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Date: SEP 30 2019
Symbol: EPC-DO: 19-343
LA-UR: 19-29503
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 8, 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) submit 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 certain volatile organic compounds (VOCs) and evaluated on a quarterly basis after operations at the facility commence. This report provides analytical data for the eighth quarter period following the start of operations in October, 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 eighth quarter, a figure of the LANL TWF permitted unit with the soil vapor monitoring well locations, a data summary and analytical results for the quarter, and a data comparison table and sample collection logs. Specifically, Table 1 is a summary of the analytical results for the eighth 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 eight quarters of sampling currently collected for the soil vapor monitoring wells. This report also presents a statistical evaluation of the data collected for the project to this date.

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 an 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 8, Los Alamos National Laboratory EPA ID #NM0890010515

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The enclosure to this report includes a discussion of the history and analytical findings for the eighth quarter, a figure of the LANL TWF permitted unit with the soil vapor monitoring well locations, a data summary and analytical results for the quarter, and a data comparison table and sample collection logs. Specifically, Table 1 is a summary of the analytical results for the eighth 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 eight quarters of sampling currently collected for the soil vapor monitoring wells. This report also presents a statistical evaluation of the data collected for the project to this date.

ENCLOSURE 1

TA-63 Transuranic Waste Facility
Soil Vapor Monitoring System Report,
Quarter 8,
Los Alamos National Laboratory
EPA ID #NM0890010515

EPC-DO-19-343

LAUR-19-29503
Unclassified

Date: SEP 30 2019

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Technical Area 63 Transuranic Waste Facility
Soil Vapor Monitoring System Report
Quarter 8
Los Alamos National Laboratory
EPA ID #NM0890010515

I. Introduction

This report describes the eighth 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 eighth 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 analysis of the data as part of an on-going review of the need for sampling on a quarterly timeframe.

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 August 1, 2019 for the eigth 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 trichloroethylene (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 each well at 9.3% and 1.6% 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. The three well locations within the boundary of the TWF permitted unit (VMW-1, VMW-2 and VMW-3) indicated the additional detection of various VOCs included in Table 1 at concentrations less than 0.1% of the SGSL.

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 seven

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 eighth quarter of operations at TWF are consistent with the previous results and do not appear to indicate additional contaminant concerns pending future sampling events subject to the Permit.

V. Additional Discussion

This section of the report discusses several additional issues related to the analytical results presented. Two VOC constituents included in the Permit tables (ethylbenzene and xylene isomers) were detected above the report detection limit in the field blank sample for the sixth and seventh quarters (LANL, 2019a, LANL 2019b) that were not detected in samples taken from the actual soil vapor monitoring wells. This result has also occurred in the sampling for this quarter. The relative concentrations of these constituents have increased slightly over the quarters but are well below the permitted SGSLs for the constituent concentrations (<0.1%). Review of the analytical laboratory data does not indicate a data quality error and this may be an equipment or procedural anomaly as it is limited to the field blanks.

Several VOC constituents included in the Permit tables were indicated that were not previously detected in those wells. These included chloroform in VMW-1, toluene in VMW-2, dichlorodifluoromethane in VMW-3 and carbon tetrachloride in VMW-5 at the 25 foot sampling interval. Bromodichloromethane was also found in VMW-4 although it is not a volatile constituent included in the Permit tables. The estimated concentrations for these VOC constituents were all significantly below the report detection limits (see Table 1) and noted with "J" EPA Data Qualifiers. The evaluation of these VOC constituent data issues will continue with future sampling events and concentrations higher than the report detection limits will be submitted to the NMED-HWB as required by Section 3.14.3 of the Permit.

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. The mean and standard deviation for the quarterly TCE concentrations in each port in the soil vapor monitoring wells during facility waste operations are 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 eight 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% with only one exception. Therefore, no significant deviations have been observed for the average TCE concentrations for each sampling port or well 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.

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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.

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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.

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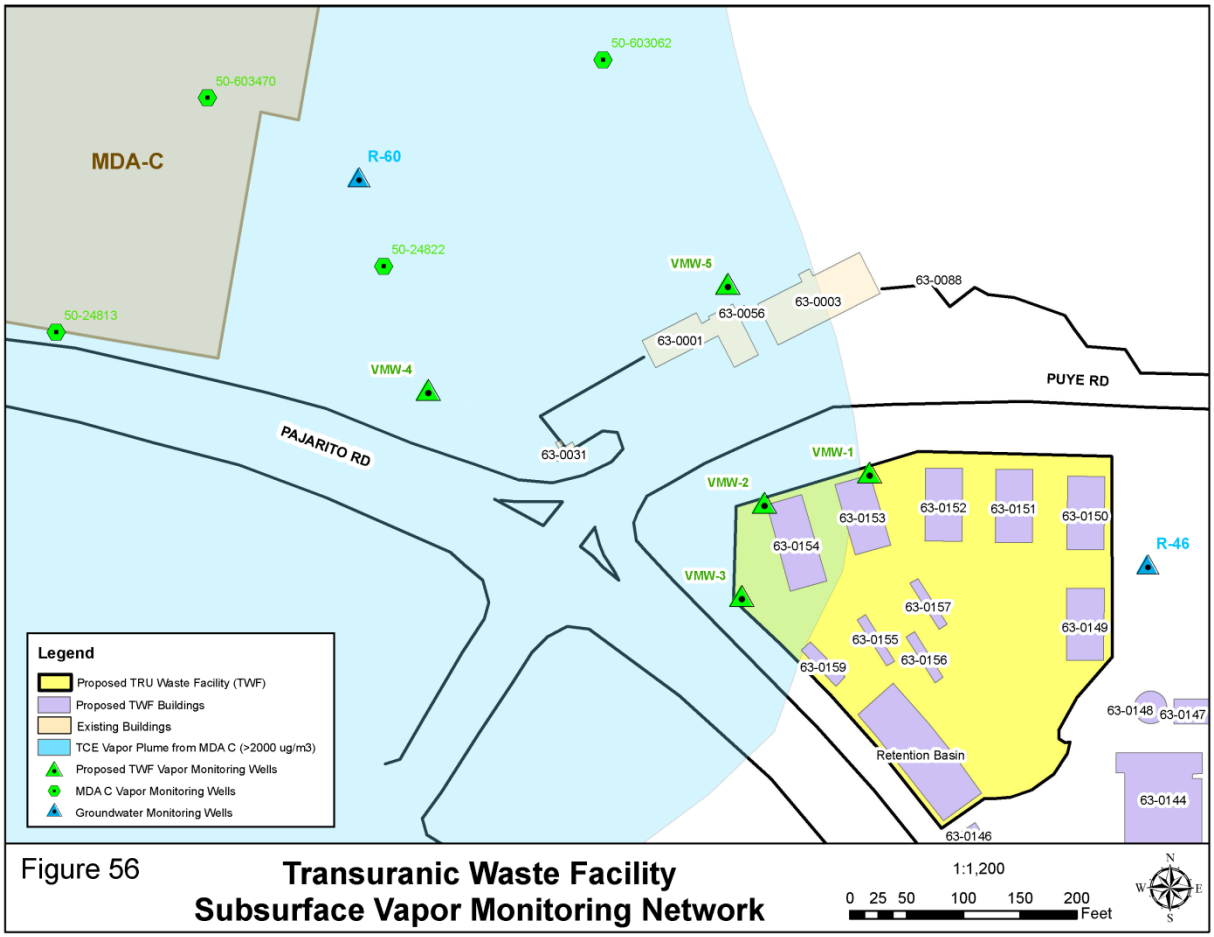

Figure 1

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 8

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Table 1: Detected Volatile Organic Compounds
at TA-63 Transuranic Waste Facility Soil Vapor Monitoring System– Quarter 8

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	TWF63-19-183277	5	Chloroform	Chloroform	5.9	J	42.9	1.08E+04	<0.1
			Trichloroethane[1,1,1-]	1,1,1-Trichloroethane	8.7	J	48.0	$.86E+07	<0.1
			Trichloroethene	Trichloroethylene	59.1	NQ	47.3	1.94E+04	0.3
VMW-2 63-2010	TWF63-19-183278	5	Toluene	Toluene	6.8	J	32.8	4.70E+07	<0.1
			Dichlorodifluoromethane	Dichlorodifluoromethane	6.4	J	43.0	1.03E+06	<0.1
			Trichloroethene	Trichloroethylene	102	NQ	46.7	1.94E+04	0.5
VMW-3 63-2011	TWF63-19-183279	5	Dichlorodifluoromethane	Dichlorodifluoromethane	5.9	J	43.5	1.03E+06	<0.1
			Trichloroethene	Trichloroethylene	85.9	NQ	47.3	1.94E+04	0.4
VMW-4 63-2012	TWF63-19-183280	25	Carbon Tetrachloride	Carbon tetrachloride	50.9	J	56.6	1.06E+05	<0.1
			Chloroform	Chloroform	97.6	NQ	43.9	2.30E+04	0.4
			Bromodichloromethane	NA	6.6	J	60.3	NA	NA
			Dichlorodifluoromethane	Dichlorodifluoromethane	59.3	NQ	44.5	2.61E+06	<0.1
			Trichloro-1,2,2-trifluoroethane[1,1,2-]	1,1,2-Trichloro-1,2,2-trifluoroethane	13.0	J	68.9	6.86E+08	<0.1
			Trichloroethene	Trichloroethylene	3010	NQ	48.3	1.57E+05	1.9
VMW-4 63-2012	TWF63-19-183281	60	Tetrachloroethene	Tetrachloroethylene	94.9	NQ	60.3	2.05E+06	<0.1
			Dichloroethene[cis-1,-2]	cis-1,2-Dichloroethylene	21.8	J	35.3	2.91E+06	<0.1
			Carbon Tetrachloride	Carbon tetrachloride	107	NQ	56.0	2.13E+05	<0.1
			Chloroform	Chloroform	220	NQ	43.4	4.44E+04	0.5
			Trichloroethane[1,1,1-]	1,1,1-Trichloroethane	15.8	J	48.6	2.34E+08	<0.1
			Dichlorodifluoromethane	Dichlorodifluoromethane	133	NQ	44.0	5.38E+06	<0.1
			Trichloroethene	Trichloroethylene	8590	NQ	47.8	9.27E+04	9.3
VMW-5 63-2013	TWF63-19-183282	25	Carbon Tetrachloride	Carbon tetrachloride	7.5	J	57.8	1.06E+05	<0.1
			Chloroform	Chloroform	30.3	J	44.9	2.30E+04	0.1
			Trichloroethane[1,1,1-]	1,1,1-Trichloroethane	22.4	J	50.2	1.16E+08	<0.1
			Dichlorodifluoromethane	Dichlorodifluoromethane	36.6	J	45.5	2.61E+06	<0.1

Table 1: Detected Volatile Organic Compounds
at TA-63 Transuranic Waste Facility Soil Vapor Monitoring System– Quarter 8

			Trichloroethene	Trichloroethylene	424	NQ	49.4	1.57E+05	0.3
VMW-5 63-2013	TWF63-19-183283	60	Carbon Tetrachloride	Carbon tetrachloride	21.4	J	57.8	2.13E+05	<0.1
			Acetone	Acetone	26.1	J	87.8	1.02E+09	<0.1
			Chloroform	Chloroform	26.3	J	44.9	4.44E+04	<0.1
			Trichloroethane[1,1,1-]	1,1,1-Trichloroethane	46.9	J	50.2	2.34E+08	<0.1
			Dichlorodifluoromethane	Dichlorodifluoromethane	59.3	NQ	45.5	5.38E+06	<0.1
			Trichloro-1,2,2-trifluoroethane[1,1,2-]	1,1,2-Trichloro-1,2,2-trifluoroethane	14.6	J	70.5	1.38E+09	<0.1
			Trichloroethene	Trichloroethylene	1500	NQ	49.4	9.27E+04	1.6
VMW-5 63-2013	TWF63-19-183285 Field Duplicate	60	Carbon Tetrachloride	Carbon tetrachloride	18.2	J	56.6	2.13E+05	<0.1
			Chloroform	Chloroform	20.5	J	43.9	4.44E+04	<0.1
			Trichloroethane [1,1,1-]	1,1,1-Trichloroethane	47.4	J	49.1	2.34E+08	<0.1
			Dichlorodifluormethane	Dichlorodifluoromethane	64.2	NQ	44.5	5.38E+06	<0.1
			Trichloro-1,2,2-trifluoroethane[1,1,2-]	1,1,2-Trichloro-1,2,2-trifluoroethane	15.3	J	68.9	1.38E+09	<0.1
			Trichloroethene	Trichloroethylene	1560	NQ	48.3	9.27E+04	1.7
VMW-3 63-2011	TWF63-19-183284 Field Blank	5	Ethylbenzene	Ethylbenzene	56.4	J	60.8	1.10E+05	<0.1
			Xylene[1,2-]	o-Xylene	69.4	NQ	60.7	9.41E+05	<0.1
			Xylene[1,3-] +Xylene[1,4-]	m-Xylene + p-Xylene	182		60.7	9.77E+05	<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 “NQ” indicates analytes that are detected above the report detection limit with no data qualifiers.
“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 8

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TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 8

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183277	63-2009	08/01/2019	Ethylbenzene	38.1888	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.33963	38.1888
TWF63-19-183277	63-2009	08/01/2019	Styrene	37.4622	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.68278	37.4622
TWF63-19-183277	63-2009	08/01/2019	Benzyl Chloride	45.5302	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.7956	45.5302
TWF63-19-183277	63-2009	08/01/2019	Dichloropropene[cis-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.90082	39.9153
TWF63-19-183277	63-2009	08/01/2019	Dichloropropene[trans-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.25733	39.9153
TWF63-19-183277	63-2009	08/01/2019	Propylbenzene[1-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	43.2317
TWF63-19-183277	63-2009	08/01/2019	Dichlorobenzene[1,4-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.00894	52.8787
TWF63-19-183277	63-2009	08/01/2019	Dibromoethane[1,2-]	67.5723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.14116	67.5723
TWF63-19-183277	63-2009	08/01/2019	Butadiene[1,3-]	19.4565	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.18056	19.4565
TWF63-19-183277	63-2009	08/01/2019	Chloro-1-propene[3-]	109.47	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.5195	109.47
TWF63-19-183277	63-2009	08/01/2019	Dichloroethane[1,2-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	35.5954
TWF63-19-183277	63-2009	08/01/2019	Methyl-2-pentanone[4-]	36.027	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.18796	36.027
TWF63-19-183277	63-2009	08/01/2019	Trimethylbenzene[1,3,5-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	36.8452	43.2317
TWF63-19-183277	63-2009	08/01/2019	Toluene	33.1416	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.89592	33.1416
TWF63-19-183277	63-2009	08/01/2019	Chlorobenzene	40.4872	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.0609	40.4872
TWF63-19-183277	63-2009	08/01/2019	Tetrahydrofuran	25.9376	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.30542	25.9376
TWF63-19-183277	63-2009	08/01/2019	Hexane	30.9985	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.04511	30.9985
TWF63-19-183277	63-2009	08/01/2019	Cyclohexane	30.2719	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.43999	30.2719
TWF63-19-183277	63-2009	08/01/2019	Trichlorobenzene[1,2,4-]	259.583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	88.9999	259.583
TWF63-19-183277	63-2009	08/01/2019	Dioxane[1,4-]	126.051	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	35.2941	126.051
TWF63-19-183277	63-2009	08/01/2019	Chlorodibromomethane	74.9172	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.87419	74.9172
TWF63-19-183277	63-2009	08/01/2019	Tetrachloroethene	59.6482	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.30373	59.6482
TWF63-19-183277	63-2009	08/01/2019	n-Heptane	36.0414	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6486	36.0414
TWF63-19-183277	63-2009	08/01/2019	Dichloroethene[cis-1,2-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.13226	34.8688
TWF63-19-183277	63-2009	08/01/2019	Dichloroethene[trans-1,2-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.52849	34.8688
TWF63-19-183277	63-2009	08/01/2019	Methyl tert-Butyl Ether	31.7071	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.35086	31.7071
TWF63-19-183277	63-2009	08/01/2019	Isooctane	41.0879	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	20.0771	41.0879
TWF63-19-183277	63-2009	08/01/2019	Dichlorobenzene[1,3-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.60984	52.8787
TWF63-19-183277	63-2009	08/01/2019	Carbon Tetrachloride	55.3282	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.78432	55.3282
TWF63-19-183277	63-2009	08/01/2019	Hexanone[2-]	143.289	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	49.1278	143.289
TWF63-19-183277	63-2009	08/01/2019	Ethyltoluene[4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.773	43.2317
TWF63-19-183277	63-2009	08/01/2019	Ethanol	65.9079	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	41.4278	65.9079
TWF63-19-183277	63-2009	08/01/2019	Propanol[2-]	85.9793	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.3199	85.9793
TWF63-19-183277	63-2009	08/01/2019	Acetone	83.0895	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.7399	83.0895
TWF63-19-183277	63-2009	08/01/2019	Chloroform	5.8555	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	4.05006	42.9404
TWF63-19-183277	63-2009	08/01/2019	Benzene	28.0958	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.51197	28.0958
TWF63-19-183277	63-2009	08/01/2019	Trichloroethane[1,1,1-]	8.72423	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	8.72423	47.9833
TWF63-19-183277	63-2009	08/01/2019	Bromomethane	135.822	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.6718	135.822
TWF63-19-183277	63-2009	08/01/2019	Chloromethane	72.2312	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.208	72.2312
TWF63-19-183277	63-2009	08/01/2019	Chloroethane	92.2883	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.8855	92.2883
TWF63-19-183277	63-2009	08/01/2019	Vinyl Chloride	22.4802	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.19645	22.4802
TWF63-19-183277	63-2009	08/01/2019	Methylene Chloride	121.501	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.8702	121.501
TWF63-19-183277	63-2009	08/01/2019	Carbon Disulfide	108.925	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.1831	108.925
TWF63-19-183277	63-2009	08/01/2019	Bromoform	90.9056	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.92123	90.9056
TWF63-19-183277	63-2009	08/01/2019	Bromodichloromethane	58.918	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.8918	58.918
TWF63-19-183277	63-2009	08/01/2019	Dichloroethane[1,1-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	35.5954
TWF63-19-183277	63-2009	08/01/2019	Dichloroethene[1,1-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.54731	34.8688
TWF63-19-183277	63-2009	08/01/2019	Trichlorofluoromethane	49.4113	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.86088	49.4113
TWF63-19-183277	63-2009	08/01/2019	Dichlorodifluoromethane	43.4907	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.94212	43.4907
TWF63-19-183277	63-2009	08/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	67.3982	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2542	67.3982
TWF63-19-183277	63-2009	08/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	61.479	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.37941	61.479
TWF63-19-183277	63-2009	08/01/2019	Dichloropropane[1,2-]	40.6419	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.38944	40.6419
TWF63-19-183277	63-2009	08/01/2019	Butanone[2-]	103.161	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.0534	103.161
TWF63-19-183277	63-2009	08/01/2019	Trichloroethane[1,1,2-]	47.9833	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.81476	47.9833
TWF63-19-183277	63-2009	08/01/2019	Trichloroethene	59.0754	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	5.26308	47.2603

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Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183277	63-2009	08/01/2019	Tetrachloroethane[1,1,2,2-]	60.3748	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.23292	60.3748
TWF63-19-183277	63-2009	08/01/2019	Hexachlorobutadiene	373.044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	83.1356	373.044
TWF63-19-183277	63-2009	08/01/2019	Xylene[1,2-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.24453	38.1852
TWF63-19-183277	63-2009	08/01/2019	Dichlorobenzene[1,2-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.82868	52.8787
TWF63-19-183277	63-2009	08/01/2019	Trimethylbenzene[1,2,4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.1246	43.2317
TWF63-19-183277	63-2009	08/01/2019	Isopropylbenzene	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	27.0198	43.2317
TWF63-19-183277	63-2009	08/01/2019	Xylene[1,3-]+Xylene[1,4-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.77315	38.1852
TWF63-19-183278	63-2010	08/01/2019	Ethylbenzene	37.7548	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.29624	37.7548
TWF63-19-183278	63-2010	08/01/2019	Styrene	37.0365	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.68278	37.0365
TWF63-19-183278	63-2010	08/01/2019	Benzyl Chloride	45.0128	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.27821	45.0128
TWF63-19-183278	63-2010	08/01/2019	Dichloropropene[cis-1,3-]	39.4617	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.85546	39.4617
TWF63-19-183278	63-2010	08/01/2019	Dichloropropene[trans-1,3-]	39.4617	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.25733	39.4617
TWF63-19-183278	63-2010	08/01/2019	Propylbenzene[1-]	42.7404	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	42.7404
TWF63-19-183278	63-2010	08/01/2019	Dichlorobenzene[1,4-]	52.2778	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.00894	52.2778
TWF63-19-183278	63-2010	08/01/2019	Dibromoethane[1,2-]	66.8044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.06437	66.8044
TWF63-19-183278	63-2010	08/01/2019	Butadiene[1,3-]	19.2354	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.18056	19.2354
TWF63-19-183278	63-2010	08/01/2019	Chloro-1-propene[3-]	109.47	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.2067	109.47
TWF63-19-183278	63-2010	08/01/2019	Dichloroethane[1,2-]	35.1909	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	35.1909
TWF63-19-183278	63-2010	08/01/2019	Methyl-2-pentanone[4-]	35.6176	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.18796	35.6176
TWF63-19-183278	63-2010	08/01/2019	Trimethylbenzene[1,3,5-]	42.7404	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	36.3539	42.7404
TWF63-19-183278	63-2010	08/01/2019	Toluene	6.77896	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	4.51931	32.765
TWF63-19-183278	63-2010	08/01/2019	Chlorobenzene	40.0272	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.60082	40.0272
TWF63-19-183278	63-2010	08/01/2019	Tetrahydrofuran	25.6428	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.30542	25.6428
TWF63-19-183278	63-2010	08/01/2019	Hexane	30.6462	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.04511	30.6462
TWF63-19-183278	63-2010	08/01/2019	Cyclohexane	29.9279	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.43999	29.9279
TWF63-19-183278	63-2010	08/01/2019	Trichlorobenzene[1,2,4-]	259.583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	88.9999	259.583
TWF63-19-183278	63-2010	08/01/2019	Dioxane[1,4-]	126.051	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	34.5739	126.051
TWF63-19-183278	63-2010	08/01/2019	Chlorodibromomethane	74.0659	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.78906	74.0659
TWF63-19-183278	63-2010	08/01/2019	Tetrachloroethene	58.9704	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.23595	58.9704
TWF63-19-183278	63-2010	08/01/2019	n-Heptane	35.6318	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.239	35.6318
TWF63-19-183278	63-2010	08/01/2019	Dichloroethene[cis-1,2-]	34.4726	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.13226	34.4726
TWF63-19-183278	63-2010	08/01/2019	Dichloroethene[trans-1,2-]	34.4726	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.52849	34.4726
TWF63-19-183278	63-2010	08/01/2019	Methyl tert-Butyl Ether	31.3468	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.31483	31.3468
TWF63-19-183278	63-2010	08/01/2019	Isooctane	40.621	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	19.6101	40.621
TWF63-19-183278	63-2010	08/01/2019	Dichlorobenzene[1,3-]	52.2778	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.60984	52.2778
TWF63-19-183278	63-2010	08/01/2019	Carbon Tetrachloride	54.6995	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.65857	54.6995
TWF63-19-183278	63-2010	08/01/2019	Hexanone[2-]	143.289	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	49.1278	143.289
TWF63-19-183278	63-2010	08/01/2019	Ethyltoluene[4-]	42.7404	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.773	42.7404
TWF63-19-183278	63-2010	08/01/2019	Ethanol	65.9079	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	41.4278	65.9079
TWF63-19-183278	63-2010	08/01/2019	Propanol[2-]	85.9793	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.0742	85.9793
TWF63-19-183278	63-2010	08/01/2019	Acetone	83.0895	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.7399	83.0895
TWF63-19-183278	63-2010	08/01/2019	Chloroform	42.4524	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.00126	42.4524
TWF63-19-183278	63-2010	08/01/2019	Benzene	27.7765	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.51197	27.7765
TWF63-19-183278	63-2010	08/01/2019	Trichloroethane[1,1,1-]	47.438	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.72423	47.438
TWF63-19-183278	63-2010	08/01/2019	Bromomethane	135.822	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.2837	135.822
TWF63-19-183278	63-2010	08/01/2019	Chloromethane	72.2312	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.208	72.2312
TWF63-19-183278	63-2010	08/01/2019	Chloroethane	92.2883	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.6218	92.2883
TWF63-19-183278	63-2010	08/01/2019	Vinyl Chloride	22.2247	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.19645	22.2247
TWF63-19-183278	63-2010	08/01/2019	Methylene Chloride	121.501	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.5231	121.501
TWF63-19-183278	63-2010	08/01/2019	Carbon Disulfide	108.925	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	15.8719	108.925
TWF63-19-183278	63-2010	08/01/2019	Bromoform	89.8726	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.81792	89.8726
TWF63-19-183278	63-2010	08/01/2019	Bromodichloromethane	58.2485	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.82485	58.2485
TWF63-19-183278	63-2010	08/01/2019	Dichloroethane[1,1-]	35.1909	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.0674	35.1909
TWF63-19-183278	63-2010	08/01/2019	Dichloroethene[1,1-]	34.4726	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.54731	34.4726
TWF63-19-183278	63-2010	08/01/2019	Trichlorofluoromethane	48.8498	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.29939	48.8498

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Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183278	63-2010	08/01/2019	Dichlorodifluoromethane	6.42476	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	4.94212	42.9965
TWF63-19-183278	63-2010	08/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	66.6323	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2542	66.6323
TWF63-19-183278	63-2010	08/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	60.7804	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.30955	60.7804
TWF63-19-183278	63-2010	08/01/2019	Dichloropropane[1,2-]	40.1801	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.9276	40.1801
TWF63-19-183278	63-2010	08/01/2019	Butanone[2-]	103.161	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.7586	103.161
TWF63-19-183278	63-2010	08/01/2019	Trichloroethane[1,1,2-]	47.438	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.81476	47.438
TWF63-19-183278	63-2010	08/01/2019	Trichloroethene	102.039	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	5.20937	46.7232
TWF63-19-183278	63-2010	08/01/2019	Tetrachloroethane[1,1,2,2-]	59.6887	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.23292	59.6887
TWF63-19-183278	63-2010	08/01/2019	Hexachlorobutadiene	373.044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	82.0697	373.044
TWF63-19-183278	63-2010	08/01/2019	Xylene[1,2-]	37.7513	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.81061	37.7513
TWF63-19-183278	63-2010	08/01/2019	Dichlorobenzene[1,2-]	52.2778	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.76859	52.2778
TWF63-19-183278	63-2010	08/01/2019	Trimethylbenzene[1,2,4-]	42.7404	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	20.6333	42.7404
TWF63-19-183278	63-2010	08/01/2019	Isopropylbenzene	42.7404	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	26.5285	42.7404
TWF63-19-183278	63-2010	08/01/2019	Xylene[1,3-]+Xylene[1,4-]	37.7513	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.33923	37.7513
TWF63-19-183279	63-2011	08/01/2019	Ethylbenzene	38.1888	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.33963	38.1888
TWF63-19-183279	63-2011	08/01/2019	Styrene	37.4622	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.68278	37.4622
TWF63-19-183279	63-2011	08/01/2019	Benzyl Chloride	45.5302	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.7956	45.5302
TWF63-19-183279	63-2011	08/01/2019	Dichloropropene[cis-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.94617	39.9153
TWF63-19-183279	63-2011	08/01/2019	Dichloropropene[trans-1,3-]	39.9153	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.25733	39.9153
TWF63-19-183279	63-2011	08/01/2019	Propylbenzene[1-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	43.2317
TWF63-19-183279	63-2011	08/01/2019	Dichlorobenzene[1,4-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.00894	52.8787
TWF63-19-183279	63-2011	08/01/2019	Dibromoethane[1,2-]	67.5723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.21794	67.5723
TWF63-19-183279	63-2011	08/01/2019	Butadiene[1,3-]	19.4565	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.40165	19.4565
TWF63-19-183279	63-2011	08/01/2019	Chloro-1-propene[3-]	109.47	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.5195	109.47
TWF63-19-183279	63-2011	08/01/2019	Dichloroethane[1,2-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	35.5954
TWF63-19-183279	63-2011	08/01/2019	Methyl-2-pentanone[4-]	36.027	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.18796	36.027
TWF63-19-183279	63-2011	08/01/2019	Trimethylbenzene[1,3,5-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	36.8452	43.2317
TWF63-19-183279	63-2011	08/01/2019	Toluene	33.1416	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.89592	33.1416
TWF63-19-183279	63-2011	08/01/2019	Chlorobenzene	40.4872	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.0609	40.4872
TWF63-19-183279	63-2011	08/01/2019	Tetrahydrofuran	25.9376	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.30542	25.9376
TWF63-19-183279	63-2011	08/01/2019	Hexane	30.9985	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.39737	30.9985
TWF63-19-183279	63-2011	08/01/2019	Cyclohexane	30.2719	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.43999	30.2719
TWF63-19-183279	63-2011	08/01/2019	Trichlorobenzene[1,2,4-]	259.583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	88.9999	259.583
TWF63-19-183279	63-2011	08/01/2019	Dioxane[1,4-]	126.051	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	35.2941	126.051
TWF63-19-183279	63-2011	08/01/2019	Chlorodibromomethane	74.9172	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.95932	74.9172
TWF63-19-183279	63-2011	08/01/2019	Tetrachloroethene	59.6482	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.37151	59.6482
TWF63-19-183279	63-2011	08/01/2019	n-Heptane	36.0414	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6486	36.0414
TWF63-19-183279	63-2011	08/01/2019	Dichloroethene[cis-1,2-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.13226	34.8688
TWF63-19-183279	63-2011	08/01/2019	Dichloroethene[trans-1,2-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.52849	34.8688
TWF63-19-183279	63-2011	08/01/2019	Methyl tert-Butyl Ether	31.7071	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.38689	31.7071
TWF63-19-183279	63-2011	08/01/2019	Isooctane	41.0879	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	20.0771	41.0879
TWF63-19-183279	63-2011	08/01/2019	Dichlorobenzene[1,3-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.21073	52.8787
TWF63-19-183279	63-2011	08/01/2019	Carbon Tetrachloride	55.3282	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.78432	55.3282
TWF63-19-183279	63-2011	08/01/2019	Hexanone[2-]	143.289	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	49.1278	143.289
TWF63-19-183279	63-2011	08/01/2019	Ethyltoluene[4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	43.2317
TWF63-19-183279	63-2011	08/01/2019	Ethanol	65.9079	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	41.4278	65.9079
TWF63-19-183279	63-2011	08/01/2019	Propanol[2-]	85.9793	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.5655	85.9793
TWF63-19-183279	63-2011	08/01/2019	Acetone	83.0895	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.7399	83.0895
TWF63-19-183279	63-2011	08/01/2019	Chloroform	42.9404	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.09885	42.9404
TWF63-19-183279	63-2011	08/01/2019	Benzene	28.0958	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.51197	28.0958
TWF63-19-183279	63-2011	08/01/2019	Trichloroethane[1,1,1-]	47.9833	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.72423	47.9833
TWF63-19-183279	63-2011	08/01/2019	Bromomethane	135.822	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.6718	135.822
TWF63-19-183279	63-2011	08/01/2019	Chloromethane	72.2312	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.4144	72.2312
TWF63-19-183279	63-2011	08/01/2019	Chloroethane	92.2883	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.8855	92.2883
TWF63-19-183279	63-2011	08/01/2019	Vinyl Chloride	22.4802	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.4519	22.4802

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Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183279	63-2011	08/01/2019	Methylene Chloride	121.501	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.8702	121.501
TWF63-19-183279	63-2011	08/01/2019	Carbon Disulfide	108.925	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.1831	108.925
TWF63-19-183279	63-2011	08/01/2019	Bromoform	90.9056	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.92123	90.9056
TWF63-19-183279	63-2011	08/01/2019	Bromodichloromethane	58.918	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.8918	58.918
TWF63-19-183279	63-2011	08/01/2019	Dichloroethane[1,1-]	35.5954	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	35.5954
TWF63-19-183279	63-2011	08/01/2019	Dichloroethene[1,1-]	34.8688	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.54731	34.8688
TWF63-19-183279	63-2011	08/01/2019	Trichlorofluoromethane	49.4113	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.86088	49.4113
TWF63-19-183279	63-2011	08/01/2019	Dichlorodifluoromethane	5.93055	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	4.94212	43.4907
TWF63-19-183279	63-2011	08/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	67.3982	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2542	67.3982
TWF63-19-183279	63-2011	08/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	61.479	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.37941	61.479
TWF63-19-183279	63-2011	08/01/2019	Dichloropropane[1,2-]	40.6419	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.38944	40.6419
TWF63-19-183279	63-2011	08/01/2019	Butanone[2-]	103.161	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.0534	103.161
TWF63-19-183279	63-2011	08/01/2019	Trichloroethane[1,1,2-]	47.9833	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.81476	47.9833
TWF63-19-183279	63-2011	08/01/2019	Trichloroethene	85.9278	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	5.31678	47.2603
TWF63-19-183279	63-2011	08/01/2019	Tetrachloroethane[1,1,2,2-]	60.3748	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.23292	60.3748
TWF63-19-183279	63-2011	08/01/2019	Hexachlorobutadiene	373.044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	84.2014	373.044
TWF63-19-183279	63-2011	08/01/2019	Xylene[1,2-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.24453	38.1852
TWF63-19-183279	63-2011	08/01/2019	Dichlorobenzene[1,2-]	52.8787	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.82868	52.8787
TWF63-19-183279	63-2011	08/01/2019	Trimethylbenzene[1,2,4-]	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.1246	43.2317
TWF63-19-183279	63-2011	08/01/2019	Isopropylbenzene	43.2317	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	27.0198	43.2317
TWF63-19-183279	63-2011	08/01/2019	Xylene[1,3-]+Xylene[1,4-]	38.1852	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.77315	38.1852
TWF63-19-183280	63-2012	08/01/2019	Ethylbenzene	39.0567	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.33963	39.0567
TWF63-19-183280	63-2012	08/01/2019	Styrene	38.3136	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.68278	38.3136
TWF63-19-183280	63-2012	08/01/2019	Benzyl Chloride	46.5649	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.7956	46.5649
TWF63-19-183280	63-2012	08/01/2019	Dichloropropene[cis-1,3-]	40.8225	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.99153	40.8225
TWF63-19-183280	63-2012	08/01/2019	Dichloropropene[trans-1,3-]	40.8225	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.25733	40.8225
TWF63-19-183280	63-2012	08/01/2019	Propylbenzene[1-]	44.2142	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	44.2142
TWF63-19-183280	63-2012	08/01/2019	Dichlorobenzene[1,4-]	54.0805	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.00894	54.0805
TWF63-19-183280	63-2012	08/01/2019	Dibromoethane[1,2-]	69.108	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.29473	69.108
TWF63-19-183280	63-2012	08/01/2019	Butadiene[1,3-]	19.8987	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.40165	19.8987
TWF63-19-183280	63-2012	08/01/2019	Chloro-1-propene[3-]	112.598	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.8323	112.598
TWF63-19-183280	63-2012	08/01/2019	Dichloroethane[1,2-]	36.4044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	36.4044
TWF63-19-183280	63-2012	08/01/2019	Methyl-2-pentanone[4-]	36.8458	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.18796	36.8458
TWF63-19-183280	63-2012	08/01/2019	Trimethylbenzene[1,3,5-]	44.2142	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	37.3365	44.2142
TWF63-19-183280	63-2012	08/01/2019	Toluene	33.8948	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.89592	33.8948
TWF63-19-183280	63-2012	08/01/2019	Chlorobenzene	41.4074	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.0609	41.4074
TWF63-19-183280	63-2012	08/01/2019	Tetrahydrofuran	26.5271	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.60016	26.5271
TWF63-19-183280	63-2012	08/01/2019	Hexane	31.703	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.39737	31.703
TWF63-19-183280	63-2012	08/01/2019	Cyclohexane	30.9599	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.43999	30.9599
TWF63-19-183280	63-2012	08/01/2019	Trichlorobenzene[1,2,4-]	267	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	88.9999	267
TWF63-19-183280	63-2012	08/01/2019	Dioxane[1,4-]	129.652	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	35.6543	129.652
TWF63-19-183280	63-2012	08/01/2019	Chlorodibromomethane	76.6199	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.95932	76.6199
TWF63-19-183280	63-2012	08/01/2019	Tetrachloroethene	44.0583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.43929	61.0038
TWF63-19-183280	63-2012	08/01/2019	n-Heptane	36.8605	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6486	36.8605
TWF63-19-183280	63-2012	08/01/2019	Dichloroethene[cis-1,2-]	35.6613	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.13226	35.6613
TWF63-19-183280	63-2012	08/01/2019	Dichloroethene[trans-1,2-]	35.6613	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.92473	35.6613
TWF63-19-183280	63-2012	08/01/2019	Methyl tert-Butyl Ether	32.4277	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.42292	32.4277
TWF63-19-183280	63-2012	08/01/2019	Isooctane	42.0217	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	20.544	42.0217
TWF63-19-183280	63-2012	08/01/2019	Dichlorobenzene[1,3-]	54.0805	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.21073	54.0805
TWF63-19-183280	63-2012	08/01/2019	Carbon Tetrachloride	50.9271	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	5.84719	56.5857
TWF63-19-183280	63-2012	08/01/2019	Hexanone[2-]	147.383	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	49.1278	147.383
TWF63-19-183280	63-2012	08/01/2019	Ethyltoluene[4-]	44.2142	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	44.2142
TWF63-19-183280	63-2012	08/01/2019	Ethanol	67.791	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	41.4278	67.791
TWF63-19-183280	63-2012	08/01/2019	Propanol[2-]	88.4358	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.5655	88.4358
TWF63-19-183280	63-2012	08/01/2019	Acetone	85.4635	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.7399	85.4635

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Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183280	63-2012	08/01/2019	Chloroform	97.5917	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	4.09885	43.9163
TWF63-19-183280	63-2012	08/01/2019	Benzene	28.7343	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.51197	28.7343
TWF63-19-183280	63-2012	08/01/2019	Trichloroethane[1,1,1-]	49.0738	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.72423	49.0738
TWF63-19-183280	63-2012	08/01/2019	Bromomethane	139.702	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.0598	139.702
TWF63-19-183280	63-2012	08/01/2019	Chloromethane	74.2949	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.6207	74.2949
TWF63-19-183280	63-2012	08/01/2019	Chloroethane	94.9251	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.1492	94.9251
TWF63-19-183280	63-2012	08/01/2019	Vinyl Chloride	22.9911	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.4519	22.9911
TWF63-19-183280	63-2012	08/01/2019	Methylene Chloride	124.973	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.2174	124.973
TWF63-19-183280	63-2012	08/01/2019	Carbon Disulfide	112.037	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.1831	112.037
TWF63-19-183280	63-2012	08/01/2019	Bromoform	92.9717	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.02453	92.9717
TWF63-19-183280	63-2012	08/01/2019	Bromodichloromethane	6.56132	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	6.0257	60.257
TWF63-19-183280	63-2012	08/01/2019	Dichloroethane[1,1-]	36.4044	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	36.4044
TWF63-19-183280	63-2012	08/01/2019	Dichloroethene[1,1-]	35.6613	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.54731	35.6613
TWF63-19-183280	63-2012	08/01/2019	Trichlorofluoromethane	50.5342	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.86088	50.5342
TWF63-19-183280	63-2012	08/01/2019	Dichlorodifluoromethane	59.3055	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	4.94212	44.4791
TWF63-19-183280	63-2012	08/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	13.0201	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	12.2542	68.9299
TWF63-19-183280	63-2012	08/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	62.8763	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.44928	62.8763
TWF63-19-183280	63-2012	08/01/2019	Dichloropropane[1,2-]	41.5656	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.38944	41.5656
TWF63-19-183280	63-2012	08/01/2019	Butanone[2-]	106.108	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.3481	106.108
TWF63-19-183280	63-2012	08/01/2019	Trichloroethane[1,1,2-]	49.0738	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.36	49.0738
TWF63-19-183280	63-2012	08/01/2019	Trichloroethene	3007.47	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	5.37049	48.3344
TWF63-19-183280	63-2012	08/01/2019	Tetrachloroethane[1,1,2,2-]	61.7469	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.919	61.7469
TWF63-19-183280	63-2012	08/01/2019	Hexachlorobutadiene	383.703	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	85.2673	383.703
TWF63-19-183280	63-2012	08/01/2019	Xylene[1,2-]	39.053	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.24453	39.053
TWF63-19-183280	63-2012	08/01/2019	Dichlorobenzene[1,2-]	54.0805	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.88877	54.0805
TWF63-19-183280	63-2012	08/01/2019	Trimethylbenzene[1,2,4-]	44.2142	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.6159	44.2142
TWF63-19-183280	63-2012	08/01/2019	Isopropylbenzene	44.2142	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	27.5111	44.2142
TWF63-19-183280	63-2012	08/01/2019	Xylene[1,3-]+Xylene[1,4-]	39.053	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.77315	39.053
TWF63-19-183281	63-2012	08/01/2019	Ethylbenzene	38.6227	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.33963	38.6227
TWF63-19-183281	63-2012	08/01/2019	Styrene	37.8879	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.68278	37.8879
TWF63-19-183281	63-2012	08/01/2019	Benzyl Chloride	46.0475	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.7956	46.0475
TWF63-19-183281	63-2012	08/01/2019	Dichloropropene[cis-1,3-]	40.3689	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.94617	40.3689
TWF63-19-183281	63-2012	08/01/2019	Dichloropropene[trans-1,3-]	40.3689	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.25733	40.3689
TWF63-19-183281	63-2012	08/01/2019	Propylbenzene[1-]	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	43.723
TWF63-19-183281	63-2012	08/01/2019	Dichlorobenzene[1,4-]	53.4796	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.00894	53.4796
TWF63-19-183281	63-2012	08/01/2019	Dibromoethane[1,2-]	68.3401	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.21794	68.3401
TWF63-19-183281	63-2012	08/01/2019	Butadiene[1,3-]	19.6776	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.40165	19.6776
TWF63-19-183281	63-2012	08/01/2019	Chloro-1-propene[3-]	112.598	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.5195	112.598
TWF63-19-183281	63-2012	08/01/2019	Dichloroethane[1,2-]	35.9999	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	35.9999
TWF63-19-183281	63-2012	08/01/2019	Methyl-2-pentanone[4-]	36.4364	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.18796	36.4364
TWF63-19-183281	63-2012	08/01/2019	Trimethylbenzene[1,3,5-]	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	36.8452	43.723
TWF63-19-183281	63-2012	08/01/2019	Toluene	33.5182	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.89592	33.5182
TWF63-19-183281	63-2012	08/01/2019	Chlorobenzene	40.9473	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.0609	40.9473
TWF63-19-183281	63-2012	08/01/2019	Tetrahydrofuran	26.2323	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.30542	26.2323
TWF63-19-183281	63-2012	08/01/2019	Hexane	31.3507	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.39737	31.3507
TWF63-19-183281	63-2012	08/01/2019	Cyclohexane	30.6159	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.43999	30.6159
TWF63-19-183281	63-2012	08/01/2019	Trichlorobenzene[1,2,4-]	267	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	88.9999	267
TWF63-19-183281	63-2012	08/01/2019	Dioxane[1,4-]	129.652	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	35.6543	129.652
TWF63-19-183281	63-2012	08/01/2019	Chlorodibromomethane	75.7685	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.95932	75.7685
TWF63-19-183281	63-2012	08/01/2019	Tetrachloroethene	94.8948	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	6.37151	60.326
TWF63-19-183281	63-2012	08/01/2019	n-Heptane	36.451	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6486	36.451
TWF63-19-183281	63-2012	08/01/2019	Dichloroethene[cis-1,2-]	21.793	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	7.13226	35.265
TWF63-19-183281	63-2012	08/01/2019	Dichloroethene[trans-1,2-]	35.265	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.52849	35.265
TWF63-19-183281	63-2012	08/01/2019	Methyl tert-Butyl Ether	32.0674	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.38689	32.0674
TWF63-19-183281	63-2012	08/01/2019	Isooctane	41.5548	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	20.0771	41.5548

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Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183281	63-2012	08/01/2019	Dichlorobenzene[1,3-]	53.4796	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.21073	53.4796
TWF63-19-183281	63-2012	08/01/2019	Carbon Tetrachloride	106.884	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	5.78432	55.957
TWF63-19-183281	63-2012	08/01/2019	Hexanone[2-]	147.383	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	49.1278	147.383
TWF63-19-183281	63-2012	08/01/2019	Ethyltoluene[4-]	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.2643	43.723
TWF63-19-183281	63-2012	08/01/2019	Ethanol	67.791	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	41.4278	67.791
TWF63-19-183281	63-2012	08/01/2019	Propanol[2-]	88.4358	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.5655	88.4358
TWF63-19-183281	63-2012	08/01/2019	Acetone	85.4635	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.7399	85.4635
TWF63-19-183281	63-2012	08/01/2019	Chloroform	219.581	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	4.09885	43.4283
TWF63-19-183281	63-2012	08/01/2019	Benzene	28.415	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.51197	28.415
TWF63-19-183281	63-2012	08/01/2019	Trichloroethane[1,1,1-]	15.8127	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	8.72423	48.5285
TWF63-19-183281	63-2012	08/01/2019	Bromomethane	139.702	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.0598	139.702
TWF63-19-183281	63-2012	08/01/2019	Chloromethane	74.2949	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.4144	74.2949
TWF63-19-183281	63-2012	08/01/2019	Chloroethane	94.9251	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.1492	94.9251
TWF63-19-183281	63-2012	08/01/2019	Vinyl Chloride	22.7357	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.4519	22.7357
TWF63-19-183281	63-2012	08/01/2019	Methylene Chloride	124.973	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.8702	124.973
TWF63-19-183281	63-2012	08/01/2019	Carbon Disulfide	112.037	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.1831	112.037
TWF63-19-183281	63-2012	08/01/2019	Bromoform	91.9387	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.02453	91.9387
TWF63-19-183281	63-2012	08/01/2019	Bromodichloromethane	59.5875	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.95875	59.5875
TWF63-19-183281	63-2012	08/01/2019	Dichloroethane[1,1-]	35.9999	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	35.9999
TWF63-19-183281	63-2012	08/01/2019	Dichloroethene[1,1-]	35.265	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.54731	35.265
TWF63-19-183281	63-2012	08/01/2019	Trichlorofluoromethane	49.9728	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.86088	49.9728
TWF63-19-183281	63-2012	08/01/2019	Dichlorodifluoromethane	133.437	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	4.94212	43.9849
TWF63-19-183281	63-2012	08/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	31.4014	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	12.2542	68.164
TWF63-19-183281	63-2012	08/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	62.1776	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.44928	62.1776
TWF63-19-183281	63-2012	08/01/2019	Dichloropropane[1,2-]	41.1037	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.38944	41.1037
TWF63-19-183281	63-2012	08/01/2019	Butanone[2-]	106.108	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.3481	106.108
TWF63-19-183281	63-2012	08/01/2019	Trichloroethane[1,1,2-]	48.5285	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.36	48.5285
TWF63-19-183281	63-2012	08/01/2019	Trichloroethene	8592.78	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	5.37049	47.7973
TWF63-19-183281	63-2012	08/01/2019	Tetrachloroethane[1,1,2,2-]	61.0608	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.919	61.0608
TWF63-19-183281	63-2012	08/01/2019	Hexachlorobutadiene	383.703	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	84.2014	383.703
TWF63-19-183281	63-2012	08/01/2019	Xylene[1,2-]	38.6191	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.24453	38.6191
TWF63-19-183281	63-2012	08/01/2019	Dichlorobenzene[1,2-]	53.4796	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.88877	53.4796
TWF63-19-183281	63-2012	08/01/2019	Trimethylbenzene[1,2,4-]	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.1246	43.723
TWF63-19-183281	63-2012	08/01/2019	Isopropylbenzene	43.723	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	27.5111	43.723
TWF63-19-183281	63-2012	08/01/2019	Xylene[1,3-]+Xylene[1,4-]	38.6191	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.77315	38.6191
TWF63-19-183282	63-2013	08/01/2019	Ethylbenzene	39.9246	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.33963	39.9246
TWF63-19-183282	63-2013	08/01/2019	Styrene	39.165	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.68278	39.165
TWF63-19-183282	63-2013	08/01/2019	Benzyl Chloride	47.5997	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.7956	47.5997
TWF63-19-183282	63-2013	08/01/2019	Dichloropropene[cis-1,3-]	41.7297	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.08225	41.7297
TWF63-19-183282	63-2013	08/01/2019	Dichloropropene[trans-1,3-]	41.7297	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.71091	41.7297
TWF63-19-183282	63-2013	08/01/2019	Propylbenzene[1-]	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.7555	45.1968
TWF63-19-183282	63-2013	08/01/2019	Dichlorobenzene[1,4-]	55.2823	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.60984	55.2823
TWF63-19-183282	63-2013	08/01/2019	Dibromoethane[1,2-]	70.6437	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.44831	70.6437
TWF63-19-183282	63-2013	08/01/2019	Butadiene[1,3-]	20.3408	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.62275	20.3408
TWF63-19-183282	63-2013	08/01/2019	Chloro-1-propene[3-]	115.725	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.145	115.725
TWF63-19-183282	63-2013	08/01/2019	Dichloroethane[1,2-]	37.2134	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87638	37.2134
TWF63-19-183282	63-2013	08/01/2019	Methyl-2-pentanone[4-]	37.6646	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.59736	37.6646
TWF63-19-183282	63-2013	08/01/2019	Trimethylbenzene[1,3,5-]	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	38.319	45.1968
TWF63-19-183282	63-2013	08/01/2019	Toluene	34.648	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.89592	34.648
TWF63-19-183282	63-2013	08/01/2019	Chlorobenzene	42.3276	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.0609	42.3276
TWF63-19-183282	63-2013	08/01/2019	Tetrahydrofuran	27.1166	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.60016	27.1166
TWF63-19-183282	63-2013	08/01/2019	Hexane	32.4075	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.39737	32.4075
TWF63-19-183282	63-2013	08/01/2019	Cyclohexane	31.6479	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.78399	31.6479
TWF63-19-183282	63-2013	08/01/2019	Trichlorobenzene[1,2,4-]	274.416	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	88.9999	274.416
TWF63-19-183282	63-2013	08/01/2019	Dioxane[1,4-]	133.253	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	36.0144	133.253

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Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183282	63-2013	08/01/2019	Chlorodibromomethane	78.3225	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.12959	78.3225
TWF63-19-183282	63-2013	08/01/2019	Tetrachloroethene	6.71042	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.57486	62.3595
TWF63-19-183282	63-2013	08/01/2019	n-Heptane	37.6797	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.6486	37.6797
TWF63-19-183282	63-2013	08/01/2019	Dichloroethene[cis-1,2-]	36.4538	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.52849	36.4538
TWF63-19-183282	63-2013	08/01/2019	Dichloroethene[trans-1,2-]	36.4538	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.92473	36.4538
TWF63-19-183282	63-2013	08/01/2019	Methyl tert-Butyl Ether	33.1483	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.49499	33.1483
TWF63-19-183282	63-2013	08/01/2019	Isooctane	42.9556	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.0109	42.9556
TWF63-19-183282	63-2013	08/01/2019	Dichlorobenzene[1,3-]	55.2823	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.21073	55.2823
TWF63-19-183282	63-2013	08/01/2019	Carbon Tetrachloride	7.54476	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	5.97294	57.8432
TWF63-19-183282	63-2013	08/01/2019	Hexanone[2-]	151.477	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	49.1278	151.477
TWF63-19-183282	63-2013	08/01/2019	Ethyltoluene[4-]	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.7555	45.1968
TWF63-19-183282	63-2013	08/01/2019	Ethanol	69.6741	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	43.3109	69.6741
TWF63-19-183282	63-2013	08/01/2019	Propanol[2-]	90.8924	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.5655	90.8924
TWF63-19-183282	63-2013	08/01/2019	Acetone	87.8374	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.7399	87.8374
TWF63-19-183282	63-2013	08/01/2019	Chloroform	30.2534	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	4.19644	44.8922
TWF63-19-183282	63-2013	08/01/2019	Benzene	29.3728	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.83124	29.3728
TWF63-19-183282	63-2013	08/01/2019	Trichloroethane[1,1,1-]	22.3558	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	9.2695	50.1643
TWF63-19-183282	63-2013	08/01/2019	Bromomethane	143.583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.8359	143.583
TWF63-19-183282	63-2013	08/01/2019	Chloromethane	76.3587	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.8271	76.3587
TWF63-19-183282	63-2013	08/01/2019	Chloroethane	97.5619	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.6765	97.5619
TWF63-19-183282	63-2013	08/01/2019	Vinyl Chloride	23.502	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.70736	23.502
TWF63-19-183282	63-2013	08/01/2019	Methylene Chloride	128.444	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.5645	128.444
TWF63-19-183282	63-2013	08/01/2019	Carbon Disulfide	115.149	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.8055	115.149
TWF63-19-183282	63-2013	08/01/2019	Bromoform	95.0377	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.23113	95.0377
TWF63-19-183282	63-2013	08/01/2019	Bromodichloromethane	61.5961	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.15961	61.5961
TWF63-19-183282	63-2013	08/01/2019	Dichloroethane[1,1-]	37.2134	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	37.2134
TWF63-19-183282	63-2013	08/01/2019	Dichloroethene[1,1-]	36.4538	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.54731	36.4538
TWF63-19-183282	63-2013	08/01/2019	Trichlorofluoromethane	51.6572	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.86088	51.6572
TWF63-19-183282	63-2013	08/01/2019	Dichlorodifluoromethane	36.5717	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	5.43634	45.4675
TWF63-19-183282	63-2013	08/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	70.4617	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	12.2542	70.4617
TWF63-19-183282	63-2013	08/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	64.2735	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.589	64.2735
TWF63-19-183282	63-2013	08/01/2019	Dichloropropane[1,2-]	42.4893	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.38944	42.4893
TWF63-19-183282	63-2013	08/01/2019	Butanone[2-]	109.056	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	25.9376	109.056
TWF63-19-183282	63-2013	08/01/2019	Trichloroethane[1,1,2-]	50.1643	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.36	50.1643
TWF63-19-183282	63-2013	08/01/2019	Trichloroethene	424.268	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	5.37049	49.4085
TWF63-19-183282	63-2013	08/01/2019	Tetrachloroethane[1,1,2,2-]	63.1191	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.919	63.1191
TWF63-19-183282	63-2013	08/01/2019	Hexachlorobutadiene	394.361	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	86.3331	394.361
TWF63-19-183282	63-2013	08/01/2019	Xylene[1,2-]	39.9209	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.24453	39.9209
TWF63-19-183282	63-2013	08/01/2019	Dichlorobenzene[1,2-]	55.2823	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.00894	55.2823
TWF63-19-183282	63-2013	08/01/2019	Trimethylbenzene[1,2,4-]	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.1071	45.1968
TWF63-19-183282	63-2013	08/01/2019	Isopropylbenzene	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	28.0024	45.1968
TWF63-19-183282	63-2013	08/01/2019	Xylene[1,3-]+Xylene[1,4-]	39.9209	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.77315	39.9209
TWF63-19-183283	63-2013	08/01/2019	Ethylbenzene	39.9246	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.33963	39.9246
TWF63-19-183283	63-2013	08/01/2019	Styrene	39.165	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.68278	39.165
TWF63-19-183283	63-2013	08/01/2019	Benzyl Chloride	47.5997	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.7956	47.5997
TWF63-19-183283	63-2013	08/01/2019	Dichloropropene[cis-1,3-]	41.7297	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.08225	41.7297
TWF63-19-183283	63-2013	08/01/2019	Dichloropropene[trans-1,3-]	41.7297	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.71091	41.7297
TWF63-19-183283	63-2013	08/01/2019	Propylbenzene[1-]	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.7555	45.1968
TWF63-19-183283	63-2013	08/01/2019	Dichlorobenzene[1,4-]	55.2823	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.60984	55.2823
TWF63-19-183283	63-2013	08/01/2019	Dibromoethane[1,2-]	70.6437	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.52509	70.6437
TWF63-19-183283	63-2013	08/01/2019	Butadiene[1,3-]	20.3408	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.62275	20.3408
TWF63-19-183283	63-2013	08/01/2019	Chloro-1-propene[3-]	115.725	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	23.4578	115.725
TWF63-19-183283	63-2013	08/01/2019	Dichloroethane[1,2-]	37.2134	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.87638	37.2134
TWF63-19-183283	63-2013	08/01/2019	Methyl-2-pentanone[4-]	37.6646	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.59736	37.6646
TWF63-19-183283	63-2013	08/01/2019	Trimethylbenzene[1,3,5-]	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	38.319	45.1968

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Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183283	63-2013	08/01/2019	Toluene	34.648	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.89592	34.648
TWF63-19-183283	63-2013	08/01/2019	Chlorobenzene	42.3276	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.0609	42.3276
TWF63-19-183283	63-2013	08/01/2019	Tetrahydrofuran	27.1166	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.60016	27.1166
TWF63-19-183283	63-2013	08/01/2019	Hexane	32.4075	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.74962	32.4075
TWF63-19-183283	63-2013	08/01/2019	Cyclohexane	31.6479	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.78399	31.6479
TWF63-19-183283	63-2013	08/01/2019	Trichlorobenzene[1,2,4-]	274.416	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	88.9999	274.416
TWF63-19-183283	63-2013	08/01/2019	Dioxane[1,4-]	133.253	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	36.0144	133.253
TWF63-19-183283	63-2013	08/01/2019	Chlorodibromomethane	78.3225	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.12959	78.3225
TWF63-19-183283	63-2013	08/01/2019	Tetrachloroethene	10.8451	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.64264	62.3595
TWF63-19-183283	63-2013	08/01/2019	n-Heptane	37.6797	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	11.0582	37.6797
TWF63-19-183283	63-2013	08/01/2019	Dichloroethene[cis-1,2-]	36.4538	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.52849	36.4538
TWF63-19-183283	63-2013	08/01/2019	Dichloroethene[trans-1,2-]	36.4538	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.92473	36.4538
TWF63-19-183283	63-2013	08/01/2019	Methyl tert-Butyl Ether	33.1483	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.53102	33.1483
TWF63-19-183283	63-2013	08/01/2019	Isooctane	42.9556	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	21.0109	42.9556
TWF63-19-183283	63-2013	08/01/2019	Dichlorobenzene[1,3-]	55.2823	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.21073	55.2823
TWF63-19-183283	63-2013	08/01/2019	Carbon Tetrachloride	21.3768	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	6.03581	57.8432
TWF63-19-183283	63-2013	08/01/2019	Hexanone[2-]	151.477	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	49.1278	151.477
TWF63-19-183283	63-2013	08/01/2019	Ethyltoluene[4-]	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.7555	45.1968
TWF63-19-183283	63-2013	08/01/2019	Ethanol	69.6741	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	43.3109	69.6741
TWF63-19-183283	63-2013	08/01/2019	Propanol[2-]	90.8924	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.5655	90.8924
TWF63-19-183283	63-2013	08/01/2019	Acetone	26.1138	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	23.7399	87.8374
TWF63-19-183283	63-2013	08/01/2019	Chloroform	26.3498	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	4.24524	44.8922
TWF63-19-183283	63-2013	08/01/2019	Benzene	29.3728	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	3.83124	29.3728
TWF63-19-183283	63-2013	08/01/2019	Trichloroethane[1,1,1-]	46.8927	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	9.2695	50.1643
TWF63-19-183283	63-2013	08/01/2019	Bromomethane	143.583	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	24.8359	143.583
TWF63-19-183283	63-2013	08/01/2019	Chloromethane	76.3587	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	13.8271	76.3587
TWF63-19-183283	63-2013	08/01/2019	Chloroethane	97.5619	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.6765	97.5619
TWF63-19-183283	63-2013	08/01/2019	Vinyl Chloride	23.502	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	9.70736	23.502
TWF63-19-183283	63-2013	08/01/2019	Methylene Chloride	128.444	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.9117	128.444
TWF63-19-183283	63-2013	08/01/2019	Carbon Disulfide	115.149	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	16.8055	115.149
TWF63-19-183283	63-2013	08/01/2019	Bromoform	95.0377	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.23113	95.0377
TWF63-19-183283	63-2013	08/01/2019	Bromodichloromethane	61.5961	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.15961	61.5961
TWF63-19-183283	63-2013	08/01/2019	Dichloroethane[1,1-]	37.2134	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.47189	37.2134
TWF63-19-183283	63-2013	08/01/2019	Dichloroethene[1,1-]	36.4538	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.54731	36.4538
TWF63-19-183283	63-2013	08/01/2019	Trichlorofluoromethane	51.6572	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.86088	51.6572
TWF63-19-183283	63-2013	08/01/2019	Dichlorodifluoromethane	59.3055	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	5.43634	45.4675
TWF63-19-183283	63-2013	08/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	14.5519	ug/m3	J	Y	GAS	REG	VOC	EPA:TO15	12.2542	70.4617
TWF63-19-183283	63-2013	08/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	64.2735	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	5.589	64.2735
TWF63-19-183283	63-2013	08/01/2019	Dichloropropane[1,2-]	42.4893	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	7.38944	42.4893
TWF63-19-183283	63-2013	08/01/2019	Butanone[2-]	109.056	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	26.2323	109.056
TWF63-19-183283	63-2013	08/01/2019	Trichloroethane[1,1,2-]	50.1643	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	10.36	50.1643
TWF63-19-183283	63-2013	08/01/2019	Trichloroethene	1503.74	ug/m3	NQ	Y	GAS	REG	VOC	EPA:TO15	5.37049	49.4085
TWF63-19-183283	63-2013	08/01/2019	Tetrachloroethane[1,1,2,2-]	63.1191	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.919	63.1191
TWF63-19-183283	63-2013	08/01/2019	Hexachlorobutadiene	394.361	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	87.3989	394.361
TWF63-19-183283	63-2013	08/01/2019	Xylene[1,2-]	39.9209	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	8.67845	39.9209
TWF63-19-183283	63-2013	08/01/2019	Dichlorobenzene[1,2-]	55.2823	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	6.00894	55.2823
TWF63-19-183283	63-2013	08/01/2019	Trimethylbenzene[1,2,4-]	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	22.1071	45.1968
TWF63-19-183283	63-2013	08/01/2019	Isopropylbenzene	45.1968	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	28.0024	45.1968
TWF63-19-183283	63-2013	08/01/2019	Xylene[1,3-]+Xylene[1,4-]	39.9209	ug/m3	U	N	GAS	REG	VOC	EPA:TO15	4.77315	39.9209
TWF63-19-183284	63-2011	08/01/2019	Ethylbenzene	56.4153	ug/m3	J	Y	GAS	FB	VOC	EPA:TO15	6.94342	60.7549
TWF63-19-183284	63-2011	08/01/2019	Styrene	59.599	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	7.23702	59.599
TWF63-19-183284	63-2011	08/01/2019	Benzyl Chloride	72.4343	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	13.4521	72.4343
TWF63-19-183284	63-2011	08/01/2019	Dichloropropene[cis-1,3-]	63.5017	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	5.89658	63.5017
TWF63-19-183284	63-2011	08/01/2019	Dichloropropene[trans-1,3-]	63.5017	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.3396	63.5017
TWF63-19-183284	63-2011	08/01/2019	Propylbenzene[1-]	68.7777	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	20.6333	68.7777

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Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183284	63-2011	08/01/2019	Dichlorobenzene[1,4-]	84.1252	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.61431	84.1252
TWF63-19-183284	63-2011	08/01/2019	Dibromoethane[1,2-]	107.501	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	10.7501	107.501
TWF63-19-183284	63-2011	08/01/2019	Butadiene[1,3-]	30.9535	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	12.8236	30.9535
TWF63-19-183284	63-2011	08/01/2019	Chloro-1-propene[3-]	172.024	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	34.4048	172.024
TWF63-19-183284	63-2011	08/01/2019	Dichloroethane[1,2-]	56.629	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	10.1123	56.629
TWF63-19-183284	63-2011	08/01/2019	Methyl-2-pentanone[4-]	57.3157	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	12.6913	57.3157
TWF63-19-183284	63-2011	08/01/2019	Trimethylbenzene[1,3,5-]	68.7777	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	58.9523	68.7777
TWF63-19-183284	63-2011	08/01/2019	Toluene	52.7253	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	7.53218	52.7253
TWF63-19-183284	63-2011	08/01/2019	Chlorobenzene	64.4115	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	7.8214	64.4115
TWF63-19-183284	63-2011	08/01/2019	Tetrahydrofuran	41.2643	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	8.25287	41.2643
TWF63-19-183284	63-2011	08/01/2019	Hexane	49.3158	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.2722	49.3158
TWF63-19-183284	63-2011	08/01/2019	Cyclohexane	48.1599	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	5.50398	48.1599
TWF63-19-183284	63-2011	08/01/2019	Trichlorobenzene[1,2,4-]	407.916	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	140.917	407.916
TWF63-19-183284	63-2011	08/01/2019	Dioxane[1,4-]	198.079	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	54.0217	198.079
TWF63-19-183284	63-2011	08/01/2019	Chlorodibromomethane	119.186	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.36465	119.186
TWF63-19-183284	63-2011	08/01/2019	Tetrachloroethene	94.8948	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.48948	94.8948
TWF63-19-183284	63-2011	08/01/2019	n-Heptane	57.3386	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	16.3825	57.3386
TWF63-19-183284	63-2011	08/01/2019	Dichloroethene[cis-1,2-]	55.4731	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.0946	55.4731
TWF63-19-183284	63-2011	08/01/2019	Dichloroethene[trans-1,2-]	55.4731	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.8871	55.4731
TWF63-19-183284	63-2011	08/01/2019	Methyl tert-Butyl Ether	50.4431	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	5.04431	50.4431
TWF63-19-183284	63-2011	08/01/2019	Isooctane	65.3672	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	31.2829	65.3672
TWF63-19-183284	63-2011	08/01/2019	Dichlorobenzene[1,3-]	84.1252	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	10.8161	84.1252
TWF63-19-183284	63-2011	08/01/2019	Carbon Tetrachloride	88.0222	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	8.80222	88.0222
TWF63-19-183284	63-2011	08/01/2019	Hexanone[2-]	225.169	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	77.7856	225.169
TWF63-19-183284	63-2011	08/01/2019	Ethyltoluene[4-]	68.7777	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	20.142	68.7777
TWF63-19-183284	63-2011	08/01/2019	Ethanol	103.57	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	64.0248	103.57
TWF63-19-183284	63-2011	08/01/2019	Propanol[2-]	135.11	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	36.8483	135.11
TWF63-19-183284	63-2011	08/01/2019	Acetone	130.569	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	37.9838	130.569
TWF63-19-183284	63-2011	08/01/2019	Chloroform	68.3142	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	6.34346	68.3142
TWF63-19-183284	63-2011	08/01/2019	Benzene	44.6978	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	5.42759	44.6978
TWF63-19-183284	63-2011	08/01/2019	Trichloroethane[1,1,1-]	76.337	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	13.6316	76.337
TWF63-19-183284	63-2011	08/01/2019	Bromomethane	213.434	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	36.8658	213.434
TWF63-19-183284	63-2011	08/01/2019	Chloromethane	113.506	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	20.6375	113.506
TWF63-19-183284	63-2011	08/01/2019	Chloroethane	145.024	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	34.2785	145.024
TWF63-19-183284	63-2011	08/01/2019	Vinyl Chloride	35.764	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	14.3056	35.764
TWF63-19-183284	63-2011	08/01/2019	Methylene Chloride	190.93	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	33.6732	190.93
TWF63-19-183284	63-2011	08/01/2019	Carbon Disulfide	171.167	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	24.8971	171.167
TWF63-19-183284	63-2011	08/01/2019	Bromoform	144.623	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	10.3302	144.623
TWF63-19-183284	63-2011	08/01/2019	Bromodichloromethane	93.7332	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.37332	93.7332
TWF63-19-183284	63-2011	08/01/2019	Dichloroethane[1,1-]	56.629	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.70783	56.629
TWF63-19-183284	63-2011	08/01/2019	Dichloroethene[1,1-]	55.4731	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	8.7172	55.4731
TWF63-19-183284	63-2011	08/01/2019	Trichlorofluoromethane	78.6088	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.7913	78.6088
TWF63-19-183284	63-2011	08/01/2019	Dichlorodifluoromethane	69.1897	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	7.9074	69.1897
TWF63-19-183284	63-2011	08/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	107.224	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	18.3813	107.224
TWF63-19-183284	63-2011	08/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	97.8075	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	8.3835	97.8075
TWF63-19-183284	63-2011	08/01/2019	Dichloropropane[1,2-]	64.6576	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	11.0842	64.6576
TWF63-19-183284	63-2011	08/01/2019	Butanone[2-]	162.11	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	38.3169	162.11
TWF63-19-183284	63-2011	08/01/2019	Trichloroethane[1,1,2-]	76.337	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	15.8127	76.337
TWF63-19-183284	63-2011	08/01/2019	Trichloroethene	75.1868	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	8.05573	75.1868
TWF63-19-183284	63-2011	08/01/2019	Tetrachloroethane[1,1,2,2-]	96.0508	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	13.0355	96.0508
TWF63-19-183284	63-2011	08/01/2019	Hexachlorobutadiene	586.212	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	127.901	586.212
TWF63-19-183284	63-2011	08/01/2019	Xylene[1,2-]	69.4276	ug/m3	NQ	Y	GAS	FB	VOC	EPA:TO15	12.5838	60.7492
TWF63-19-183284	63-2011	08/01/2019	Dichlorobenzene[1,2-]	84.1252	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	9.01342	84.1252
TWF63-19-183284	63-2011	08/01/2019	Trimethylbenzene[1,2,4-]	68.7777	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	32.9151	68.7777
TWF63-19-183284	63-2011	08/01/2019	Isopropylbenzene	68.7777	ug/m3	U	N	GAS	FB	VOC	EPA:TO15	41.7579	68.7777

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Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183284	63-2011	08/01/2019	Xylene[1,3-]+Xylene[1,4-]	182.248	ug/m3	NQ	Y	GAS	FB	VOC	EPA:TO15	6.94276	60.7492
TWF63-19-183285	63-2013	08/01/2019	Ethylbenzene	39.0567	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	4.33963	39.0567
TWF63-19-183285	63-2013	08/01/2019	Styrene	38.3136	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	4.68278	38.3136
TWF63-19-183285	63-2013	08/01/2019	Benzyl Chloride	46.5649	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	8.7956	46.5649
TWF63-19-183285	63-2013	08/01/2019	Dichloropropene[cis-1,3-]	40.8225	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	3.99153	40.8225
TWF63-19-183285	63-2013	08/01/2019	Dichloropropene[trans-1,3-]	40.8225	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.25733	40.8225
TWF63-19-183285	63-2013	08/01/2019	Propylbenzene[1-]	44.2142	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	13.7555	44.2142
TWF63-19-183285	63-2013	08/01/2019	Dichlorobenzene[1,4-]	54.0805	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.60984	54.0805
TWF63-19-183285	63-2013	08/01/2019	Dibromoethane[1,2-]	69.108	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.29473	69.108
TWF63-19-183285	63-2013	08/01/2019	Butadiene[1,3-]	19.8987	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	8.40165	19.8987
TWF63-19-183285	63-2013	08/01/2019	Chloro-1-propene[3-]	112.598	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	22.8323	112.598
TWF63-19-183285	63-2013	08/01/2019	Dichloroethane[1,2-]	36.4044	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.47189	36.4044
TWF63-19-183285	63-2013	08/01/2019	Methyl-2-pentanone[4-]	36.8458	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	8.18796	36.8458
TWF63-19-183285	63-2013	08/01/2019	Trimethylbenzene[1,3,5-]	44.2142	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	37.3365	44.2142
TWF63-19-183285	63-2013	08/01/2019	Toluene	33.8948	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	4.89592	33.8948
TWF63-19-183285	63-2013	08/01/2019	Chlorobenzene	41.4074	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.0609	41.4074
TWF63-19-183285	63-2013	08/01/2019	Tetrahydrofuran	26.5271	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.60016	26.5271
TWF63-19-183285	63-2013	08/01/2019	Hexane	31.703	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.39737	31.703
TWF63-19-183285	63-2013	08/01/2019	Cyclohexane	30.9599	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	3.43999	30.9599
TWF63-19-183285	63-2013	08/01/2019	Trichlorobenzene[1,2,4-]	267	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	88.9999	267
TWF63-19-183285	63-2013	08/01/2019	Dioxane[1,4-]	129.652	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	36.0144	129.652
TWF63-19-183285	63-2013	08/01/2019	Chlorodibromomethane	76.6199	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.04446	76.6199
TWF63-19-183285	63-2013	08/01/2019	Tetrachloroethene	15.5899	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.43929	61.0038
TWF63-19-183285	63-2013	08/01/2019	n-Heptane	36.8605	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	10.6486	36.8605
TWF63-19-183285	63-2013	08/01/2019	Dichloroethene[cis-1,2-]	35.6613	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.13226	35.6613
TWF63-19-183285	63-2013	08/01/2019	Dichloroethene[trans-1,2-]	35.6613	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.92473	35.6613
TWF63-19-183285	63-2013	08/01/2019	Methyl tert-Butyl Ether	32.4277	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	3.42292	32.4277
TWF63-19-183285	63-2013	08/01/2019	Isooctane	42.0217	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	20.544	42.0217
TWF63-19-183285	63-2013	08/01/2019	Dichlorobenzene[1,3-]	54.0805	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.21073	54.0805
TWF63-19-183285	63-2013	08/01/2019	Carbon Tetrachloride	18.2332	ug/m3	J	Y	GAS	FD	VOC	EPA:TO15	5.91006	56.5857
TWF63-19-183285	63-2013	08/01/2019	Hexanone[2-]	147.383	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	49.1278	147.383
TWF63-19-183285	63-2013	08/01/2019	Ethyltoluene[4-]	44.2142	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	13.2643	44.2142
TWF63-19-183285	63-2013	08/01/2019	Ethanol	67.791	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	41.4278	67.791
TWF63-19-183285	63-2013	08/01/2019	Propanol[2-]	88.4358	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	24.5655	88.4358
TWF63-19-183285	63-2013	08/01/2019	Acetone	85.4635	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	23.7399	85.4635
TWF63-19-183285	63-2013	08/01/2019	Chloroform	20.4943	ug/m3	J	Y	GAS	FD	VOC	EPA:TO15	4.14765	43.9163
TWF63-19-183285	63-2013	08/01/2019	Benzene	28.7343	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	3.51197	28.7343
TWF63-19-183285	63-2013	08/01/2019	Trichloroethane[1,1,1-]	47.438	ug/m3	J	Y	GAS	FD	VOC	EPA:TO15	8.72423	49.0738
TWF63-19-183285	63-2013	08/01/2019	Bromomethane	139.702	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	24.0598	139.702
TWF63-19-183285	63-2013	08/01/2019	Chloromethane	74.2949	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	13.6207	74.2949
TWF63-19-183285	63-2013	08/01/2019	Chloroethane	94.9251	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	22.4129	94.9251
TWF63-19-183285	63-2013	08/01/2019	Vinyl Chloride	22.9911	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	9.4519	22.9911
TWF63-19-183285	63-2013	08/01/2019	Methylene Chloride	124.973	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	22.2174	124.973
TWF63-19-183285	63-2013	08/01/2019	Carbon Disulfide	112.037	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	16.4943	112.037
TWF63-19-183285	63-2013	08/01/2019	Bromoform	92.9717	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.02453	92.9717
TWF63-19-183285	63-2013	08/01/2019	Bromodichloromethane	60.257	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.0257	60.257
TWF63-19-183285	63-2013	08/01/2019	Dichloroethane[1,1-]	36.4044	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	6.47189	36.4044
TWF63-19-183285	63-2013	08/01/2019	Dichloroethene[1,1-]	35.6613	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.54731	35.6613
TWF63-19-183285	63-2013	08/01/2019	Trichlorofluoromethane	50.5342	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.86088	50.5342
TWF63-19-183285	63-2013	08/01/2019	Dichlorodifluoromethane	64.2476	ug/m3	NQ	Y	GAS	FD	VOC	EPA:TO15	4.94212	44.4791
TWF63-19-183285	63-2013	08/01/2019	Trichloro-1,2,2-trifluoroethane[1,1,2-]	15.3178	ug/m3	J	Y	GAS	FD	VOC	EPA:TO15	12.2542	68.9299
TWF63-19-183285	63-2013	08/01/2019	Dichloro-1,1,2,2-tetrafluoroethane[1,2-]	62.8763	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.51914	62.8763
TWF63-19-183285	63-2013	08/01/2019	Dichloropropane[1,2-]	41.5656	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	7.38944	41.5656
TWF63-19-183285	63-2013	08/01/2019	Butanone[2-]	106.108	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	25.6428	106.108
TWF63-19-183285	63-2013	08/01/2019	Trichloroethane[1,1,2-]	49.0738	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	10.36	49.0738

TA-63 Transuranic Waste Facility Soil Vapor Monitoring System
Sampling and Analysis - Quarter 8

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Units	Validation Qualifier	Detected	Sample Type	Sample Purpose	Method Category	Lab Method	Report Method Detection Limit ug/m3	Report Detection Limit ug/m3
TWF63-19-183285	63-2013	08/01/2019	Trichloroethene	1557.44	ug/m3	NQ	Y	GAS	FD	VOC	EPA:TO15	5.37049	48.3344
TWF63-19-183285	63-2013	08/01/2019	Tetrachloroethane[1,1,2,2-]	61.7469	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	8.919	61.7469
TWF63-19-183285	63-2013	08/01/2019	Hexachlorobutadiene	383.703	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	85.2673	383.703
TWF63-19-183285	63-2013	08/01/2019	Xylene[1,2-]	39.053	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	8.24453	39.053
TWF63-19-183285	63-2013	08/01/2019	Dichlorobenzene[1,2-]	54.0805	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	5.94886	54.0805
TWF63-19-183285	63-2013	08/01/2019	Trimethylbenzene[1,2,4-]	44.2142	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	21.6159	44.2142
TWF63-19-183285	63-2013	08/01/2019	Isopropylbenzene	44.2142	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	27.5111	44.2142
TWF63-19-183285	63-2013	08/01/2019	Xylene[1,3-]+Xylene[1,4-]	39.053	ug/m3	U	N	GAS	FD	VOC	EPA:TO15	4.77315	39.053

Table 3. Current and Previous
Quarterly Results

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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		Quarter 8	
			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 (%)	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	59.1	0.3
		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									8.7	<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								
		Chloroform															5.9	<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	102	0.5
		Dichlorodifluoromethane	7.9	<0.1													6.4	<0.1
		Acetone													20.2	<0.1		
		Toluene															6.8	<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		
		Dichlorodifluoromethane															5.9	<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	3010	1.9
		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	50.9	<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	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	59.3	<0.1
		1,1,2-Trichloro-1,2,2-trifluoroethane	17.6	<0.1	13.0	<0.1									16.1	<0.1	13.0	<0.1
		1,1,1-Trichloroethane	7.1	<0.1														
		Bromodichloromethane															6.6	<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	8590	9.3
		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	94.9	<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	21.8	<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	107	<0.1
		Chloroform	190	0.4	200	0.5	244	0.5	229	0.5	210	0.5	215	0.5	215	0.5	220	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	15.8	<0.1
		Dichlorodifluoromethane	143	<0.1	158	<0.1	148	<0.1	193	<0.1	168	<0.1	168	<0.1	183	<0.1	133	<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	424	0.3
		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	30.3	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	22.4	<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	36.6	<0.1
		Tetrachloroethylene	6.8	<0.1														

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		Quarter 8	
			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 (%)	Result (ug/m^3)	Percentage Of SGSL (%)
		Acetone							15.0	<0.1					12.3	<0.1		
		Carbon tetrachloride															7.5	<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	1500	1.6
		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	26.3	<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	46.9	<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	59.3	<0.1
		1,1,2-Trichloro-1,2,2-trifluoroethane			10.0	<0.1	19.9	<0.1							15.3	<0.1	14.6	<0.1
		Toluene	10.5	<0.1														
		Carbon tetrachloride	13.2	<0.1			10.7	<0.1							18.2	<0.1	21.4	<0.1
		Acetone	26.1	<0.1													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 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		Quarter 8	
			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 (%)	Result (ug/m^3)	Percentage Of SGSL (%)
VMW-5 63-2013 Field Duplicate	60	Trichloroethylene															1560	1.7
		Carbon tetrachloride															18.2	<0.1
		1,1,1-Trichloroethane															47.4	<0.1
		Dichlorodifluoromethane															64.2	<0.1
		1,1,2-Trichloro-1,2,2-trifluoroethane															15.3	<0.1

Table 4. Statistical Analysis

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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
Quarter 8	59.1	102	85.9	3010	8590	424	1500
Mean	47.5	109	80.5	3074	7922	376	1450
Std. Deviation (n-1)	11.3	19.0	16.4	361	555	66.3	91.0
2xStd. Dev.	22.6	38.0	32.8	722	1110	133	182
Lower Limit (95%=-2 SD)	24.9	71.0	47.7	2352	6812	243	1260
Upper Limit (95%=+2 SD)	70.1	147	113	3796	9032	509	1632

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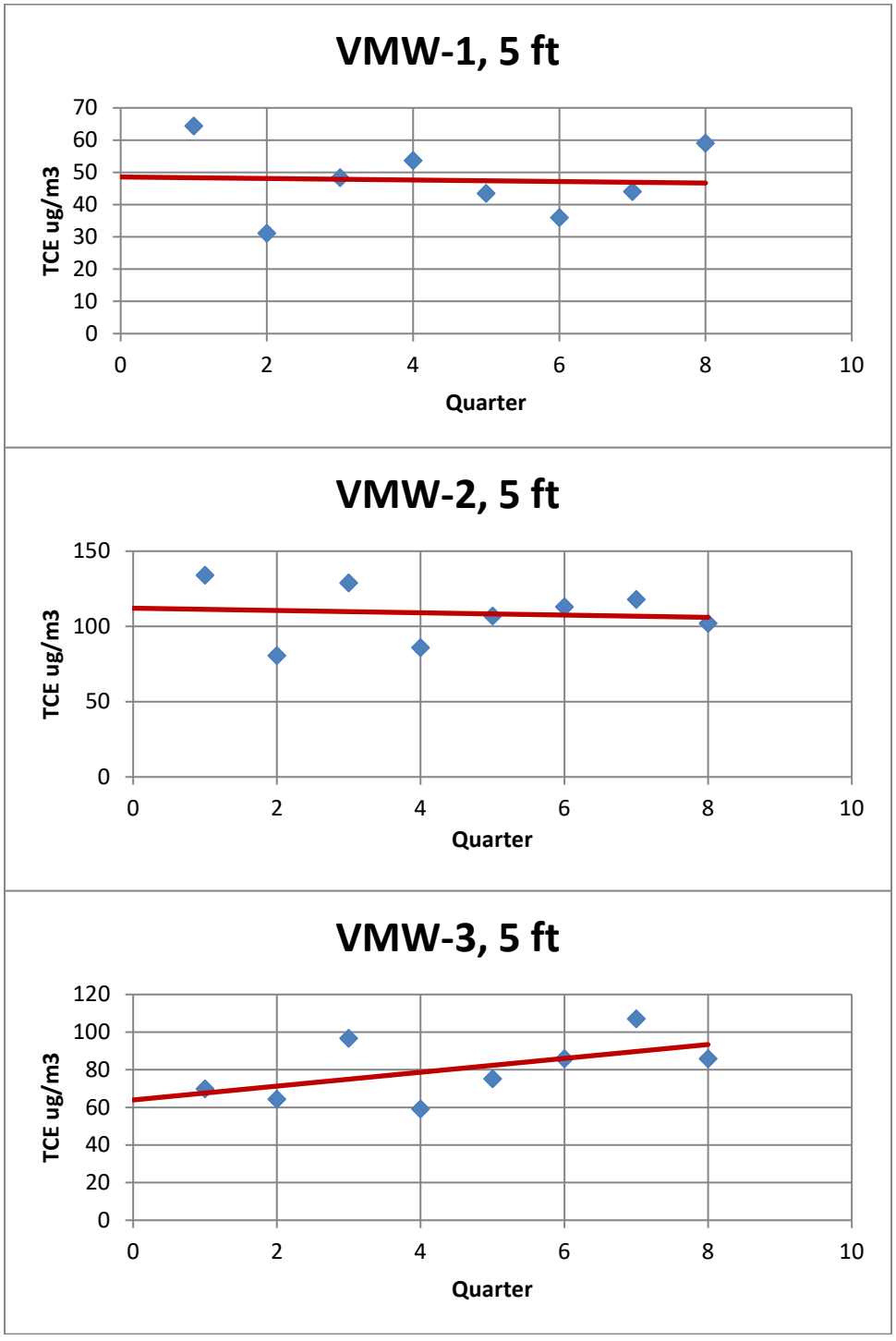

Figure 2. Simple Linear Regression Plots for TA-63 TWF Soil Vapor Monitoring Wells Inside the Permitted Unit

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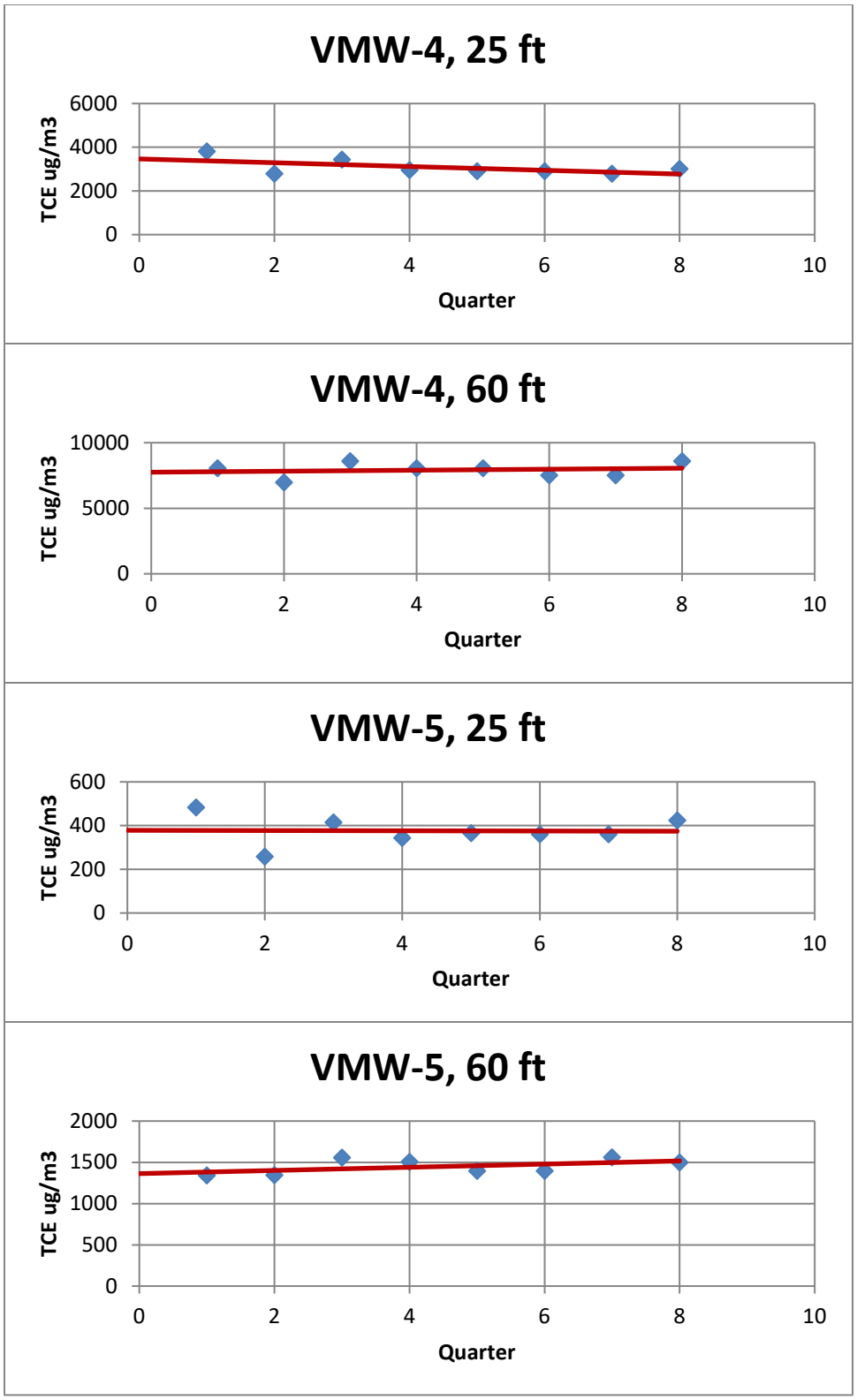

Figure 3. Simple Linear Regression Plots for TA-63 TWF Soil Vapor Monitoring Wells Outside the Permitted Unit

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Sample Collection Logs
at TA-63 Transuranic Waste Facility – Quarter 8

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SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12543

EVENT NAME: TWF Vapor Monitoring - TA-63

SAMPLE ID: TWF63-19-183277

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	8/1/2019	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	0958		**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 # 34764

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 12,900$ ppm $O_2 = 19.2\%$ VOC = 0.0 ppm

COLLECTED BY (PRINT): D. Jaramillo

RELINQUISHED BY (Printed Name) Katrina Tow **(Signature)**		**Date/Time** 8/1/2019 1300	**RECEIVED BY (Printed Name)** **(Signature)**		**Date/Time** 8.1.19 1340
RELINQUISHED BY (Printed Name) **(Signature)**		**Date/Time**	**RECEIVED BY (Printed Name)** **(Signature)**		**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12543

EVENT NAME: TWF Vapor Monitoring - TA-63

SAMPLE ID: TWF63-19-183278

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	8/1/2019	OK	FIELD MATRIX:	GAS	OK
TIME COLLECTED (HH:MM):	1024		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 # 33941

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 7020$ ppm $O_2 = 20.2\%$ VOC = 0.0 ppm

COLLECTED BY (PRINT): D. Jaramillo

RELINQUISHED BY (Printed Name) Katrina Tow **(Signature)**	**Date/Time** 8/1/19 1300	**RECEIVED BY (Printed Name)** **(Signature)**	**Date/Time** 8/1/19 1300
RELINQUISHED BY (Printed Name) **(Signature)**	**Date/Time**	**RECEIVED BY (Printed Name)** **(Signature)**	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12543

EVENT NAME: TWF Vapor Monitoring - TA-63

SAMPLE ID: TWF63-19-183279

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	8/1/2019	OK	FIELD MATRIX:	GAS	OK
TIME COLLECTED (HH:MM):	1047		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 # N3518

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 6950$ ppm $O_2 = 20.9\%$ VOC = 0.0 ppm

COLLECTED BY (PRINT): D. Jaramillo

RELINQUISHED BY (Printed Name) Katrina Tow (Signature)	**Date/Time** 8/1/19 1300	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time** 8/1/19 1300
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12543

EVENT NAME: TWF Vapor Monitoring - TA-63

SAMPLE ID: TWF63-19-183280

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	8/1/2019	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1131		**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

LOCATION COMMENTS: Summa# 34432

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 13,500$ ppm $O_2 = 19.6\%$ $VOC = 0.3$ ppm

COLLECTED BY (PRINT): D. Jaramillo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	**Date/Time** 8/1/19 1300	**RECEIVED BY (Printed Name) (Signature)**		**Date/Time** 8.1.19 1300
RELINQUISHED BY (Printed Name) (Signature)		**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**		**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12543

EVENT NAME: TWF Vapor Monitoring - TA-63

SAMPLE ID: TWF63-19-183281

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	8/1/2019	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1149		**MEDIA:**	GAS	
PRS ID:	TA-63		**SAMPLE TECH CODE:**	VOST	
LOCATION ID:	63-2012		**FIELD PREP:**	NA	
LOCATION TYPE:			**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

LOCATION COMMENTS: Summa # N1638

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 17,200$ ppm $O_2 = 19.6\%$ $VOC = 1.1$ ppm

COLLECTED BY (PRINT): D. Jaramillo

RELINQUISHED BY (Printed Name) Katrina Tow **(Signature)**		**Date/Time** 8/1/19 1300	**RECEIVED BY (Printed Name)** **(Signature)**		**Date/Time** 8/1/19 1300
RELINQUISHED BY (Printed Name) **(Signature)**		**Date/Time**	**RECEIVED BY (Printed Name)** **(Signature)**		**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12543

EVENT NAME: TWF Vapor Monitoring - TA-63

SAMPLE ID: TWF63-19-183282

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	8/1/2019	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1221		**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

LOCATION COMMENTS: Summa #33576

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\ \%$ $CO_2 = 36{,}500$ ppm $O_2 = 18.3\ \%$ VOC = 0.0 ppm

COLLECTED BY (PRINT): D. Jaramillo

RELINQUISHED BY (Printed Name) Katrina Tow **(Signature)**	**Date/Time** 8/1/19 1300	**RECEIVED BY (Printed Name)** **(Signature)**	**Date/Time** 8/1/19
RELINQUISHED BY (Printed Name) **(Signature)**	**Date/Time**	**RECEIVED BY (Printed Name)** **(Signature)**	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12543

EVENT NAME: TWF Vapor Monitoring - TA-63

SAMPLE ID: TWF63-19-183283

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	8/1/2019	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1236		**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: VM W-5

LOCATION COMMENTS: Summa # N2814

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\%$ $CO_2 = 26,600$ ppm $O_2 = 19.2\%$ VOC = 0.1 ppm

COLLECTED BY (PRINT): D. Jaramillo

RELINQUISHED BY (Printed Name) Katrina Tow **(Signature)**		**Date/Time** 8/1/19 1300	**RECEIVED BY (Printed Name)** **(Signature)**		**Date/Time** 8/1/19 1300
RELINQUISHED BY (Printed Name) **(Signature)**		**Date/Time**	**RECEIVED BY (Printed Name)** **(Signature)**		**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12543

EVENT NAME: TWF Vapor Monitoring - TA-63

SAMPLE ID: TWF63-19-183284

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	8/1/19	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1245	↓	**MEDIA:**	Nitrogen	↓
PRS ID:	TA-63	↓	**SAMPLE TECH CODE:**	VOST	↓
LOCATION ID:	UNK	63-2011	**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: QC of ~~MD54-1~~ TWF63-19-183279
KT 7/23/19

LOCATION COMMENTS: Summa # 00278

FIELD PARAMETERS:

Sample Time NA HH:MM

COLLECTED BY (PRINT): D. Jaramillo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	**Date/Time** 8/1/19 1300	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time** 8/1/19 1300
RELINQUISHED BY (Printed Name) (Signature)		**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 12543

EVENT NAME: TWF Vapor Monitoring - TA-63

SAMPLE ID: TWF63-19-183285

WORK ORDER:

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
Date Collected (MM/DD/YYY):	8/1/19	OK	**FIELD MATRIX:**	GAS	OK
TIME COLLECTED (HH:MM):	1237		**MEDIA:**	GAS	
PRS ID:	TA-63		**SAMPLE TECH CODE:**	VOST	
LOCATION ID:	UNK	63-2013	**FIELD PREP:**	NA	
LOCATION TYPE:	BH	OK	**FIELD QC TYPE:**	FD	
TOP DEPTH:	59		**SAMPLE USAGE:**	QC	
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: QC of TWF63-19-183283

LOCATION COMMENTS: Summa # N2872

FIELD PARAMETERS:

Sample Time NA HH:MM

$CH_4 = 0\ \%$ $CO_2 = 26,600$ ppm (KT 8/1/19) $O_2 = 19.2\ \%$ VOC = 0.1 ppm

COLLECTED BY (PRINT): D. Jaramillo

RELINQUISHED BY (Printed Name) (Signature)	Katrina Tow	**Date/Time** 8/1/19 1300	**RECEIVED BY (Printed Name) (Signature)**		**Date/Time** 8.1.19 1300
RELINQUISHED BY (Printed Name) (Signature)		**Date/Time**	**RECEIVED BY (Printed Name) (Signature)**		**Date/Time**

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 according to 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.

9/26/19

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

Date Signed

27 Sept 2019

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

Date Signed

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