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Carlsbad Field Office
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JUL 29 2016

Mr. John E. Kieling, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87508-6303

Ms. Kathryn Roberts, Director
Resource Protection Division
New Mexico Environment Department
Harold Runnels Building
1190 Saint Francis Drive, Room 4050
Santa Fe, NM 87502-5469

Subject: Quarterly Report for the Reporting Period between April 1, 2016, through June 30, 2016, as required by NMED Administrative Orders dated February 27, 2014, and May 12, 2014, as amended by NMED Directives dated August 29, 2014, December 9, 2014, July 15, 2015, and February 26, 2016 Waste Isolation Pilot Plant Hazardous Waste Facility Number: NM4890139088-TSDF

Dear Mr. Kieling and Ms. Roberts:

The purpose of this letter is to transmit the quarterly report for the reporting period between April 1, 2016, through June 30, 2016, as required by the February 27, 2014, and May 12, 2014, Administrative Orders issued under the authority of the New Mexico Hazardous Waste Act § 74-4-13 from Mr. Ryan Flynn to Messrs. Hellstrom, Franco, Cook, and McQuinn, and as amended by the August 29, 2014, and December 9, 2014, directives from Mr. Ryan Flynn to Messrs. Franco and McQuinn, the July 15, 2015, directive from Ms. Kathryn Roberts to Messrs. Bryson and Breidenbach and the February 26, 2016, directive from Ms. Kathryn Roberts to Messrs. Shrader and Breidenbach. The paper copy of the report is enclosed.

We certify under penalty of law that this document and all attachments were prepared under our direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our 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 our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact Mr. George T. Basabilvazo at (575) 234-7488.

Sincerely,

Original Signatures on File

Todd Shrader, Manager
Carlsbad Field Office

Philip J. Breidenbach, Project Manager
Nuclear Waste Partnership LLC

Enclosure

cc: (w/enclosure)
R. Maestas, NMED
C. Smith, NMED
J. Sales, EPA
CBFO M&RC

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Quarterly Status Report for the New Mexico Environment Department Administrative Orders

Reporting Period April 1, 2016, through June 30, 2016

Introduction

This report serves to fulfill the monitoring and reporting requirements set forth by Administrative Orders, AO1, AO2, and AO3, as amended by the NMED directives dated August 29, 2014, December 9, 2014, July 15, 2015, and February 26, 2016. In accordance with Paragraph 18(a) of AO2, subsequent reports will identify new information since the previous reporting period. The following sections combine the information required by the three orders and provide references to the respective paragraphs from AO1, AO2, and AO3.

1.0 Status of Permit-related surface and underground inspections for this reporting period, as requested per Paragraph 14(a) of AO1 and Paragraphs 18(c) and 18(e)(iii) of AO2, including the accessibility for personnel performing these Permit-required activities per Paragraph 18(e)(i) of AO2 and the status of recovery activities per Paragraph 18(e)(ii) of AO2:

Attachment 1, *List of Surface and Underground Inspections*, shows the current status of each Permit-required inspection. The list is sorted so that the “Not Current” rows appear at the beginning of the table.

2.0 Status of Permit-related monitoring activities for this reporting period, as requested per Paragraph 14(a) of AO1 and Paragraph 18(c) of AO2, including the accessibility for personnel performing these Permit-required activities per Paragraph 18(e)(i) of AO2 and the status of recovery activities per Paragraph 18(e)(ii) of AO2:

Volatile Organic Compound (VOC) Monitoring

Samples are being collected twice each week at one location on-site and one location off-site. The two monitoring locations, which are 24-hour VOC samples, are collected on the surface near the Training Building (VOC-C) and at an off-site location (VOC-D) approximately a mile southeast of the Training Building.

Room-based VOC monitoring activities (required by Permit Part 4, Sections 4.4.3 and 4.6.3, Tables 4.4.1 and 4.6.3.2, and associated requirements in Attachment N) are not currently being performed in the underground due to radioactive contamination. This does not pose a threat to underground waste workers because waste handling is not underway in the underground. Room-based VOC monitoring is planned to commence when underground waste emplacement operations resume.

Geomechanical Monitoring

The purpose of geomechanical monitoring is to confirm the structural integrity of the underground repository. Geomechanical monitoring data are transmitted electronically via

remote instruments located in Room 6 of Panel 7 in accordance with Permit Part 4, Section 4.6.1, associated requirements in Attachment A2-5b(2), and Attachment E, Table E-2. Catchup bolting in the clean areas of the underground and Panel 7, Room 1 is complete. These areas are now under routine bolting maintenance based on geotechnical surveys. Catchup bolting continues in the contaminated areas.

Hydrogen and Methane Monitoring

Hydrogen and methane monitoring activities (required by Permit Part 4, Section 4.6.5 and associated requirements in Attachment N1) are not currently being performed due to radioactive contamination. Previous monitoring data (prior to the 2014 events) from the Semi-Annual VOC, Hydrogen and Methane Data Summary Reports indicate that this does not pose a threat to underground waste workers.

Mine Ventilation Rate Monitoring

Mine ventilation rate monitoring activities (required by Permit Part 4, Section 4.6.4 and associated requirements of Permit Attachment O) are currently being performed. Pursuant to the Nitrate Salt Bearing Waste Container Isolation Plan, Revision 2, Section 3, high-efficiency particulate air (HEPA) filtration of underground exhaust air is continuing. The ventilation system has been operating in filtration mode since February 14, 2014, with a flow rate of approximately 60,000 standard cubic feet per minute (scfm). Surface VOC monitoring indicates that the reduced flow rate does not pose a threat to the non-waste surface worker.

3.0 Location of environmental monitoring equipment. The reports shall include dates of sampling, and all data that has been produced by these monitoring stations for this reporting period, as requested per Paragraph 14(f) of AO1:

Attachment 2, *Environmental Monitoring*, includes the new VOC monitoring data for this reporting period. Aerial photos and diagrams displaying monitoring locations are also included. Surface monitoring equipment has been deployed since February 25, 2014. Samples are being collected twice each week at the locations indicated in Attachment 2.

4.0 Updates on activities performed pursuant to the Underground Derived Waste Storage Plan, including a description of any surface and underground derived waste produced, whether the derived waste is mixed or non-mixed, the contents, container type, container location, total container count, and approximate volume of derived waste per container, as requested per Paragraph 14(i) of AO1 and Paragraph 18(d) of AO2:

Since the submittal of the last quarterly report, no derived waste was generated; however, on June 20, 2016 and then later clarified on June 23, 2016, the NMED granted an additional extension of storage time for TRU mixed waste in the WHB. This storage extension expires on June 16, 2017. Attachment 3, *Surface and Underground Derived Waste Currently in Storage at the WIPP Facility*, has been updated to reflect this new storage deadline.

5.0 The current status of activities required by the RCRA Contingency Plan, Permit Attachment D, including identification of applicable sections of the Contingency Plan, the schedule for actions required under the Contingency Plan, and any deviations from any Contingency Plan requirements, as requested per Paragraph 18(b) of AO2. Non-applicable sections shall also be identified and explanations shall be provided as to why such sections do not apply:

There has been no change in the status of the RCRA Contingency Plan implementation since the submittal of the last quarterly report. Attachment 4, *Status of RCRA Contingency Plan Required Activities*, was last updated September 30, 2015. A Class 2 Permit Modification Request to revise the RCRA Contingency Plan was submitted to the NMED on June 3, 2016. Public meetings were held on June 28, 2016 (Santa Fe) and June 30, 2016 (Carlsbad).

6.0 The report shall include the submission of a list containing all additional requirements placed upon the WIPP by any state or federal agency relating to corrective actions or recovery and as a result of the incidents referenced in Paragraphs 8 and 9 of the May 12, 2014, Administrative Order, including requirements by other segments of DOE, as requested by Paragraph 18(f) of AO2:

During this reporting period, there have been no additional requirements placed upon the WIPP by any state or federal agency relating to corrective actions or recovery and as a result of the incidents referenced in Paragraphs 8 and 9 of the May 12, 2014, Administrative Order, including requirements by other segments of DOE, as requested by Paragraph 18(f) of AO2. Attachment 5, *Corrective Actions*, is currently reserved.

7.0 The Permittees shall provide a status of recovery-related activities relative to the underground per Paragraph 18I(ii) of AO2 and a summary of recovery-related work performed in Panel 7, including relevant photographs, as requested per Paragraph 18(k) of AO2:

During this reporting period, the Permittees continued to reduce combustibles in the underground. Most recently, lube-oil storage improvements were implemented that resulted in the elimination of combustibles from a former lube bay.

Cold Operations, the phase of the WIPP facility restart that involves conducting waste handling and emplacement operations with simulated waste containers, is underway. This phase began with a process to demonstrate the adequacy of procedures. Many of these procedures had not been used for more than two years due to the February 2014 events. The purpose of Cold Operations is to validate procedure adequacy based on current facility conditions and establish worker proficiency prior to the beginning of formal Operational Readiness Reviews.

The Cold Operations phase uses a graded approach that begins with table-top practical exercises, proceeds to field walk-downs of work activities, and follows with slow, disciplined field implementation of standard operating procedures. The process will be complete after employees demonstrate proficiency in their respective work areas while responding to random interruptions, abnormal conditions, and occasional emergency challenges that exercise the site emergency response organization.

These activities are designed to ensure that staff and procedures are well integrated. Cold Operations will also confirm equipment operability, confirm the readiness of procedures, and demonstrate the performance and knowledge of employees in the areas of waste handling, maintenance, underground services, work planning, industrial hygiene, safety, engineering, radiological controls, and the emergency response organization.

In addition, the Interim Ventilation System (IVS) construction and installation has been completed. On May 2, 2016, the Permittees submitted the New Mexico Registered Professional Engineer's (PE's) Certification of the IVS installation to the NMED. On May 26, 2016, the Permittees received the results of the NMED's inspection of the IVS and evaluation of the PE's certification. Photographs depicting the completed work activities are shown in Attachment 6, *Recovery-Related Work Activities*.

8.0 The Permittees shall submit a WIPP Nitrate Salt Bearing Waste Container Isolation Plan per Paragraph 22(a) of AO3. The plan shall contain a detailed proposal for the expedited closure of Panel 6 per Paragraph 22(a)(i) of AO3 and the expedited closure of Panel 7, Room 7 per Paragraph 22(a)(iii) of AO3:

Attachment 7, *WIPP Nitrate Salt Bearing Waste Container Isolation Plan Information Required by Administrative Order 3*, is currently reserved, and was last updated on November 30, 2015.

Attachment 1
List of Surface and Underground Inspections

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/ ¹ Other)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Fire Sprinkler Systems	Emergency Services	Monthly/ quarterly	WP 12-FP0025 Inspecting for Deterioration, Leaks/Spills, static pressures, and removable strainers	Not Current (Buildings 384, 411, 489)	5/30/16, 5/6/16, 5/26/16 (monthly)	7/31/16	During the month of June, Buildings 384, 411, and 489 were missed due to a procedure revision. A STOP WORK was issued by the Fire Protection Engineer as the procedure listed incorrect valve numbers for performing the inspections in these three buildings. Procedure revisions were completed as expeditiously as possible, but the monthly inspections for those three buildings were not able to be performed by the end of June, and completion of the monthly inspections lapsed into the next reporting period. Corrective measures have been undertaken to schedule inspections earlier, thereby allowing time to resolve issues before the inspections become delinquent.
				Current (Other Locations)	6/30/16 (monthly)	N/A	
				Current	4/25/16 (quarterly)	N/A	
Bulkhead in Filled Panels	Underground Operations	Monthly	Integrity and Deterioration of Accessible Areas	Current	6/29/16	N/A	Underground access limitations prevented inspections of bulkheads (74-B-372, 74-B-367, and 74-B-470) in Panels 3 and 4 in April and May.
Explosion-Isolation Walls	Underground Operations	Quarterly	Integrity and Deterioration of Accessible Areas	Current	6/15/16	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Fire Hoses	Emergency Services	Annually (minimum)	12-FP0031 Inspecting for Deterioration and Leaks/Spills	Current	5/9/16	N/A	
Fire Extinguishers (Underground)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Current	6/29/16	N/A	
Fire Extinguishers (Surface)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Current	6/20/16	N/A	
Air Intake Shaft Hoist	Underground Operations	Preoperational	WP 04-HO1004 Inspecting for Deterioration, Safety Equipment, Communication Systems, and Mechanical Operability in accordance with Mine Safety and Health Administration (MSHA) requirements	Current	6/29/16	N/A	
Ambulance (Surface) and related emergency supplies and equipment	Emergency Services	Weekly	12-FP0030 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	6/27/16	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/ ¹ Other)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Ambulances (Underground) and related emergency supplies and equipment	Emergency Services	Weekly	12-FP0030 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	6/28/16	N/A	For the two underground ambulances, there was one inspection missed during the reporting period. The missed inspection was associated with Ambulance #2 for the week of 6/5/16; however the inspection was subsequently performed on 6/7/16 in addition to the regularly-scheduled inspection for the week of 6/6/16. Corrective measures have been undertaken to schedule inspections earlier, thereby allowing time to resolve issues before the inspections become delinquent.
Exhaust Shaft	Underground Operations	Quarterly	PM041099 Inspecting for Deterioration and Leaks/Spills	Current	5/15/16	N/A	
Salt Handling Shaft Hoist	Underground Operations	Preoperational	WP 04-HO1002 Inspecting for Deterioration, Safety Equipment, Communication Systems, and Mechanical Operability in accordance with MSHA requirements	Current	6/30/16	N/A	
Self-Rescuers (SRs)	Underground Operations	Quarterly	WP 04-AU1026 Inspecting for Deterioration and Functionality in accordance with MSHA requirements	Current	6/23/16	N/A	
Underground Openings—Roof Bolts and Travelways	Underground Operations	Weekly	WP 04-AU1007 Inspecting for Deterioration	Current	6/20/16	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/ Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Waste Hoist	Underground Operations	Preoperational	WP 04-HO1003 Inspecting for Deterioration, Safety Equipment, Communication Systems, and Mechanical Operability, Leaks/Spills, in accordance with MSHA requirements	Current	6/30/16	N/A	
MSHA Air Quality Monitor	Maintenance/ Underground Operations	Daily	WP 12-IH1828 Inspecting for Air Quality Monitoring Equipment Functional Check	Current	6/30/16	N/A	
Fire Detection and Alarm System (Underground)	Emergency Services	Semiannually	12-FP0027 Inspecting for Deterioration, Operability of indicator lights and, underground fuel station dry chemical suppression system. Inspection is per NFPA 17	Other	12/17/15	9/30/16	This inspection could not be performed due to a qualified contractor not being available to perform the testing. The equipment has been tagged out of service until a qualified contractor is identified and a contract established. Inspections are anticipated to resume by the end of the next reporting period. As a compensatory measure, no fuel is being stored in the underground while the fire suppression system is out of service.
Fire Pumps	Emergency Services	Weekly/ annually	WP 12-FP0026, WP 12-FP5113, and WP 12-FP5114 Inspecting for Deterioration, Leaks/Spills, valves, and panel lights	Current (Electric Fire Pump)	6/28/16 (Weekly) 3/18/15 (Annual)	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Fire Pumps (continued)	Emergency Services	Weekly/ annually	WP 12-FP0026, WP 12-FP5113, and WP 12-FP5114 Inspecting for Deterioration, Leaks/Spills, valves, and panel lights	Other (Diesel Fire Pump)	2/29/16 (Weekly) 3/2/16 (Annual)	9/30/16	During the annual inspection of the diesel fire pump on 3/2/16, the pump was taken out of service for repair. Compensatory measures have been established to use a fire truck to draw water from the firewater storage tank and pressurize the firewater header, if needed.
Fire and Emergency Response Trucks (Underground Fire Suppression Vehicles)	Emergency Services	Weekly	12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Current	6/29/16	N/A	During this period, inspections of two of the underground fire suppression vehicles for the week of 4/4/16 were performed one day past the weekly inspection period on 4/11/16. The vehicles were inspected again later the week of 4/11/16 to satisfy that week's inspection requirement. Corrective measures have been undertaken to schedule inspections earlier, thereby allowing time to resolve issues before the inspections become delinquent.
Rescue Truck (Surface)	Emergency Services	Weekly	12-FP0030 and 12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Other	6/27/16	9/30/16	Unit was out of service due to maintenance. As a compensatory measure, the rescue equipment has been placed onto Fire Truck # 2 and was inspected as part of the Fire Truck #2 weekly inspections. This measure will be in place until the unit is repaired.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Automatic on-board fire suppression systems	Emergency Services	Semiannual	WP 12-FP0060 Inspecting for Mechanical Operability, Deterioration	Other	11/9/15	12/31/16	The automatic fire suppression systems have been tagged out of service until an approved vendor can confirm the existing configuration or install new systems/parts, thus ensuring the systems can perform their intended function. Qualified fire watches have been established as compensatory measures while the systems are out of service.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/ Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Hazardous Material Response Equipment	Emergency Services	Weekly	12-FP0033 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	6/28/16	N/A	During this period, the Level A & B suits were not available since they had exceeded their expiration date and had not been kept in a climate-controlled (i.e., air-conditioned) environment. Since the Level A & B suits had expired, inspections for these pieces of equipment were suspended. There are no chemical hazards present at the WIPP facility which would require the use of Level A suits during an emergency. However, as a compensatory measure, the Permittees have mutual-aid agreements in place with Lea and Eddy counties to support a hazardous material emergency response, should the need arise. The Level B suits were received on-site on June 15, 2016. They have been placed in storage in the Building 452 vehicle bay due to climate-controlled requirements.
Miners First Aid Station	Emergency Services	Quarterly	12-FP0035 Inspecting for Required Equipment	Current	6/1/16	N/A	
Personal Protective Equipment (PPE): —Self-Contained Breathing Apparatus (SCBA)	Emergency Services	Weekly	12-FP0029 Inspecting for Deterioration and Pressure	Current (Fire Truck #2 PPE)	6/29/16	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/ Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Personal Protective Equipment (PPE): —Self-Contained Breathing Apparatus (SCBA) (continued)	Emergency Services	Weekly	12-FP0029 Inspecting for Deterioration and Pressure	Current (Fire Truck #1 PPE)	6/29/16	N/A	SCBAs on Fire Truck #1 were not inspected the week ending 5/8/16. The truck was out of service, and SCBAs were moved to the leased fire truck. The PM was inactivated, resulting in the inspection of the PPE on the leased truck not being scheduled. The PM was reactivated the following week, and the weekly inspections were completed for the remainder of the reporting period.
				Current (Rescue Truck #1 PPE)	6/29/16	N/A	SCBAs on surface Rescue Truck #1 were not inspected the week ending 6/19/16. The truck was out of service and off-site for repairs. The SCBAs were moved to the vehicle bay, and some of the inspections were missed at this temporary location. However, inspections resumed and were current by the end of the reporting period.
Vehicle Siren (Surface Vehicles)	Emergency Services	Weekly	Functional Test included with inspection of the Ambulances, Fire Trucks, and Rescue Trucks	Current	6/27/16 (Ambulance #1) 6/28/16 (Fire Trucks #1 and #2)	N/A	
				Other	6/27/16 (Rescue Truck #1)	9/30/16	Unit was out of service due to maintenance.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/ Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Vehicle Siren (Underground Vehicles)	Emergency Services	Weekly	Functional Test included with inspection of the Ambulances, Fire Trucks, and Rescue Trucks	Current	6/28/16 (Ambulance #2 and #3) 6/29/16 (Rescue Truck #2)	N/A	
Adjustable Center of Gravity Lift Fixture	Waste Handling	Preoperational	WP 05-WH1410 Inspecting for Mechanical Operability and Deterioration	Other	6/4/16 (41-T-035)	When waste disposal operations resume	Normal waste handling operations have not resumed; therefore, preoperational inspections are not routinely being performed. However, waste currently being stored in the Waste Handling Building was moved a short distance on 6/4/16 for configuration reasons, and the required preoperational inspections were performed.
Contact-Handled (CH) TRU Underground Transporter	Waste Handling	Preoperational	WP 05-WH1603 Inspecting for Leaks/Spills, Mechanical Operability, Deterioration, and area around transporter clear of obstacles	Other	N/A	When waste disposal operations resume	
Conveyance Loading Car	Waste Handling	Preoperational	WP 05-1406 Inspecting for Mechanical Operability, Deterioration, path clear of obstacles and guards in the proper place	Other	N/A	When waste disposal operations resume	
Facility Transfer Vehicle	Waste Handling	Preoperational	WP 05-WH1204 Inspecting for Mechanical Operability, Deterioration, path clear of obstacles, and guards in the proper place	Other	N/A	When waste disposal operations resume	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Forklifts Used for Waste Handling (Electric and Diesel forklifts, Push-Pull Attachment) on Surface	Waste Handling	Preoperational	WP 05-WH1201, WP 05-WH1207, WP 05-WH1401, WP 05-WH1402, WP 05-WH1403, and WP 05-WH1412 Inspecting for Leaks/Spills, Mechanical Operability, Deterioration, and On board fire suppression system	Other	6/4/16 (41-H-012D)	When waste disposal operations resume	Normal waste handling operations have not resumed; therefore, preoperational inspections are not routinely being performed. However, waste currently being stored in the Waste Handling Building was moved a short distance on 6/4/16 for configuration reasons, and the required preoperational inspections were performed.
Forklifts Used for Waste Handling (Electric and Diesel forklifts, Push-Pull Attachment) in Underground	Waste Handling	Preoperational	WP 05-WH1201, WP 05-WH1207, WP 05-WH1401, WP 05-WH1402, WP 05-WH1403, and WP 05-WH1412 Inspecting for Leaks/Spills, Mechanical Operability, Deterioration, and On board fire suppression system	Other	N/A	When waste disposal operations resume	
Surface TRU Mixed Waste Handling Area	Waste Handling	Preoperational or Weekly	WP 05-WH1101 Inspecting for Deterioration, Leaks/Spills, Required Aisle Space, Posted Warnings, Communication Systems, Container Condition, and Floor coating integrity	Current	6/30/16 (Preoperational) 6/29/16 (Weekly)	N/A	
TRU Mixed Waste Decontamination Equipment	Waste Handling	Annually	WP 05-WH1101 Inspecting for Required Equipment	Current	12/30/15	N/A	
Underground TRU Mixed Waste Disposal Area	Waste Handling	Preoperational	WP 05-WH1810 Inspecting for Deterioration, Leaks/Spills, mine pager phones, equipment, unobstructed access, signs, debris, and ventilation	Other	N/A	When waste disposal operations resume	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
TDOP Upender	Waste Handling	Preoperational	WP 05-WH1010 Inspecting for Mechanical Operability and Deterioration	Other	N/A	When waste disposal operations resume	
Waste Handling Cranes	Waste Handling	Preoperational	WP 05-WH1407 Inspecting for Mechanical Operability, Deterioration, and Leaks/Spills	Other	6/4/16 (41-T-151D)	When waste disposal operations resume	Normal waste handling operations have not resumed; therefore, preoperational inspections are not routinely being performed. However, waste currently being stored in the Waste Handling Building was moved a short distance on 6/4/16 for configuration reasons, and the required preoperational inspections were performed.
Push-Pull Attachment (Surface)	Waste Handling	Preoperational	WP 05-WH1401 Inspecting for Damage and Deterioration	Other	N/A	When waste disposal operations resume	
Push-Pull Attachment (Underground)	Waste Handling	Preoperational	WP 05-WH1401 Inspecting for Damage and Deterioration	Other	N/A	When waste disposal operations resume	
Trailer Jockey	Waste Handling	Preoperational	WP 05-WH1405 Inspecting for Leaks/Spills, Mechanical Operability and Deterioration	Other	N/A	When waste disposal operations resume	
Bolting Robot	Waste Handling	Preoperational	WP 05-WH1203 Mechanical Operability	Other	N/A	When waste disposal operations resume	
Yard Transfer Vehicle	Waste Handling	Preoperational	WP 05-WH1205 Mechanical Operability, clear of obstacles and Guards in proper place	Other	N/A	When waste disposal operations resume	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/ ¹ Other)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Payload Transfer Station	Waste Handling	Preoperational	WP 05-WH1208 Mechanical Operability, Deterioration, and Guards in proper place	Other	N/A	When waste disposal operations resume	
Monorail Hoist	Waste Handling	Preoperational	WP 05-WH1202 Mechanical Operability, and Leaks/Spills	Other	N/A	When waste disposal operations resume	
Bolting Station	Waste Handling	Preoperational	WP 05-WH1203 Mechanical Operability, Deterioration, and Guards in proper place	Other	N/A	When waste disposal operations resume	
Backup Power Supply Diesel Generators	Facility Operations	Monthly	WP 04-ED1301 Inspecting for Mechanical Operability and Leaks/Spills by starting and operating both generators. Results of this inspection are logged in accordance with WP 04-AD3008.	Current	6/19/16 (#1) 6/18/16 (#2)	N/A	
Central Monitoring System (CMS)	Facility Operations	Continuous	Automatic Self-Checking	Current	6/30/16	N/A	
Public Address (and Intercom System) on Surface and Underground and Mine Pager Phones	Facility Operations	Monthly	WP 04-PC3017 Testing of PA and Underground Alarms and Mine Page Phones at essential locations Systems operated in test mode	Current	6/5/16	N/A	The monthly test of public address system was not performed in April. The missed inspection was due to a scheduling and tracking issue. Corrective measures have been undertaken to schedule inspections earlier, thereby allowing time to resolve issues before the inspections become delinquent.
Radio Equipment	Facility Operations	Daily	Radios are operated daily and are repaired upon failure	Current	6/30/16	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/ ¹ Other)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Uninterruptible Power Supply (Central UPS)	Facility Operations	Daily	WP 04-ED1542 Inspecting for Mechanical Operability and Deterioration with no malfunction alarms. Results of this inspection are logged in accordance with WP 04- AD3008.	Current	6/30/16	N/A	
Water Tank Level	Facility Operations	Daily	SDD-WD00 Inspecting for Deterioration, and water levels. Results of this inspection are logged in accordance with WP 04- AD3008.	Current	6/30/16	N/A	
Facility Inspections (Water Diversion Bems)	Facility Engineering	Annually	WP 10-WC3008 Inspecting for Damage, Impediments to water flow, and Deterioration	Current	12/18/15	N/A	
Eye Wash and Shower Equipment	Equipment Custodian	Weekly	WP 12-IS1832 Inspecting for Deterioration	Current (Weekly)	4/1/16 – 6/30/16	N/A	During this reporting period, weekly inspections of some of the eye wash units were missed. The missed inspections were due to scheduling/tracking issues. As of the end of the reporting period, the eye wash unit inspections were current. Corrective measures have been undertaken to schedule inspections earlier, thereby allowing time to resolve issues before the inspections become delinquent.
				Current (Semi-Annual)	4/1/16 – 6/30/16	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 6/30/16 (Current/Not Current/ Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Perimeter Fence, Gates, Signs	Security	Daily	PF0-008 Inspecting for Deterioration and Posted Warnings	Current	6/30/16	N/A	
Underground—Geomechanical Instrumentation System (GIS)	Geotechnical Engineering	Monthly	WP 07-EU1301 Inspecting for Deterioration	Current	6/24/16	N/A	Complete at accessible areas.
Ventilation Exhaust	Maintenance Operations	Quarterly	IC041098 Check for Deterioration and Calibration of Mine Ventilation Rate Monitoring Equipment	Other	41F30703 Fan A (11/9/13) 41F30704 Fan B (5/20/13) 41F30702 Fan C (12/18/13)	No date set because the 700 fans are not used while in filtration mode.	The 700 horsepower fans have been placed out of service because the underground ventilation system is operating in filtration mode. The quarterly inspection PM has been deactivated.

1 **Current** – As of the end of the reporting period, the inspection of in-service equipment was up-to-date (any missed inspections that occurred during the reporting period are noted in the “Comments” field)

Not Current – As of the end of the reporting period, either 1) inspection of in-service equipment was delinquent or 2) emergency equipment was out-of-service, with no established compensatory measure(s)

Other – As of the end of the reporting period either 1) equipment was out-of-service (applicable compensatory measures are noted in the “Comments” field) or 2) equipment was not being used to handle TRU mixed waste

2 Routine inspections are proposed to begin with resumption of normal operations

N/A Not Applicable

Attachment 2 Environmental Monitoring



VOC Sampling Locations

Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/3/2016	2/9/2016	9428	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9428	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9428	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9428	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9428	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.12 J
CEMRC	2/3/2016	2/9/2016	9428	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9428	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9428	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9428	D	Toluene	108-88-3	PPBV	0.4	0.08 J
CEMRC	2/3/2016	2/9/2016	9428	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9428	D	Butane, 2-methyl-	78-78-4	PPBV		2.46 NJ
CEMRC	2/3/2016	2/9/2016	9428	D	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	2/3/2016	2/9/2016	9428	D	Isobutane	75-28-5	PPBV		2.56 NJ
CEMRC	2/3/2016	2/9/2016	9428	D	Pentane	109-66-0	PPBV		1.88 NJ
CEMRC	2/3/2016	2/9/2016	9428	D	Propane	74-98-6	PPBV		4.26 NJ
CEMRC	2/3/2016	2/9/2016	9428	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/3/2016	2/9/2016	9428	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/3/2016	2/9/2016	9428	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/3/2016	2/9/2016	9428	D	1,2-Dichloroethane	107-06-2	PPTV	100	23.68 J
CEMRC	2/3/2016	2/9/2016	9428	D	Carbon Tetrachloride	56-23-5	PPTV	100	110.98
CEMRC	2/3/2016	2/9/2016	9428	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/3/2016	2/9/2016	9428	D	Chloroform	67-66-3	PPTV	100	16.36 J
CEMRC	2/3/2016	2/9/2016	9428	D	Methylene Chloride	75-09-2	PPTV	100	78.72 J

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).

U = Compound not detected above the MDL.

NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

* A value will not appear in the MRL column for TICs.

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/3/2016	2/9/2016	9428	D	Toluene	108-88-3	PPTV	100	75.2 J
CEMRC	2/3/2016	2/9/2016	9428	D	Trichloroethylene (1)	79-01-6	PPTV	100	7.44 J
CEMRC	2/3/2016	2/9/2016	9427	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9427	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9427	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9427	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9427	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.1 J
CEMRC	2/3/2016	2/9/2016	9427	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9427	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9427	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9427	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9427	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/3/2016	2/9/2016	9427	C	Butane	106-97-8	PPBV		1.56 NJ
CEMRC	2/3/2016	2/9/2016	9427	C	Dichlorodifluoromethane	75-71-8	PPBV		0.62 NJ
CEMRC	2/3/2016	2/9/2016	9427	C	Propane	74-98-6	PPBV		1.72 NJ
CEMRC	2/3/2016	2/9/2016	9427	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/3/2016	2/9/2016	9427	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/3/2016	2/9/2016	9427	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/3/2016	2/9/2016	9427	C	1,2-Dichloroethane	107-06-2	PPTV	100	17.12 J
CEMRC	2/3/2016	2/9/2016	9427	C	Carbon Tetrachloride	56-23-5	PPTV	100	103.68
CEMRC	2/3/2016	2/9/2016	9427	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/3/2016	2/9/2016	9427	C	Chloroform	67-66-3	PPTV	100	17.26 J
CEMRC	2/3/2016	2/9/2016	9427	C	Methylene Chloride	75-09-2	PPTV	100	82.74 J
CEMRC	2/3/2016	2/9/2016	9427	C	Toluene	108-88-3	PPTV	100	63.18 J

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Notes:

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/3/2016	2/9/2016	9427	C	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	2/4/2016	2/9/2016	9430	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9430	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9430	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9430	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9430	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.1 J
CEMRC	2/4/2016	2/9/2016	9430	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9430	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9430	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9430	D	Toluene	108-88-3	PPBV	0.4	0.16 J
CEMRC	2/4/2016	2/9/2016	9430	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9430	D	Butane	106-97-8	PPBV		7.06 NJ
CEMRC	2/4/2016	2/9/2016	9430	D	Butane, 2-methyl-	78-78-4	PPBV		3.42 NJ
CEMRC	2/4/2016	2/9/2016	9430	D	Cyclopentane, methyl-	96-37-7	PPBV		0.58 NJ
CEMRC	2/4/2016	2/9/2016	9430	D	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	2/4/2016	2/9/2016	9430	D	Isobutane	75-28-5	PPBV		3.84 NJ
CEMRC	2/4/2016	2/9/2016	9430	D	Pentane	109-66-0	PPBV		2.78 NJ
CEMRC	2/4/2016	2/9/2016	9430	D	Propane	74-98-6	PPBV		6.22 NJ
CEMRC	2/4/2016	2/9/2016	9430	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/4/2016	2/9/2016	9430	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/4/2016	2/9/2016	9430	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/4/2016	2/9/2016	9430	D	1,2-Dichloroethane	107-06-2	PPTV	100	27.12 J
CEMRC	2/4/2016	2/9/2016	9430	D	Carbon Tetrachloride	56-23-5	PPTV	100	104.96

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Notes:

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/4/2016	2/9/2016	9430	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/4/2016	2/9/2016	9430	D	Chloroform	67-66-3	PPTV	100	16.38 J
CEMRC	2/4/2016	2/9/2016	9430	D	Methylene Chloride	75-09-2	PPTV	100	79.34 J
CEMRC	2/4/2016	2/9/2016	9430	D	Toluene	108-88-3	PPTV	100	163
CEMRC	2/4/2016	2/9/2016	9430	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	2/4/2016	2/9/2016	9429	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9429	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9429	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9429	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9429	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.12 J
CEMRC	2/4/2016	2/9/2016	9429	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9429	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9429	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9429	C	Toluene	108-88-3	PPBV	0.4	0.08 J
CEMRC	2/4/2016	2/9/2016	9429	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/4/2016	2/9/2016	9429	C	Butane	106-97-8	PPBV		4.16 NJ
CEMRC	2/4/2016	2/9/2016	9429	C	Butane, 2-methyl-	78-78-4	PPBV		1.98 NJ
CEMRC	2/4/2016	2/9/2016	9429	C	Dichlorodifluoromethane	75-71-8	PPBV		0.5 NJ
CEMRC	2/4/2016	2/9/2016	9429	C	Isobutane	75-28-5	PPBV		2.34 NJ
CEMRC	2/4/2016	2/9/2016	9429	C	Pentane	109-66-0	PPBV		1.38 NJ
CEMRC	2/4/2016	2/9/2016	9429	C	Propane	74-98-6	PPBV		4.26 NJ
CEMRC	2/4/2016	2/9/2016	9429	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/4/2016	2/9/2016	9429	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/4/2016	2/9/2016	9429	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U

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Notes:

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/4/2016	2/9/2016	9429	C	1,2-Dichloroethane	107-06-2	PPTV	100	19.72 J
CEMRC	2/4/2016	2/9/2016	9429	C	Carbon Tetrachloride	56-23-5	PPTV	100	108.28
CEMRC	2/4/2016	2/9/2016	9429	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/4/2016	2/9/2016	9429	C	Chloroform	67-66-3	PPTV	100	15.4 J
CEMRC	2/4/2016	2/9/2016	9429	C	Methylene Chloride	75-09-2	PPTV	100	81.18 J
CEMRC	2/4/2016	2/9/2016	9429	C	Toluene	108-88-3	PPTV	100	97.98 J
CEMRC	2/4/2016	2/9/2016	9429	C	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	2/9/2016	2/24/2016	9432	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9432	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9432	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9432	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9432	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9432	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9432	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9432	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9432	D	Toluene	108-88-3	PPBV	0.4	0.22 J
CEMRC	2/9/2016	2/24/2016	9432	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9432	D	Butane	106-97-8	PPBV		8.86 NJ
CEMRC	2/9/2016	2/24/2016	9432	D	Butane, 2-methyl-	78-78-4	PPBV		4.28 NJ
CEMRC	2/9/2016	2/24/2016	9432	D	Cyclopentane, methyl-	96-37-7	PPBV		0.62 NJ
CEMRC	2/9/2016	2/24/2016	9432	D	Pentane	109-66-0	PPBV		3.62 NJ
CEMRC	2/9/2016	2/24/2016	9432	D	Propane	74-98-6	PPBV		7.36 NJ
CEMRC	2/9/2016	2/24/2016	9432	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).

U = Compound not detected above the MDL.

NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

* A value will not appear in the MRL column for TICs.

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/9/2016	2/24/2016	9432	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/9/2016	2/24/2016	9432	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/9/2016	2/24/2016	9432	D	1,2-Dichloroethane	107-06-2	PPTV	100	34.92 J
CEMRC	2/9/2016	2/24/2016	9432	D	Carbon Tetrachloride	56-23-5	PPTV	100	70.82 J
CEMRC	2/9/2016	2/24/2016	9432	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/9/2016	2/24/2016	9432	D	Chloroform	67-66-3	PPTV	100	15.62 J
CEMRC	2/9/2016	2/24/2016	9432	D	Methylene Chloride	75-09-2	PPTV	100	68.02 J
CEMRC	2/9/2016	2/24/2016	9432	D	Toluene	108-88-3	PPTV	100	228.48
CEMRC	2/9/2016	2/24/2016	9432	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	2/9/2016	2/24/2016	9431	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9431	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9431	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9431	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9431	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9431	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9431	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9431	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9431	C	Toluene	108-88-3	PPBV	0.4	0.2 J
CEMRC	2/9/2016	2/24/2016	9431	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/9/2016	2/24/2016	9431	C	Butane	106-97-8	PPBV		8.94 NJ
CEMRC	2/9/2016	2/24/2016	9431	C	Butane, 2-methyl-	78-78-4	PPBV		4.4 NJ
CEMRC	2/9/2016	2/24/2016	9431	C	Cyclopentane, methyl-	96-37-7	PPBV		0.6 NJ
CEMRC	2/9/2016	2/24/2016	9431	C	Pentane	109-66-0	PPBV		3.54 NJ
CEMRC	2/9/2016	2/24/2016	9431	C	Propane	74-98-6	PPBV		7.84 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).

U = Compound not detected above the MDL.

NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

* A value will not appear in the MRL column for TICs.

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/9/2016	2/24/2016	9431	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/9/2016	2/24/2016	9431	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/9/2016	2/24/2016	9431	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/9/2016	2/24/2016	9431	C	1,2-Dichloroethane	107-06-2	PPTV	100	33.36 J
CEMRC	2/9/2016	2/24/2016	9431	C	Carbon Tetrachloride	56-23-5	PPTV	100	91 J
CEMRC	2/9/2016	2/24/2016	9431	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/9/2016	2/24/2016	9431	C	Chloroform	67-66-3	PPTV	100	17.4 J
CEMRC	2/9/2016	2/24/2016	9431	C	Methylene Chloride	75-09-2	PPTV	100	65.72 J
CEMRC	2/9/2016	2/24/2016	9431	C	Toluene	108-88-3	PPTV	100	211.52
CEMRC	2/9/2016	2/24/2016	9431	C	Trichloroethylene (1)	79-01-6	PPTV	100	11.12 J
CEMRC	2/10/2016	2/24/2016	9435	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9435	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9435	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9435	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9435	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9435	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9435	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9435	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9435	D	Toluene	108-88-3	PPBV	0.4	0.36 J
CEMRC	2/10/2016	2/24/2016	9435	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9435	D	Butane	106-97-8	PPBV		10.32 NJ
CEMRC	2/10/2016	2/24/2016	9435	D	Butane, 2-methyl-	78-78-4	PPBV		4.98 NJ
CEMRC	2/10/2016	2/24/2016	9435	D	Cyclohexane, methyl-	108-87-2	PPBV		0.54 NJ

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analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/10/2016	2/24/2016	9435	D	Cyclopentane, methyl-	96-37-7	PPBV		0.76 NJ
CEMRC	2/10/2016	2/24/2016	9435	D	Isobutane	75-28-5	PPBV		5.78 NJ
CEMRC	2/10/2016	2/24/2016	9435	D	Pentane	109-66-0	PPBV		4.34 NJ
CEMRC	2/10/2016	2/24/2016	9435	D	Propane	74-98-6	PPBV		8.32 NJ
CEMRC	2/10/2016	2/24/2016	9435	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/10/2016	2/24/2016	9435	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/10/2016	2/24/2016	9435	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/10/2016	2/24/2016	9435	D	1,2-Dichloroethane	107-06-2	PPTV	100	33.96 J
CEMRC	2/10/2016	2/24/2016	9435	D	Carbon Tetrachloride	56-23-5	PPTV	100	74.66 J
CEMRC	2/10/2016	2/24/2016	9435	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/10/2016	2/24/2016	9435	D	Chloroform	67-66-3	PPTV	100	14.52 J
CEMRC	2/10/2016	2/24/2016	9435	D	Methylene Chloride	75-09-2	PPTV	100	66.38 J
CEMRC	2/10/2016	2/24/2016	9435	D	Toluene	108-88-3	PPTV	100	403
CEMRC	2/10/2016	2/24/2016	9435	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	2/10/2016	2/24/2016	9434	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9434	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9434	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9434	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9434	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.32 J
CEMRC	2/10/2016	2/24/2016	9434	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9434	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9434	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/10/2016	2/24/2016	9434	C	Toluene	108-88-3	PPBV	0.4	0.36 J
CEMRC	2/10/2016	2/24/2016	9434	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/10/2016	2/24/2016	9434	C	Butane	106-97-8	PPBV		9.42 NJ
CEMRC	2/10/2016	2/24/2016	9434	C	Butane, 2-methyl-	78-78-4	PPBV		4.66 NJ
CEMRC	2/10/2016	2/24/2016	9434	C	Cyclohexane, methyl-	108-87-2	PPBV		0.52 NJ
CEMRC	2/10/2016	2/24/2016	9434	C	Cyclopentane, methyl-	96-37-7	PPBV		0.72 NJ
CEMRC	2/10/2016	2/24/2016	9434	C	Isobutane	75-28-5	PPBV		5.26 NJ
CEMRC	2/10/2016	2/24/2016	9434	C	Pentane	109-66-0	PPBV		3.94 NJ
CEMRC	2/10/2016	2/24/2016	9434	C	Pentane, 2-methyl-	107-83-5	PPBV		1 NJ
CEMRC	2/10/2016	2/24/2016	9434	C	Propane	74-98-6	PPBV		7.52 NJ
CEMRC	2/10/2016	2/24/2016	9434	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	43.72 J
CEMRC	2/10/2016	2/24/2016	9434	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/10/2016	2/24/2016	9434	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/10/2016	2/24/2016	9434	C	1,2-Dichloroethane	107-06-2	PPTV	100	34.74 J
CEMRC	2/10/2016	2/24/2016	9434	C	Carbon Tetrachloride	56-23-5	PPTV	100	291.88
CEMRC	2/10/2016	2/24/2016	9434	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/10/2016	2/24/2016	9434	C	Chloroform	67-66-3	PPTV	100	43.1 J
CEMRC	2/10/2016	2/24/2016	9434	C	Methylene Chloride	75-09-2	PPTV	100	70.8 J
CEMRC	2/10/2016	2/24/2016	9434	C	Toluene	108-88-3	PPTV	100	376.32
CEMRC	2/10/2016	2/24/2016	9434	C	Trichloroethylene (1)	79-01-6	PPTV	100	106.46
CEMRC	2/17/2016	2/24/2016	9437	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9437	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9437	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9437	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9437	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/17/2016	2/24/2016	9437	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9437	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9437	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9437	D	Toluene	108-88-3	PPBV	0.4	0.4
CEMRC	2/17/2016	2/24/2016	9437	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9437	D	Butane	106-97-8	PPBV		5.86 NJ
CEMRC	2/17/2016	2/24/2016	9437	D	Butane, 2-methyl-	78-78-4	PPBV		3 NJ
CEMRC	2/17/2016	2/24/2016	9437	D	Dichlorodifluoromethane	75-71-8	PPBV		0.56 NJ
CEMRC	2/17/2016	2/24/2016	9437	D	Isobutane	75-28-5	PPBV		3.3 NJ
CEMRC	2/17/2016	2/24/2016	9437	D	Pentane	109-66-0	PPBV		2.3 NJ
CEMRC	2/17/2016	2/24/2016	9437	D	Propane	74-98-6	PPBV		5.18 NJ
CEMRC	2/17/2016	2/24/2016	9437	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/17/2016	2/24/2016	9437	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/17/2016	2/24/2016	9437	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/17/2016	2/24/2016	9437	D	1,2-Dichloroethane	107-06-2	PPTV	100	26.62 J
CEMRC	2/17/2016	2/24/2016	9437	D	Carbon Tetrachloride	56-23-5	PPTV	100	75.66 J
CEMRC	2/17/2016	2/24/2016	9437	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/17/2016	2/24/2016	9437	D	Chloroform	67-66-3	PPTV	100	13.66 J
CEMRC	2/17/2016	2/24/2016	9437	D	Methylene Chloride	75-09-2	PPTV	100	62.74 J
CEMRC	2/17/2016	2/24/2016	9437	D	Toluene	108-88-3	PPTV	100	406.82
CEMRC	2/17/2016	2/24/2016	9437	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	2/17/2016	2/24/2016	9436	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9436	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9436	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/17/2016	2/24/2016	9436	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9436	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.32 J
CEMRC	2/17/2016	2/24/2016	9436	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9436	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9436	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9436	C	Toluene	108-88-3	PPBV	0.4	0.32 J
CEMRC	2/17/2016	2/24/2016	9436	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/17/2016	2/24/2016	9436	C	Dichlorodifluoromethane	75-71-8	PPBV		0.52 NJ
CEMRC	2/17/2016	2/24/2016	9436	C	Pentane	109-66-0	PPBV		2 NJ
CEMRC	2/17/2016	2/24/2016	9436	C	Propane	74-98-6	PPBV		4.6 NJ
CEMRC	2/17/2016	2/24/2016	9436	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	81.72 J
CEMRC	2/17/2016	2/24/2016	9436	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/17/2016	2/24/2016	9436	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/17/2016	2/24/2016	9436	C	1,2-Dichloroethane	107-06-2	PPTV	100	20.66 J
CEMRC	2/17/2016	2/24/2016	9436	C	Carbon Tetrachloride	56-23-5	PPTV	100	316.64
CEMRC	2/17/2016	2/24/2016	9436	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/17/2016	2/24/2016	9436	C	Chloroform	67-66-3	PPTV	100	29.12 J
CEMRC	2/17/2016	2/24/2016	9436	C	Methylene Chloride	75-09-2	PPTV	100	68.42 J
CEMRC	2/17/2016	2/24/2016	9436	C	Toluene	108-88-3	PPTV	100	326.14
CEMRC	2/17/2016	2/24/2016	9436	C	Trichloroethylene (1)	79-01-6	PPTV	100	101.18
CEMRC	2/18/2016	2/25/2016	9439	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9439	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9439	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/18/2016	2/25/2016	9439	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9439	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9439	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9439	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9439	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9439	D	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	2/18/2016	2/25/2016	9439	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9439	D	Acetone	67-64-1	PPBV		0.82 NJ
CEMRC	2/18/2016	2/25/2016	9439	D	Butane	106-97-8	PPBV		3.54 NJ
CEMRC	2/18/2016	2/25/2016	9439	D	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	2/18/2016	2/25/2016	9439	D	Isobutane	75-28-5	PPBV		2.12 NJ
CEMRC	2/18/2016	2/25/2016	9439	D	Pentane	109-66-0	PPBV		1.4 NJ
CEMRC	2/18/2016	2/25/2016	9439	D	Propane	74-98-6	PPBV		3.06 NJ
CEMRC	2/18/2016	2/25/2016	9439	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/18/2016	2/25/2016	9439	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/18/2016	2/25/2016	9439	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/18/2016	2/25/2016	9439	D	1,2-Dichloroethane	107-06-2	PPTV	100	21.68 J
CEMRC	2/18/2016	2/25/2016	9439	D	Carbon Tetrachloride	56-23-5	PPTV	100	76.72 J
CEMRC	2/18/2016	2/25/2016	9439	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/18/2016	2/25/2016	9439	D	Chloroform	67-66-3	PPTV	100	13.74 J
CEMRC	2/18/2016	2/25/2016	9439	D	Methylene Chloride	75-09-2	PPTV	100	69.6 J
CEMRC	2/18/2016	2/25/2016	9439	D	Toluene	108-88-3	PPTV	100	204.62
CEMRC	2/18/2016	2/25/2016	9439	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	2/18/2016	2/25/2016	9438	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/18/2016	2/25/2016	9438	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9438	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9438	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9438	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9438	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9438	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9438	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9438	C	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	2/18/2016	2/25/2016	9438	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/18/2016	2/25/2016	9438	C	Butane	106-97-8	PPBV		3.54 NJ
CEMRC	2/18/2016	2/25/2016	9438	C	Dichlorodifluoromethane	75-71-8	PPBV		0.56 NJ
CEMRC	2/18/2016	2/25/2016	9438	C	Propane	74-98-6	PPBV		3.06 NJ
CEMRC	2/18/2016	2/25/2016	9438	C	Trichloromonofluoromethane	75-69-4	PPBV		0.5 NJ
CEMRC	2/18/2016	2/25/2016	9438	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/18/2016	2/25/2016	9438	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/18/2016	2/25/2016	9438	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/18/2016	2/25/2016	9438	C	1,2-Dichloroethane	107-06-2	PPTV	100	22.28 J
CEMRC	2/18/2016	2/25/2016	9438	C	Carbon Tetrachloride	56-23-5	PPTV	100	87.82 J
CEMRC	2/18/2016	2/25/2016	9438	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/18/2016	2/25/2016	9438	C	Chloroform	67-66-3	PPTV	100	15.62 J
CEMRC	2/18/2016	2/25/2016	9438	C	Methylene Chloride	75-09-2	PPTV	100	67.56 J
CEMRC	2/18/2016	2/25/2016	9438	C	Toluene	108-88-3	PPTV	100	204.46
CEMRC	2/18/2016	2/25/2016	9438	C	Trichloroethylene (1)	79-01-6	PPTV	100	U

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Notes:

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/23/2016	2/25/2016	9442	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9442	D	Butane	106-97-8	PPBV		2.74 NJ
CEMRC	2/23/2016	2/25/2016	9442	D	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	2/23/2016	2/25/2016	9442	D	Propane	74-98-6	PPBV		2.44 NJ
CEMRC	2/23/2016	2/25/2016	9442	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/23/2016	2/25/2016	9442	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/23/2016	2/25/2016	9442	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/23/2016	2/25/2016	9442	D	1,2-Dichloroethane	107-06-2	PPTV	100	23.46 J
CEMRC	2/23/2016	2/25/2016	9442	D	Carbon Tetrachloride	56-23-5	PPTV	100	79.76 J
CEMRC	2/23/2016	2/25/2016	9442	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/23/2016	2/25/2016	9442	D	Chloroform	67-66-3	PPTV	100	15.44 J
CEMRC	2/23/2016	2/25/2016	9442	D	Methylene Chloride	75-09-2	PPTV	100	72.58 J
CEMRC	2/23/2016	2/25/2016	9442	D	Toluene	108-88-3	PPTV	100	134.5
CEMRC	2/23/2016	2/25/2016	9442	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	2/23/2016	2/25/2016	9440	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U

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Notes:

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/23/2016	2/25/2016	9440	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9440	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9440	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9440	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.46
CEMRC	2/23/2016	2/25/2016	9440	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9440	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9440	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9440	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	2/23/2016	2/25/2016	9440	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	0.14 J
CEMRC	2/23/2016	2/25/2016	9440	C	Butane	106-97-8	PPBV		2.62 NJ
CEMRC	2/23/2016	2/25/2016	9440	C	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	2/23/2016	2/25/2016	9440	C	Pentane	109-66-0	PPBV		0.86 NJ
CEMRC	2/23/2016	2/25/2016	9440	C	Propane	74-98-6	PPBV		2.32 NJ
CEMRC	2/23/2016	2/25/2016	9440	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	67.98 J
CEMRC	2/23/2016	2/25/2016	9440	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/23/2016	2/25/2016	9440	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/23/2016	2/25/2016	9440	C	1,2-Dichloroethane	107-06-2	PPTV	100	22.64 J
CEMRC	2/23/2016	2/25/2016	9440	C	Carbon Tetrachloride	56-23-5	PPTV	100	451.64
CEMRC	2/23/2016	2/25/2016	9440	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/23/2016	2/25/2016	9440	C	Chloroform	67-66-3	PPTV	100	62.68 J
CEMRC	2/23/2016	2/25/2016	9440	C	Methylene Chloride	75-09-2	PPTV	100	86.92 J
CEMRC	2/23/2016	2/25/2016	9440	C	Toluene	108-88-3	PPTV	100	116.66
CEMRC	2/23/2016	2/25/2016	9440	C	Trichloroethylene (1)	79-01-6	PPTV	100	149.1

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Notes:

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/25/2016	2/25/2016	9446	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9446	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9446	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9446	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9446	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9446	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9446	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9446	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9446	D	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	2/25/2016	2/25/2016	9446	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9446	D	Butane	106-97-8	PPBV		7.1 NJ
CEMRC	2/25/2016	2/25/2016	9446	D	Butane, 2-methyl-	78-78-4	PPBV		3.32 NJ
CEMRC	2/25/2016	2/25/2016	9446	D	Isobutane	75-28-5	PPBV		4.22 NJ
CEMRC	2/25/2016	2/25/2016	9446	D	Pentane	109-66-0	PPBV		2.8 NJ
CEMRC	2/25/2016	2/25/2016	9446	D	Propane	74-98-6	PPBV		6.82 NJ
CEMRC	2/25/2016	2/25/2016	9446	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	2/25/2016	2/25/2016	9446	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/25/2016	2/25/2016	9446	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/25/2016	2/25/2016	9446	D	1,2-Dichloroethane	107-06-2	PPTV	100	24.86 J
CEMRC	2/25/2016	2/25/2016	9446	D	Carbon Tetrachloride	56-23-5	PPTV	100	71.56 J
CEMRC	2/25/2016	2/25/2016	9446	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/25/2016	2/25/2016	9446	D	Chloroform	67-66-3	PPTV	100	14.68 J
CEMRC	2/25/2016	2/25/2016	9446	D	Methylene Chloride	75-09-2	PPTV	100	62.24 J
CEMRC	2/25/2016	2/25/2016	9446	D	Toluene	108-88-3	PPTV	100	200.42

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/25/2016	2/25/2016	9446	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	2/25/2016	2/25/2016	9445	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9445	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9445	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9445	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9445	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9445	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9445	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9445	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9445	C	Toluene	108-88-3	PPBV	0.4	0.2 J
CEMRC	2/25/2016	2/25/2016	9445	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	2/25/2016	2/25/2016	9445	C	Butane	106-97-8	PPBV		7.72 NJ
CEMRC	2/25/2016	2/25/2016	9445	C	Butane, 2-methyl-	78-78-4	PPBV		3.58 NJ
CEMRC	2/25/2016	2/25/2016	9445	C	Isobutane	75-28-5	PPBV		4.54 NJ
CEMRC	2/25/2016	2/25/2016	9445	C	Pentane	109-66-0	PPBV		2.94 NJ
CEMRC	2/25/2016	2/25/2016	9445	C	Propane	74-98-6	PPBV		7.3 NJ
CEMRC	2/25/2016	2/25/2016	9445	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	14.82 J
CEMRC	2/25/2016	2/25/2016	9445	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	2/25/2016	2/25/2016	9445	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	2/25/2016	2/25/2016	9445	C	1,2-Dichloroethane	107-06-2	PPTV	100	28.92 J
CEMRC	2/25/2016	2/25/2016	9445	C	Carbon Tetrachloride	56-23-5	PPTV	100	121.9
CEMRC	2/25/2016	2/25/2016	9445	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	2/25/2016	2/25/2016	9445	C	Chloroform	67-66-3	PPTV	100	18.22 J
CEMRC	2/25/2016	2/25/2016	9445	C	Methylene Chloride	75-09-2	PPTV	100	69.14 J

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	2/25/2016	2/25/2016	9445	C	Toluene	108-88-3	PPTV	100	215.9
CEMRC	2/25/2016	2/25/2016	9445	C	Trichloroethylene (1)	79-01-6	PPTV	100	22.62 J
CEMRC	3/2/2016	3/24/2016	9448	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9448	D	Butane	106-97-8	PPBV		4.38 NJ
CEMRC	3/2/2016	3/24/2016	9448	D	Butane, 2-methyl-	78-78-4	PPBV		2.24 NJ
CEMRC	3/2/2016	3/24/2016	9448	D	Isobutane	75-28-5	PPBV		2.32 NJ
CEMRC	3/2/2016	3/24/2016	9448	D	Pentane	109-66-0	PPBV		1.92 NJ
CEMRC	3/2/2016	3/24/2016	9448	D	Propane	74-98-6	PPBV		3.8 NJ
CEMRC	3/2/2016	3/24/2016	9448	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	3/2/2016	3/24/2016	9448	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/2/2016	3/24/2016	9448	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/2/2016	3/24/2016	9448	D	1,2-Dichloroethane	107-06-2	PPTV	100	16.14 J
CEMRC	3/2/2016	3/24/2016	9448	D	Carbon Tetrachloride	56-23-5	PPTV	100	56.06 J
CEMRC	3/2/2016	3/24/2016	9448	D	Chlorobenzene	108-90-7	PPTV	100	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/2/2016	3/24/2016	9448	D	Chloroform	67-66-3	PPTV	100	11.44 J
CEMRC	3/2/2016	3/24/2016	9448	D	Methylene Chloride	75-09-2	PPTV	100	53.16 J
CEMRC	3/2/2016	3/24/2016	9448	D	Toluene	108-88-3	PPTV	100	122.32
CEMRC	3/2/2016	3/24/2016	9448	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/2/2016	3/24/2016	9447	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9447	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9447	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9447	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9447	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.16 J
CEMRC	3/2/2016	3/24/2016	9447	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9447	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9447	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9447	C	Toluene	108-88-3	PPBV	0.4	0.16 J
CEMRC	3/2/2016	3/24/2016	9447	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/2/2016	3/24/2016	9447	C	Butane	106-97-8	PPBV		4.44 NJ
CEMRC	3/2/2016	3/24/2016	9447	C	Butane, 2-methyl-	78-78-4	PPBV		2.34 NJ
CEMRC	3/2/2016	3/24/2016	9447	C	Dichlorodifluoromethane	75-71-8	PPBV		0.46 NJ
CEMRC	3/2/2016	3/24/2016	9447	C	Isobutane	75-28-5	PPBV		2.4 NJ
CEMRC	3/2/2016	3/24/2016	9447	C	Pentane	109-66-0	PPBV		1.88 NJ
CEMRC	3/2/2016	3/24/2016	9447	C	Propane	74-98-6	PPBV		3.92 NJ
CEMRC	3/2/2016	3/24/2016	9447	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	25 J
CEMRC	3/2/2016	3/24/2016	9447	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/2/2016	3/24/2016	9447	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/2/2016	3/24/2016	9447	C	1,2-Dichloroethane	107-06-2	PPTV	100	16.9 J

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Notes:

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/2/2016	3/24/2016	9447	C	Carbon Tetrachloride	56-23-5	PPTV	100	128.46
CEMRC	3/2/2016	3/24/2016	9447	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/2/2016	3/24/2016	9447	C	Chloroform	67-66-3	PPTV	100	15.32 J
CEMRC	3/2/2016	3/24/2016	9447	C	Methylene Chloride	75-09-2	PPTV	100	55.02 J
CEMRC	3/2/2016	3/24/2016	9447	C	Toluene	108-88-3	PPTV	100	140.56
CEMRC	3/2/2016	3/24/2016	9447	C	Trichloroethylene (1)	79-01-6	PPTV	100	29.78 J
CEMRC	3/3/2016	3/24/2016	9450	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9450	D	Butane	106-97-8	PPBV		3.18 NJ
CEMRC	3/3/2016	3/24/2016	9450	D	Butane, 2-methyl-	78-78-4	PPBV		1.74 NJ
CEMRC	3/3/2016	3/24/2016	9450	D	Dichlorodifluoromethane	75-71-8	PPBV		0.56 NJ
CEMRC	3/3/2016	3/24/2016	9450	D	Isobutane	75-28-5	PPBV		1.76 NJ
CEMRC	3/3/2016	3/24/2016	9450	D	Pentane	109-66-0	PPBV		1.24 NJ
CEMRC	3/3/2016	3/24/2016	9450	D	Propane	74-98-6	PPBV		3.12 NJ
CEMRC	3/3/2016	3/24/2016	9450	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/3/2016	3/24/2016	9450	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9450	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9450	D	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9450	D	Carbon Tetrachloride	56-23-5	PPTV	100	59.1 J
CEMRC	3/3/2016	3/24/2016	9450	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9450	D	Chloroform	67-66-3	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9450	D	Methylene Chloride	75-09-2	PPTV	100	52.76 J
CEMRC	3/3/2016	3/24/2016	9450	D	Toluene	108-88-3	PPTV	100	98.82 J
CEMRC	3/3/2016	3/24/2016	9450	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9449	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9449	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9449	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9449	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9449	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9449	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9449	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9449	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9449	C	Toluene	108-88-3	PPBV	0.4	0.16 J
CEMRC	3/3/2016	3/24/2016	9449	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/3/2016	3/24/2016	9449	C	Butane	106-97-8	PPBV		4.24 NJ
CEMRC	3/3/2016	3/24/2016	9449	C	Butane, 2-methyl-	78-78-4	PPBV		2.3 NJ
CEMRC	3/3/2016	3/24/2016	9449	C	Dichlorodifluoromethane	75-71-8	PPBV		0.58 NJ
CEMRC	3/3/2016	3/24/2016	9449	C	Isobutane	75-28-5	PPBV		2.36 NJ
CEMRC	3/3/2016	3/24/2016	9449	C	Pentane	109-66-0	PPBV		1.74 NJ

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/3/2016	3/24/2016	9449	C	Propane	74-98-6	PPBV		3.9 NJ
CEMRC	3/3/2016	3/24/2016	9449	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	13.32 J
CEMRC	3/3/2016	3/24/2016	9449	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9449	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9449	C	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9449	C	Carbon Tetrachloride	56-23-5	PPTV	100	99.66 J
CEMRC	3/3/2016	3/24/2016	9449	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/3/2016	3/24/2016	9449	C	Chloroform	67-66-3	PPTV	100	14.86 J
CEMRC	3/3/2016	3/24/2016	9449	C	Methylene Chloride	75-09-2	PPTV	100	55.82 J
CEMRC	3/3/2016	3/24/2016	9449	C	Toluene	108-88-3	PPTV	100	136.76
CEMRC	3/3/2016	3/24/2016	9449	C	Trichloroethylene (1)	79-01-6	PPTV	100	18.28 J
CEMRC	3/8/2016	3/30/2016	9453	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9453	D	Butane	106-97-8	PPBV		1.66 NJ
CEMRC	3/8/2016	3/30/2016	9453	D	Dichlorodifluoromethane	75-71-8	PPBV		0.56 NJ

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/8/2016	3/30/2016	9453	D	Pentane	109-66-0	PPBV		0.56 NJ
CEMRC	3/8/2016	3/30/2016	9453	D	Propane	74-98-6	PPBV		1.74 NJ
CEMRC	3/8/2016	3/30/2016	9453	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9453	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9453	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9453	D	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9453	D	Carbon Tetrachloride	56-23-5	PPTV	100	65.44 J
CEMRC	3/8/2016	3/30/2016	9453	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9453	D	Chloroform	67-66-3	PPTV	100	11.66 J
CEMRC	3/8/2016	3/30/2016	9453	D	Methylene Chloride	75-09-2	PPTV	100	53.2 J
CEMRC	3/8/2016	3/30/2016	9453	D	Toluene	108-88-3	PPTV	100	62.8 J
CEMRC	3/8/2016	3/30/2016	9453	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9451	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/8/2016	3/30/2016	9451	C	Butane	106-97-8	PPBV		3.22 NJ
CEMRC	3/8/2016	3/30/2016	9451	C	Butane, 2-methyl-	78-78-4	PPBV		1.74 NJ

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/8/2016	3/30/2016	9451	C	Dichlorodifluoromethane	75-71-8	PPBV		0.62 NJ
CEMRC	3/8/2016	3/30/2016	9451	C	Isobutane	75-28-5	PPBV		2.02 NJ
CEMRC	3/8/2016	3/30/2016	9451	C	Pentane	109-66-0	PPBV		1.16 NJ
CEMRC	3/8/2016	3/30/2016	9451	C	Propane	74-98-6	PPBV		3.12 NJ
CEMRC	3/8/2016	3/30/2016	9451	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9451	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9451	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9451	C	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9451	C	Carbon Tetrachloride	56-23-5	PPTV	100	92.32 J
CEMRC	3/8/2016	3/30/2016	9451	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/8/2016	3/30/2016	9451	C	Chloroform	67-66-3	PPTV	100	12.98 J
CEMRC	3/8/2016	3/30/2016	9451	C	Methylene Chloride	75-09-2	PPTV	100	61.68 J
CEMRC	3/8/2016	3/30/2016	9451	C	Toluene	108-88-3	PPTV	100	79.1 J
CEMRC	3/8/2016	3/30/2016	9451	C	Trichloroethylene (1)	79-01-6	PPTV	100	10.66 J
CEMRC	3/9/2016	3/30/2016	9455	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9455	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9455	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9455	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9455	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9455	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9455	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9455	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9455	D	Toluene	108-88-3	PPBV	0.4	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/9/2016	3/30/2016	9455	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9455	D	Butane	106-97-8	PPBV		4.84 NJ
CEMRC	3/9/2016	3/30/2016	9455	D	Butane, 2-methyl-	78-78-4	PPBV		2.5 NJ
CEMRC	3/9/2016	3/30/2016	9455	D	Dichlorodifluoromethane	75-71-8	PPBV		0.56 NJ
CEMRC	3/9/2016	3/30/2016	9455	D	Isobutane	75-28-5	PPBV		2.64 NJ
CEMRC	3/9/2016	3/30/2016	9455	D	Pentane	109-66-0	PPBV		2.06 NJ
CEMRC	3/9/2016	3/30/2016	9455	D	Propane	74-98-6	PPBV		4.24 NJ
CEMRC	3/9/2016	3/30/2016	9455	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	3/9/2016	3/30/2016	9455	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/9/2016	3/30/2016	9455	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/9/2016	3/30/2016	9455	D	1,2-Dichloroethane	107-06-2	PPTV	100	16.44 J
CEMRC	3/9/2016	3/30/2016	9455	D	Carbon Tetrachloride	56-23-5	PPTV	100	63.62 J
CEMRC	3/9/2016	3/30/2016	9455	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/9/2016	3/30/2016	9455	D	Chloroform	67-66-3	PPTV	100	11.02 J
CEMRC	3/9/2016	3/30/2016	9455	D	Methylene Chloride	75-09-2	PPTV	100	53.7 J
CEMRC	3/9/2016	3/30/2016	9455	D	Toluene	108-88-3	PPTV	100	89.1 J
CEMRC	3/9/2016	3/30/2016	9455	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/9/2016	3/30/2016	9454	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9454	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9454	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9454	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9454	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.18 J
CEMRC	3/9/2016	3/30/2016	9454	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9454	C	Chloroform	67-66-3	PPBV	0.4	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/9/2016	3/30/2016	9454	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9454	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9454	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/9/2016	3/30/2016	9454	C	Butane	106-97-8	PPBV		1.84 NJ
CEMRC	3/9/2016	3/30/2016	9454	C	Dichlorodifluoromethane	75-71-8	PPBV		0.56 NJ
CEMRC	3/9/2016	3/30/2016	9454	C	Isobutane	75-28-5	PPBV		1.02 NJ
CEMRC	3/9/2016	3/30/2016	9454	C	Propane	74-98-6	PPBV		1.92 NJ
CEMRC	3/9/2016	3/30/2016	9454	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	34.56 J
CEMRC	3/9/2016	3/30/2016	9454	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/9/2016	3/30/2016	9454	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/9/2016	3/30/2016	9454	C	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	3/9/2016	3/30/2016	9454	C	Carbon Tetrachloride	56-23-5	PPTV	100	163.76
CEMRC	3/9/2016	3/30/2016	9454	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/9/2016	3/30/2016	9454	C	Chloroform	67-66-3	PPTV	100	16.54 J
CEMRC	3/9/2016	3/30/2016	9454	C	Methylene Chloride	75-09-2	PPTV	100	59.46 J
CEMRC	3/9/2016	3/30/2016	9454	C	Toluene	108-88-3	PPTV	100	78.4 J
CEMRC	3/9/2016	3/30/2016	9454	C	Trichloroethylene (1)	79-01-6	PPTV	100	40.08 J
CEMRC	3/16/2016	3/30/2016	9457	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9457	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9457	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9457	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9457	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9457	D	Chlorobenzene	108-90-7	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/16/2016	3/30/2016	9457	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9457	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9457	D	Toluene	108-88-3	PPBV	0.4	0.16 J
CEMRC	3/16/2016	3/30/2016	9457	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9457	D	Butane	106-97-8	PPBV		6.32 NJ
CEMRC	3/16/2016	3/30/2016	9457	D	Butane, 2-methyl-	78-78-4	PPBV		2.98 NJ
CEMRC	3/16/2016	3/30/2016	9457	D	Dichlorodifluoromethane	75-71-8	PPBV		0.46 NJ
CEMRC	3/16/2016	3/30/2016	9457	D	Isobutane	75-28-5	PPBV		3.34 NJ
CEMRC	3/16/2016	3/30/2016	9457	D	Pentane	109-66-0	PPBV		2.6 NJ
CEMRC	3/16/2016	3/30/2016	9457	D	Propane	74-98-6	PPBV		5.8 NJ
CEMRC	3/16/2016	3/30/2016	9457	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	3/16/2016	3/30/2016	9457	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/16/2016	3/30/2016	9457	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/16/2016	3/30/2016	9457	D	1,2-Dichloroethane	107-06-2	PPTV	100	21.98 J
CEMRC	3/16/2016	3/30/2016	9457	D	Carbon Tetrachloride	56-23-5	PPTV	100	59.02 J
CEMRC	3/16/2016	3/30/2016	9457	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/16/2016	3/30/2016	9457	D	Chloroform	67-66-3	PPTV	100	10.86 J
CEMRC	3/16/2016	3/30/2016	9457	D	Methylene Chloride	75-09-2	PPTV	100	55.36 J
CEMRC	3/16/2016	3/30/2016	9457	D	Toluene	108-88-3	PPTV	100	146.18
CEMRC	3/16/2016	3/30/2016	9457	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/16/2016	3/30/2016	9456	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9456	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9456	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9456	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).

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NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/16/2016	3/30/2016	9456	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9456	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9456	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9456	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9456	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9456	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/16/2016	3/30/2016	9456	C	Butane	106-97-8	PPBV		4.14 NJ
CEMRC	3/16/2016	3/30/2016	9456	C	Butane, 2-methyl-	78-78-4	PPBV		2.18 NJ
CEMRC	3/16/2016	3/30/2016	9456	C	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	3/16/2016	3/30/2016	9456	C	Isobutane	75-28-5	PPBV		2.2 NJ
CEMRC	3/16/2016	3/30/2016	9456	C	Pentane	109-66-0	PPBV		1.66 NJ
CEMRC	3/16/2016	3/30/2016	9456	C	Propane	74-98-6	PPBV		3.96 NJ
CEMRC	3/16/2016	3/30/2016	9456	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	13.74 J
CEMRC	3/16/2016	3/30/2016	9456	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/16/2016	3/30/2016	9456	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/16/2016	3/30/2016	9456	C	1,2-Dichloroethane	107-06-2	PPTV	100	19.32 J
CEMRC	3/16/2016	3/30/2016	9456	C	Carbon Tetrachloride	56-23-5	PPTV	100	99.64 J
CEMRC	3/16/2016	3/30/2016	9456	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/16/2016	3/30/2016	9456	C	Chloroform	67-66-3	PPTV	100	13.04 J
CEMRC	3/16/2016	3/30/2016	9456	C	Methylene Chloride	75-09-2	PPTV	100	62.42 J
CEMRC	3/16/2016	3/30/2016	9456	C	Toluene	108-88-3	PPTV	100	121.6
CEMRC	3/16/2016	3/30/2016	9456	C	Trichloroethylene (1)	79-01-6	PPTV	100	15.72 J
CEMRC	3/17/2016	3/30/2016	9459	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/17/2016	3/30/2016	9459	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9459	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9459	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9459	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9459	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9459	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9459	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9459	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9459	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9459	D	Butane	106-97-8	PPBV		4.86 NJ
CEMRC	3/17/2016	3/30/2016	9459	D	Butane, 2-methyl-	78-78-4	PPBV		2.6 NJ
CEMRC	3/17/2016	3/30/2016	9459	D	Dichlorodifluoromethane	75-71-8	PPBV		0.5 NJ
CEMRC	3/17/2016	3/30/2016	9459	D	Isobutane	75-28-5	PPBV		2.64 NJ
CEMRC	3/17/2016	3/30/2016	9459	D	Pentane	109-66-0	PPBV		2.06 NJ
CEMRC	3/17/2016	3/30/2016	9459	D	Propane	74-98-6	PPBV		4.38 NJ
CEMRC	3/17/2016	3/30/2016	9459	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	3/17/2016	3/30/2016	9459	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/17/2016	3/30/2016	9459	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/17/2016	3/30/2016	9459	D	1,2-Dichloroethane	107-06-2	PPTV	100	19.26 J
CEMRC	3/17/2016	3/30/2016	9459	D	Carbon Tetrachloride	56-23-5	PPTV	100	59.62 J
CEMRC	3/17/2016	3/30/2016	9459	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/17/2016	3/30/2016	9459	D	Chloroform	67-66-3	PPTV	100	U
CEMRC	3/17/2016	3/30/2016	9459	D	Methylene Chloride	75-09-2	PPTV	100	56.6 J
CEMRC	3/17/2016	3/30/2016	9459	D	Toluene	108-88-3	PPTV	100	124.84

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/17/2016	3/30/2016	9459	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/17/2016	3/30/2016	9458	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9458	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9458	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9458	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9458	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.2 J
CEMRC	3/17/2016	3/30/2016	9458	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9458	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9458	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9458	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9458	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/17/2016	3/30/2016	9458	C	Butane	106-97-8	PPBV		4.96 NJ
CEMRC	3/17/2016	3/30/2016	9458	C	Butane, 2-methyl-	78-78-4	PPBV		2.56 NJ
CEMRC	3/17/2016	3/30/2016	9458	C	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	3/17/2016	3/30/2016	9458	C	Isobutane	75-28-5	PPBV		2.68 NJ
CEMRC	3/17/2016	3/30/2016	9458	C	Pentane	109-66-0	PPBV		2.06 NJ
CEMRC	3/17/2016	3/30/2016	9458	C	Propane	74-98-6	PPBV		4.52 NJ
CEMRC	3/17/2016	3/30/2016	9458	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	30.94 J
CEMRC	3/17/2016	3/30/2016	9458	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/17/2016	3/30/2016	9458	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/17/2016	3/30/2016	9458	C	1,2-Dichloroethane	107-06-2	PPTV	100	18.2 J
CEMRC	3/17/2016	3/30/2016	9458	C	Carbon Tetrachloride	56-23-5	PPTV	100	169.64
CEMRC	3/17/2016	3/30/2016	9458	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/17/2016	3/30/2016	9458	C	Chloroform	67-66-3	PPTV	100	20.84 J

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/17/2016	3/30/2016	9458	C	Methylene Chloride	75-09-2	PPTV	100	59.32 J
CEMRC	3/17/2016	3/30/2016	9458	C	Toluene	108-88-3	PPTV	100	148.02
CEMRC	3/17/2016	3/30/2016	9458	C	Trichloroethylene (1)	79-01-6	PPTV	100	42.04 J
CEMRC	3/22/2016	4/6/2016	9462	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9462	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9462	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9462	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9462	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9462	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9462	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9462	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9462	D	Toluene	108-88-3	PPBV	0.4	0.16 J
CEMRC	3/22/2016	4/6/2016	9462	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9462	D	Acetone	67-64-1	PPBV		0.76 NJ
CEMRC	3/22/2016	4/6/2016	9462	D	Butane	106-97-8	PPBV		4.22 NJ
CEMRC	3/22/2016	4/6/2016	9462	D	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	3/22/2016	4/6/2016	9462	D	Isobutane	75-28-5	PPBV		2.42 NJ
CEMRC	3/22/2016	4/6/2016	9462	D	Pentane	109-66-0	PPBV		1.86 NJ
CEMRC	3/22/2016	4/6/2016	9462	D	Propane	74-98-6	PPBV		3.8 NJ
CEMRC	3/22/2016	4/6/2016	9462	D	Trichloromonofluoromethane	75-69-4	PPBV		0.5 NJ
CEMRC	3/22/2016	4/6/2016	9462	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	3/22/2016	4/6/2016	9462	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/22/2016	4/6/2016	9462	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/22/2016	4/6/2016	9462	D	1,2-Dichloroethane	107-06-2	PPTV	100	18.3 J
CEMRC	3/22/2016	4/6/2016	9462	D	Carbon Tetrachloride	56-23-5	PPTV	100	62.24 J
CEMRC	3/22/2016	4/6/2016	9462	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/22/2016	4/6/2016	9462	D	Chloroform	67-66-3	PPTV	100	12.1 J
CEMRC	3/22/2016	4/6/2016	9462	D	Methylene Chloride	75-09-2	PPTV	100	67.34 J
CEMRC	3/22/2016	4/6/2016	9462	D	Toluene	108-88-3	PPTV	100	148.74
CEMRC	3/22/2016	4/6/2016	9462	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/22/2016	4/6/2016	9460	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9460	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9460	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9460	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9460	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.16 J
CEMRC	3/22/2016	4/6/2016	9460	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9460	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9460	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9460	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9460	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/22/2016	4/6/2016	9460	C	Dichlorodifluoromethane	75-71-8	PPBV		0.52 NJ
CEMRC	3/22/2016	4/6/2016	9460	C	Isobutane	75-28-5	PPBV		2 NJ
CEMRC	3/22/2016	4/6/2016	9460	C	Pentane	109-66-0	PPBV		1.52 NJ
CEMRC	3/22/2016	4/6/2016	9460	C	Propane	74-98-6	PPBV		3.22 NJ
CEMRC	3/22/2016	4/6/2016	9460	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	17.82 J
CEMRC	3/22/2016	4/6/2016	9460	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/22/2016	4/6/2016	9460	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/22/2016	4/6/2016	9460	C	1,2-Dichloroethane	107-06-2	PPTV	100	16.1 J
CEMRC	3/22/2016	4/6/2016	9460	C	Carbon Tetrachloride	56-23-5	PPTV	100	137.34
CEMRC	3/22/2016	4/6/2016	9460	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/22/2016	4/6/2016	9460	C	Chloroform	67-66-3	PPTV	100	21.74 J
CEMRC	3/22/2016	4/6/2016	9460	C	Methylene Chloride	75-09-2	PPTV	100	63.56 J
CEMRC	3/22/2016	4/6/2016	9460	C	Toluene	108-88-3	PPTV	100	114.34
CEMRC	3/22/2016	4/6/2016	9460	C	Trichloroethylene (1)	79-01-6	PPTV	100	37.54 J
CEMRC	3/23/2016	4/6/2016	9464	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9464	D	Butane	106-97-8	PPBV		2.9 NJ
CEMRC	3/23/2016	4/6/2016	9464	D	Dichlorodifluoromethane	75-71-8	PPBV		0.52 NJ
CEMRC	3/23/2016	4/6/2016	9464	D	Isobutane	75-28-5	PPBV		1.72 NJ
CEMRC	3/23/2016	4/6/2016	9464	D	Pentane	109-66-0	PPBV		1.16 NJ
CEMRC	3/23/2016	4/6/2016	9464	D	Propane	74-98-6	PPBV		2.92 NJ
CEMRC	3/23/2016	4/6/2016	9464	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U

Qualifiers:

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Notes:

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/23/2016	4/6/2016	9464	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9464	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9464	D	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9464	D	Carbon Tetrachloride	56-23-5	PPTV	100	59.48 J
CEMRC	3/23/2016	4/6/2016	9464	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9464	D	Chloroform	67-66-3	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9464	D	Methylene Chloride	75-09-2	PPTV	100	70.8 J
CEMRC	3/23/2016	4/6/2016	9464	D	Toluene	108-88-3	PPTV	100	68.02 J
CEMRC	3/23/2016	4/6/2016	9464	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9463	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/23/2016	4/6/2016	9463	C	Butane	106-97-8	PPBV		2.62 NJ
CEMRC	3/23/2016	4/6/2016	9463	C	Dichlorodifluoromethane	75-71-8	PPBV		0.5 NJ
CEMRC	3/23/2016	4/6/2016	9463	C	Isobutane	75-28-5	PPBV		1.52 NJ
CEMRC	3/23/2016	4/6/2016	9463	C	Pentane	109-66-0	PPBV		1.04 NJ
CEMRC	3/23/2016	4/6/2016	9463	C	Propane	74-98-6	PPBV		2.46 NJ

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/23/2016	4/6/2016	9463	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9463	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9463	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9463	C	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9463	C	Carbon Tetrachloride	56-23-5	PPTV	100	76.4 J
CEMRC	3/23/2016	4/6/2016	9463	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/23/2016	4/6/2016	9463	C	Chloroform	67-66-3	PPTV	100	12.08 J
CEMRC	3/23/2016	4/6/2016	9463	C	Methylene Chloride	75-09-2	PPTV	100	63.32 J
CEMRC	3/23/2016	4/6/2016	9463	C	Toluene	108-88-3	PPTV	100	69.66 J
CEMRC	3/23/2016	4/6/2016	9463	C	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/30/2016	4/15/2016	9466	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9466	D	Butane	106-97-8	PPBV		4.12 NJ
CEMRC	3/30/2016	4/15/2016	9466	D	Dichlorodifluoromethane	75-71-8	PPBV		0.52 NJ
CEMRC	3/30/2016	4/15/2016	9466	D	Pentane	109-66-0	PPBV		1.88 NJ

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/30/2016	4/15/2016	9466	D	Propane	74-98-6	PPBV		4.2 NJ
CEMRC	3/30/2016	4/15/2016	9466	D	Trichloromonofluoromethane	75-69-4	PPBV		0.52 NJ
CEMRC	3/30/2016	4/15/2016	9466	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	3/30/2016	4/15/2016	9466	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/30/2016	4/15/2016	9466	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/30/2016	4/15/2016	9466	D	1,2-Dichloroethane	107-06-2	PPTV	100	18.18 J
CEMRC	3/30/2016	4/15/2016	9466	D	Carbon Tetrachloride	56-23-5	PPTV	100	62.9 J
CEMRC	3/30/2016	4/15/2016	9466	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/30/2016	4/15/2016	9466	D	Chloroform	67-66-3	PPTV	100	11.66 J
CEMRC	3/30/2016	4/15/2016	9466	D	Methylene Chloride	75-09-2	PPTV	100	58.78 J
CEMRC	3/30/2016	4/15/2016	9466	D	Toluene	108-88-3	PPTV	100	131.46
CEMRC	3/30/2016	4/15/2016	9466	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	3/30/2016	4/15/2016	9465	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9465	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9465	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9465	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9465	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.14 J
CEMRC	3/30/2016	4/15/2016	9465	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9465	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9465	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9465	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9465	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/30/2016	4/15/2016	9465	C	Butane	106-97-8	PPBV		3.32 NJ
CEMRC	3/30/2016	4/15/2016	9465	C	Dichlorodifluoromethane	75-71-8	PPBV		0.52 NJ

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	3/30/2016	4/15/2016	9465	C	Pentane	109-66-0	PPBV		1.48 NJ
CEMRC	3/30/2016	4/15/2016	9465	C	Propane	74-98-6	PPBV		3.36 NJ
CEMRC	3/30/2016	4/15/2016	9465	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	17.1 J
CEMRC	3/30/2016	4/15/2016	9465	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	3/30/2016	4/15/2016	9465	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	3/30/2016	4/15/2016	9465	C	1,2-Dichloroethane	107-06-2	PPTV	100	16.32 J
CEMRC	3/30/2016	4/15/2016	9465	C	Carbon Tetrachloride	56-23-5	PPTV	100	128.46
CEMRC	3/30/2016	4/15/2016	9465	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	3/30/2016	4/15/2016	9465	C	Chloroform	67-66-3	PPTV	100	19.2 J
CEMRC	3/30/2016	4/15/2016	9465	C	Methylene Chloride	75-09-2	PPTV	100	56.66 J
CEMRC	3/30/2016	4/15/2016	9465	C	Toluene	108-88-3	PPTV	100	110.74
CEMRC	3/30/2016	4/15/2016	9465	C	Trichloroethylene (1)	79-01-6	PPTV	100	31.06 J
CEMRC	4/1/2016	4/15/2016	9470	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9470	D	Acetone	67-64-1	PPBV		0.76 NJ

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/1/2016	4/15/2016	9470	D	Butane	106-97-8	PPBV		1.2 NJ
CEMRC	4/1/2016	4/15/2016	9470	D	Dichlorodifluoromethane	75-71-8	PPBV		0.7 NJ
CEMRC	4/1/2016	4/15/2016	9470	D	Isobutane	75-28-5	PPBV		0.96 NJ
CEMRC	4/1/2016	4/15/2016	9470	D	Propane	74-98-6	PPBV		1.42 NJ
CEMRC	4/1/2016	4/15/2016	9470	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/1/2016	4/15/2016	9470	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/1/2016	4/15/2016	9470	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/1/2016	4/15/2016	9470	D	1,2-Dichloroethane	107-06-2	PPTV	100	17.4 J
CEMRC	4/1/2016	4/15/2016	9470	D	Carbon Tetrachloride	56-23-5	PPTV	100	77.06 J
CEMRC	4/1/2016	4/15/2016	9470	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/1/2016	4/15/2016	9470	D	Chloroform	67-66-3	PPTV	100	13.74 J
CEMRC	4/1/2016	4/15/2016	9470	D	Methylene Chloride	75-09-2	PPTV	100	68.32 J
CEMRC	4/1/2016	4/15/2016	9470	D	Toluene	108-88-3	PPTV	100	53.98 J
CEMRC	4/1/2016	4/15/2016	9470	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	4/1/2016	4/15/2016	9469	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9469	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9469	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9469	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9469	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9469	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9469	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9469	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9469	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	4/1/2016	4/15/2016	9469	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/1/2016	4/15/2016	9469	C	Acetone	67-64-1	PPBV		0.84 NJ
CEMRC	4/1/2016	4/15/2016	9469	C	Butane	106-97-8	PPBV		1.1 NJ
CEMRC	4/1/2016	4/15/2016	9469	C	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	4/1/2016	4/15/2016	9469	C	Propane	74-98-6	PPBV		1.3 NJ
CEMRC	4/1/2016	4/15/2016	9469	C	Trichloromonofluoromethane	75-69-4	PPBV		0.72 NJ
CEMRC	4/1/2016	4/15/2016	9469	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	10.32 J
CEMRC	4/1/2016	4/15/2016	9469	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/1/2016	4/15/2016	9469	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/1/2016	4/15/2016	9469	C	1,2-Dichloroethane	107-06-2	PPTV	100	15.42 J
CEMRC	4/1/2016	4/15/2016	9469	C	Carbon Tetrachloride	56-23-5	PPTV	100	84.22 J
CEMRC	4/1/2016	4/15/2016	9469	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/1/2016	4/15/2016	9469	C	Chloroform	67-66-3	PPTV	100	14.3 J
CEMRC	4/1/2016	4/15/2016	9469	C	Methylene Chloride	75-09-2	PPTV	100	63.32 J
CEMRC	4/1/2016	4/15/2016	9469	C	Toluene	108-88-3	PPTV	100	57.54 J
CEMRC	4/1/2016	4/15/2016	9469	C	Trichloroethylene (1)	79-01-6	PPTV	100	10.76 J
CEMRC	4/5/2016	4/28/2016	9472	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9472	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9472	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9472	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9472	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9472	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9472	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9472	D	Methylene Chloride	75-09-2	PPBV	0.4	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/5/2016	4/28/2016	9472	D	Toluene	108-88-3	PPBV	0.4	0.16 J
CEMRC	4/5/2016	4/28/2016	9472	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9472	D	Acetone	67-64-1	PPBV		0.54 NJ
CEMRC	4/5/2016	4/28/2016	9472	D	Butane	106-97-8	PPBV		4.18 NJ
CEMRC	4/5/2016	4/28/2016	9472	D	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	4/5/2016	4/28/2016	9472	D	Isobutane	75-28-5	PPBV		2.36 NJ
CEMRC	4/5/2016	4/28/2016	9472	D	Pentane	109-66-0	PPBV		1.76 NJ
CEMRC	4/5/2016	4/28/2016	9472	D	Propane	74-98-6	PPBV		3.98 NJ
CEMRC	4/5/2016	4/28/2016	9472	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/5/2016	4/28/2016	9472	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/5/2016	4/28/2016	9472	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/5/2016	4/28/2016	9472	D	1,2-Dichloroethane	107-06-2	PPTV	100	19.88 J
CEMRC	4/5/2016	4/28/2016	9472	D	Carbon Tetrachloride	56-23-5	PPTV	100	93.24 J
CEMRC	4/5/2016	4/28/2016	9472	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/5/2016	4/28/2016	9472	D	Chloroform	67-66-3	PPTV	100	14.6 J
CEMRC	4/5/2016	4/28/2016	9472	D	Methylene Chloride	75-09-2	PPTV	100	70.92 J
CEMRC	4/5/2016	4/28/2016	9472	D	Toluene	108-88-3	PPTV	100	164.46
CEMRC	4/5/2016	4/28/2016	9472	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	4/5/2016	4/28/2016	9471	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9471	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9471	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9471	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9471	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9471	C	Chlorobenzene	108-90-7	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/5/2016	4/28/2016	9471	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9471	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9471	C	Toluene	108-88-3	PPBV	0.4	0.22 J
CEMRC	4/5/2016	4/28/2016	9471	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/5/2016	4/28/2016	9471	C	Acetone	67-64-1	PPBV		0.5 NJ
CEMRC	4/5/2016	4/28/2016	9471	C	Butane	106-97-8	PPBV		4.86 NJ
CEMRC	4/5/2016	4/28/2016	9471	C	Dichlorodifluoromethane	75-71-8	PPBV		0.56 NJ
CEMRC	4/5/2016	4/28/2016	9471	C	Isobutane	75-28-5	PPBV		2.74 NJ
CEMRC	4/5/2016	4/28/2016	9471	C	Pentane	109-66-0	PPBV		1.96 NJ
CEMRC	4/5/2016	4/28/2016	9471	C	Trichloromonofluoromethane	75-69-4	PPBV		0.66 NJ
CEMRC	4/5/2016	4/28/2016	9471	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	21.42 J
CEMRC	4/5/2016	4/28/2016	9471	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	42.54 J
CEMRC	4/5/2016	4/28/2016	9471	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/5/2016	4/28/2016	9471	C	1,2-Dichloroethane	107-06-2	PPTV	100	27.82 J
CEMRC	4/5/2016	4/28/2016	9471	C	Carbon Tetrachloride	56-23-5	PPTV	100	123.22
CEMRC	4/5/2016	4/28/2016	9471	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/5/2016	4/28/2016	9471	C	Chloroform	67-66-3	PPTV	100	25.9 J
CEMRC	4/5/2016	4/28/2016	9471	C	Methylene Chloride	75-09-2	PPTV	100	85.1 J
CEMRC	4/5/2016	4/28/2016	9471	C	Toluene	108-88-3	PPTV	100	218.76
CEMRC	4/5/2016	4/28/2016	9471	C	Trichloroethylene (1)	79-01-6	PPTV	100	24.3 J
CEMRC	4/6/2016	4/28/2016	9475	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9475	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9475	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/6/2016	4/28/2016	9475	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9475	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9475	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9475	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9475	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9475	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9475	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9475	D	Acetone	67-64-1	PPBV		0.98 NJ
CEMRC	4/6/2016	4/28/2016	9475	D	Butane	106-97-8	PPBV		3.36 NJ
CEMRC	4/6/2016	4/28/2016	9475	D	Dichlorodifluoromethane	75-71-8	PPBV		0.5 NJ
CEMRC	4/6/2016	4/28/2016	9475	D	Isobutane	75-28-5	PPBV		1.84 NJ
CEMRC	4/6/2016	4/28/2016	9475	D	Pentane	109-66-0	PPBV		1.44 NJ
CEMRC	4/6/2016	4/28/2016	9475	D	Propane	74-98-6	PPBV		3.08 NJ
CEMRC	4/6/2016	4/28/2016	9475	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/6/2016	4/28/2016	9475	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/6/2016	4/28/2016	9475	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/6/2016	4/28/2016	9475	D	1,2-Dichloroethane	107-06-2	PPTV	100	19.62 J
CEMRC	4/6/2016	4/28/2016	9475	D	Carbon Tetrachloride	56-23-5	PPTV	100	87.44 J
CEMRC	4/6/2016	4/28/2016	9475	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/6/2016	4/28/2016	9475	D	Chloroform	67-66-3	PPTV	100	15.54 J
CEMRC	4/6/2016	4/28/2016	9475	D	Methylene Chloride	75-09-2	PPTV	100	68.1 J
CEMRC	4/6/2016	4/28/2016	9475	D	Toluene	108-88-3	PPTV	100	115.26
CEMRC	4/6/2016	4/28/2016	9475	D	Trichloroethylene (1)	79-01-6	PPTV	100	30.52 J
CEMRC	4/6/2016	4/28/2016	9474	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/6/2016	4/28/2016	9474	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9474	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9474	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9474	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9474	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9474	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9474	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9474	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9474	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/6/2016	4/28/2016	9474	C	Butane	106-97-8	PPBV		2.82 NJ
CEMRC	4/6/2016	4/28/2016	9474	C	Dichlorodifluoromethane	75-71-8	PPBV		0.46 NJ
CEMRC	4/6/2016	4/28/2016	9474	C	Pentane	109-66-0	PPBV		1.16 NJ
CEMRC	4/6/2016	4/28/2016	9474	C	Propane	74-98-6	PPBV		2.74 NJ
CEMRC	4/6/2016	4/28/2016	9474	C	Trichloromonofluoromethane	75-69-4	PPBV		0.44 NJ
CEMRC	4/6/2016	4/28/2016	9474	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/6/2016	4/28/2016	9474	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/6/2016	4/28/2016	9474	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/6/2016	4/28/2016	9474	C	1,2-Dichloroethane	107-06-2	PPTV	100	17.92 J
CEMRC	4/6/2016	4/28/2016	9474	C	Carbon Tetrachloride	56-23-5	PPTV	100	85.02 J
CEMRC	4/6/2016	4/28/2016	9474	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/6/2016	4/28/2016	9474	C	Chloroform	67-66-3	PPTV	100	13.88 J
CEMRC	4/6/2016	4/28/2016	9474	C	Methylene Chloride	75-09-2	PPTV	100	69.48 J
CEMRC	4/6/2016	4/28/2016	9474	C	Toluene	108-88-3	PPTV	100	114.18
CEMRC	4/6/2016	4/28/2016	9474	C	Trichloroethylene (1)	79-01-6	PPTV	100	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/13/2016	4/28/2016	9477	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9477	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9477	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9477	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9477	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9477	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9477	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9477	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9477	D	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	4/13/2016	4/28/2016	9477	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9477	D	Acetone	67-64-1	PPBV		0.48 NJ
CEMRC	4/13/2016	4/28/2016	9477	D	Butane	106-97-8	PPBV		3.64 NJ
CEMRC	4/13/2016	4/28/2016	9477	D	Dichlorodifluoromethane	75-71-8	PPBV		0.46 NJ
CEMRC	4/13/2016	4/28/2016	9477	D	Isobutane	75-28-5	PPBV		2.52 NJ
CEMRC	4/13/2016	4/28/2016	9477	D	Propane	74-98-6	PPBV		3.72 NJ
CEMRC	4/13/2016	4/28/2016	9477	D	Trichloromonofluoromethane	75-69-4	PPBV		0.46 NJ
CEMRC	4/13/2016	4/28/2016	9477	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/13/2016	4/28/2016	9477	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/13/2016	4/28/2016	9477	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/13/2016	4/28/2016	9477	D	1,2-Dichloroethane	107-06-2	PPTV	100	21.98 J
CEMRC	4/13/2016	4/28/2016	9477	D	Carbon Tetrachloride	56-23-5	PPTV	100	80.98 J
CEMRC	4/13/2016	4/28/2016	9477	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/13/2016	4/28/2016	9477	D	Chloroform	67-66-3	PPTV	100	15.44 J

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/13/2016	4/28/2016	9477	D	Methylene Chloride	75-09-2	PPTV	100	63.02 J
CEMRC	4/13/2016	4/28/2016	9477	D	Toluene	108-88-3	PPTV	100	180.52
CEMRC	4/13/2016	4/28/2016	9477	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	4/13/2016	4/28/2016	9476	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9476	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9476	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9476	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9476	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9476	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9476	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9476	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9476	C	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	4/13/2016	4/28/2016	9476	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/13/2016	4/28/2016	9476	C	Acetone	67-64-1	PPBV		0.52 NJ
CEMRC	4/13/2016	4/28/2016	9476	C	Butane	106-97-8	PPBV		3.74 NJ
CEMRC	4/13/2016	4/28/2016	9476	C	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	4/13/2016	4/28/2016	9476	C	Pentane	109-66-0	PPBV		1.42 NJ
CEMRC	4/13/2016	4/28/2016	9476	C	Propane	74-98-6	PPBV		3.86 NJ
CEMRC	4/13/2016	4/28/2016	9476	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/13/2016	4/28/2016	9476	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/13/2016	4/28/2016	9476	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/13/2016	4/28/2016	9476	C	1,2-Dichloroethane	107-06-2	PPTV	100	23 J
CEMRC	4/13/2016	4/28/2016	9476	C	Carbon Tetrachloride	56-23-5	PPTV	100	92.9 J
CEMRC	4/13/2016	4/28/2016	9476	C	Chlorobenzene	108-90-7	PPTV	100	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/13/2016	4/28/2016	9476	C	Chloroform	67-66-3	PPTV	100	16.24 J
CEMRC	4/13/2016	4/28/2016	9476	C	Methylene Chloride	75-09-2	PPTV	100	71.5 J
CEMRC	4/13/2016	4/28/2016	9476	C	Toluene	108-88-3	PPTV	100	196.76
CEMRC	4/13/2016	4/28/2016	9476	C	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	4/14/2016	4/28/2016	9479	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9479	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9479	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9479	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9479	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9479	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9479	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9479	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9479	D	Toluene	108-88-3	PPBV	0.4	0.24 J
CEMRC	4/14/2016	4/28/2016	9479	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9479	D	Acetone	67-64-1	PPBV		0.6 NJ
CEMRC	4/14/2016	4/28/2016	9479	D	Butane	106-97-8	PPBV		5.22 NJ
CEMRC	4/14/2016	4/28/2016	9479	D	Dichlorodifluoromethane	75-71-8	PPBV		0.46 NJ
CEMRC	4/14/2016	4/28/2016	9479	D	Isobutane	75-28-5	PPBV		3.16 NJ
CEMRC	4/14/2016	4/28/2016	9479	D	Pentane	109-66-0	PPBV		2.24 NJ
CEMRC	4/14/2016	4/28/2016	9479	D	Propane	74-98-6	PPBV		4.64 NJ
CEMRC	4/14/2016	4/28/2016	9479	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/14/2016	4/28/2016	9479	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/14/2016	4/28/2016	9479	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/14/2016	4/28/2016	9479	D	1,2-Dichloroethane	107-06-2	PPTV	100	22.06 J
CEMRC	4/14/2016	4/28/2016	9479	D	Carbon Tetrachloride	56-23-5	PPTV	100	81.64 J
CEMRC	4/14/2016	4/28/2016	9479	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/14/2016	4/28/2016	9479	D	Chloroform	67-66-3	PPTV	100	13.12 J
CEMRC	4/14/2016	4/28/2016	9479	D	Methylene Chloride	75-09-2	PPTV	100	66.16 J
CEMRC	4/14/2016	4/28/2016	9479	D	Toluene	108-88-3	PPTV	100	261.7
CEMRC	4/14/2016	4/28/2016	9479	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	4/14/2016	4/28/2016	9478	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9478	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9478	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9478	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9478	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9478	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9478	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9478	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9478	C	Toluene	108-88-3	PPBV	0.4	0.24 J
CEMRC	4/14/2016	4/28/2016	9478	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/14/2016	4/28/2016	9478	C	Acetone	67-64-1	PPBV		0.52 NJ
CEMRC	4/14/2016	4/28/2016	9478	C	Butane	106-97-8	PPBV		5.72 NJ
CEMRC	4/14/2016	4/28/2016	9478	C	Pentane	109-66-0	PPBV		2.54 NJ
CEMRC	4/14/2016	4/28/2016	9478	C	Propane	74-98-6	PPBV		4.9 NJ
CEMRC	4/14/2016	4/28/2016	9478	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	13.02 J
CEMRC	4/14/2016	4/28/2016	9478	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/14/2016	4/28/2016	9478	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U

Qualifiers:

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/14/2016	4/28/2016	9478	C	1,2-Dichloroethane	107-06-2	PPTV	100	22.78 J
CEMRC	4/14/2016	4/28/2016	9478	C	Carbon Tetrachloride	56-23-5	PPTV	100	116.52
CEMRC	4/14/2016	4/28/2016	9478	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/14/2016	4/28/2016	9478	C	Chloroform	67-66-3	PPTV	100	18.32 J
CEMRC	4/14/2016	4/28/2016	9478	C	Methylene Chloride	75-09-2	PPTV	100	62.1 J
CEMRC	4/14/2016	4/28/2016	9478	C	Toluene	108-88-3	PPTV	100	253.58
CEMRC	4/14/2016	4/28/2016	9478	C	Trichloroethylene (1)	79-01-6	PPTV	100	22.72 J
CEMRC	4/19/2016	5/9/2016	9482	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9482	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9482	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9482	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9482	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9482	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9482	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9482	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9482	D	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	4/19/2016	5/9/2016	9482	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9482	D	Acetone	67-64-1	PPBV		0.44 NJ
CEMRC	4/19/2016	5/9/2016	9482	D	Butane	106-97-8	PPBV		3.42 NJ
CEMRC	4/19/2016	5/9/2016	9482	D	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	4/19/2016	5/9/2016	9482	D	Pentane	109-66-0	PPBV		1.4 NJ
CEMRC	4/19/2016	5/9/2016	9482	D	Propane	74-98-6	PPBV		3.1 NJ
CEMRC	4/19/2016	5/9/2016	9482	D	Trichloromonofluoromethane	75-69-4	PPBV		0.52 NJ

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/19/2016	5/9/2016	9482	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/19/2016	5/9/2016	9482	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/19/2016	5/9/2016	9482	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/19/2016	5/9/2016	9482	D	1,2-Dichloroethane	107-06-2	PPTV	100	20.84 J
CEMRC	4/19/2016	5/9/2016	9482	D	Carbon Tetrachloride	56-23-5	PPTV	100	89.2 J
CEMRC	4/19/2016	5/9/2016	9482	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/19/2016	5/9/2016	9482	D	Chloroform	67-66-3	PPTV	100	16.76 J
CEMRC	4/19/2016	5/9/2016	9482	D	Methylene Chloride	75-09-2	PPTV	100	78.26 J
CEMRC	4/19/2016	5/9/2016	9482	D	Toluene	108-88-3	PPTV	100	155.3
CEMRC	4/19/2016	5/9/2016	9482	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	4/19/2016	5/9/2016	9480	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9480	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9480	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9480	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9480	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.44
CEMRC	4/19/2016	5/9/2016	9480	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9480	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9480	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/19/2016	5/9/2016	9480	C	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	4/19/2016	5/9/2016	9480	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	0.12 J
CEMRC	4/19/2016	5/9/2016	9480	C	Acetone	67-64-1	PPBV		0.48 NJ
CEMRC	4/19/2016	5/9/2016	9480	C	Butane	106-97-8	PPBV		3.82 NJ
CEMRC	4/19/2016	5/9/2016	9480	C	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	4/19/2016	5/9/2016	9480	C	Pentane	109-66-0	PPBV		1.54 NJ

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/19/2016	5/9/2016	9480	C	Propane	74-98-6	PPBV		3.44 NJ
CEMRC	4/19/2016	5/9/2016	9480	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	97.86 J
CEMRC	4/19/2016	5/9/2016	9480	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	23.98 J
CEMRC	4/19/2016	5/9/2016	9480	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/19/2016	5/9/2016	9480	C	1,2-Dichloroethane	107-06-2	PPTV	100	25.98 J
CEMRC	4/19/2016	5/9/2016	9480	C	Carbon Tetrachloride	56-23-5	PPTV	100	418.44
CEMRC	4/19/2016	5/9/2016	9480	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/19/2016	5/9/2016	9480	C	Chloroform	67-66-3	PPTV	100	35.76 J
CEMRC	4/19/2016	5/9/2016	9480	C	Methylene Chloride	75-09-2	PPTV	100	88.82 J
CEMRC	4/19/2016	5/9/2016	9480	C	Toluene	108-88-3	PPTV	100	168.72
CEMRC	4/19/2016	5/9/2016	9480	C	Trichloroethylene (1)	79-01-6	PPTV	100	128.22
CEMRC	4/20/2016	5/9/2016	9484	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9484	D	Acetone	67-64-1	PPBV		0.52 NJ
CEMRC	4/20/2016	5/9/2016	9484	D	Butane	106-97-8	PPBV		2.94 NJ

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/20/2016	5/9/2016	9484	D	Dichlorodifluoromethane	75-71-8	PPBV		0.64 NJ
CEMRC	4/20/2016	5/9/2016	9484	D	Pentane	109-66-0	PPBV		1.1 NJ
CEMRC	4/20/2016	5/9/2016	9484	D	Propane	74-98-6	PPBV		2.88 NJ
CEMRC	4/20/2016	5/9/2016	9484	D	Trichloromonofluoromethane	75-69-4	PPBV		0.5 NJ
CEMRC	4/20/2016	5/9/2016	9484	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/20/2016	5/9/2016	9484	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/20/2016	5/9/2016	9484	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/20/2016	5/9/2016	9484	D	1,2-Dichloroethane	107-06-2	PPTV	100	20.56 J
CEMRC	4/20/2016	5/9/2016	9484	D	Carbon Tetrachloride	56-23-5	PPTV	100	83.34 J
CEMRC	4/20/2016	5/9/2016	9484	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/20/2016	5/9/2016	9484	D	Chloroform	67-66-3	PPTV	100	15.2 J
CEMRC	4/20/2016	5/9/2016	9484	D	Methylene Chloride	75-09-2	PPTV	100	72.84 J
CEMRC	4/20/2016	5/9/2016	9484	D	Toluene	108-88-3	PPTV	100	119.26
CEMRC	4/20/2016	5/9/2016	9484	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	4/20/2016	5/9/2016	9483	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	0.12 J
CEMRC	4/20/2016	5/9/2016	9483	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9483	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9483	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9483	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.86
CEMRC	4/20/2016	5/9/2016	9483	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9483	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9483	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9483	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	4/20/2016	5/9/2016	9483	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	0.38 J

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/20/2016	5/9/2016	9483	C	Acetone	67-64-1	PPBV		0.58 NJ
CEMRC	4/20/2016	5/9/2016	9483	C	Butane	106-97-8	PPBV		2.64 NJ
CEMRC	4/20/2016	5/9/2016	9483	C	Dichlorodifluoromethane	75-71-8	PPBV		0.6 NJ
CEMRC	4/20/2016	5/9/2016	9483	C	Isobutane	75-28-5	PPBV		1.62 NJ
CEMRC	4/20/2016	5/9/2016	9483	C	Pentane	109-66-0	PPBV		1 NJ
CEMRC	4/20/2016	5/9/2016	9483	C	Propane	74-98-6	PPBV		2.6 NJ
CEMRC	4/20/2016	5/9/2016	9483	C	Trichloromonofluoromethane	75-69-4	PPBV		0.46 NJ
CEMRC	4/20/2016	5/9/2016	9483	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	131.36
CEMRC	4/20/2016	5/9/2016	9483	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/20/2016	5/9/2016	9483	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/20/2016	5/9/2016	9483	C	1,2-Dichloroethane	107-06-2	PPTV	100	19.64 J
CEMRC	4/20/2016	5/9/2016	9483	C	Carbon Tetrachloride	56-23-5	PPTV	100	856.22
CEMRC	4/20/2016	5/9/2016	9483	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/20/2016	5/9/2016	9483	C	Chloroform	67-66-3	PPTV	100	119.26
CEMRC	4/20/2016	5/9/2016	9483	C	Methylene Chloride	75-09-2	PPTV	100	88.74 J
CEMRC	4/20/2016	5/9/2016	9483	C	Toluene	108-88-3	PPTV	100	106.26
CEMRC	4/20/2016	5/9/2016	9483	C	Trichloroethylene (1)	79-01-6	PPTV	100	355.72
CEMRC	4/28/2016	5/9/2016	9488	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9488	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9488	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9488	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9488	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9488	D	Chlorobenzene	108-90-7	PPBV	0.4	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/28/2016	5/9/2016	9488	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9488	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9488	D	Toluene	108-88-3	PPBV	0.4	0.2 J
CEMRC	4/28/2016	5/9/2016	9488	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9488	D	Butane	106-97-8	PPBV		5.1 NJ
CEMRC	4/28/2016	5/9/2016	9488	D	Butane, 2-methyl-	78-78-4	PPBV		2.1 NJ
CEMRC	4/28/2016	5/9/2016	9488	D	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	4/28/2016	5/9/2016	9488	D	Isobutane	75-28-5	PPBV		2.94 NJ
CEMRC	4/28/2016	5/9/2016	9488	D	Propane	74-98-6	PPBV		4.56 NJ
CEMRC	4/28/2016	5/9/2016	9488	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	4/28/2016	5/9/2016	9488	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/28/2016	5/9/2016	9488	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/28/2016	5/9/2016	9488	D	1,2-Dichloroethane	107-06-2	PPTV	100	23.86 J
CEMRC	4/28/2016	5/9/2016	9488	D	Carbon Tetrachloride	56-23-5	PPTV	100	83.7 J
CEMRC	4/28/2016	5/9/2016	9488	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/28/2016	5/9/2016	9488	D	Chloroform	67-66-3	PPTV	100	16.78 J
CEMRC	4/28/2016	5/9/2016	9488	D	Methylene Chloride	75-09-2	PPTV	100	88.36 J
CEMRC	4/28/2016	5/9/2016	9488	D	Toluene	108-88-3	PPTV	100	212.88
CEMRC	4/28/2016	5/9/2016	9488	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	4/28/2016	5/9/2016	9487	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9487	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9487	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9487	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9487	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.28 J

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/28/2016	5/9/2016	9487	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9487	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9487	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9487	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9487	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/28/2016	5/9/2016	9487	C	Butane	106-97-8	PPBV		4.68 NJ
CEMRC	4/28/2016	5/9/2016	9487	C	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	4/28/2016	5/9/2016	9487	C	Pentane	109-66-0	PPBV		1.92 NJ
CEMRC	4/28/2016	5/9/2016	9487	C	Propane	74-98-6	PPBV		4.42 NJ
CEMRC	4/28/2016	5/9/2016	9487	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	53.92 J
CEMRC	4/28/2016	5/9/2016	9487	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/28/2016	5/9/2016	9487	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/28/2016	5/9/2016	9487	C	1,2-Dichloroethane	107-06-2	PPTV	100	19.62 J
CEMRC	4/28/2016	5/9/2016	9487	C	Carbon Tetrachloride	56-23-5	PPTV	100	286.96
CEMRC	4/28/2016	5/9/2016	9487	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/28/2016	5/9/2016	9487	C	Chloroform	67-66-3	PPTV	100	27.4 J
CEMRC	4/28/2016	5/9/2016	9487	C	Methylene Chloride	75-09-2	PPTV	100	84.4 J
CEMRC	4/28/2016	5/9/2016	9487	C	Toluene	108-88-3	PPTV	100	157.74
CEMRC	4/28/2016	5/9/2016	9487	C	Trichloroethylene (1)	79-01-6	PPTV	100	72.7 J
CEMRC	4/29/2016	5/9/2016	9490	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9490	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9490	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9490	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/29/2016	5/9/2016	9490	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9490	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9490	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9490	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9490	D	Toluene	108-88-3	PPBV	0.4	0.16 J
CEMRC	4/29/2016	5/9/2016	9490	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9490	D	Acetone	67-64-1	PPBV		0.64 NJ
CEMRC	4/29/2016	5/9/2016	9490	D	Butane	106-97-8	PPBV		4.54 NJ
CEMRC	4/29/2016	5/9/2016	9490	D	Dichlorodifluoromethane	75-71-8	PPBV		0.5 NJ
CEMRC	4/29/2016	5/9/2016	9490	D	Isobutane	75-28-5	PPBV		2.62 NJ
CEMRC	4/29/2016	5/9/2016	9490	D	Pentane	109-66-0	PPBV		1.98 NJ
CEMRC	4/29/2016	5/9/2016	9490	D	Propane	74-98-6	PPBV		3.72 NJ
CEMRC	4/29/2016	5/9/2016	9490	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	21.5 J
CEMRC	4/29/2016	5/9/2016	9490	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	27.02 J
CEMRC	4/29/2016	5/9/2016	9490	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/29/2016	5/9/2016	9490	D	1,2-Dichloroethane	107-06-2	PPTV	100	37.88 J
CEMRC	4/29/2016	5/9/2016	9490	D	Carbon Tetrachloride	56-23-5	PPTV	100	116.58
CEMRC	4/29/2016	5/9/2016	9490	D	Chlorobenzene	108-90-7	PPTV	100	23.26 J
CEMRC	4/29/2016	5/9/2016	9490	D	Chloroform	67-66-3	PPTV	100	30.16 J
CEMRC	4/29/2016	5/9/2016	9490	D	Methylene Chloride	75-09-2	PPTV	100	95.9 J
CEMRC	4/29/2016	5/9/2016	9490	D	Toluene	108-88-3	PPTV	100	161.44
CEMRC	4/29/2016	5/9/2016	9490	D	Trichloroethylene (1)	79-01-6	PPTV	100	25.54 J
CEMRC	4/29/2016	5/9/2016	9489	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9489	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	4/29/2016	5/9/2016	9489	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9489	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9489	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9489	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9489	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9489	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9489	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9489	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/29/2016	5/9/2016	9489	C	Acetone	67-64-1	PPBV		0.56 NJ
CEMRC	4/29/2016	5/9/2016	9489	C	Butane	106-97-8	PPBV		3.68 NJ
CEMRC	4/29/2016	5/9/2016	9489	C	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	4/29/2016	5/9/2016	9489	C	Isobutane	75-28-5	PPBV		2.28 NJ
CEMRC	4/29/2016	5/9/2016	9489	C	Pentane	109-66-0	PPBV		1.6 NJ
CEMRC	4/29/2016	5/9/2016	9489	C	Propane	74-98-6	PPBV		3.04 NJ
CEMRC	4/29/2016	5/9/2016	9489	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	15.36 J
CEMRC	4/29/2016	5/9/2016	9489	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	4/29/2016	5/9/2016	9489	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	4/29/2016	5/9/2016	9489	C	1,2-Dichloroethane	107-06-2	PPTV	100	22.68 J
CEMRC	4/29/2016	5/9/2016	9489	C	Carbon Tetrachloride	56-23-5	PPTV	100	131.38
CEMRC	4/29/2016	5/9/2016	9489	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	4/29/2016	5/9/2016	9489	C	Chloroform	67-66-3	PPTV	100	18.06 J
CEMRC	4/29/2016	5/9/2016	9489	C	Methylene Chloride	75-09-2	PPTV	100	75.38 J
CEMRC	4/29/2016	5/9/2016	9489	C	Toluene	108-88-3	PPTV	100	139.3
CEMRC	4/29/2016	5/9/2016	9489	C	Trichloroethylene (1)	79-01-6	PPTV	100	24.72 J

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/3/2016	5/25/2016	9493	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9493	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9493	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9493	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9493	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9493	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9493	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9493	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9493	D	Toluene	108-88-3	PPBV	0.4	0.38 J
CEMRC	5/3/2016	5/25/2016	9493	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9493	D	Acetone	67-64-1	PPBV		0.54 NJ
CEMRC	5/3/2016	5/25/2016	9493	D	Butane	106-97-8	PPBV		6.68 NJ
CEMRC	5/3/2016	5/25/2016	9493	D	Dichlorodifluoromethane	75-71-8	PPBV		0.5 NJ
CEMRC	5/3/2016	5/25/2016	9493	D	Isobutane	75-28-5	PPBV		3.58 NJ
CEMRC	5/3/2016	5/25/2016	9493	D	Pentane	109-66-0	PPBV		2.76 NJ
CEMRC	5/3/2016	5/25/2016	9493	D	Propane	74-98-6	PPBV		5.74 NJ
CEMRC	5/3/2016	5/25/2016	9493	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	5/3/2016	5/25/2016	9493	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/3/2016	5/25/2016	9493	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/3/2016	5/25/2016	9493	D	1,2-Dichloroethane	107-06-2	PPTV	100	25.08 J
CEMRC	5/3/2016	5/25/2016	9493	D	Carbon Tetrachloride	56-23-5	PPTV	100	98.04 J
CEMRC	5/3/2016	5/25/2016	9493	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/3/2016	5/25/2016	9493	D	Chloroform	67-66-3	PPTV	100	15.28 J

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/3/2016	5/25/2016	9493	D	Methylene Chloride	75-09-2	PPTV	100	75.52 J
CEMRC	5/3/2016	5/25/2016	9493	D	Toluene	108-88-3	PPTV	100	355.22
CEMRC	5/3/2016	5/25/2016	9493	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	5/3/2016	5/25/2016	9491	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9491	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9491	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9491	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9491	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.18 J
CEMRC	5/3/2016	5/25/2016	9491	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9491	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9491	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9491	C	Toluene	108-88-3	PPBV	0.4	0.32 J
CEMRC	5/3/2016	5/25/2016	9491	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/3/2016	5/25/2016	9491	C	Acetone	67-64-1	PPBV		1.18 NJ
CEMRC	5/3/2016	5/25/2016	9491	C	Butane	106-97-8	PPBV		6.28 NJ
CEMRC	5/3/2016	5/25/2016	9491	C	Dichlorodifluoromethane	75-71-8	PPBV		0.54 NJ
CEMRC	5/3/2016	5/25/2016	9491	C	Isobutane	75-28-5	PPBV		3.44 NJ
CEMRC	5/3/2016	5/25/2016	9491	C	Pentane	109-66-0	PPBV		2.48 NJ
CEMRC	5/3/2016	5/25/2016	9491	C	Propane	74-98-6	PPBV		5.06 NJ
CEMRC	5/3/2016	5/25/2016	9491	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	23.86 J
CEMRC	5/3/2016	5/25/2016	9491	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	24.78 J
CEMRC	5/3/2016	5/25/2016	9491	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/3/2016	5/25/2016	9491	C	1,2-Dichloroethane	107-06-2	PPTV	100	22.26 J
CEMRC	5/3/2016	5/25/2016	9491	C	Carbon Tetrachloride	56-23-5	PPTV	100	175.58

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/3/2016	5/25/2016	9491	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/3/2016	5/25/2016	9491	C	Chloroform	67-66-3	PPTV	100	22.46 J
CEMRC	5/3/2016	5/25/2016	9491	C	Methylene Chloride	75-09-2	PPTV	100	75.32 J
CEMRC	5/3/2016	5/25/2016	9491	C	Toluene	108-88-3	PPTV	100	324.38
CEMRC	5/3/2016	5/25/2016	9491	C	Trichloroethylene (1)	79-01-6	PPTV	100	44.94 J
CEMRC	5/4/2016	5/25/2016	9495	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9495	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9495	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9495	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9495	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9495	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9495	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9495	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9495	D	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	5/4/2016	5/25/2016	9495	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9495	D	Acetone	67-64-1	PPBV		0.6 NJ
CEMRC	5/4/2016	5/25/2016	9495	D	Butane	106-97-8	PPBV		3.7 NJ
CEMRC	5/4/2016	5/25/2016	9495	D	Dichlorodifluoromethane	75-71-8	PPBV		0.58 NJ
CEMRC	5/4/2016	5/25/2016	9495	D	Isobutane	75-28-5	PPBV		2.08 NJ
CEMRC	5/4/2016	5/25/2016	9495	D	Propane	74-98-6	PPBV		3.62 NJ
CEMRC	5/4/2016	5/25/2016	9495	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	5/4/2016	5/25/2016	9495	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/4/2016	5/25/2016	9495	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/4/2016	5/25/2016	9495	D	1,2-Dichloroethane	107-06-2	PPTV	100	19.76 J
CEMRC	5/4/2016	5/25/2016	9495	D	Carbon Tetrachloride	56-23-5	PPTV	100	105.66
CEMRC	5/4/2016	5/25/2016	9495	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/4/2016	5/25/2016	9495	D	Chloroform	67-66-3	PPTV	100	15.72 J
CEMRC	5/4/2016	5/25/2016	9495	D	Methylene Chloride	75-09-2	PPTV	100	72.62 J
CEMRC	5/4/2016	5/25/2016	9495	D	Toluene	108-88-3	PPTV	100	167.7
CEMRC	5/4/2016	5/25/2016	9495	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	5/4/2016	5/25/2016	9494	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9494	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9494	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9494	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9494	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.34 J
CEMRC	5/4/2016	5/25/2016	9494	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9494	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9494	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9494	C	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	5/4/2016	5/25/2016	9494	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/4/2016	5/25/2016	9494	C	Acetone	67-64-1	PPBV		0.66 NJ
CEMRC	5/4/2016	5/25/2016	9494	C	Butane	106-97-8	PPBV		4.26 NJ
CEMRC	5/4/2016	5/25/2016	9494	C	Dichlorodifluoromethane	75-71-8	PPBV		0.6 NJ
CEMRC	5/4/2016	5/25/2016	9494	C	Isobutane	75-28-5	PPBV		2.38 NJ
CEMRC	5/4/2016	5/25/2016	9494	C	Pentane	109-66-0	PPBV		1.54 NJ
CEMRC	5/4/2016	5/25/2016	9494	C	Propane	74-98-6	PPBV		4.2 NJ
CEMRC	5/4/2016	5/25/2016	9494	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	57.92 J

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/4/2016	5/25/2016	9494	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/4/2016	5/25/2016	9494	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/4/2016	5/25/2016	9494	C	1,2-Dichloroethane	107-06-2	PPTV	100	21.88 J
CEMRC	5/4/2016	5/25/2016	9494	C	Carbon Tetrachloride	56-23-5	PPTV	100	314.22
CEMRC	5/4/2016	5/25/2016	9494	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/4/2016	5/25/2016	9494	C	Chloroform	67-66-3	PPTV	100	31.22 J
CEMRC	5/4/2016	5/25/2016	9494	C	Methylene Chloride	75-09-2	PPTV	100	80.32 J
CEMRC	5/4/2016	5/25/2016	9494	C	Toluene	108-88-3	PPTV	100	184.18
CEMRC	5/4/2016	5/25/2016	9494	C	Trichloroethylene (1)	79-01-6	PPTV	100	96.16 J
CEMRC	5/11/2016	5/25/2016	9497	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9497	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9497	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9497	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9497	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9497	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9497	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9497	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9497	D	Toluene	108-88-3	PPBV	0.4	0.26 J
CEMRC	5/11/2016	5/25/2016	9497	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9497	D	Butane	106-97-8	PPBV		5.78 NJ
CEMRC	5/11/2016	5/25/2016	9497	D	Butane, 2-methyl-	78-78-4	PPBV		3.1 NJ
CEMRC	5/11/2016	5/25/2016	9497	D	Dichlorodifluoromethane	75-71-8	PPBV		0.46 NJ
CEMRC	5/11/2016	5/25/2016	9497	D	Isobutane	75-28-5	PPBV		3.26 NJ

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/11/2016	5/25/2016	9497	D	Pentane	109-66-0	PPBV		2.46 NJ
CEMRC	5/11/2016	5/25/2016	9497	D	Propane	74-98-6	PPBV		5.5 NJ
CEMRC	5/11/2016	5/25/2016	9497	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	5/11/2016	5/25/2016	9497	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/11/2016	5/25/2016	9497	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/11/2016	5/25/2016	9497	D	1,2-Dichloroethane	107-06-2	PPTV	100	22.88 J
CEMRC	5/11/2016	5/25/2016	9497	D	Carbon Tetrachloride	56-23-5	PPTV	100	95.22 J
CEMRC	5/11/2016	5/25/2016	9497	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/11/2016	5/25/2016	9497	D	Chloroform	67-66-3	PPTV	100	14.12 J
CEMRC	5/11/2016	5/25/2016	9497	D	Methylene Chloride	75-09-2	PPTV	100	76.1 J
CEMRC	5/11/2016	5/25/2016	9497	D	Toluene	108-88-3	PPTV	100	228.66
CEMRC	5/11/2016	5/25/2016	9497	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	5/11/2016	5/25/2016	9496	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9496	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9496	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9496	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9496	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.2 J
CEMRC	5/11/2016	5/25/2016	9496	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9496	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9496	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9496	C	Toluene	108-88-3	PPBV	0.4	0.2 J
CEMRC	5/11/2016	5/25/2016	9496	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/11/2016	5/25/2016	9496	C	Acetone	67-64-1	PPBV		1.42 NJ
CEMRC	5/11/2016	5/25/2016	9496	C	Butane	106-97-8	PPBV		5.5 NJ

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/11/2016	5/25/2016	9496	C	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	5/11/2016	5/25/2016	9496	C	Hexanal	66-25-1	PPBV		1 NJ
CEMRC	5/11/2016	5/25/2016	9496	C	Isobutane	75-28-5	PPBV		3.44 NJ
CEMRC	5/11/2016	5/25/2016	9496	C	Pentane	109-66-0	PPBV		2.3 NJ
CEMRC	5/11/2016	5/25/2016	9496	C	Propane	74-98-6	PPBV		5.28 NJ
CEMRC	5/11/2016	5/25/2016	9496	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	28.44 J
CEMRC	5/11/2016	5/25/2016	9496	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/11/2016	5/25/2016	9496	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/11/2016	5/25/2016	9496	C	1,2-Dichloroethane	107-06-2	PPTV	100	24.26 J
CEMRC	5/11/2016	5/25/2016	9496	C	Carbon Tetrachloride	56-23-5	PPTV	100	176.32
CEMRC	5/11/2016	5/25/2016	9496	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/11/2016	5/25/2016	9496	C	Chloroform	67-66-3	PPTV	100	18.42 J
CEMRC	5/11/2016	5/25/2016	9496	C	Methylene Chloride	75-09-2	PPTV	100	78.66 J
CEMRC	5/11/2016	5/25/2016	9496	C	Toluene	108-88-3	PPTV	100	224.5
CEMRC	5/11/2016	5/25/2016	9496	C	Trichloroethylene (1)	79-01-6	PPTV	100	38.78 J
CEMRC	5/13/2016	5/25/2016	9501	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9501	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9501	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9501	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9501	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9501	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9501	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9501	D	Methylene Chloride	75-09-2	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/13/2016	5/25/2016	9501	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9501	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9501	D	Acetone	67-64-1	PPBV		0.78 NJ
CEMRC	5/13/2016	5/25/2016	9501	D	Butane	106-97-8	PPBV		2.38 NJ
CEMRC	5/13/2016	5/25/2016	9501	D	Dichlorodifluoromethane	75-71-8	PPBV		0.56 NJ
CEMRC	5/13/2016	5/25/2016	9501	D	Propane	74-98-6	PPBV		2.08 NJ
CEMRC	5/13/2016	5/25/2016	9501	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	5/13/2016	5/25/2016	9501	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/13/2016	5/25/2016	9501	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/13/2016	5/25/2016	9501	D	1,2-Dichloroethane	107-06-2	PPTV	100	16.82 J
CEMRC	5/13/2016	5/25/2016	9501	D	Carbon Tetrachloride	56-23-5	PPTV	100	100.4
CEMRC	5/13/2016	5/25/2016	9501	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/13/2016	5/25/2016	9501	D	Chloroform	67-66-3	PPTV	100	16.9 J
CEMRC	5/13/2016	5/25/2016	9501	D	Methylene Chloride	75-09-2	PPTV	100	76.98 J
CEMRC	5/13/2016	5/25/2016	9501	D	Toluene	108-88-3	PPTV	100	113.24
CEMRC	5/13/2016	5/25/2016	9501	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	5/13/2016	5/25/2016	9500	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	0.28 J
CEMRC	5/13/2016	5/25/2016	9500	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9500	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9500	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9500	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.94
CEMRC	5/13/2016	5/25/2016	9500	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9500	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9500	C	Methylene Chloride	75-09-2	PPBV	0.4	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/13/2016	5/25/2016	9500	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	5/13/2016	5/25/2016	9500	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	0.38 J
CEMRC	5/13/2016	5/25/2016	9500	C	Acetone	67-64-1	PPBV		1.42 NJ
CEMRC	5/13/2016	5/25/2016	9500	C	Butane	106-97-8	PPBV		3.06 NJ
CEMRC	5/13/2016	5/25/2016	9500	C	Dichlorodifluoromethane	75-71-8	PPBV		0.56 NJ
CEMRC	5/13/2016	5/25/2016	9500	C	Nonanal	124-19-6	PPBV		0.7 NJ
CEMRC	5/13/2016	5/25/2016	9500	C	Pentane	109-66-0	PPBV		1.12 NJ
CEMRC	5/13/2016	5/25/2016	9500	C	Propane	74-98-6	PPBV		2.48 NJ
CEMRC	5/13/2016	5/25/2016	9500	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	266.16
CEMRC	5/13/2016	5/25/2016	9500	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/13/2016	5/25/2016	9500	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/13/2016	5/25/2016	9500	C	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	5/13/2016	5/25/2016	9500	C	Carbon Tetrachloride	56-23-5	PPTV	100	856.6
CEMRC	5/13/2016	5/25/2016	9500	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/13/2016	5/25/2016	9500	C	Chloroform	67-66-3	PPTV	100	54.42 J
CEMRC	5/13/2016	5/25/2016	9500	C	Methylene Chloride	75-09-2	PPTV	100	86.88 J
CEMRC	5/13/2016	5/25/2016	9500	C	Toluene	108-88-3	PPTV	100	132.34
CEMRC	5/13/2016	5/25/2016	9500	C	Trichloroethylene (1)	79-01-6	PPTV	100	348.48
CEMRC	5/17/2016	6/6/2016	9504	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9504	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9504	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9504	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9504	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/17/2016	6/6/2016	9504	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9504	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9504	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9504	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9504	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9504	D	Dichlorodifluoromethane	75-71-8	PPBV		0.64 NJ
CEMRC	5/17/2016	6/6/2016	9504	D	Isobutane	75-28-5	PPBV		2.14 NJ
CEMRC	5/17/2016	6/6/2016	9504	D	Pentane	109-66-0	PPBV		1.54 NJ
CEMRC	5/17/2016	6/6/2016	9504	D	Propane	74-98-6	PPBV		3.76 NJ
CEMRC	5/17/2016	6/6/2016	9504	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	5/17/2016	6/6/2016	9504	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/17/2016	6/6/2016	9504	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/17/2016	6/6/2016	9504	D	1,2-Dichloroethane	107-06-2	PPTV	100	18.52 J
CEMRC	5/17/2016	6/6/2016	9504	D	Carbon Tetrachloride	56-23-5	PPTV	100	97.12 J
CEMRC	5/17/2016	6/6/2016	9504	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/17/2016	6/6/2016	9504	D	Chloroform	67-66-3	PPTV	100	U
CEMRC	5/17/2016	6/6/2016	9504	D	Methylene Chloride	75-09-2	PPTV	100	59.8 J
CEMRC	5/17/2016	6/6/2016	9504	D	Toluene	108-88-3	PPTV	100	149.1
CEMRC	5/17/2016	6/6/2016	9504	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	5/17/2016	6/6/2016	9502	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9502	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9502	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9502	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9502	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.14 J

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/17/2016	6/6/2016	9502	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9502	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9502	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9502	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9502	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/17/2016	6/6/2016	9502	C	Acetone	67-64-1	PPBV		0.52 NJ
CEMRC	5/17/2016	6/6/2016	9502	C	Butane	106-97-8	PPBV		3.18 NJ
CEMRC	5/17/2016	6/6/2016	9502	C	Dichlorodifluoromethane	75-71-8	PPBV		0.6 NJ
CEMRC	5/17/2016	6/6/2016	9502	C	Isobutane	75-28-5	PPBV		1.92 NJ
CEMRC	5/17/2016	6/6/2016	9502	C	Pentane	109-66-0	PPBV		1.18 NJ
CEMRC	5/17/2016	6/6/2016	9502	C	Propane	74-98-6	PPBV		3.02 NJ
CEMRC	5/17/2016	6/6/2016	9502	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	14.4 J
CEMRC	5/17/2016	6/6/2016	9502	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	27.38 J
CEMRC	5/17/2016	6/6/2016	9502	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/17/2016	6/6/2016	9502	C	1,2-Dichloroethane	107-06-2	PPTV	100	18.76 J
CEMRC	5/17/2016	6/6/2016	9502	C	Carbon Tetrachloride	56-23-5	PPTV	100	126.46
CEMRC	5/17/2016	6/6/2016	9502	C	Chlorobenzene	108-90-7	PPTV	100	15.62 J
CEMRC	5/17/2016	6/6/2016	9502	C	Chloroform	67-66-3	PPTV	100	15.04 J
CEMRC	5/17/2016	6/6/2016	9502	C	Methylene Chloride	75-09-2	PPTV	100	69.38 J
CEMRC	5/17/2016	6/6/2016	9502	C	Toluene	108-88-3	PPTV	100	130.92
CEMRC	5/17/2016	6/6/2016	9502	C	Trichloroethylene (1)	79-01-6	PPTV	100	22.42 J
CEMRC	5/19/2016	6/6/2016	9508	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9508	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/19/2016	6/6/2016	9508	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9508	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9508	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9508	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9508	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9508	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9508	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9508	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9508	D	Acetone	67-64-1	PPBV		1 NJ
CEMRC	5/19/2016	6/6/2016	9508	D	Butane	106-97-8	PPBV		1.32 NJ
CEMRC	5/19/2016	6/6/2016	9508	D	Dichlorodifluoromethane	75-71-8	PPBV		0.58 NJ
CEMRC	5/19/2016	6/6/2016	9508	D	Ethanol	64-17-5	PPBV		0.54 NJ
CEMRC	5/19/2016	6/6/2016	9508	D	Propane	74-98-6	PPBV		1.46 NJ
CEMRC	5/19/2016	6/6/2016	9508	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	5/19/2016	6/6/2016	9508	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/19/2016	6/6/2016	9508	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/19/2016	6/6/2016	9508	D	1,2-Dichloroethane	107-06-2	PPTV	100	17.68 J
CEMRC	5/19/2016	6/6/2016	9508	D	Carbon Tetrachloride	56-23-5	PPTV	100	98.58 J
CEMRC	5/19/2016	6/6/2016	9508	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/19/2016	6/6/2016	9508	D	Chloroform	67-66-3	PPTV	100	14.72 J
CEMRC	5/19/2016	6/6/2016	9508	D	Methylene Chloride	75-09-2	PPTV	100	76.04 J
CEMRC	5/19/2016	6/6/2016	9508	D	Toluene	108-88-3	PPTV	100	82.66 J
CEMRC	5/19/2016	6/6/2016	9508	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	5/19/2016	6/6/2016	9507	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/19/2016	6/6/2016	9507	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9507	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9507	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9507	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.24 J
CEMRC	5/19/2016	6/6/2016	9507	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9507	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9507	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9507	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9507	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/19/2016	6/6/2016	9507	C	Acetone	67-64-1	PPBV		1.16 NJ
CEMRC	5/19/2016	6/6/2016	9507	C	Butane	106-97-8	PPBV		1.42 NJ
CEMRC	5/19/2016	6/6/2016	9507	C	Dichlorodifluoromethane	75-71-8	PPBV		0.64 NJ
CEMRC	5/19/2016	6/6/2016	9507	C	Ethanol	64-17-5	PPBV		0.86 NJ
CEMRC	5/19/2016	6/6/2016	9507	C	Propane	74-98-6	PPBV		1.56 NJ
CEMRC	5/19/2016	6/6/2016	9507	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	37.9 J
CEMRC	5/19/2016	6/6/2016	9507	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/19/2016	6/6/2016	9507	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/19/2016	6/6/2016	9507	C	1,2-Dichloroethane	107-06-2	PPTV	100	20.8 J
CEMRC	5/19/2016	6/6/2016	9507	C	Carbon Tetrachloride	56-23-5	PPTV	100	225.86
CEMRC	5/19/2016	6/6/2016	9507	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/19/2016	6/6/2016	9507	C	Chloroform	67-66-3	PPTV	100	26.56 J
CEMRC	5/19/2016	6/6/2016	9507	C	Methylene Chloride	75-09-2	PPTV	100	83.54 J
CEMRC	5/19/2016	6/6/2016	9507	C	Toluene	108-88-3	PPTV	100	80.9 J
CEMRC	5/19/2016	6/6/2016	9507	C	Trichloroethylene (1)	79-01-6	PPTV	100	64.34 J

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/25/2016	6/6/2016	9509	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9509	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9509	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9509	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9509	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9509	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9509	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9509	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9509	D	Toluene	108-88-3	PPBV	0.4	0.2 J
CEMRC	5/25/2016	6/6/2016	9509	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9509	D	Butane	106-97-8	PPBV		4.18 NJ
CEMRC	5/25/2016	6/6/2016	9509	D	Dichlorodifluoromethane	75-71-8	PPBV		0.6 NJ
CEMRC	5/25/2016	6/6/2016	9509	D	Isobutane	75-28-5	PPBV		2.4 NJ
CEMRC	5/25/2016	6/6/2016	9509	D	Nonanal	124-19-6	PPBV		0.52 NJ
CEMRC	5/25/2016	6/6/2016	9509	D	Pentane	109-66-0	PPBV		1.76 NJ
CEMRC	5/25/2016	6/6/2016	9509	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	12.78 J
CEMRC	5/25/2016	6/6/2016	9509	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/25/2016	6/6/2016	9509	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/25/2016	6/6/2016	9509	D	1,2-Dichloroethane	107-06-2	PPTV	100	18.1 J
CEMRC	5/25/2016	6/6/2016	9509	D	Carbon Tetrachloride	56-23-5	PPTV	100	125.2
CEMRC	5/25/2016	6/6/2016	9509	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/25/2016	6/6/2016	9509	D	Chloroform	67-66-3	PPTV	100	13.12 J
CEMRC	5/25/2016	6/6/2016	9509	D	Methylene Chloride	75-09-2	PPTV	100	69.26 J

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/25/2016	6/6/2016	9509	D	Toluene	108-88-3	PPTV	100	194.64
CEMRC	5/25/2016	6/6/2016	9509	D	Trichloroethylene (1)	79-01-6	PPTV	100	18.18 J
CEMRC	5/25/2016	6/6/2016	9510	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9510	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9510	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9510	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9510	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.3 J
CEMRC	5/25/2016	6/6/2016	9510	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9510	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9510	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9510	C	Toluene	108-88-3	PPBV	0.4	0.2 J
CEMRC	5/25/2016	6/6/2016	9510	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/25/2016	6/6/2016	9510	C	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	5/25/2016	6/6/2016	9510	C	Isobutane	75-28-5	PPBV		2.3 NJ
CEMRC	5/25/2016	6/6/2016	9510	C	Pentane	109-66-0	PPBV		1.74 NJ
CEMRC	5/25/2016	6/6/2016	9510	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	58.5 J
CEMRC	5/25/2016	6/6/2016	9510	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/25/2016	6/6/2016	9510	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/25/2016	6/6/2016	9510	C	1,2-Dichloroethane	107-06-2	PPTV	100	17.16 J
CEMRC	5/25/2016	6/6/2016	9510	C	Carbon Tetrachloride	56-23-5	PPTV	100	267.28
CEMRC	5/25/2016	6/6/2016	9510	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/25/2016	6/6/2016	9510	C	Chloroform	67-66-3	PPTV	100	20.12 J
CEMRC	5/25/2016	6/6/2016	9510	C	Methylene Chloride	75-09-2	PPTV	100	72.98 J
CEMRC	5/25/2016	6/6/2016	9510	C	Toluene	108-88-3	PPTV	100	201.48

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/25/2016	6/6/2016	9510	C	Trichloroethylene (1)	79-01-6	PPTV	100	76.7 J
CEMRC	5/26/2016	6/6/2016	9512	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9512	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9512	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9512	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9512	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9512	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9512	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9512	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9512	D	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	5/26/2016	6/6/2016	9512	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9512	D	Acetone	67-64-1	PPBV		0.5 NJ
CEMRC	5/26/2016	6/6/2016	9512	D	Butane	106-97-8	PPBV		3.22 NJ
CEMRC	5/26/2016	6/6/2016	9512	D	Pentane	109-66-0	PPBV		1.28 NJ
CEMRC	5/26/2016	6/6/2016	9512	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9512	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9512	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9512	D	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9512	D	Carbon Tetrachloride	56-23-5	PPTV	100	100.1
CEMRC	5/26/2016	6/6/2016	9512	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9512	D	Chloroform	67-66-3	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9512	D	Methylene Chloride	75-09-2	PPTV	100	53.34 J
CEMRC	5/26/2016	6/6/2016	9512	D	Toluene	108-88-3	PPTV	100	168.68

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Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/26/2016	6/6/2016	9512	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9511	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9511	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9511	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9511	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9511	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.32 J
CEMRC	5/26/2016	6/6/2016	9511	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9511	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9511	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9511	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9511	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	5/26/2016	6/6/2016	9511	C	Acetone	67-64-1	PPBV		0.46 NJ
CEMRC	5/26/2016	6/6/2016	9511	C	Butane	106-97-8	PPBV		2.86 NJ
CEMRC	5/26/2016	6/6/2016	9511	C	Dichlorodifluoromethane	75-71-8	PPBV		0.58 NJ
CEMRC	5/26/2016	6/6/2016	9511	C	Isobutane	75-28-5	PPBV		1.58 NJ
CEMRC	5/26/2016	6/6/2016	9511	C	Propane	74-98-6	PPBV		2.46 NJ
CEMRC	5/26/2016	6/6/2016	9511	C	Trichloromonofluoromethane	75-69-4	PPBV		0.48 NJ
CEMRC	5/26/2016	6/6/2016	9511	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	36.94 J
CEMRC	5/26/2016	6/6/2016	9511	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9511	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9511	C	1,2-Dichloroethane	107-06-2	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9511	C	Carbon Tetrachloride	56-23-5	PPTV	100	266.54
CEMRC	5/26/2016	6/6/2016	9511	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	5/26/2016	6/6/2016	9511	C	Chloroform	67-66-3	PPTV	100	29.04 J

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Notes:

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7/21/2016 10:43 AM

Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	5/26/2016	6/6/2016	9511	C	Methylene Chloride	75-09-2	PPTV	100	62.3 J
CEMRC	5/26/2016	6/6/2016	9511	C	Toluene	108-88-3	PPTV	100	139.9
CEMRC	5/26/2016	6/6/2016	9511	C	Trichloroethylene (1)	79-01-6	PPTV	100	85.36 J
CEMRC	6/1/2016	6/14/2016	9514	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9514	D	Butane	106-97-8	PPBV		2.6 NJ
CEMRC	6/1/2016	6/14/2016	9514	D	Dichlorodifluoromethane	75-71-8	PPBV		0.46 NJ
CEMRC	6/1/2016	6/14/2016	9514	D	Pentane	109-66-0	PPBV		1.16 NJ
CEMRC	6/1/2016	6/14/2016	9514	D	Propane	74-98-6	PPBV		2.42 NJ
CEMRC	6/1/2016	6/14/2016	9514	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	6/1/2016	6/14/2016	9514	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	6/1/2016	6/14/2016	9514	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	6/1/2016	6/14/2016	9514	D	1,2-Dichloroethane	107-06-2	PPTV	100	16.4 J
CEMRC	6/1/2016	6/14/2016	9514	D	Carbon Tetrachloride	56-23-5	PPTV	100	83.78 J
CEMRC	6/1/2016	6/14/2016	9514	D	Chlorobenzene	108-90-7	PPTV	100	U

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Notes:

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7/21/2016 10:43 AM

Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	6/1/2016	6/14/2016	9514	D	Chloroform	67-66-3	PPTV	100	U
CEMRC	6/1/2016	6/14/2016	9514	D	Methylene Chloride	75-09-2	PPTV	100	138.68
CEMRC	6/1/2016	6/14/2016	9514	D	Toluene	108-88-3	PPTV	100	148.46
CEMRC	6/1/2016	6/14/2016	9514	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	6/1/2016	6/14/2016	9513	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9513	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9513	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9513	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9513	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.28 J
CEMRC	6/1/2016	6/14/2016	9513	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9513	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9513	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9513	C	Toluene	108-88-3	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9513	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	6/1/2016	6/14/2016	9513	C	Acetone	67-64-1	PPBV		0.5 NJ
CEMRC	6/1/2016	6/14/2016	9513	C	Butane	106-97-8	PPBV		2.74 NJ
CEMRC	6/1/2016	6/14/2016	9513	C	Isobutane	75-28-5	PPBV		1.68 NJ
CEMRC	6/1/2016	6/14/2016	9513	C	Pentane	109-66-0	PPBV		1.28 NJ
CEMRC	6/1/2016	6/14/2016	9513	C	Propane	74-98-6	PPBV		2.62 NJ
CEMRC	6/1/2016	6/14/2016	9513	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	70.82 J
CEMRC	6/1/2016	6/14/2016	9513	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	36.64 J
CEMRC	6/1/2016	6/14/2016	9513	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	6/1/2016	6/14/2016	9513	C	1,2-Dichloroethane	107-06-2	PPTV	100	19.98 J
CEMRC	6/1/2016	6/14/2016	9513	C	Carbon Tetrachloride	56-23-5	PPTV	100	313.5

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Notes:

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	6/1/2016	6/14/2016	9513	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	6/1/2016	6/14/2016	9513	C	Chloroform	67-66-3	PPTV	100	34.34 J
CEMRC	6/1/2016	6/14/2016	9513	C	Methylene Chloride	75-09-2	PPTV	100	74.94 J
CEMRC	6/1/2016	6/14/2016	9513	C	Toluene	108-88-3	PPTV	100	156.74
CEMRC	6/1/2016	6/14/2016	9513	C	Trichloroethylene (1)	79-01-6	PPTV	100	150.28
CEMRC	6/2/2016	6/14/2016	9517	D	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	Toluene	108-88-3	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9517	D	Acetone	67-64-1	PPBV		0.68 NJ
CEMRC	6/2/2016	6/14/2016	9517	D	Butane	106-97-8	PPBV		2.02 NJ
CEMRC	6/2/2016	6/14/2016	9517	D	Dichlorodifluoromethane	75-71-8	PPBV		0.46 NJ
CEMRC	6/2/2016	6/14/2016	9517	D	Nonanal	124-19-6	PPBV		0.88 NJ
CEMRC	6/2/2016	6/14/2016	9517	D	Pentane	109-66-0	PPBV		0.86 NJ
CEMRC	6/2/2016	6/14/2016	9517	D	Propane	74-98-6	PPBV		2.24 NJ
CEMRC	6/2/2016	6/14/2016	9517	D	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	6/2/2016	6/14/2016	9517	D	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	6/2/2016	6/14/2016	9517	D	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	6/2/2016	6/14/2016	9517	D	1,2-Dichloroethane	107-06-2	PPTV	100	16.16 J
CEMRC	6/2/2016	6/14/2016	9517	D	Carbon Tetrachloride	56-23-5	PPTV	100	88.62 J
CEMRC	6/2/2016	6/14/2016	9517	D	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	6/2/2016	6/14/2016	9517	D	Chloroform	67-66-3	PPTV	100	11.78 J
CEMRC	6/2/2016	6/14/2016	9517	D	Methylene Chloride	75-09-2	PPTV	100	72.12 J
CEMRC	6/2/2016	6/14/2016	9517	D	Toluene	108-88-3	PPTV	100	137.3
CEMRC	6/2/2016	6/14/2016	9517	D	Trichloroethylene (1)	79-01-6	PPTV	100	U
CEMRC	6/2/2016	6/14/2016	9516	C	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9516	C	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9516	C	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9516	C	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9516	C	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9516	C	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9516	C	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9516	C	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9516	C	Toluene	108-88-3	PPBV	0.4	0.16 J
CEMRC	6/2/2016	6/14/2016	9516	C	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	6/2/2016	6/14/2016	9516	C	Acetone	67-64-1	PPBV		0.58 NJ
CEMRC	6/2/2016	6/14/2016	9516	C	Butane	106-97-8	PPBV		1.74 NJ
CEMRC	6/2/2016	6/14/2016	9516	C	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	6/2/2016	6/14/2016	9516	C	Nonanal	124-19-6	PPBV		0.62 NJ
CEMRC	6/2/2016	6/14/2016	9516	C	Pentane	109-66-0	PPBV		0.72 NJ
CEMRC	6/2/2016	6/14/2016	9516	C	Propane	74-98-6	PPBV		1.78 NJ

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

analytical services by Carlsbad Environmental Monitoring & Research Center (CEMRC)

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	6/2/2016	6/14/2016	9516	C	1,1,1-Trichloroethane	71-55-6	PPTV	100	U
CEMRC	6/2/2016	6/14/2016	9516	C	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	100	U
CEMRC	6/2/2016	6/14/2016	9516	C	1,1-Dichloroethylene	75-35-4	PPTV	100	U
CEMRC	6/2/2016	6/14/2016	9516	C	1,2-Dichloroethane	107-06-2	PPTV	100	16.06 J
CEMRC	6/2/2016	6/14/2016	9516	C	Carbon Tetrachloride	56-23-5	PPTV	100	97.08 J
CEMRC	6/2/2016	6/14/2016	9516	C	Chlorobenzene	108-90-7	PPTV	100	U
CEMRC	6/2/2016	6/14/2016	9516	C	Chloroform	67-66-3	PPTV	100	12.1 J
CEMRC	6/2/2016	6/14/2016	9516	C	Methylene Chloride	75-09-2	PPTV	100	78.6 J
CEMRC	6/2/2016	6/14/2016	9516	C	Toluene	108-88-3	PPTV	100	168.12
CEMRC	6/2/2016	6/14/2016	9516	C	Trichloroethylene (1)	79-01-6	PPTV	100	11.5 J

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Notes:

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Attachment 3
Surface & Underground Derived Waste Currently in Storage at the WIPP Facility

Site of Origin	Shipment	Receipt Date/Time	ICV Closure Date/Time	Venting Deadline	Venting Date	WHB Deadline	Assembly	Unemplaced Containers	Waste Volume ¹ (ft ³)
SRS	SR140003	1/24/2014 12:40	1/16/2014 8:45	3/16/2014 8:45	2/1/2014 8:15	06/16/2017	SR139200	6-55G Drums	44.4
SRS	SR140003	1/24/2014 12:40	1/16/2014 8:45	3/16/2014 8:45	2/1/2014 8:15	06/16/2017	SR139201	7-55G Drums	51.8
SRS	SR140003	1/24/2014 12:40	1/16/2014 8:40	3/16/2014 8:40	2/1/2014 8:32	06/16/2017	SR139206	4-55G Drums	29.6
SRS	SR140003	1/24/2014 12:40	1/16/2014 8:40	3/16/2014 8:40	2/1/2014 8:34	06/16/2017	SR139207	7-55G Drums	51.8
LANL	LA140018	2/1/2014 1:30	1/29/2014 14:25	3/29/2014 14:25	2/1/2014 12:40	06/16/2017	LA139903	1 SWB	66.3
LANL	LA140019	2/1/2014 1:50	1/30/2014 15:20	3/30/2014 15:20	2/1/2014 14:25	06/16/2017	LA139927	1 SWB	66.3
LANL	LA140019	2/1/2014 1:50	1/30/2014 15:20	3/30/2014 15:20	2/1/2014 14:26	06/16/2017	LA139928	1 SWB	66.3
INL	IN140037	2/1/2014 21:11	1/30/2014 14:00	3/30/2014 14:00	2/2/2014 10:17	06/16/2017	IN139806	1 TDOP	160
INL	IN140037	2/1/2014 21:11	1/30/2014 14:03	3/30/2014 14:03	2/2/2014 10:24	06/16/2017	IN139814	1 TDOP	160
SRS	SR314011	1/28/2014 14:10	1/22/2014 8:30	3/22/2014 8:30	2/3/2014 12:14	06/16/2017	SR139781	1 SLB2	261
INL	IN140036	2/1/2014 22:40	1/25/2014 13:35	3/25/2014 13:35	2/3/2014 13:15	06/16/2017	IN139540	1 SWB	66.3
INL	IN140036	2/1/2014 22:40	1/25/2014 13:35	3/25/2014 13:35	2/3/2014 13:15	06/16/2017	IN139541	1 SWB	66.3
INL	IN140041	2/3/2014 7:13	1/31/2014 13:30	3/31/2014 13:30	2/3/2014 14:37	06/16/2017	IN140062	1 SWB	66.3
INL	IN140040	2/3/2014 0:17	1/31/2014 13:21	3/31/2014 13:21	2/4/2014 9:04	06/16/2017	IN140133	1 TDOP	160
INL	IN140041	2/3/2014 7:13	1/31/2014 13:40	3/31/2014 13:40	2/4/2014 9:31	06/16/2017	IN140129	1 TDOP	160
INL	IN140041	2/3/2014 7:13	1/31/2014 13:35	3/31/2014 13:35	2/4/2014 9:37	06/16/2017	IN139266	1 TDOP	160
INL	IN140040	2/3/2014 0:17	1/31/2014 13:13	3/31/2014 13:13	2/4/2014 12:22	06/16/2017	IN139593	1 SWB	66.3
INL	IN140040	2/3/2014 0:17	1/31/2014 13:16	3/31/2014 13:16	2/4/2014 12:55	06/16/2017	IN140144	1 TDOP	160
SRS	SR140004	2/1/2014 15:45	1/23/2014 10:40	3/23/2014 10:40	2/4/2014 13:51	06/16/2017	SR139755	6-55G Drums	44.4
SRS	SR140004	2/1/2014 15:45	1/23/2014 10:40	3/23/2014 10:40	2/4/2014 13:52	06/16/2017	SR139756	7-55G Drums	51.8
LANL	LA140020	2/3/2014 22:34	2/3/2014 10:00	4/3/2014 10:00	2/4/2014 16:38	06/16/2017	LA139983	1 SWB	66.3
LANL	LA140020	2/3/2014 22:34	2/3/2014 10:05	4/3/2014 10:05	2/4/2014 16:44	06/16/2017	LA139972	1 SWB	66.3
SRS	SR140004	2/1/2014 15:45	1/23/2014 10:30	3/23/2014 10:30	2/4/2014 17:50	06/16/2017	SR139767	7-55G Drums	51.8
SRS	SR140004	2/1/2014 15:45	1/23/2014 10:35	3/23/2014 10:35	2/4/2014 17:51	06/16/2017	SR139760	6-55G Drums	44.4
SRS	SR140004	2/1/2014 15:45	1/23/2014 10:30	3/23/2014 10:30	2/4/2014 17:51	06/16/2017	SR139766	4-55G Drums	29.6
SRS	SR140004	2/1/2014 15:45	1/23/2014 10:35	3/23/2014 10:35	2/4/2014 17:52	06/16/2017	SR139761	7-55G Drums	51.8
LANL	LA140020	2/3/2014 22:34	2/3/2014 10:15	4/3/2014 10:15	2/5/2014 8:34	06/16/2017	LA139965	1 SWB	66.3
LANL	LA140020	2/3/2014 22:34	2/3/2014 10:15	4/3/2014 10:15	2/5/2014 8:36	06/16/2017	LA139966	1 SWB	66.3

Site of Origin	Shipment	Receipt Date/Time	ICV Closure Date/Time	Venting Deadline	Venting Date	WHB Deadline	Assembly	Unemplaced Containers	Waste Volume ¹ (ft ³)
LANL	LA140021	2/4/2014 22:40	2/4/2014 9:35	4/4/2014 9:35	2/5/2014 9:12	06/16/2017	LA139990	1 SWB	66.3
LANL	LA140021	2/4/2014 22:40	2/4/2014 9:35	4/4/2014 9:35	2/5/2014 9:13	06/16/2017	LA139991	1 SWB	66.3
LANL	LA140021	2/4/2014 22:40	2/4/2014 9:25	4/4/2014 9:25	2/5/2014 9:32	06/16/2017	LA140008	1 SWB	66.3
INL	IN140043	2/5/2014 0:30	2/1/2014 11:30	4/1/2014 11:30	2/11/2014 9:12	06/16/2017	IN140096	1 SWB	66.3
INL	IN140043	2/5/2014 0:30	2/1/2014 11:30	4/1/2014 11:30	2/11/2014 9:13	06/16/2017	IN140097	1 SWB	66.3
LANL	LA140021	2/4/2014 22:40	2/4/2014 9:30	4/4/2014 9:30	2/11/2014 9:13	06/16/2017	LA140002	1 SWB	66.3
INL	IN140044	2/6/2014 1:09	2/3/2014 13:55	4/3/2014 13:55	2/11/2014 10:00	06/16/2017	IN139670	1 TDOP	160
INL	IN140044	2/6/2014 1:09	2/3/2014 13:52	4/3/2014 13:52	2/11/2014 10:43	06/16/2017	IN139666	1 TDOP	160
INL	IN140045	2/6/2014 1:27	2/3/2014 13:44	4/3/2014 13:44	2/11/2014 11:00	06/16/2017	IN140205	1 TDOP	160
INL	IN140045	2/6/2014 1:27	2/3/2014 13:40	4/3/2014 13:40	2/11/2014 11:02	06/16/2017	IN139923	1 TDOP	160
SRS	SR314012	1/31/2014 16:10	1/27/2014 10:48	3/27/2014 10:48	3/26/2014 9:33	06/16/2017	SR139785	1 SLB2	261
SRS	SR140005	2/5/2014 13:00	1/31/2014 12:34	3/31/2014 12:34	3/26/2014 13:19	06/16/2017	SR139977	5-55G Drums	37
SRS	SR140005	2/5/2014 13:00	1/31/2014 12:34	3/31/2014 12:34	3/26/2014 13:20	06/16/2017	SR139978	7-55G Drums	51.8
SRS	SR140005	2/5/2014 13:00	1/31/2014 12:29	3/31/2014 12:29	3/26/2014 17:04	06/16/2017	SR139996	5-55G Drums	37
SRS	SR140005	2/5/2014 13:00	1/31/2014 12:29	3/31/2014 12:29	3/26/2014 17:05	06/16/2017	SR139997	7-55G Drums	51.8
SRS	SR314013	2/1/2014 15:15	1/28/2014 10:40	3/28/2014 10:40	3/26/2014 18:30	06/16/2017	SR139789	1 SLB2	261
SRS	SR140005	2/5/2014 13:00	1/31/2014 12:23	3/31/2014 12:23	3/26/2014 18:40	06/16/2017	SR140015	5-55G Drums	37
SRS	SR140005	2/5/2014 13:00	1/31/2014 12:23	3/31/2014 12:23	3/26/2014 18:43	06/16/2017	SR140016	7-55G Drums	51.8
INL	IN140044	2/6/2014 1:09	2/3/2014 13:49	4/3/2014 13:49	3/27/2014 10:31	06/16/2017	IN136332	7-55G Drums	51.8
INL	IN140043	2/5/2014 0:30	2/1/2014 11:35	4/1/2014 11:35	3/27/2014 12:48	06/16/2017	IN140078	1 SWB	66.3
INL	IN140043	2/5/2014 0:30	2/1/2014 11:35	4/1/2014 11:35	3/27/2014 12:50	06/16/2017	IN140079	1 SWB	66.3
SRS	SR314014	2/4/2014 13:15	1/30/2014 10:30	3/30/2014 10:30	3/27/2014 14:04	06/16/2017	SR139793	1 SLB2	261
INL	IN140043	2/5/2014 0:30	2/1/2014 11:40	4/1/2014 11:40	3/27/2014 14:51	06/16/2017	IN140074	1 SWB	66.3
INL	IN140042	2/5/2014 0:34	2/1/2014 11:50	4/1/2014 11:50	3/27/2014 15:34	06/16/2017	IN140090	1 SWB	66.3
INL	IN140042	2/5/2014 0:34	2/1/2014 11:50	4/1/2014 11:50	3/27/2014 15:37	06/16/2017	IN140091	1 SWB	66.3
INL	IN140042	2/5/2014 0:34	2/1/2014 11:45	4/1/2014 11:45	3/27/2014 18:08	06/16/2017	IN140070	1 SWB	66.3
INL	IN140042	2/5/2014 0:34	2/1/2014 11:55	4/1/2014 11:55	3/27/2014 18:30	06/16/2017	IN140084	1 SWB	66.3
INL	IN140042	2/5/2014 0:34	2/1/2014 11:55	4/1/2014 11:55	3/27/2014 18:36	06/16/2017	IN140085	1 SWB	66.3

Site of Origin	Shipment	Receipt Date/Time	ICV Closure Date/Time	Venting Deadline	Venting Date	WHB Deadline	Assembly	Unemplaced Containers	Waste Volume ¹ (ft ³)
INL	IN140045	2/6/2014 1:27	2/3/2014 13:48	4/3/2014 13:48	3/27/2014 19:24	06/16/2017	IN140066	1 SWB	66.3
WIPP ²	---	6/13/2014	---	---	---	06/16/2017	WISD002 ³	1 SWB	66.3
WIPP ²	---	6/13/2014	---	---	---	06/16/2017	WISD003 ³	1 SWB	66.3
WIPP ²	---	6/13/2014	---	---	---	06/16/2017	WISD004 ³	1 SWB	66.3
WIPP ²	---	6/13/2014	---	---	---	06/16/2017	WISD005 ³	1 SWB	66.3
WIPP ²	---	6/21/2014	---	---	---	06/16/2017	WISD006 ³	1 SWB	66.3
WIPP ²	---	6/21/2014	---	---	---	06/16/2017	WISD007 ³	1 SWB	66.3
WIPP ²	---	6/24/2014	---	---	---	06/16/2017	WISD008 ³	1 SWB	66.3
WIPP ²	---	6/24/2014	---	---	---	06/16/2017	WISD009 ³	1 SWB	66.3
WIPP ²	---	6/24/2014	---	---	---	06/16/2017	WISD010 ³	1 SWB	66.3
WIPP ²	---	6/24/2014	---	---	---	06/16/2017	WISD011 ³	1 SWB	66.3
WIPP ²	---	3/1/2015	---	---	---	06/16/2017	WISD012 ³	1 SWB	66.3
---	---	---	---	---	---	---	---	155 Containers	5,866.7 ft ³

Notes:

¹55G Drum=7.4 ft³, SWB=66.3 ft³, TDOP=160 ft³, 85G Drum=11.4 ft³, 100G Drum=13.4 ft³, SLB2=261 ft³ (Permit Part 3, Section 3.3.1)

²Waste generated at the WIPP facility as a result of decontamination activities and characterized as derived waste (Permit Part 2, Section 2.3.5)

³Derived-waste container number

INL – Idaho National Laboratory

LANL – Los Alamos National Laboratory

SRS – Savannah River Site

SWB – standard waste box

SLB – Standard large box

TDOP – ten-drum overpack

WHB – Waste Handling Building

Attachment 4
Status of RCRA Contingency Plan Required Activities (reserved)
[Last updated September 30, 2015]

Attachment 5
Corrective Actions (reserved)
[Last updated October 31, 2015]

Attachment 6
Recovery-Related Work Activities



IVS Fans and Filter Units



IVS Ductwork, Fan and Filter Units



Aerial View of the IVS

Attachment 7
WIPP Nitrate Salt Bearing Waste Container Isolation Plan
Information Required by Administrative Order 3 (reserved)
[Last updated November 30, 2015]