



ESHID-602791

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Date: DEC 21 2017
Symbol: EPC-DO: 17-560
LA-UR: LA-UR-17-31410
Locates Action No.: N/A

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 1, Los Alamos National Laboratory EPA ID #NM0890010515

Dear Mr. Kieling:

The U.S. Department of Energy (DOE) and the Los Alamos National Security, LLC (LANS), (collectively the Permittees) are submitting this report to the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) in accordance with Section 3.14.3 of the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (the Permit). The Permit requires that a soil vapor monitoring system be sampled and evaluated for the LANL Technical Area (TA)-63 Transuranic Waste Facility (TWF) on a quarterly basis after operations at the facility commence. This report provides analytical data for the 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 summary, a figure of the facility with the soil vapor monitoring well locations, a summary table of detected volatile organic compounds for the wells, a table of analytical results and well preparation logs. The figure is from the Permit (Figure 56) and was revised as part of a permit modification request submittal on March 11, 2016 for construction updates for the TWF. Table 1 is a summary of the analytical results and includes detected constituents, detection limits, the appropriate soil gas screening levels from Permit Tables 3.14.3.1-3 and a percentage comparison of the detected levels with the screening levels. Table 2 is a listing of the complete analytical results for the sampling event. A

Mr. John E. Kieling
EPC-DO: 17-560

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compact disc with copies of this submittal and the analytical data in Excel format is also included to facilitate review by NMED of the monitoring results.

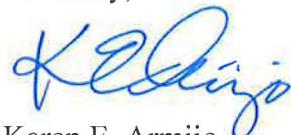
If you have questions or comments concerning this submittal, please contact Karen E. Armijo of the DOE at (505) 665-7314 or Mark P. Haagenstad, LANS, at (505) 665-2014.

Sincerely,



Taunia S. Van Valkenburg
Group Leader

Sincerely,



Karen E. Armijo
Permitting and Compliance Program Manager

TVV/KEA/GAB:am

Enclosure(s):

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

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The enclosure to this report includes a summary, a figure of the facility with the soil vapor monitoring well locations, a summary table of detected volatile organic compounds for the wells, a table of analytical results and well preparation logs. The figure is from the Permit (Figure 56) and was revised as part of a permit modification request submittal on March 11, 2016 for construction updates for the TWF. Table 1 is a summary of the analytical results and includes detected constituents, detection limits, the appropriate soil gas screening levels from Permit Tables 3.14.3.1-3 and a percentage comparison of the detected levels with the screening levels. Table 2 is a listing of the complete analytical results for the sampling event. A

ENCLOSURE 1

**TA-63 Transuranic Waste Facility
Soil Vapor Monitoring System Report
Quarter 1
Los Alamos National Laboratory**

EPC-DO-17-560

LAUR-17-31410

Date: DEC 21 2017

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**TA-63 TRANSURANIC WASTE FACILITY
SOIL VAPOR MONITORING SYSTEM REPORT
QUARTER 1
LOS ALAMOS NATIONAL LABORATORY**

I. Introduction

This report describes the first 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 LANL Permit is issued to the United States Department of Energy (DOE), the owner and co-operator of LANL, and Los Alamos National Security, LLC (LANS), the co-operator of LANL (collectively described as the Permittees). The Permit contains conditions for hazardous waste management activities at LANL necessary to protect human health and the environment. These include 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). The monitoring network was constructed to meet the Permit conditions and sampling and analysis for the first quarter of waste management operations has established that soil vapor concentrations at the site do not exceed the soil vapor screening levels established by the Permit.

II. TWF Soil Vapor Monitoring Wells

The TWF is located south-east of the TA-50 Material Disposal Area C, Solid Waste Management Unit 50-009, (MDA-C) at LANL. MDA-C is a site of past waste disposal activities and is the primary source near the TWF for potential soil vapor intrusion. Site investigation indicates that the boundary of a soil vapor plume from MDA-C extends to a position under the northwest section of the TWF site. In response to the Permit conditions, the Permittees installed a subsurface vapor monitoring network consisting of five vapor monitoring wells in or near the TWF facility as specified in Permit Section A.6.10. Two of the monitoring wells are located close to the building foundations adjacent to the unit boundary facing MDA-C and the utility corridor on Puye Road as depicted by locations VMW-1 and VMW-2 in Figure 56 of Attachment N, *Figures*, of the Permit (see Figure 1 of this submittal). A third monitoring well within the permitted unit is located at a point on the western edge of the unit close to the utility corridor on Pajarito Road, as depicted by location VMW-3 on Figure 56. The sampling ports for these wells are located at a 5 foot nominal depth. Two monitoring wells are located between MDA-C and Puye Road, as depicted by locations VMW-4 and VMW-5 on Figure 56. The sampling ports for both these wells are located at 25 and 60 feet.

III. Soil Vapor Sampling

Sampling procedures and VOC analyses of the obtained samples were performed and scheduled in compliance with the conditions contained in the Permit. Sampling of the wells was completed on October 31, 2017. Analytical results for the sample were compared to the soil gas screening levels (SGSLs) in Section 3.14.3 of the Permit.

The sampling of the new vapor-monitoring wells was performed using the same procedures as the ongoing vapor monitoring conducted at MDA-C. Sampling was performed by extracting formation air through the sand layer and into the stainless steel tubing of the wells. Samples were collected from all sampling ports. All samples for VOC analysis were collected in SUMMA canisters and submitted for laboratory analysis of VOCs using U.S. Environmental Protection Agency (EPA) Method TO-15. The samples were analyzed for the constituents identified in Tables 3.14.3.1, 3.14.3.2 and 3.14.3.3 in the Permit. There were no variances in the sampling procedures from the Permit requirements.

IV. Sampling Results

Analytical results for this sampling event are presented in Table 2 and summarized for relevant VOCs above detection limits in Table 1. 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 lists the detected VOCs and includes the calculated percentage of the SGSL as an indicator of the relative concentrations.

TCE concentrations were detected in all of the five monitoring well locations. The VMW-4 and VMW-5 locations contain the highest concentrations at 8.7% and 1.4% 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 sited in the permitted unit (VMW-1, VMW-2 and VMW-3) have detected concentrations of TCE of less than 1% of the SGSL. TCE is the highest concentration VOC detected in this sample event and in previous MDA-C investigations.

Additional VOCs included in the soil gas monitoring screening level tables in the Permit were detected in the soil vapor monitoring wells. The well locations within the boundary of the TWF permitted unit (VMW-1, VMW-2 and VMW-3) indicated additional detections of listed VOCs but the concentrations were less than 0.1% of the SGSLs. The well locations north of Puye Road (VMW-4 and VMW-5) also detected additional VOCs matching the constituents of concern in the Permit and the results are included in Table 1. None of the additional detections at these two locations exceeded 1% of the SGSLs listed in the Permit.

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 in the *TA-63 Transuranic Waste Facility Soil Vapor Monitoring System Report*, (ENV-DO-15-0305) of October 29, 2015. The sampling results reported herein for the first quarter of

operations at TWF are consistent with the previous baseline results and do not appear to indicate additional contaminant concerns pending further quarterly analyses subject to the Permit.

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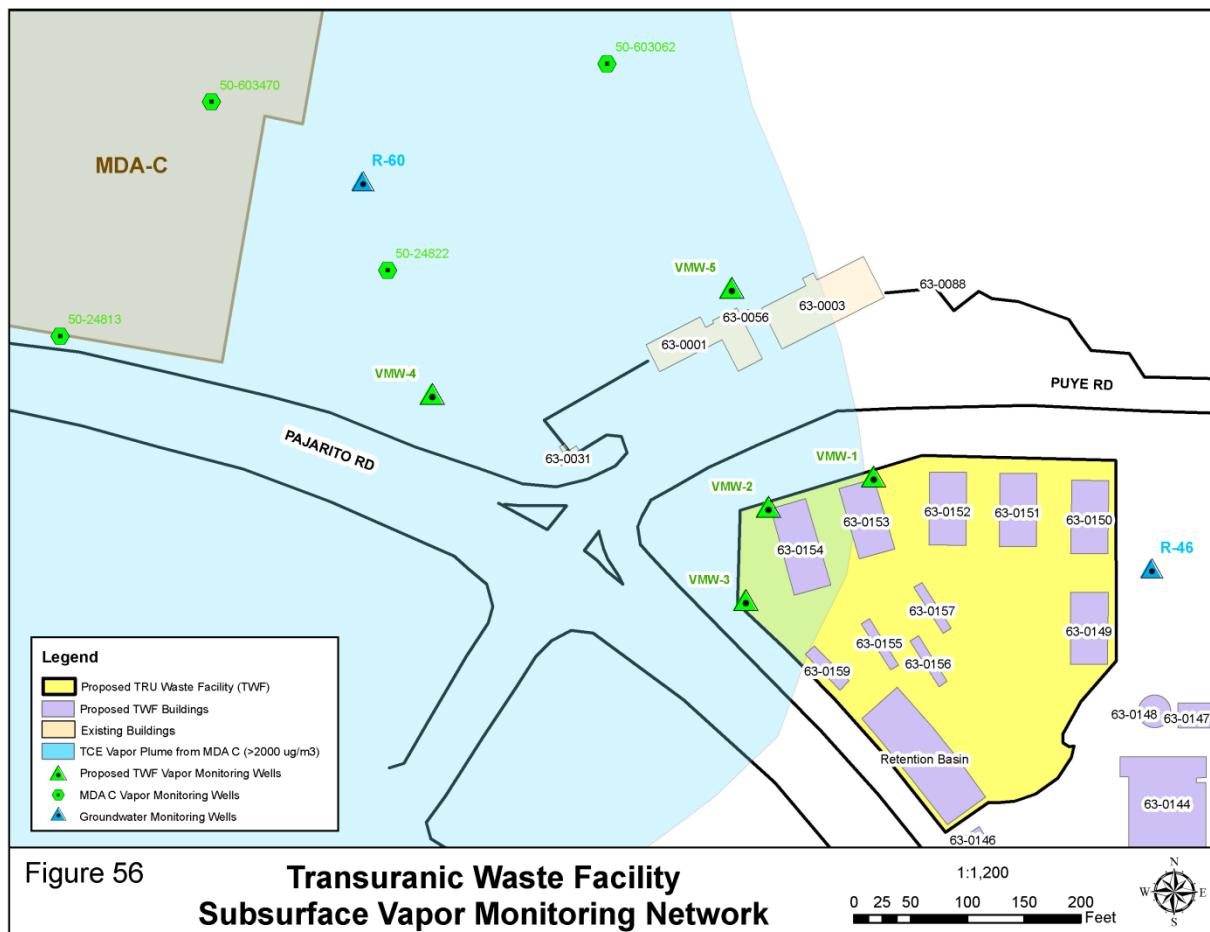


Figure 1

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])

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Table 1 Detected volatile organic compounds
at TA-63 Transuranic Waste Facility – Quarter 1

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**Table 1 Detected volatile organic compounds
at TA-63 Transuranic Waste Facility Soil Vapor Monitoring System– Quarter 1**

| Well | Sample ID | Sample Port Depth (ft) | Analyte/Constituent | Listing in Permit Tables | Result (ug/m3) | EPA Data Qualifier | Report Detection Limit (ug/m3) | Soil-Gas Screening Level (ug/m3) | Percentage Of SGSL (%) |
|------------------|--------------------|-------------------------------|---|---------------------------------------|-----------------------|---------------------------|---------------------------------------|---|-------------------------------|
| VMW-1 63-2009 | MD54-18- 148582 | 5 | Toluene | Toluene | 12.4 | J | 35.4 | 4.70E+7 | <0.1 |
| | | | Tetrachloroethene | Tetrachloroethylene | 11.5 | J | 63.7 | 4.08E+5 | <0.1 |
| | | | Dichloroethene[cis-1,2-] | Cis-1,2-Dichloroethylene | 11.5 | J | 37.2 | 5.85E+5 | <0.1 |
| | | | Acetone | Acetone | 16.1 | J | 90.2 | 2.73E+8 | <0.1 |
| | | | Trichloroethane[1,1,1-] | 1,1,1-Trichloroethane | 142 | | 51.3 | 4.86E+7 | <0.1 |
| | | | Dichloroethane[1,1-] | 1,1-Dichloroethane | 33.6 | J | 38.0 | 1.73E+5 | <0.1 |
| | | | Dichloroethene[1,1-] | 1,1-Dichloroethylene | 10.3 | J | 37.3 | 1.86E+6 | <0.1 |
| | | | Dichlorodifluoromethane | Dichlorodifluoromethane | 6.9 | J | 46.5 | 1.03E+6 | <0.1 |
| | | | Trichloroethene | Trichloroethylene | 64.4 | | 50.5 | 1.94E+4 | 0.3 |
| | | | | | | | | | |
| VMW-2 63-2010 | MD54-18- 148583 | 5 | Dichlorodifluoromethane | Dichlorodifluoromethane | 7.9 | J | 48.9 | 1.03E+6 | <0.1 |
| | | | Trichloroethene | Trichloroethylene | 134 | | 53.2 | 1.94E+4 | 0.7 |
| VMW-3 63-2011 | MD54-18- 148584 | 5 | Toluene | Toluene | 8.3 | J | 37.7 | 4.70E+7 | <0.1 |
| | | | Trichloroethene | Trichloroethylene | 69.8 | | 53.7 | 1.94E+4 | 0.4 |
| VMW-4 63-2012 | MD54-18- 148585 | 25 | Tetrachloroethene | Tetrachloroethylene | 49.5 | J | 67.8 | 2.63E+6 | <0.1 |
| | | | Carbon tetrachloride | Carbon tetrachloride | 49.7 | J | 62.9 | 1.06E+5 | <0.1 |
| | | | Chloroform | Chloroform | 112 | | 48.8 | 2.30E+4 | 0.5 |
| | | | Trichloroethane[1,1,1-] | 1,1,1-Trichloroethane | 7.1 | J | 54.5 | 1.16E+8 | <0.1 |
| | | | Dichlorodifluoromethane | Dichlorodifluoromethane | 84.0 | | 49.4 | 2.61E+6 | <0.1 |
| | | | Trichloro-1,2,2-trifluoroethane[1,1,2-] | 1,1,2-Trichloro-1,2,2-trifluoroethane | 17.6 | J | 76.6 | 6.86E+8 | <0.1 |
| | | | Trichloroethene | Trichloroethylene | 3810 | | 53.7 | 1.57E+5 | 2.4 |
| VMW-4 63-2012 | MD54-18- 148586 | 60 | Toluene | Toluene | 7.6 | J | 33.1 | 2.14E+8 | <0.1 |
| | | | Tetrachloroethene | Tetrachloroethylene | 81.3 | | 59.6 | 2.05E+6 | <0.1 |
| | | | Dichloroethene[cis-1,2-] | Cis-1,2-Dichloroethylene | 16.6 | J | 34.9 | 2.91E+6 | <0.1 |
| | | | Carbon tetrachloride | Carbon tetrachloride | 94.3 | | 55.3 | 2.13E+5 | <0.1 |
| | | | Acetone | Acetone | 16.1 | J | 83.0 | 1.02E+9 | <0.1 |
| | | | Chloroform | Chloroform | 190 | | 42.9 | 4.44E+4 | 0.4 |
| | | | Trichloroethane[1,1,1-] | 1,1,1-Trichloroethane | 13.1 | J | 48.0 | 2.34E+8 | <0.1 |
| | | | Trichlorodifluoromethane | Trichlorodifluoromethane | 6.2 | J | 49.4 | 3.01E+7 | <0.1 |
| | | | Dichlorodifluoromethane | Dichlorodifluoromethane | 143 | | 43.5 | 5.38E+6 | <0.1 |

**Table 1 Detected volatile organic compounds
at TA-63 Transuranic Waste Facility Soil Vapor Monitoring System– Quarter 1**

| Well | Sample ID | Sample Port Depth (ft) | Analyte/Constituent | Listing in Permit Tables | Result (ug/m3) | EPA Data Qualifier | Report Detection Limit (ug/m3) | Soil-Gas Screening Level (ug/m3) | Percentage Of SGSL (%) |
|---------------|---------------------------------|-------------------------------|--|---------------------------------------|-----------------------|---------------------------|---------------------------------------|---|-------------------------------|
| | | | Trichlor-1,2,2-trifluoroethane[1,1,2-] | 1,1,2-Trichloro-1,2,2-trifluoroethane | 25.3 | J | 67.4 | 1.38E+9 | <0.1 |
| | | | Trichloroethene | Trichloroethylene | 8060 | | 47.3 | 9.27E+4 | 8.7 |
| | | | | | | | | | |
| VMW-5 63-2013 | MDA54-18-148587 | 25 | Tetrachloroethene | Tetrachloroethylene | 6.8 | J | 74.6 | 2.63E+6 | <0.1 |
| | | | Chloroform | Chloroform | 35.6 | J | 53.7 | 2.30E+4 | 0.2 |
| | | | Trichloroethane[1,1,1-] | 1,1,1-Trichloroethane | 30.5 | J | 60.0 | 1.16E+8 | <0.1 |
| | | | Dichlorodifluoromethane | Dichlorodifluoromethane | 59.3 | | 54.4 | 2.61E+6 | <0.1 |
| | | | Trichloroethene | Trichloroethylene | 483 | | 59.1 | 1.57E+5 | 0.3 |
| | | | | | | | | | |
| VMW-5 63-2013 | MDA54-18-148588 | 60 | Toluene | Toluene | 10.5 | J | 32.4 | 2.14E+8 | <0.1 |
| | | | Tetrachloroethene | Tetrachloroethylene | 16.9 | J | 58.3 | 2.05E+6 | <0.1 |
| | | | Carbon tetrachloride | Carbon tetrachloride | 13.2 | J | 54.1 | 2.13E+5 | <0.1 |
| | | | Acetone | Acetone | 26.1 | J | 80.7 | 1.02E+9 | <0.1 |
| | | | Chloroform | Chloroform | 15.6 | J | 42.0 | 4.44E+4 | <0.1 |
| | | | Trichloroethane[1,1,1-] | 1,1,1-Trichloroethane | 44.7 | J | 46.9 | 2.34E+8 | <0.1 |
| | | | Dichlorodifluoromethane | Dichlorodifluoromethane | 64.2 | | 42.5 | 5.38E+6 | <0.1 |
| | | | Trichloroethene | Trichloroethylene | 1340 | | 46.2 | 9.27E+4 | 1.4 |
| | | | | | | | | | |
| VMW-5 63-2013 | MDA54-18-148589 Field Duplicate | 25 | Tetrachloroethene | Tetrachloroethylene | 8.8 | J | 74.6 | 2.63E+6 | <0.1 |
| | | | Chloroform | Chloroform | 30.7 | J | 53.7 | 2.30E+4 | 0.1 |
| | | | Trichloroethane[1,1,1-] | 1,1,1-Trichloroethane | 32.7 | J | 60.0 | 1.16E+8 | <0.1 |
| | | | Dichlorodifluoromethane | Dichlorodifluoromethane | 59.3 | | 54.4 | 2.61E+6 | <0.1 |
| | | | Trichloroethene | Trichloroethylene | 451 | | 59.1 | 1.57E+5 | 0.3 |
| | | | | | | | | | |
| VMW-5 63-2013 | MDA54-18-148590 Field Blank | | Dichloroethene[cis-1,2-] | Cis-1,2-dichloethylene | 19.8 | J | 75.3 | 2.91E+6 | <0.1 |
| | | | Trichloroethane[1,1,1-] | 1,1,1-Trichloroethane | 81.8 | J | 103.6 | 2.34E+8 | <0.1 |
| | | | Dichloroethane[1,1-] | 1,1-Dichloroethane | 24.3 | J | 76.9 | 8.56E+5 | <0.1 |
| | | | Trichlorethene | Trichloroethylene | 59.1 | J | 102.0 | 9.27E+4 | <0.1 |

EPA Data Qualifier “J” indicates analytes that are detected but results are estimated as less than the report detection limit.

Table 2. Analytical Results for Soil Vapor Monitoring Wells
at TA-63 Transuranic Waste Facility – Quarter 1

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TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 1

| Sampling Plan/Program Name | Field Sample ID | Location ID | Sample Date | Parameter Name | Report Result | Report Units | Lab Qualifier | Detected | Sample Matrix | Sample Purpose | Sample Type | Sample Time | Latitude (Decimal) | Longitude (Decimal) | Filtered | Field Sample Comments | Lab Matrix | COC # | Lab Method | Method Detection Limit | Report Detection Limit |
|--|-----------------|-------------|-------------|-----------------------------|---------------|-------------------|---------------|----------|---------------|----------------|-------------|-------------|--------------------|---------------------|----------|-----------------------|------------|----------|------------|------------------------|------------------------|
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Ethylbenzene | 40.7926 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.7 | 40.7926 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Styrene | 40.0164 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 0.73 | 40.0164 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Benzyl Chloride | 48.6345 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 0.75 | 48.6345 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Dichloropropene[cis-1,3-] | 42.6368 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 42.6368 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Dichloropropene[trans-1,3-] | 42.6368 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.0 | 42.6368 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Propylbenzene[1-] | 46.1793 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 0.96 | 46.1793 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Dichlorobenzene[1,4-] | 56.4841 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 0.60 | 56.4841 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Dibromoethane[1,2-] | 72.1794 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 0.77 | 72.1794 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Butadiene[1,-] | 20.783 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 2.0 | 20.783 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Chloro-1-propene[3-] | 118.853 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 7.2 | 118.853 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Dichloroethane[1,2-] | 38.0223 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 38.0223 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Methyl-2-pentanone[4-] | 38.4834 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 38.4834 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Trimethylbenzene[1,3,5-] | 46.1793 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 0.68 | 46.1793 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Toluene | 12.4281 | ug/m ³ | J | Y | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 35.4012 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Chlorobenzene | 43.2477 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 43.2477 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Tetrahydrofuran | 27.7061 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 27.7061 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Hexane | 33.112 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 2.0 | 33.112 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Cyclohexane | 32.3359 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.8 | 32.3359 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Trichlorobenzene[1,2,4-] | 281.833 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 3.2 | 281.833 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Dioxane[1,-] | 136.855 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 2.8 | 136.855 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Chlorodibromomethane | 80.0252 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 80.0252 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Tetrachloroethene | 11.5229 | ug/m ³ | J | Y | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 0.85 | 63.7151 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | n-Heptane | 38.4988 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 38.4988 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Dichloroethene[cis-1,2-] | 11.4909 | ug/m ³ | J | Y | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 37.2462 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Dichloroethene[trans-1,2-] | 37.2462 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 2.6 | 37.2462 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Methyl tert-Butyl Ether | 33.8689 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 33.8689 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Isooctane | 43.8894 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 43.8894 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Dichlorobenzene[1,3-] | 56.4841 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 56.4841 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Carbon Tetrachloride | 59.1006 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.29462 N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 59.1006 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148582 | 63-2009 | 10/31/2017 | Hexane | 155.571 | ug/m ³ | U | N | GAS | REG | GAS | 11:36 | 35.859856 | -106.294 | | | | | | | |

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 1

| Sampling Plan/Program Name | Field Sample ID | Location ID | Sample Date | Parameter Name | Report Result | Report Units | Lab Qualifier | Detected | Sample Matrix | Sample Purpose | Sample Type | Sample Time | Latitude (Decimal) | Longitude (Decimal) | Filtered | Field Sample Comments | Lab Matrix | COC # | Lab Method | Method Detection Limit | Report Detection Limit |
|--|-----------------|-------------|-------------|---|---------------|--------------|---------------|----------|---------------|----------------|-------------|-------------|--------------------|---------------------|----------|-----------------------|------------|----------|------------|------------------------|------------------------|
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Methyl tert-Butyl Ether | 35.6705 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.7 | 35.6705 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Isooctane | 46.2239 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 46.2239 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Dichlorobenzene[1,3-] | 59.4886 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 59.4886 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Carbon Tetrachloride | 62.2443 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 62.2443 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Hexanone[2-] | 163.759 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 3.9 | 163.759 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Ethyltoluene[4-] | 48.6357 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 0.73 | 48.6357 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Ethanol | 75.3233 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 6.4 | 75.3233 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Propanol[2-] | 98.2621 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 4.4 | 98.2621 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Acetone | 94.9594 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 5.1 | 94.9594 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Chloroform | 48.3079 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 48.3079 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Benzene | 31.6077 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 31.6077 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Trichloroethane[1,1,1-] | 53.9812 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 53.9812 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Bromomethane | 155.225 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 4.1 | 155.225 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Chloromethane | 82.5499 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 6.5 | 82.5499 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Chloroethane | 105.472 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 8.2 | 105.472 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Vinyl Chloride | 25.2902 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.9 | 25.2902 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Methylene Chloride | 138.859 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 5.8 | 138.859 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Carbon Disulfide | 124.485 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 4.9 | 124.485 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Bromoform | 102.269 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 0.83 | 102.269 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Bromodichloromethane | 66.2827 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 0.63 | 66.2827 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Dichloroethane[1,1-] | 40.0448 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 40.0448 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Dichloroethene[1,1-] | 39.2274 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 39.2274 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Trichlorofluoromethane | 55.5877 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 0.95 | 55.5877 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Dichlorodifluoromethane | 7.9074 | ug/m3 | J | Y | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 48.927 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Trichloro-1,2,2-trifluoroethane[1,1,2-] | 75.8229 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 75.8229 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Dichloro-1,2,2-tetrafluoroethane[1,2-] | 69.1639 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 69.1639 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Dichloropropene[1,2-] | 45.7221 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 45.7221 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Butanone[2-] | 117.898 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 6.9 | 117.898 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Trichloroethane[1,1,2-] | 53.9812 | ug/m3 | U | N | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 53.9812 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148583 | 63-2010 | 10/31/2017 | Trichloroethene | 134.262 | ug/m3 | Y | GAS | REG | GAS | 09:59 | 35.859764 | -106.294975 | | | | | | | | |

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 1

| Sampling Plan/Program Name | Field Sample ID | Location ID | Sample Date | Parameter Name | Report Result | Report Units | Lab Qualifier | Detected | Sample Matrix | Sample Purpose | Sample Type | Sample Time | Latitude (Decimal) | Longitude (Decimal) | Filtered | Field Sample Comments | Lab Matrix | COC # | Lab Method | Method Detection Limit | Report Detection Limit |
|--|-----------------|-------------|-------------|---|---------------|-------------------|---------------|----------|---------------|----------------|-------------|-------------|--------------------|---------------------|----------|-----------------------|------------|----------|------------|------------------------|------------------------|
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Dichloro-1,1,2-tetrafluoroethane[1,2,-] | 69.8625 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 69.8625 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Dichloropropane[1,2,-] | 46.184 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 46.184 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Butanone[2,-] | 120.846 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 7.1 | 120.846 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Trichloroethane[1,1,2,-] | 54.5264 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 54.5264 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Trichloroethene | 69.8163 | ug/m ³ | U | Y | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 53.7049 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Tetrachloroethane[1,1,2,2,-] | 68.6077 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 68.6077 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Hexachlorobutadiene | 436.995 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 4.0 | 436.995 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Xylene[1,2,-] | 43.3923 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 1.8 | 43.3923 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Dichlorobenzene[1,2,-] | 60.0895 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 0.94 | 60.0895 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Trimethylbenzene[1,2,4,-] | 49.1269 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 0.84 | 49.1269 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Isopropylbenzene | 49.1269 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 0.76 | 49.1269 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148584 | 63-2011 | 10/31/2017 | Xylene[1,3,-]Xylene[1,4,-] | 43.3923 | ug/m ³ | U | N | GAS | REG | GAS | 09:34 | 35.85956 | -106.295044 | N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 43.3923 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Ethylbenzene | 43.3963 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 1.8 | 43.3963 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Styrene | 42.5707 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 0.79 | 42.5707 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Benzyl Chloride | 51.7388 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 0.81 | 51.7388 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Dichloropropene[cis-1,3,-] | 45.3583 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 45.3583 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Dichloropropene[trans-1,3,-] | 45.3583 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 45.3583 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Propylbenzene[1,-] | 49.1269 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 1.0 | 49.1269 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Dichlorobenzene[1,4,-] | 60.0895 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 0.65 | 60.0895 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Dibromoethane[1,2,-] | 76.7866 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 0.83 | 76.7866 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Butadiene[1,3,-] | 22.1096 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 2.1 | 22.1096 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Chloro-1-propene[3,-] | 128.236 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 7.8 | 128.236 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Dichloroethane[1,2,-] | 40.4493 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 40.4493 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Methyl-2-pentanone[4,-] | 40.9398 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 40.9398 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Trimethylbenzene[1,3,5,-] | 49.1269 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 0.73 | 49.1269 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Toluene | 37.6609 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 37.6609 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Chlorobenzene | 46.0082 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 46.0082 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Tetrahydrofuran | 29.4745 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 29.4745 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148585 | 63-2012 | 10/31/2017 | Hexane | 35.2256 | ug/m ³ | U | N | GAS | REG | GAS | 12:20 | 35.860065 | -106.2959 | N | | GAS | 2018-661 | EPA:TO15 | 2.1 | 35.2256 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and | | | | | | | | | | | | | | | | | | | | | |

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 1

| Sampling Plan/Program Name | Field Sample ID | Location ID | Sample Date | Parameter Name | Report Result | Report Units | Lab Qualifier | Detected | Sample Matrix | Sample Purpose | Sample Type | Sample Time | Latitude (Decimal) | Longitude (Decimal) | Filtered | Field Sample Comments | Lab Matrix | COC # | Lab Method | Method Detection Limit | Report Detection Limit |
|--|-----------------|-------------|-------------|----------------------------|---------------|--------------|---------------|----------|---------------|----------------|-------------|-------------|--------------------|---------------------|----------|-----------------------|------------|----------|------------|------------------------|------------------------|
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Toluene | 7.53218 | ug/m3 | J | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.0 | 33.1416 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Chlorobenzene | 40.4872 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 40.4872 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Tetrahydrofuran | 25.9376 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.0 | 25.9376 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Hexane | 200.786 | ug/m3 | | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.8 | 30.9985 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Cyclohexane | 30.2719 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.7 | 30.2719 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Trichlorobenzene[1,2,4-] | 259.583 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 3.0 | 259.583 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Dioxane[1,4-] | 126.051 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 2.7 | 126.051 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Chlorodibromomethane | 74.9172 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 74.9172 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Tetrachloroethene | 81.3384 | ug/m3 | | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 0.80 | 59.6482 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | n-Heptane | 9.82948 | ug/m3 | J | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 36.0414 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Dichloroethene[cis-1,2-] | 16.6419 | ug/m3 | J | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 34.8688 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Dichloroethene[trans-1,2-] | 34.8688 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 2.4 | 34.8688 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Methyl tert-Butyl Ether | 31.7071 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 31.7071 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Isooctane | 41.0879 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 41.0879 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Dichlorobenzene[1,3-] | 52.8787 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 52.8787 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Carbon Tetrachloride | 94.3095 | ug/m3 | | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 55.3282 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Hexanone[2-] | 143.289 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 3.4 | 143.289 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Ethyltoluene[4-] | 43.2317 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 0.65 | 43.2317 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Ethanol | 35.7786 | ug/m3 | J | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 5.7 | 65.9079 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Propanol[2-] | 85.9793 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 3.9 | 85.9793 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Acetone | 16.1431 | ug/m3 | J | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 4.6 | 83.0895 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Chloroform | 190.304 | ug/m3 | | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 42.9404 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Benzene | 28.0958 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 28.0958 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Trichloroethane[1,1,1-] | 13.0863 | ug/m3 | J | Y | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 0.97 | 47.9833 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Bromomethane | 135.822 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 3.6 | 135.822 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Chloromethane | 72.2312 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 5.8 | 72.2312 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Chloroethane | 92.2883 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 7.3 | 92.2883 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Vinyl Chloride | 22.4802 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 1.7 | 22.4802 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Methylene Chloride | 121.501 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 5.2 | 121.501 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Carbon Disulfide | 108.925 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106.2959 N | | GAS | 2018-661 | EPA:TO15 | 4.4 | 108.925 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148586 | 63-2012 | 10/31/2017 | Bromoform | 90.9056 | ug/m3 | U | N | GAS | REG | GAS | 12:35 | 35.860065 | -106 | | | | | | | |

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 1

| Sampling Plan/Program Name | Field Sample ID | Location ID | Sample Date | Parameter Name | Report Result | Report Units | Lab Qualifier | Detected | Sample Matrix | Sample Purpose | Sample Type | Sample Time | Latitude (Decimal) | Longitude (Decimal) | Filtered | Field Sample Comments | Lab Matrix | COC # | Lab Method | Method Detection Limit | Report Detection Limit |
|--|-----------------|-------------|-------------|---|---------------|-------------------|---------------|----------|---------------|----------------|-------------|-------------|--------------------|---------------------|----------|-----------------------|------------|----------|------------|------------------------|------------------------|
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Chloromethane | 90.8049 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 7.3 | 90.8049 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Chloroethane | 116.02 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 9.1 | 116.02 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Vinyl Chloride | 28.1003 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 2.1 | 28.1003 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Methylene Chloride | 152.744 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 6.4 | 152.744 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Carbon Disulfide | 136.934 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 5.5 | 136.934 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Bromoform | 113.632 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.92 | 113.632 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Bromodichloromethane | 73.6475 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.70 | 73.6475 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Dichloroethane[1,1-] | 44.4942 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 44.4942 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Dichloroethene[1,1-] | 43.586 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 43.586 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Trichlorofluoromethane | 61.7641 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.0 | 61.7641 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Dichlorodifluoromethane | 59.3055 | ug/m ³ | Y | | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 54.3634 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Trichloro-1,2,2-trifluoroethane[1,1,2-] | 84.2477 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 84.2477 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Dichloro-1,1,2-tetrafluoroethane[1,2-] | 76.8488 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.8 | 76.8488 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Dichloropropene[1,2-] | 50.8024 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.7 | 50.8024 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Butanone[2-] | 129.688 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 7.6 | 129.688 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Trichloroethane[1,1,2-] | 59.9791 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 59.9791 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Trichloroethene | 483.344 | ug/m ³ | Y | | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 59.0754 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Tetrachloroethane[1,1,2,2-] | 75.4685 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 75.4685 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Hexachlorobutadiene | 468.97 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 4.3 | 468.97 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Xylene[1,2-] | 47.7315 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.9 | 47.7315 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Dichlorobenzene[1,2-] | 66.0984 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.0 | 66.0984 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Trimethylbenzene[1,2,4-] | 54.0396 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.90 | 54.0396 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Isopropylbenzene | 54.0396 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.81 | 54.0396 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148587 | 63-2013 | 10/31/2017 | Xylene[1,3-]+Xylene[1,4-] | 47.7315 | ug/m ³ | U | N | GAS | REG | GAS | 13:06 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 47.7315 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148588 | 63-2013 | 10/31/2017 | Ethylbenzene | 37.3209 | ug/m ³ | U | N | GAS | REG | GAS | 13:22 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 37.3209 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148588 | 63-2013 | 10/31/2017 | Styrene | 36.6108 | ug/m ³ | U | N | GAS | REG | GAS | 13:22 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.67 | 36.6108 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148588 | 63-2013 | 10/31/2017 | Benzyl Chloride | 44.4954 | ug/m ³ | U | N | GAS | REG | GAS | 13:22 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.69 | 44.4954 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148588 | 63-2013 | 10/31/2017 | Dichloropropene[cis-1,3-] | 39.0082 | ug/m ³ | U | N | GAS | REG | GAS | 13:22 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 39.0082 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148588 | 63-2013 | 10/31/2017 | Dichloropropene[trans-1,3-] | 39.0082 | ug/m ³ | U | N | GAS | REG | GAS | 13:22 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.91 | 39.0082 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148588 | | | | | | | | | | | | | | | | | | | | |

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 1

| Sampling Plan/Program Name | Field Sample ID | Location ID | Sample Date | Parameter Name | Report Result | Report Units | Lab Qualifier | Detected | Sample Matrix | Sample Purpose | Sample Type | Sample Time | Latitude (Decimal) | Longitude (Decimal) | Filtered | Field Sample Comments | Lab Matrix | COC # | Lab Method | Method Detection Limit | Report Detection Limit |
|--|-----------------|-------------|-------------|-----------------------------|---------------|-------------------|---------------|----------|---------------|----------------|-------------|-------------|--------------------|---------------------|----------|-----------------------|------------|----------|------------|------------------------|------------------------|
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Styrene | 46.8278 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.86 | 46.8278 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Benzyl Chloride | 56.9127 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.88 | 56.9127 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Dichloropropene[cis-1,3-] | 49.8942 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 49.8942 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Dichloropropene[trans-1,3-] | 49.8942 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 49.8942 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Propylbenzene[1-] | 54.0396 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.1 | 54.0396 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Dichlorobenzene[1,4-] | 66.0984 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.71 | 66.0984 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Dibromoethane[1,2-] | 84.4653 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.91 | 84.4653 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Butadiene[1,3-] | 24.3206 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 2.3 | 24.3206 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Chloro-1-propene[3-] | 137.619 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 8.5 | 137.619 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Dichloroethane[1,2-] | 44.4942 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.5 | 44.4942 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Methyl-2-pentanone[4-] | 45.0338 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 45.0338 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Trimethylbenzene[1,3,5-] | 54.0396 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.80 | 54.0396 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Toluene | 41.427 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 41.427 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Chlorobenzene | 50.609 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 50.609 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Tetrahydrofuran | 32.422 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 32.422 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Hexane | 38.7481 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 2.3 | 38.7481 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Cyclohexane | 37.8399 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 2.1 | 37.8399 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Trichlorobenzene[1,2,4-] | 326.333 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 3.7 | 326.333 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Dioxane[1,4-] | 158.464 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 3.4 | 158.464 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Chlorodibromomethane | 93.6465 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 93.6465 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Tetrachloroethene | 8.81166 | ug/m ³ | J | Y | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 0.99 | 74.5602 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | n-Heptane | 45.0518 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 45.0518 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Dichloroethene[cis-1,2-] | 43.586 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.8 | 43.586 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Dichloroethene[trans-1,2-] | 43.586 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 3.0 | 43.586 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Methyl tert-Butyl Ether | 39.6339 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.9 | 39.6339 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Isooctane | 51.3599 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.3 | 51.3599 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Dichlorobenzene[1,3-] | 66.0984 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 66.0984 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Carbon Tetrachloride | 69.1603 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 69.1603 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Hexanone[2-] | 180.135 | ug/m ³ | U | N | GAS | FD | GAS | 13:07 | 35.86025 | -106.29515 | N | | GAS | 2018-661 | EPA:TO15 | 4.3 | 180.135 |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148589 | 63-2013 | 10/31/2017 | Ethyltoluene[| | | | | | | | | | | | | | | | | |

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 1

| Sampling Plan/Program Name | Field Sample ID | Location ID | Sample Date | Parameter Name | Report Result | Report Units | Lab Qualifier | Detected | Sample Matrix | Sample Purpose | Sample Type | Sample Time | Latitude (Decimal) | Longitude (Decimal) | Filtered | Field Sample Comments | Lab Matrix | COC # | Lab Method | Method Detection Limit | Report Detection Limit |
|--|-----------------|-------------|-------------|--|---------------|--------------|---------------|----------|---------------|----------------|-------------|-------------|--------------------|---------------------|----------|-----------------------|------------|----------|------------|------------------------|------------------------|
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Isooctane | 88.7126 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.3 | 88.7126 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Dichlorobenzene[1,3-] | 114.17 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.5 | 114.17 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Carbon Tetrachloride | 119.459 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.9 | 119.459 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Hexanone[2-] | 315.236 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 7.5 | 315.236 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Ethyltoluene[4-] | 93.3412 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 1.4 | 93.3412 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Ethanol | 144.997 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 12 | 144.997 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Propanol[2-] | 189.154 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 8.5 | 189.154 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Acetone | 182.797 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 10 | 182.797 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Chloroform | 92.7121 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 3.0 | 92.7121 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Benzene | 60.6613 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.6 | 60.6613 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Trichloroethane[1,1,1-] | 81.7897 | ug/m3 | J | Y | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.1 | 103.6 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Bromomethane | 298.807 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 7.9 | 298.807 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Chloromethane | 158.909 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 13 | 158.909 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Chloroethane | 203.034 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 16 | 203.034 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Vinyl Chloride | 48.5368 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 3.7 | 48.5368 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Methylene Chloride | 267.303 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 11 | 267.303 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Carbon Disulfide | 239.634 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 9.6 | 239.634 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Bromoform | 196.274 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 1.6 | 196.274 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Dichlorodifluoromethane | 127.209 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 1.2 | 127.209 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Dichloroethane[1,1-] | 24.2696 | ug/m3 | J | Y | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.2 | 76.8537 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Dichloroethene[1,1-] | 75.2849 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.3 | 75.2849 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Trichlorofluoromethane | 106.683 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 1.8 | 106.683 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Dichlorodifluoromethane | 93.9004 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.6 | 93.9004 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Trichloro-1,2,2-trifluoroethane[1,1,2-] | 145.519 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.9 | 145.519 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Dichloro-1,1,2-tetrafluoroethane[1,2,2-] | 132.739 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 3.1 | 132.739 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Dichloropropane[1,2-] | 87.7496 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.9 | 87.7496 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Butanone[2-] | 226.954 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 13 | 226.954 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Trichloroethane[1,1,2-] | 103.6 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.5 | 103.6 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Trichloroethene | 59.0754 | ug/m3 | J | Y | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.8 | 102.039 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Tetrachloroethane[1,1,2,2-] | 130.355 | ug/m3 | U | N | GAS | FB | GAS | 14:00 | 35.86025 | -106.29515 N | | GAS | 2018-661 | EPA:TO15 | 2.8 | 130.355 | |
| 1st Qtr FY2018, 54-009, TWF, Poregas Sampling and Analysis | MD54-18-148590 | 63-2013 | 10/31/2017 | Hexachlorobutadiene | 820.698 | ug/m3 | U</ | | | | | | | | | | | | | | |

Well Purge Forms
at TA-63 Transuranic Waste Facility – Quarter 1

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Purge/Screening Using MultiRAE IR Multigas Monitor

| Borehole ID | <u>63-2009</u> | | MultiRae No | <u>4255</u> | Sampler: <u>M. Shendo and K. Tow</u> | | |
|----------------------------|-------------------|---|--|---------------------|--------------------------------------|----------------------------|---|
| Sampling Date | <u>10/31/17</u> | | Static Pressure of Port (KpA): | <u>-0.025</u> | Reviewed by: | | Date |
| Purge Flow Rate (slpm): | <u>1.8</u> | | Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) | | | <u>Default to 10 mins.</u> | |
| Port # | Depth (ft bgs) | Screening Time | CH ₄ % | CO ₂ ppm | O ₂ % | VOC (ppm) | Comments |
| 1 | 7 | <u>1134</u> 0957 KT 10/31/17 | 0 | 6500 | 19.1 | 0.0 | Ambient Air: CH ₄ %= <u>0</u> , CO ₂ (ppm)= <u>0</u> , O ₂ <u>20.9</u> , VOC(ppm) <u>0</u> Start Port Purge = 0947 1124 KT 10/31/17 |
| 1 | 7 | <u>1135</u> 0958 KT 10/31/17 | 0 | 6500 | 19.1 | 0.0 | |
| 1 | 7 | <u>1136</u> 0959 KT 10/31/17 | 0 | 6570 | 19.1 | 0.0 | |
| | | | | | | | |
| | | | | | | | Summa # = <u>N1819</u> |
| | | | | | | | Sample ID # = <u>MD54-18-148582</u> |
| | | | | | | | Total Purge (SL) = <u>22.72</u> |
| | | | | | | | Vac pressure of Summa Canister (psi) = Start = -18 End = 0 |
| | | | | | | | |

Purge/Screening Using MultiRAE IR Multigas Monitor

| Borehole ID | <u>63-2010</u> | | MultiRae No | <u>4255</u> | | Sampler: <u>M. Shendo and K. Tow</u> | |
|----------------------------|-------------------|-------------------|---|---------------------|------------------|--------------------------------------|---|
| Sampling Date | <u>10/31/17</u> | | Static Pressure of Port (KpA): | <u>-0.032</u> | | Reviewed by: | Date |
| Purge Flow Rate (slpm): | <u>1.9</u> | | Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) <u>Default to 10 mins.</u> | | | | |
| Port # | Depth (ft bgs) | Screening Time | CH ₄ % | CO ₂ ppm | O ₂ % | VOC (ppm) | Comments |
| 1 | 7 | 0957 | 0 | 4300 | 20.0 | 0.0 | Ambient Air: CH ₄ %= <u>0</u> , CO ₂ (ppm)= <u>0</u> , O ₂ <u>20.9</u> , VOC(ppm) <u>0</u> Start Port Purge = <u>0947</u> |
| 1 | 7 | 0958 | 0 | 4250 | 20.0 | 0.0 | |
| 1 | 7 | 0959 | 0 | 4250 | 20.0 | 0.0 | |
| | | | | | | | |
| | | | | | | | Summa # = <u>N2763</u> |
| | | | | | | | Sample ID # = <u>MD54-18-148583</u> |
| | | | | | | | Total Purge (SL) = <u>24.90</u> |
| | | | | | | | Vac pressure of Summa Canister (psi) = Start = <u>-20</u> End = <u>0</u> |
| | | | | | | | |

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID 63-2011

MultiRae No 4255

Sampler: M. Shendo and K. Tow

Sampling Date 10/31/17

Static Pressure of Port
(KpA):

0.00

Reviewed by: _____

Date _____

Purge Flow Rate
(slpm): 1.9

Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2)

Default to 10 mins.

| Port # | Depth (ft bgs) | Screening Time | CH ₄ % | CO ₂ ppm | O ₂ % | VOC (ppm) | Comments |
|--------|-------------------|-------------------|-------------------|---------------------|------------------|-----------|--|
| 1 | 7 | 0932 | 0 | 3690 | 20.1 | 0.0 | Ambient Air: CH ₄ %= <u>0</u> , CO ₂ (ppm)= <u>0</u> , O ₂ <u>20.9</u> , VOC (ppm) <u>0</u> Start Port Purge = 0922 |
| 1 | 7 | 0933 | 0 | 3650 | 20.1 | 0.0 | |
| 1 | 7 | 0934 | 0 | 3650 | 20.2 | 0.0 | |
| | | | | | | | |
| | | | | | | | Summa # = <u>96101</u> |
| | | | | | | | Sample ID # = <u>MD54-18-148584</u> ^{LT 10/31/17} |
| | | | | | | | Total Purge (SL) = <u>21.63</u> |
| | | | | | | | Vac pressure of Summa Canister (psi) = Start = -18 End = -1 |
| | | | | | | | |

Purge/Screening Using MultiRAE IR Multigas Monitor

| Borehole ID | <u>63-2012</u> | | MultiRae No | <u>4255</u> | | Sampler: <u>M. Shendo and K. Tow</u> | |
|----------------------------|-------------------|-------------------|---|---------------------|------------------|--------------------------------------|--|
| Sampling Date | <u>10/31/17</u> | | Static Pressure of Port (KpA): | <u>-0.111</u> | | Reviewed by: | Date |
| Purge Flow Rate (slpm): | <u>2.0</u> | | Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) <u>Default to 10 mins.</u> | | | | |
| Port # | Depth (ft bgs) | Screening Time | CH ₄ % | CO ₂ ppm | O ₂ % | VOC (ppm) | Comments |
| 1 | 24.5 | <u>1218</u> | <u>0</u> | <u>8400</u> | <u>19.5</u> | <u>0.3</u> | Ambient Air: CH ₄ %= <u>0</u> , CO ₂ (ppm)= <u>0</u> , O ₂ <u>20.9</u> , VOC (ppm) <u>0</u> Start Port Purge = <u>1208</u> |
| 1 | 24.5 | <u>1219</u> | <u>0</u> | <u>8400</u> | <u>19.5</u> | <u>0.4</u> | |
| 1 | 24.5 | <u>1220</u> | <u>0</u> | <u>8480</u> | <u>19.5</u> | <u>0.4</u> | |
| | | | | | | | |
| | | | | | | | Summa # = <u>N0415</u> |
| | | | | | | | Sample ID # = <u>MD54-18-148585</u> |
| | | | | | | | Total Purge (SL) = <u>26.42</u> |
| | | | | | | | Vac pressure of Summa Canister (psi) = Start = -20 End = -1 |
| | | | | | | | |

Purge/Screening Using MultiRAE IR Multigas Monitor

| Borehole ID | <u>63-2012</u> | | MultiRae No | <u>4255</u> | | Sampler: <u>M. Shendo and K. Tow</u> | |
|----------------------------|-------------------|-------------------|---|---------------------|------------------|--------------------------------------|---|
| Sampling Date | <u>10/31/17</u> | | Static Pressure of Port (KpA): | <u>-0.178</u> | | Reviewed by: | Date |
| Purge Flow Rate (slpm): | <u>2.0</u> | | Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2) <u>Default to 10 mins.</u> | | | | |
| Port # | Depth (ft bgs) | Screening Time | CH ₄ % | CO ₂ ppm | O ₂ % | VOC (ppm) | Comments |
| 2 | 59.5 | <u>1233</u> | 0 | 9440 | 19.5 | 1.9 | Ambient Air: CH ₄ %= <u>0</u> , CO ₂ (ppm)= <u>10</u> , O ₂ <u>20.9</u> , VOC (ppm) <u>0</u> Start Port Purge = <u>1233</u> |
| 2 | 59.5 | <u>1234</u> | 0 | 9520 | 19.5 | 2.0 | |
| 2 | 59.5 | <u>1235</u> | 0 | 9520 | 19.5 | 2.0 | |
| | | | | | | | |
| | | | | | | | Summa # = <u>00457</u> |
| | | | | | | | Sample ID # = <u>MD54-18-148586</u> |
| | | | | | | | Total Purge (SL) = <u>23.86</u> |
| | | | | | | | Vac pressure of Summa Canister (psi) = Start = -18 End = -1 |
| | | | | | | | |

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID 63-2013

MultiRae No

4255

Sampler: M. Shendo and K. Tow

Sampling Date 10/31/17

Static Pressure of Port
(KpA):

-0.105

Reviewed by:

Date

Purge Flow Rate
(slpm):

2.0

Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2)

Default to 10 mins.

| Port # | Depth (ft bgs) | Screening Time | CH ₄ % | CO ₂ ppm | O ₂ % | VOC (ppm) | Comments |
|--------|-------------------|-------------------|-------------------|---------------------|------------------|-----------|--|
| 1 | 24.5 | 1304 | 0 | 1.98% 19,800 | 17.8 | 0.0 | Ambient Air: CH ₄ %= <u>0</u> , CO ₂ (ppm)= <u>0</u> , O ₂ <u>20.9</u> , VOC(ppm) <u>0</u> Start Port Purge = <u>1254</u> |
| 1 | 24.5 | 1305 | 0 | 2.00% 20,000 | 17.8 | 0.0 | |
| 1 | 24.5 | 1306 | 0 | 2.00% 20,000 | 17.8 | 0.0 | |
| | | | | | | | |
| | | | | | | | Summa # = <u>N2743</u> FD <u>13676</u> |
| | | | | | | | Sample ID # = <u>MD54-18-148587</u> FD# <u>MD54-18-148589</u> |
| | | | | | | | Total Purge (SL) = <u>23.80</u> |
| | | | | | | | Vac pressure of Summa Canister (psi) = Start = -20 / - ^{FD} ₂₀ End = 0 / ^{FD} ₀ |
| | | | | | | | |

Purge/Screening Using MultiRAE IR Multigas Monitor

Borehole ID 63-2013

MultiRae No

4255

Sampler: M. Shendo and K. Tow

Sampling Date 10/31/17

Static Pressure of Port
(KpA):

- 0.239

Reviewed by:

Date

Purge Flow Rate
(slpm): 2.0

Time Required to purge sample train at nominal flow rate (Section 4.1, Step 2)

Default to 10 mins.

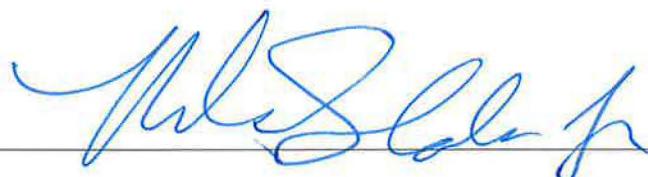
| Port # | Depth (ft bgs) | Screening Time | CH4 % | CO2 ppm | O2% | VOC (ppm) | Comments |
|--------|----------------|----------------|-------|-----------------|------|-----------|---|
| 2 | 59.5 | 1320 | 0 | 1.28% 12,800 | 19.1 | 0.0 | Ambient Air: CH4% = 0, CO2(ppm) = 50 O2 20.9, VOC (ppm) 0 Start Port Purge = 1310 |
| 2 | 59.5 | 1321 | 0 | 1.27% 12,700 | 19.0 | 0.0 | |
| 2 | 59.5 | 1322 | 0 | 1.27% 12,700 | 19.0 | 0.0 | |
| | | | | | | | Summa # = 00415 FB N2792 |
| | | | | | | | Sample ID # = MD54-18-148588 FB MD54-18-148590 |
| | | | | | | | Total Purge (SL) = 23.16 |
| | | | | | | | Vac pressure of Summa Canister (psi) = Start = -17 / -13 FB End = 0 / -6 |

CERTIFICATION

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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.



Taunia S. Van Valkenberg
Group Leader
Compliance Protection Group
Environmental Protection Division
Los Alamos National Laboratory

12/20/2017

Date Signed



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

20 Dec 2017

Date Signed

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