175124	63-2013	05/01/2019	Hexachlorobutadiene	362.386	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	223.827	362.386
TWF63-19-175124	63-2013	05/01/2019	Xylene[1,2-]	37.3173	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.98022	37.3173
TWF63-19-175124	63-2013	05/01/2019	Dichlorobenzene[1,2-]	51.6769	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.6188	51.6769
TWF63-19-175124	63-2013	05/01/2019	Trimethylbenzene[1,2,4-]	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.86031	42.2492
TWF63-19-175124	63-2013	05/01/2019	Isopropylbenzene	42.2492	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	2.94762	42.2492
TWF63-19-175124	63-2013	05/01/2019	Xylene[1,3-]+Xylene[1,4-]	37.3173	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.94276	37.3173
TWF63-19-175125	63-2013	05/01/2019	Ethylbenzene	38.6227	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.33963	38.6227
TWF63-19-175125	63-2013	05/01/2019	Styrene	37.8879	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.68278	37.8879
TWF63-19-175125	63-2013	05/01/2019	Benzyl Chloride	46.0475	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.7956	46.0475
TWF63-19-175125	63-2013	05/01/2019	Dichloropropene[cis-1,3-]	40.3689	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.94617	40.3689
TWF63-19-175125	63-2013	05/01/2019	Dichloropropene[trans-1,3-]	40.3689	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.25733	40.3689
TWF63-19-175125	63-2013	05/01/2019	Propylbenzene[1-]	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	43.723
TWF63-19-175125	63-2013	05/01/2019	Dichlorobenzene[1,4-]	53.4796	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.00894	53.4796
TWF63-19-175125	63-2013	05/01/2019	Dibromoethane[1,2-]	68.3401	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.21794	68.3401
TWF63-19-175125	63-2013	05/01/2019	Butadiene[1,3-]	19.6776	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.40165	19.6776
TWF63-19-175125	63-2013	05/01/2019	Chloro-1-propene[3-]	112.598	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.5195	112.598
TWF63-19-175125	63-2013	05/01/2019	Dichloroethane[1,2-]	35.9999	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	35.9999
TWF63-19-175125	63-2013	05/01/2019	Methyl-2-pentanone[4-]	36.4364	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.18796	36.4364
TWF63-19-175125	63-2013	05/01/2019	Trimethylbenzene[1,3,5-]	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	36.8452	43.723
TWF63-19-175125	63-2013	05/01/2019	Toluene	33.5182	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.89592	33.5182
TWF63-19-175125	63-2013	05/01/2019	Chlorobenzene	40.9473	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.0609	40.9473
TWF63-19-175125	63-2013	05/01/2019	Tetrahydrofuran	26.2323	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.30542	26.2323
TWF63-19-175125	63-2013	05/01/2019	Hexane	31.3507	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.39737	31.3507
TWF63-19-175125	63-2013	05/01/2019	Cyclohexane	30.6159	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.43999	30.6159
TWF63-19-175125	63-2013	05/01/2019	Trichlorobenzene[1,2,4-]	267	ug/m3	UJ	N	GAS	REG	VOC	EPA:TO15	88.9999	267
TWF63-19-175125	63-2013	05/01/2019	Dioxane[1,4-]	129.652	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	35.6543	129.652
TWF63-19-175125	63-2013	05/01/2019	Chlorodibromomethane	75.7685	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.95932	75.7685
TWF63-19-175125	63-2013	05/01/2019	Tetrachloroethene	12.8786	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	6.37151	60.326
TWF63-19-175125	63-2013	05/01/2019	n-Heptane	36.451	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6486	36.451
TWF63-19-175125	63-2013	05/01/2019	Dichloroethene[cis-1,2-]	35.265	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.13226	35.265
TWF63-19-175125	63-2013	05/01/2019	Dichloroethene[trans-1,2-]	35.265	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.52849	35.265
TWF63-19-175125	63-2013	05/01/2019	Methyl tert-Butyl Ether	32.0674	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.38689	32.0674
TWF63-19-175125	63-2013	05/01/2019	Isooctane	41.5548	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	20.0771	41.5548
TWF63-19-175125	63-2013	05/01/2019	Dichlorobenzene[1,3-]	53.4796	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.21073	53.4796
TWF63-19-175125	63-2013	05/01/2019	Carbon Tetrachloride	18.2332	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	5.78432	55.957
TWF63-19-175125	63-2013	05/01/2019	Hexanone[2-]	147.383	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	49.1278	147.383
TWF63-19-175125	63-2013	05/01/2019	Ethyltoluene[4-]	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	43.723
TWF63-19-175125	63-2013	05/01/2019	Ethanol	67.791	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	41.4278	67.791
TWF63-19-175125	63-2013	05/01/2019	Propanol[2-]	88.4358	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.5655	88.4358
TWF63-19-175125	63-2013	05/01/2019	Acetone	85.4635	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.7399	85.4635

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175125	63-2013	05/01/2019	Chloroform	21.4702	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	4.09885	43.4283
TWF63-19-175125	63-2013	05/01/2019	Benzene	28.415	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.51197	28.415
TWF63-19-175125	63-2013	05/01/2019	Trichloroethane[1,1,1-]	45.257	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	8.72423	48.5285
TWF63-19-175125	63-2013	05/01/2019	Bromomethane	139.702	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.0598	139.702
TWF63-19-175125	63-2013	05/01/2019	Chloromethane	74.2949	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.4144	74.2949
TWF63-19-175125	63-2013	05/01/2019	Chloroethane	94.9251	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.1492	94.9251
TWF63-19-175125	63-2013	05/01/2019	Vinyl Chloride	22.7357	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.4519	22.7357
TWF63-19-175125	63-2013	05/01/2019	Methylene Chloride	124.973	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.8702	124.973
TWF63-19-175125	63-2013	05/01/2019	Carbon Disulfide	112.037	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.1831	112.037
TWF63-19-175125	63-2013	05/01/2019	Bromoform	91.9387	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.02453	91.9387
TWF63-19-175125	63-2013	05/01/2019	Bromodichloromethane	59.5875	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.95875	59.5875
TWF63-19-175125	63-2013	05/01/2019	Dichloroethane[1,1-]	35.9999	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	35.9999
TWF63-19-175125	63-2013	05/01/2019	Dichloroethene[1,1-]	35.265	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.54731	35.265
TWF63-19-175125	63-2013	05/01/2019	Trichlorofluoromethane	49.9728	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.86088	49.9728
TWF63-19-175125	63-2013	05/01/2019	Dichlorodifluoromethane	79.074	ug/m3		Y	GAS	REG	VOC	EPA:TO15	4.94212	43.9849
TWF63-19-175125	63-2013	05/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	15.3178	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	12.2542	68.164
TWF63-19-175125	63-2013	05/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	62.1776	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.44928	62.1776
TWF63-19-175125	63-2013	05/01/2019	Dichloropropane[1,2-]	41.1037	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.38944	41.1037
TWF63-19-175125	63-2013	05/01/2019	Butanone[2-]	106.108	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.3481	106.108
TWF63-19-175125	63-2013	05/01/2019	Trichloroethane[1,1,2-]	48.5285	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.36	48.5285
TWF63-19-175125	63-2013	05/01/2019	Trichloroethene	1557.44	ug/m3		Y	GAS	REG	VOC	EPA:TO15	5.37049	47.7973
TWF63-19-175125	63-2013	05/01/2019	Tetrachloroethane[1,1,2,2-]	61.0608	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.919	61.0608
TWF63-19-175125	63-2013	05/01/2019	Hexachlorobutadiene	383.703	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	84.2014	383.703
TWF63-19-175125	63-2013	05/01/2019	Xylene[1,2-]	38.6191	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.24453	38.6191
TWF63-19-175125	63-2013	05/01/2019	Dichlorobenzene[1,2-]	53.4796	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.88877	53.4796
TWF63-19-175125	63-2013	05/01/2019	Trimethylbenzene[1,2,4-]	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.1246	43.723
TWF63-19-175125	63-2013	05/01/2019	Isopropylbenzene	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	27.5111	43.723
TWF63-19-175125	63-2013	05/01/2019	Xylene[1,3-]+Xylene[1,4-]	38.6191	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.77315	38.6191
TWF63-19-175126	63-2009	05/01/2019	Ethylbenzene	40.7926	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	4.7736	40.7926
TWF63-19-175126	63-2009	05/01/2019	Styrene	40.0164	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.10848	40.0164
TWF63-19-175126	63-2009	05/01/2019	Benzyl Chloride	48.6345	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	9.31299	48.6345
TWF63-19-175126	63-2009	05/01/2019	Dichloropropene[cis-1,3-]	42.6368	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	4.17297	42.6368
TWF63-19-175126	63-2009	05/01/2019	Dichloropropene[trans-1,3-]	42.6368	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.71091	42.6368
TWF63-19-175126	63-2009	05/01/2019	Propylbenzene[1-]	46.1793	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	14.2468	46.1793
TWF63-19-175126	63-2009	05/01/2019	Dichlorobenzene[1,4-]	56.4841	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.60984	56.4841
TWF63-19-175126	63-2009	05/01/2019	Dibromoethane[1,2-]	72.1794	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.67866	72.1794
TWF63-19-175126	63-2009	05/01/2019	Butadiene[1,3-]	20.783	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	8.84385	20.783
TWF63-19-175126	63-2009	05/01/2019	Chloro-1-propene[3-]	118.853	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	23.7706	118.853
TWF63-19-175126	63-2009	05/01/2019	Dichloroethane[1,2-]	38.0223	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.87638	38.0223
TWF63-19-175126	63-2009	05/01/2019	Methyl-2-pentanone[4-]	38.4834	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	8.59736	38.4834
TWF63-19-175126	63-2009	05/01/2019	Trimethylbenzene[1,3,5-]	46.1793	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	39.3016	46.1793
TWF63-19-175126	63-2009	05/01/2019	Toluene	35.4012	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.27252	35.4012
TWF63-19-175126	63-2009	05/01/2019	Chlorobenzene	43.2477	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.0609	43.2477
TWF63-19-175126	63-2009	05/01/2019	Tetrahydrofuran	27.7061	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.89491	27.7061
TWF63-19-175126	63-2009	05/01/2019	Hexane	33.112	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.74962	33.112
TWF63-19-175126	63-2009	05/01/2019	Cyclohexane	32.3359	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	3.78399	32.3359
TWF63-19-175126	63-2009	05/01/2019	Trichlorobenzene[1,2,4-]	281.833	ug/m3	UJ	N	GAS	FD	VOC	EPA:TO15	96.4166	281.833
TWF63-19-175126	63-2009	05/01/2019	Dioxane[1,4-]	136.855	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	36.0144	136.855
TWF63-19-175126	63-2009	05/01/2019	Chlorodibromomethane	80.0252	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.29986	80.0252
TWF63-19-175126	63-2009	05/01/2019	Tetrachloroethene	63.7151	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.7782	63.7151
TWF63-19-175126	63-2009	05/01/2019	n-Heptane	38.4988	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	11.0582	38.4988
TWF63-19-175126	63-2009	05/01/2019	Dichloroethene[cis-1,2-]	37.2462	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.52849	37.2462
TWF63-19-175126	63-2009	05/01/2019	Dichloroethene[trans-1,2-]	37.2462	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.92473	37.2462
TWF63-19-175126	63-2009	05/01/2019	Methyl tert-Butyl Ether	33.8689	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	3.60308	33.8689
TWF63-19-175126	63-2009	05/01/2019	Isooctane	43.8894	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	21.4778	43.8894
TWF63-19-175126	63-2009	05/01/2019	Dichlorobenzene[1,3-]	56.4841	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.21073	56.4841
TWF63-19-175126	63-2009	05/01/2019	Carbon Tetrachloride	59.1006	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.16155	59.1006
TWF63-19-175126	63-2009	05/01/2019	Hexanone[2-]	155.571	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	53.2217	155.571

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175126	63-2009	05/01/2019	Ethyltoluene[4-]	46.1793	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	13.7555	46.1793
TWF63-19-175126	63-2009	05/01/2019	Ethanol	71.5572	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	45.194	71.5572
TWF63-19-175126	63-2009	05/01/2019	Propanol[2-]	93.349	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	27.0221	93.349
TWF63-19-175126	63-2009	05/01/2019	Acetone	90.2114	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	26.1138	90.2114
TWF63-19-175126	63-2009	05/01/2019	Chloroform	45.8681	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	4.34283	45.8681
TWF63-19-175126	63-2009	05/01/2019	Benzene	30.0114	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	3.83124	30.0114
TWF63-19-175126	63-2009	05/01/2019	Trichloroethane[1,1,1-]	51.2549	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	9.2695	51.2549
TWF63-19-175126	63-2009	05/01/2019	Bromomethane	147.463	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	25.224	147.463
TWF63-19-175126	63-2009	05/01/2019	Chloromethane	78.4224	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	14.2399	78.4224
TWF63-19-175126	63-2009	05/01/2019	Chloroethane	100.199	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	23.2039	100.199
TWF63-19-175126	63-2009	05/01/2019	Vinyl Chloride	24.0129	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	9.96282	24.0129
TWF63-19-175126	63-2009	05/01/2019	Methylene Chloride	131.916	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	23.2588	131.916
TWF63-19-175126	63-2009	05/01/2019	Carbon Disulfide	118.261	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	17.1167	118.261
TWF63-19-175126	63-2009	05/01/2019	Bromoform	97.1038	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.33443	97.1038
TWF63-19-175126	63-2009	05/01/2019	Bromodichloromethane	62.9351	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.29351	62.9351
TWF63-19-175126	63-2009	05/01/2019	Dichloroethane[1,1-]	38.0223	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.87638	38.0223
TWF63-19-175126	63-2009	05/01/2019	Dichloroethene[1,1-]	37.2462	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.94355	37.2462
TWF63-19-175126	63-2009	05/01/2019	Trichlorofluoromethane	52.7802	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.86088	52.7802
TWF63-19-175126	63-2009	05/01/2019	Dichlorodifluoromethane	6.91897	ug/m3	J	Y	GAS	FD	VOC	EPA:TO15	5.43634	46.456
TWF63-19-175126	63-2009	05/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	71.9935	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	13.0201	71.9935
TWF63-19-175126	63-2009	05/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	65.6708	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.72873	65.6708
TWF63-19-175126	63-2009	05/01/2019	Dichloropropane[1,2-]	43.4129	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.85128	43.4129
TWF63-19-175126	63-2009	05/01/2019	Butanone[2-]	112.003	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	26.8218	112.003
TWF63-19-175126	63-2009	05/01/2019	Trichloroethane[1,1,2-]	51.2549	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	10.9053	51.2549
TWF63-19-175126	63-2009	05/01/2019	Trichloroethene	59.0754	ug/m3		Y	GAS	FD	VOC	EPA:TO15	5.37049	50.4826
TWF63-19-175126	63-2009	05/01/2019	Tetrachloroethane[1,1,2,2-]	64.4912	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	8.919	64.4912
TWF63-19-175126	63-2009	05/01/2019	Hexachlorobutadiene	405.02	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	89.5306	405.02
TWF63-19-175126	63-2009	05/01/2019	Xylene[1,2-]	40.7887	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	8.67845	40.7887
TWF63-19-175126	63-2009	05/01/2019	Dichlorobenzene[1,2-]	56.4841	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.00894	56.4841
TWF63-19-175126	63-2009	05/01/2019	Trimethylbenzene[1,2,4-]	46.1793	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	22.5984	46.1793
TWF63-19-175126	63-2009	05/01/2019	Isopropylbenzene	46.1793	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	28.9849	46.1793
TWF63-19-175126	63-2009	05/01/2019	Xylene[1,3-]+Xylene[1,4-]	40.7887	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	4.77315	40.7887
TWF63-19-175127	63-2013	05/01/2019	Ethylbenzene	47.736	ug/m3	J	Y	GAS	FB	VOC	EPA:TO15	8.24531	69.4342
TWF63-19-175127	63-2013	05/01/2019	Styrene	68.1131	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	8.51414	68.1131
TWF63-19-175127	63-2013	05/01/2019	Benzyl Chloride	82.7821	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	16.039	82.7821
TWF63-19-175127	63-2013	05/01/2019	Dichloropropene[cis-1,3-]	72.5733	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	7.25733	72.5733
TWF63-19-175127	63-2013	05/01/2019	Dichloropropene[trans-1,3-]	72.5733	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	13.6075	72.5733
TWF63-19-175127	63-2013	05/01/2019	Propylbenzene[1-]	78.6031	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	24.5635	78.6031
TWF63-19-175127	63-2013	05/01/2019	Dichlorobenzene[1,4-]	96.1431	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.417	96.1431
TWF63-19-175127	63-2013	05/01/2019	Dibromoethane[1,2-]	122.859	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	13.0537	122.859
TWF63-19-175127	63-2013	05/01/2019	Butadiene[1,3-]	35.3754	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	15.4767	35.3754
TWF63-19-175127	63-2013	05/01/2019	Chloro-1-propene[3-]	206.429	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	40.6602	206.429
TWF63-19-175127	63-2013	05/01/2019	Dichloroethane[1,2-]	64.7189	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	12.1348	64.7189
TWF63-19-175127	63-2013	05/01/2019	Methyl-2-pentanone[4-]	65.5037	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	15.1477	65.5037
TWF63-19-175127	63-2013	05/01/2019	Trimethylbenzene[1,3,5-]	78.6031	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	68.7777	78.6031
TWF63-19-175127	63-2013	05/01/2019	Toluene	60.2574	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.03862	60.2574
TWF63-19-175127	63-2013	05/01/2019	Chlorobenzene	73.6132	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.20164	73.6132
TWF63-19-175127	63-2013	05/01/2019	Tetrahydrofuran	47.1592	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	10.0213	47.1592
TWF63-19-175127	63-2013	05/01/2019	Hexane	56.3609	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	13.3857	56.3609
TWF63-19-175127	63-2013	05/01/2019	Cyclohexane	55.0398	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	6.53598	55.0398
TWF63-19-175127	63-2013	05/01/2019	Trichlorobenzene[1,2,4-]	489.5	ug/m3	UJ	N	GAS	FB	VOC	EPA:TO15	163.167	489.5
TWF63-19-175127	63-2013	05/01/2019	Dioxane[1,4-]	237.695	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	64.826	237.695
TWF63-19-175127	63-2013	05/01/2019	Chlorodibromomethane	136.213	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.0673	136.213
TWF63-19-175127	63-2013	05/01/2019	Tetrachloroethene	108.451	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.5229	108.451
TWF63-19-175127	63-2013	05/01/2019	n-Heptane	65.5298	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	19.659	65.5298
TWF63-19-175127	63-2013	05/01/2019	Dichloroethene[cis-1,2-]	63.3978	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	13.472	63.3978
TWF63-19-175127	63-2013	05/01/2019	Dichloroethene[trans-1,2-]	63.3978	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	14.2645	63.3978
TWF63-19-175127	63-2013	05/01/2019	Methyl tert-Butyl Ether	57.6493	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	6.12523	57.6493

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 7

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Lab Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit (ug/m3)	Report Detection Limit (ug/m3)
TWF63-19-175127	63-2013	05/01/2019	Isooctane	74.7053	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	37.3527	74.7053
TWF63-19-175127	63-2013	05/01/2019	Dichlorobenzene[1,3-]	96.1431	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	12.6188	96.1431
TWF63-19-175127	63-2013	05/01/2019	Carbon Tetrachloride	100.597	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	10.6884	100.597
TWF63-19-175127	63-2013	05/01/2019	Hexanone[2-]	270.203	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	90.0676	270.203
TWF63-19-175127	63-2013	05/01/2019	Ethyltoluene[4-]	78.6031	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	24.5635	78.6031
TWF63-19-175127	63-2013	05/01/2019	Ethanol	124.284	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	77.2064	124.284
TWF63-19-175127	63-2013	05/01/2019	Propanol[2-]	162.132	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	44.2179	162.132
TWF63-19-175127	63-2013	05/01/2019	Acetone	156.683	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	45.1057	156.683
TWF63-19-175127	63-2013	05/01/2019	Chloroform	78.0734	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	7.31938	78.0734
TWF63-19-175127	63-2013	05/01/2019	Benzene	51.0832	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	6.70467	51.0832
TWF63-19-175127	63-2013	05/01/2019	Trichloroethane[1,1,1-]	87.2423	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	16.3579	87.2423
TWF63-19-175127	63-2013	05/01/2019	Bromomethane	256.121	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	42.6868	256.121
TWF63-19-175127	63-2013	05/01/2019	Chloromethane	136.207	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	24.765	136.207
TWF63-19-175127	63-2013	05/01/2019	Chloroethane	174.029	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	39.5521	174.029
TWF63-19-175127	63-2013	05/01/2019	Vinyl Chloride	40.8731	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	17.3711	40.8731
TWF63-19-175127	63-2013	05/01/2019	Methylene Chloride	229.117	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	41.6576	229.117
TWF63-19-175127	63-2013	05/01/2019	Carbon Disulfide	205.401	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	29.8765	205.401
TWF63-19-175127	63-2013	05/01/2019	Bromoform	165.283	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	12.3962	165.283
TWF63-19-175127	63-2013	05/01/2019	Bromodichloromethane	107.124	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	10.7124	107.124
TWF63-19-175127	63-2013	05/01/2019	Dichloroethane[1,1-]	64.7189	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.7303	64.7189
TWF63-19-175127	63-2013	05/01/2019	Dichloroethene[1,1-]	63.3978	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	10.3021	63.3978
TWF63-19-175127	63-2013	05/01/2019	Trichlorofluoromethane	89.8387	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	14.0373	89.8387
TWF63-19-175127	63-2013	05/01/2019	Dichlorodifluoromethane	79.074	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.39003	79.074
TWF63-19-175127	63-2013	05/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	122.542	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	22.9766	122.542
TWF63-19-175127	63-2013	05/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	111.78	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.78075	111.78
TWF63-19-175127	63-2013	05/01/2019	Dichloropropane[1,2-]	73.8944	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	13.3934	73.8944
TWF63-19-175127	63-2013	05/01/2019	Butanone[2-]	194.532	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	47.1592	194.532
TWF63-19-175127	63-2013	05/01/2019	Trichloroethane[1,1,2-]	87.2423	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	18.539	87.2423
TWF63-19-175127	63-2013	05/01/2019	Trichloroethene	85.9278	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.66688	85.9278
TWF63-19-175127	63-2013	05/01/2019	Tetrachloroethane[1,1,2,2-]	109.772	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	15.7798	109.772
TWF63-19-175127	63-2013	05/01/2019	Hexachlorobutadiene	703.455	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	149.218	703.455
TWF63-19-175127	63-2013	05/01/2019	Xylene[1,2-]	56.4099	ug/m3	J	Y	GAS	FB	VOC	EPA:TO15	15.1873	69.4276
TWF63-19-175127	63-2013	05/01/2019	Dichlorobenzene[1,2-]	96.1431	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	10.8161	96.1431
TWF63-19-175127	63-2013	05/01/2019	Trimethylbenzene[1,2,4-]	78.6031	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	39.3016	78.6031
TWF63-19-175127	63-2013	05/01/2019	Isopropylbenzene	78.6031	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	49.1269	78.6031
TWF63-19-175127	63-2013	05/01/2019	Xylene[1,3-]+Xylene[1,4-]	164.891	ug/m3		Y	GAS	FB	VOC	EPA:TO15	8.67845	69.4276

Table 3. Current and Previous
Quarterly Results

[This page has been left intentionally blank.]

Table 3: Current and Previous Quarter Results

Well	Sample Port Depth (ft)	Analyte/Constituent (as Listed in Permit Tables)	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Quarter 5		Quarter 6		Quarter 7	
			Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)
VMW-1 63-2009	5	Trichloroethylene	64.4	0.3	31.1	0.2	48.3	0.2	53.7	0.3	43.5	0.2	36.0	0.2	44.0	0.2
		Toluene	12.4	<0.1												
		Tetrachloroethylene	11.5	<0.1												
		cis-1,2-Dichloroethylene	11.5	<0.1												
		Acetone	16.1	<0.1												
		1,1,1-Trichloroethane	142	<0.1			8.2	<0.1								
		1,1-Dichloroethane	33.6	<0.1												
		1,1-Dichloroethylene	10.3	<0.1												
		Dichlorodifluoromethane	6.9	<0.1												
		Methylene chloride							13.2	<0.1						
VMW-2 63-2010	5	Trichloroethylene	134	0.7	80.6	0.4	129	0.7	85.9	0.4	107	0.6	113	0.6	118	0.6
		Dichlorodifluoromethane	7.9	<0.1												
		Acetone													20.2	<0.1
VMW-3 63-2011	5	Trichloroethylene	69.8	0.4	64.4	0.3	96.7	0.5	59.1	0.3	75.2	0.4	85.9	0.4	107	0.6
		Toluene	8.3	<0.1												
		Acetone							20.9	<0.1					12.3	<0.1
VMW-4 63-2012	25	Trichloroethylene	3810	2.4	2793	1.8	3437	2.2	2954	1.9	2900	1.8	2900	1.8	2790	1.8
		Tetrachloroethylene	49.5	<0.1	34.6	<0.1	34.6	<0.1	36.6	<0.1	43.4	<0.1	39.3	<0.1	34.6	<0.1
		Carbon tetrachloride	49.7	<0.1	35.2	<0.1	48.4	<0.1	41.5	<0.1	35.2	<0.1	46.5	<0.1	42.1	<0.1
		Chloroform	112	0.5	87.8	0.2	107	0.5	107	0.5	102	0.4	92.7	0.4	97.6	0.4
		Dichlorodifluoromethane	84	<0.1	74.1	<0.1	84.0	<0.1	84.0	<0.1	69.2	<0.1	79.1	<0.1	84.0	<0.1
		1,1,2-Trichloro-1,2,2-trifluoroethane	17.6	<0.1	13.0	<0.1									16.1	<0.1
		1,1,1-Trichloroethane	7.1	<0.1												
VMW-4 63-2012	60	Trichloroethylene	8060	8.7	6980	7.5	8590	9.3	8060	8.7	8060	8.7	7520	8.1	7520	8.1
		Tetrachloroethylene	81.3	<0.1	74.6	<0.1	88.1	<0.1	81.3	<0.1	88.1	<0.1	88.1	<0.1	81.3	<0.1
		cis-1,2-Dichloroethylene	16.6	<0.1	23.8	<0.1	25.8	<0.1	25.0	<0.1	19.4	<0.1	19.8	<0.1	19.8	<0.1
		Carbon tetrachloride	94.3	<0.1	88.0	<0.1	113	<0.1	107	<0.1	107	<0.1	113	<0.1	101	<0.1
		Chloroform	190	0.4	200	0.5	244	0.5	229	0.5	210	0.5	215	0.5	215	0.5
		1,1,1-Trichloroethane	13.1	<0.1	14.2	<0.1	14.2	<0.1	15.3	<0.1	15.3	<0.1			13.6	<0.1
		Dichlorodifluoromethane	143	<0.1	158	<0.1	148	<0.1	193	<0.1	168	<0.1	168	<0.1	183	<0.1
		1,1,2-Trichloro-1,2,2-trifluoroethane	25.3	<0.1	28.3	<0.1	29.9	<0.1	32.2	<0.1	36.8	<0.1	26.0	<0.1	28.3	<0.1
		Toluene	7.6	<0.1												
		Acetone	16.1	<0.1												
		Trichlorofluoromethane	6.2	<0.1			6.7	<0.1								
VMW-5 63-2013	25	Trichloroethylene	483	0.3	258	0.2	414	0.3	344	0.2	365	0.2	360	0.2	360	0.2
		Chloroform	35.6	0.2	19.0	<0.1	26.3	0.1	32.2	<0.1	32.2	0.1	28.8	0.1	32.2	0.1
		1,1,1-Trichloroethane	30.5	<0.1	19.6	<0.1	20.2	<0.1	27.8	<0.1	22.9	<0.1			23.4	<0.1
		Dichlorodifluoromethane	59.3	<0.1	42.0	<0.1	42.0	<0.1	47.4	<0.1	47.0	<0.1	49.4	<0.1	54.4	<0.1
		Tetrachloroethylene	6.8	<0.1												
		Acetone							15.0	<0.1					12.3	<0.1
VMW-5 63-2013	60	Trichloroethylene	1340	1.4	1343	1.4	1557	1.7	1504	1.6	1396	1.5	1400	1.5	1560	1.7

Table 3: Current and Previous Quarter Results

Well	Sample Port Depth (ft)	Analyte/Constituent (as Listed in Permit Tables)	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Quarter 5		Quarter 6		Quarter 7	
			Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)	Result (ug/m^3)	Percentage of SGSL (%)
		Tetrachloroethylene	16.9	<0.1	12.9	<0.1	15.6	<0.1					10.2	<0.1	12.9	<0.1
		Chloroform	15.6	<0.1	18.1	<0.1	22.9	<0.1	19.0	<0.1	22.9	<0.1	22.0	<0.1	21.5	<0.1
		1,1,1-Trichloroethane	44.7	<0.1	47.4	<0.1	47.4	<0.1	60.0	<0.1	50.2	<0.1	42.0	<0.1	45.3	<0.1
		Dichlorodifluoromethane	64.2	<0.1	84.0	<0.1	69.2	<0.1	84.0	<0.1	79.0	<0.1	79.0	<0.1	79.0	<0.1
		1,1,2-Trichloro-1,2,2-trifluoroethane			10.0	<0.1	19.9	<0.1							15.3	<0.1
		Toluene	10.5	<0.1												
		Carbon tetrachloride	13.2	<0.1			10.7	<0.1							18.2	<0.1
		Acetone	26.1	<0.1												
VMW-5 63-2013 Field Duplicate	25	Trichloroethylene	451	0.3												
		Tetrachloroethylene	8.8	<0.1												
		Chloroform	30.7	0.1												
		1,1,1-Trichloroethane	32.7	<0.1												
		Dichlorodifluoromethane	59.3	<0.1												
VMW-3 63-2011 Field Duplicate	5	Trichloroethylene			45.6	0.2					80.6	0.4				
VMW-4 63-2012 Field Duplicate	25	Trichloroethylene					3276	2.1					2790	1.8		
		Tetrachloroethylene					32.5	<0.1					34.6	<0.1		
		Carbon tetrachloride					56.6	<0.1					49.7	<0.1		
		Chloroform					112	0.5					97.6	0.4		
		1,1,1-Trichloroethane					12.5	<0.1								
		Dichlorofluoromethane					74.1	<0.1					79.1	<0.1		
VWM-4 63-2012 Field Duplicate	60	Trichloroethylene							8593	9.3						
		Tetrachloroethylene							81.3	<0.1						
		cis-1,2-Dichloroethylene							27.0	<0.1						
		Carbon tetrachloride							113	<0.1						
		Chloroform							249	0.6						
		Dichlorodifluoromethane							188	<0.1						
		1,1,2-Trichloro-1,2,2-trifluoroethane							32.2	<0.1						
VMW-1 63-2009 Field Duplicate	5	Trichloroethylene													59.1	0.3
		Dichlorodifluoromethane													6.9	<0.1

Table 4. Statistical Analysis

[This page has been left intentionally blank.]

Table 4. Statistical Analysis
TWF Soil Vapor Monitoring
Trichloroethylene Data Statistics
Mean and 95% Confidence Range

	VMW-1 (ug/m^3)	VMW-2 (ug/m^3)	VMW-3 (ug/m^3)	VMW-4 25 ft (ug/m^3)	VMW-4 60 ft (ug/m^3)	VMW-5 25 ft (ug/m^3)	VMW-5 60 ft (ug/m^3)
Quarter 1	64.4	134	69.8	3810	8060	483	1340
Quarter 2	31.1	80.6	64.4	2793	6982	258	1343
Quarter 3	48.3	129	96.7	3437	8593	414	1557
Quarter 4	53.7	85.9	59.1	2954	8056	344	1504
Quarter 5	43.5	107	75.2	2900	8056	365	1396
Quarter 6	36.0	113	85.9	2900	7520	360	1400
Quarter 7	44.0	118	107	2790	7520	360	1560
Mean	45.9	110	79.7	3083	7827	369	1442
Std. Deviation (n-1)	11.1	20.3	17.6	389	524	68.5	96.1
2xStd. Dev.	22.2	40.6	35.2	780	1050	137	192
Lower Limit (95%=-2 SD)	23.7	69.4	44.5	2310	6780	232	1250
Upper Limit (95%=+2 SD)	68.1	151	115	3860	8880	506	1630

[This page has been left intentionally blank.]

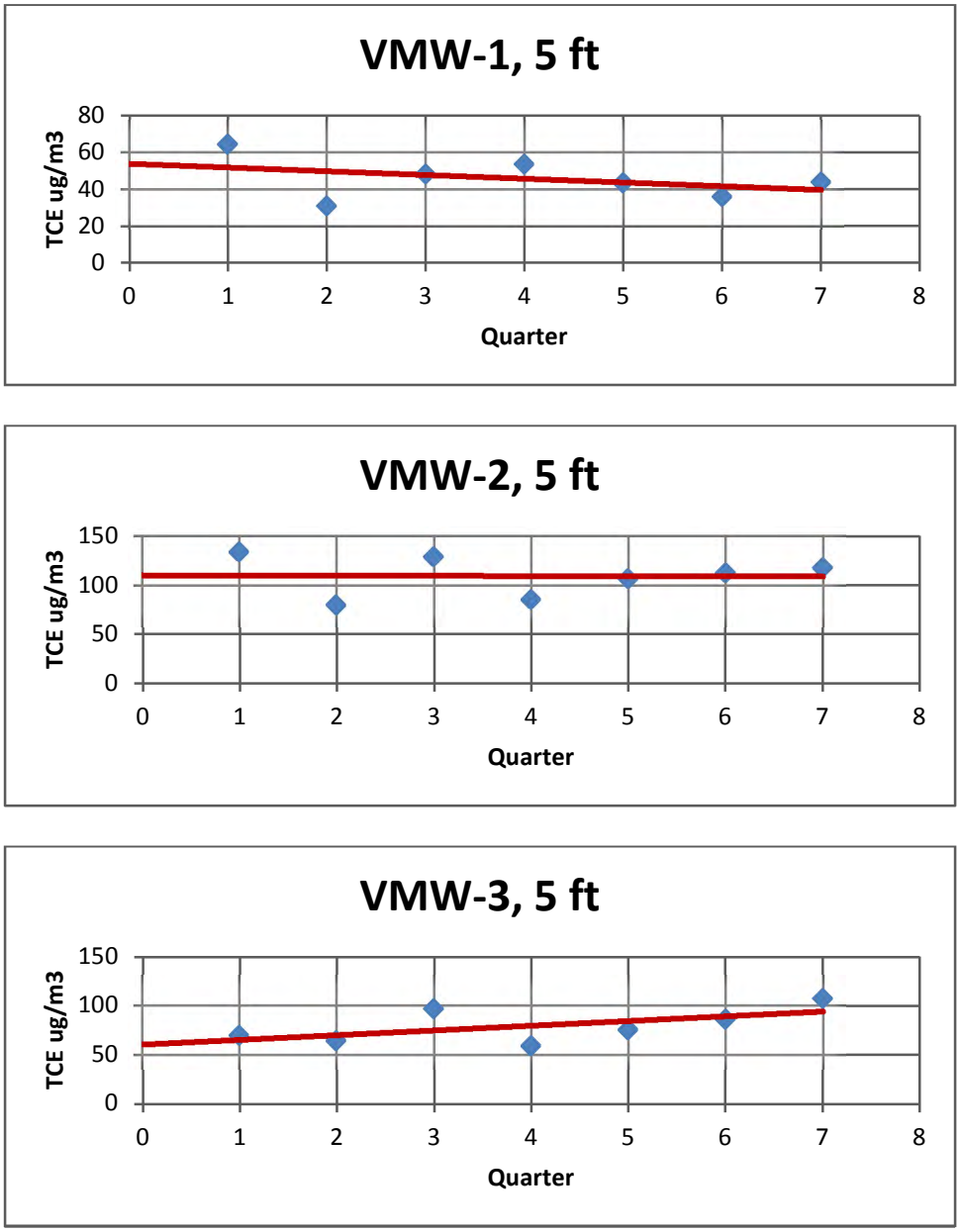
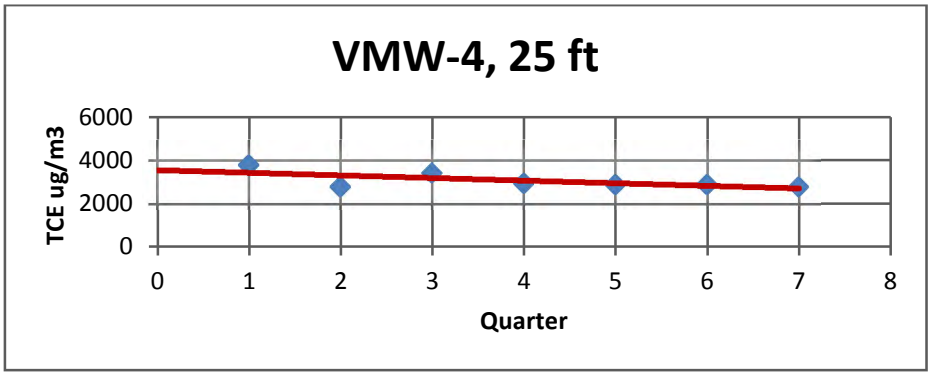
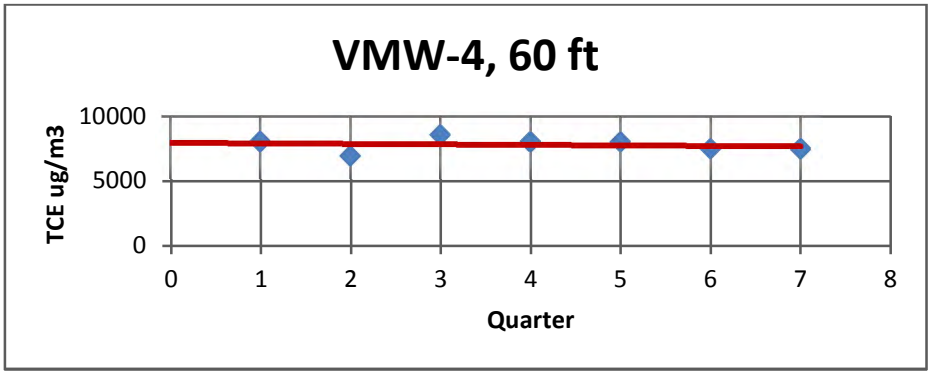
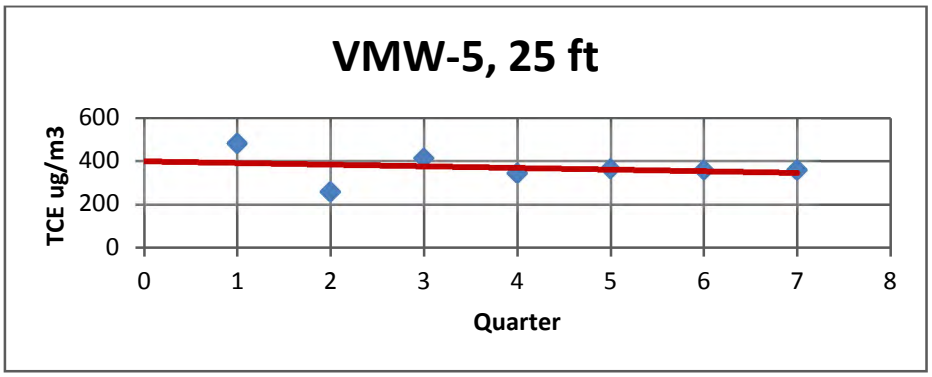


Figure 2. Simple Linear Regression Plots for TA-63 TWF Soil Vapor Monitoring Wells Inside the Permitted Unit

[This page has been left intentionally blank.]







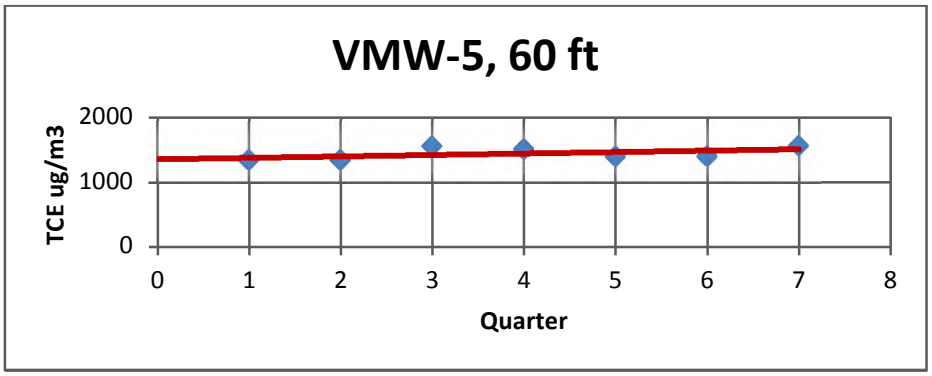


Figure 3. Simple Linear Regression Plots for TA-63 TWF Soil Vapor Monitoring Wells Outside the Permitted Unit

[This page has been left intentionally blank.]

Sample Collection Logs
at TA-63 Transuranic Waste Facility – Quarter 7

[This page has been left intentionally blank.]

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12394

EVENT NAME: FY19 - April - TWF Poregas Sampling - TA-63

SAMPLE ID: TWF63-19-175119

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	5/1/19	OK	FIELD MATRIX:	GAS	OK
TIME COLLECTED (HH:MM):	1231		MEDIA:	GAS	
PRS ID:	TA-63		SAMPLE TECH CODE:	VOST	
LOCATION ID:	63-2009		FIELD PREP:	NA	
LOCATION TYPE:	BH		FIELD QC TYPE:	REG	
TOP DEPTH:	6.5		SAMPLE USAGE:	INV	
BOTTOM DEPTH:	7.5		EXCAVATED:		YES / NO / (NA)

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

SAMPLE COMMENTS: VMW-1

LOCATION COMMENTS: Summa # 0Ø342

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 6330$ ppm $O_2 = 20.0\%$ VOC = 0 ppm

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	Date/Time 5/1/19 1415	RECEIVED BY (Printed Name) (Signature)		Date/Time 5.1.19 1415
RELINQUISHED BY (Printed Name) (Signature)		Date/Time	RECEIVED BY (Printed Name) (Signature)		Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12394

EVENT NAME: FY19 - April - TWF Poregas Sampling - TA-63

SAMPLE ID: TWF63-19-175120

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	5/1/2019	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1253		**MEDIA:**	GAS	
PRS ID:	TA-63		**SAMPLE TECH CODE:**	VOST	
LOCATION ID:	63-2010		**FIELD PREP:**	NA	
LOCATION TYPE:	BH		**FIELD QC TYPE:**	REG	
TOP DEPTH:	6.5		**SAMPLE USAGE:**	INV	
BOTTOM DEPTH:	7.5		**EXCAVATED:**		YES / NO / (NA)

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

SAMPLE COMMENTS: VMW-2

LOCATION COMMENTS: Summa # N2814

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 4860$ ppm $O_2 = 20.2\%$ VOC = 0 ppm

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	**Date/Time** 5/1/19 1415	**RECEIVED BY (Printed Name) (Signature)**		**Date/Time** 5.1.19 1415
RELINQUISHED BY (Printed Name) (Signature)		**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**		**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12394

EVENT NAME: FY19 - April - TWF Poregas Sampling - TA-63

SAMPLE ID: TWF63-19-175121

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	5/1/19	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1312		**MEDIA:**	GAS	
PRS ID:	TA-63		**SAMPLE TECH CODE:**	VOST	
LOCATION ID:	63-2011		**FIELD PREP:**	NA	
LOCATION TYPE:	BH		**FIELD QC TYPE:**	REG	
TOP DEPTH:	6.5		**SAMPLE USAGE:**	INV	
BOTTOM DEPTH:	7.5		**EXCAVATED:**		YES / NO / (NA)

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

SAMPLE COMMENTS: VMW-3

LOCATION COMMENTS: Summa # 00121

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 3000$ ppm $O_2 = 20.6\%$ VOC = 0 ppm

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	**Date/Time** 5/1/19 1415	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time** 5.1.19 1415
RELINQUISHED BY (Printed Name) (Signature)		**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12394

EVENT NAME: FY19 - April - TWF Poregas Sampling - TA-63

SAMPLE ID: TWF63-19-175122

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	5/1/2019	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1045		**MEDIA:**	GAS	
PRS ID:	TA-63		**SAMPLE TECH CODE:**	VOST	
LOCATION ID:	63-2012		**FIELD PREP:**	NA	
LOCATION TYPE:	BH		**FIELD QC TYPE:**	REG	
TOP DEPTH:	24		**SAMPLE USAGE:**	INV	
BOTTOM DEPTH:	25		**EXCAVATED:**		YES / NO / (NA)

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

SAMPLE COMMENTS: VMW-4 Port #1

LOCATION COMMENTS: Summa # 00277

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 7730$ ppm $O_2 = 19.9\%$ VOC = 0.5 ppm

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	**Date/Time** 5/1/19 1415	**RECEIVED BY (Printed Name) (Signature)**	M. Lisa Mtz	**Date/Time** 5.1.19 1415
RELINQUISHED BY (Printed Name) (Signature)		**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**		**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12394

EVENT NAME: FY19 - April - TWF Poregas Sampling - TA-63

SAMPLE ID: TWF63-19-175123

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	5/1/19	OK	FIELD MATRIX:	GAS	OK
TIME COLLECTED (HH:MM):	1100		MEDIA:	GAS	
PRS ID:	TA-63		SAMPLE TECH CODE:	VOST	
LOCATION ID:	63-2012		FIELD PREP:	NA	
LOCATION TYPE:	BH		FIELD QC TYPE:	REG	
TOP DEPTH:	59		SAMPLE USAGE:	INV	
BOTTOM DEPTH:	60		EXCAVATED:		YES / NO / (NA)

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

SAMPLE COMMENTS: VMW-4 Port # 2

LOCATION COMMENTS: Summa # 00292

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 10{,}200$ ppm $O_2 = 19.6\%$ VOC = 1.6 ppm

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	Date/Time 5/1/19 1415	RECEIVED BY (Printed Name) (Signature)	Date/Time 5/1/19 1415
RELINQUISHED BY (Printed Name) (Signature)		Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12394

EVENT NAME: FY19 - April - TWF Poregas Sampling - TA-63

SAMPLE ID: TWF63-19-175124

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	5/1/2019	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1126		**MEDIA:**	GAS	
PRS ID:	TA-63		**SAMPLE TECH CODE:**	VOST	
LOCATION ID:	63-2013		**FIELD PREP:**	NA	
LOCATION TYPE:	BH		**FIELD QC TYPE:**	REG	
TOP DEPTH:	24		**SAMPLE USAGE:**	INV	
BOTTOM DEPTH:	25		**EXCAVATED:**		YES / NO / (NA)

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

SAMPLE COMMENTS: VMW-5 Port #1

LOCATION COMMENTS: Summa # N3493

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 18,600$ ppm $O_2 = 18.8\%$ VOC = 0.0 ppm

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	**Date/Time** 5/1/19 1415	**RECEIVED BY (Printed Name) (Signature)**		**Date/Time** 5/1/19 1415
RELINQUISHED BY (Printed Name) (Signature)		**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**		**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12394

EVENT NAME: FY19 - April - TWF Poregas Sampling - TA-63

SAMPLE ID: TWF63-19-175125

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	5/1/2019	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1140		**MEDIA:**	GAS	
PRS ID:	TA-63		**SAMPLE TECH CODE:**	VOST	
LOCATION ID:	63-2013		**FIELD PREP:**	NA	
LOCATION TYPE:	BH		**FIELD QC TYPE:**	REG	
TOP DEPTH:	59		**SAMPLE USAGE:**	INV	
BOTTOM DEPTH:	60		**EXCAVATED:**		YES / NO / (NA)

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

SAMPLE COMMENTS: VMW-5 Port #2

LOCATION COMMENTS: Summa # 00399

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 14,400$ ppm $O_2 = 19.3\%$ VOC = 0.1 ppm

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) Katrina Tow **(Signature)**	**Date/Time** 5/1/19 1415	**RECEIVED BY (Printed Name)** M. Isis. Mtz **(Signature)**	**Date/Time** 5/1/19 1415
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12394

EVENT NAME: FY19 - April - TWF Poregas Sampling - TA-63

SAMPLE ID: TWF63-19-175126

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	5/1/2019	OK	FIELD MATRIX:	GAS	OK
TIME COLLECTED (HH:MM):	1232	↓	MEDIA:	GAS	↓
PRS ID:	TA-63	↓	SAMPLE TECH CODE:	VOST	↓
LOCATION ID:	UNK	63-2009	FIELD PREP:	NA	↓
LOCATION TYPE:	BH	OK	FIELD QC TYPE:	FD	↓
TOP DEPTH:	6.5	↓	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	7.5	↓	EXCAVATED:		YES / NO / (NA)

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

SAMPLE COMMENTS: VMW-1

LOCATION COMMENTS: Summa # N1671

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 6330$ ppm $O_2 = 20.0\%$ $VOC = 0$ ppm

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature) Katrina Tow	Date/Time 5/1/19 1415	RECEIVED BY (Printed Name) (Signature)	Date/Time 5.1.19 1415
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12394

EVENT NAME: FY19 - April - TWF Poregas Sampling - TA-63

SAMPLE ID: TWF63-19-175127

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	5/1/2019	OK	FIELD MATRIX:	GAS	OK
TIME COLLECTED (HH:MM):	1353		MEDIA:	Nitrogen	
PRS ID:	TA-63		SAMPLE TECH CODE:	VOST	
LOCATION ID:	UNK	63-2013	FIELD PREP:	NA	
LOCATION TYPE:	NA	OK	FIELD QC TYPE:	FB	
TOP DEPTH:			SAMPLE USAGE:	QC	
BOTTOM DEPTH:			EXCAVATED:		YES / NO / (NA)

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

SAMPLE COMMENTS: VMW-5 Port 1 / QC of TWF63-19-175124

LOCATION COMMENTS: Summa #00512

FIELD PARAMETERS:

Sample Time NA HH:MM

KT 4/26/19

COLLECTED BY (PRINT): M. Shendo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	Date/Time 5/1/19 1415	RECEIVED BY (Printed Name) (Signature)		Date/Time 5/1/19 1415
RELINQUISHED BY (Printed Name) (Signature)		Date/Time	RECEIVED BY (Printed Name) (Signature)		Date/Time

CERTIFICATION

[This page has been left intentionally blank.]

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.

6/24/19

Enrique Torres
Division Leader
Environmental Protection and Compliance Division
Triad National Security, LLC

Date Signed

25 June 2019

Karen E. Armijo
Permitting and Compliance Program Manager
Los Alamos Site Office
National Nuclear Security Administration
U.S. Department of Energy

Date Signed

[This page has been left intentionally blank.]