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NMED
Hazardous Waste Bureau

Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

JUN 2 9 2015

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
Harold Runnels Building
1190 Saint Francis Drive, Room 4050
Santa Fe, NM 87502-5469

Subject: Monthly Report for the Reporting Period Ending May 31, 2015 as Required by NMED Administrative Orders dated February 27, 2014, May 12, 2014, and May 20, 2014, as Amended by NMED Directives dated August 29, 2014 and December 9, 2014

Dear Mr. Kieling and Ms. Roberts:

The purpose of this letter is to transmit the monthly report for the reporting period ending May 31, 2015, as requested by the February 27, 2014, May 12, 2014, and May 20, 2014, Administrative Orders, issued under the authority of the New Mexico Hazardous Waste Act § 74-4-13 from Ryan Flynn to Messrs. Hellstrom, Franco, Cook, and McQuinn, and as amended by the August 29, 2014, and December 9, 2014, directives from Ryan Flynn to Messrs. Franco and McQuinn. This paper copy of the report is enclosed along with a compact disc containing the electronic version of the report.

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,

DC Bryson for
Jose R. Franco, Manager
Carlsbad Field Office

James A. Bellon
Philip J. Breidenbach, Project Manager
Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure

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Monthly Status Report for the New Mexico Environment Department Administrative Orders

Reporting Period May 1, 2015, through May 31, 2015

Introduction

On February 5, 2014, a vehicle fire occurred in the Waste Isolation Pilot Plant (WIPP) underground, resulting in temporary suspension of normal operations and waste shipments from generator sites. On February 14, 2014, while the fire investigation was still underway, a continuous air monitor detected airborne radiation in the WIPP underground facility, causing the ventilation exhaust to automatically realign to high efficiency particulate air (HEPA) filtration mode. The ventilation system has been operating in filtration mode since that time. Entries into Panel 7 in the underground have confirmed that at least one container from a nitrate salt bearing waste stream from Los Alamos National Laboratory (LANL) was breached. The independent Technical Assistance Team (TAT) confirmed that one drum in Panel 7, Room 7, from LANL was responsible for the 2014 radiological release. The report concluded that the drum contained chemically incompatible materials, ultimately leading to the release. The *overarching conclusion* is that chemically incompatible contents of Drum 68660 from LANL in combination with physical conditions (e.g., the configuration of the materials in the drum) supported exothermic chemical reactions leading to a thermal runaway; the consequent build-up of gases within the drum displaced the drum lid, venting radioactive materials and hot matter that further reacted with air or other materials outside the drum to cause the damage observed in WIPP Panel 7, Room 7. Shipments of waste to the WIPP facility have been suspended.

In April 2015, the Department of Energy Office of Environmental Management (EM) released the Accident Investigation Board (AIB) Phase 2 Report related to the February 14, 2014 radiological event. The AIB concluded that the release was caused by an exothermic reaction involving the mixture of organic materials and nitrate salts in one drum that was processed at LANL in December 2013. The AIB also concluded that an underground salt haul truck fire that occurred at WIPP on February 5, 2014, did not cause or contribute to the radiological release event.

The New Mexico Environment Department (NMED) has issued two Administrative Orders (AOs) to address certain activities relative to the WIPP Hazardous Waste Facility Permit (Permit) that cannot be performed because the underground is inaccessible for normal activities. The AOs provide requirements for monitoring and reporting to the NMED concerning the status of recovery from the two events. The first administrative order (AO1) issued on February 27, 2014, addressed above-ground compliance, and required a weekly report to be submitted with regard to surface-related requirements of the Permit. On May 12, 2014, a second administrative order (AO2) was issued to address, in part, Permit-required activities that cannot currently be performed due to restriction on access to the underground. The second administrative order changed the reporting period from weekly to biweekly, with additional information required to supplement the information required by AO1. A directive from the Secretary of the NMED was issued on August 29, 2014, which amended the reporting frequency from biweekly to monthly for reporting required under AO1 and AO2 with the submittal being due to NMED no later than the 15th of the month for activities conducted during

the previous month. A new directive from the Secretary of the NMED was issued on December 9, 2014, which amended the submittal frequency for this report. The new due date for the monthly submittal shall be the last day of the subsequent month for activities conducted during the previous month.

This report serves to fulfill the reporting requirements set forth by AO1 and AO2, as amended by the NMED directives dated August 29, 2014, and December 9, 2014. The following sections combine the information required by both orders, as appropriate, and provide references to the applicable paragraphs from AO1 and AO2.

In accordance with Paragraph 17(a) of AO2, and a subsequent letter from the NMED dated September 24, 2014, the Permittees submitted a revised draft of the underground compliance plan (UCP) on October 30, 2014, for NMED's review and comments. Pertinent elements of the WIPP Recovery Plan were integrated into the UCP as these elements pertain to the Permit-related requirements addressed by the AOs. The monthly reports serve to provide a status of recovery-related activities, as outlined in AO1 and AO2. In accordance with Paragraph 18(a) of AO2, subsequent reports will identify new information since the previous reporting period.

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:

See Attachment 1, *Surface and Underground Inspections*, for the current status of each Permit-required inspection, including accessibility of underground equipment for personnel performing the inspections. This list is taken from Permit Attachment E, Table E-1. The surface and underground inspections required by Table E-1a related to remote-handled (RH) transuranic (TRU) waste are pre-operational. Because the WIPP facility has not been handling RH TRU waste, and there is no RH TRU waste being stored at the WIPP facility at this time, these pre-operational inspections do not currently apply. Inspections and preventative maintenance (PM) are not required for equipment that is out of service. Prior to commencing RH TRU waste handling operations, PMs and/or inspections will be brought into a current/compliant status.

As indicated in Attachment 1, a few underground inspections cannot currently be performed due to the inaccessibility to those portions of the underground where inspections are required. Some inspections are being completed in order to facilitate recovery. In accordance with Paragraph 17(a) of AO2 and an NMED letter dated September 24, 2014, the Permittees were required to submit a revised UCP to the NMED by October 30, 2014. The order requires that the UCP shall include a detailed compliance schedule for those requirements described in Paragraph 13 of AO2. The compliance schedule includes a proposed timeline, including dates, for achieving underground recovery and attaining compliance with these Permit-required activities. Before these activities can resume, however, certain prerequisite activities must be performed in order to establish the safety and habitability of the work areas in the underground. The UCP will be updated as information becomes available, and these updates will be provided to the NMED for review and comment prior to being incorporated. Future updates to the UCP, will be reflected in the monthly reports, as required by Paragraph 18(c) of AO2.

In Attachment 1, new emergency equipment is being brought into service at the site. There are two underground rescue trucks on the equipment list, but one is still awaiting arrival to the site. Pre-operational inspections are not being performed on the on-site rescue truck because the inspection procedure is being revised. Because the rescue truck is currently not operating, underground emergency response compensatory measures including fire and medical, have been implemented.

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:

In accordance with Paragraph 17(a) of AO2, the draft UCP was submitted to the NMED by June 26, 2014. On September 24, 2014, the NMED notified the Permittees that review of the draft UCP had been suspended pending the release of the WIPP Recovery Plan. Currently, certain monitoring activities cannot be performed due to the inaccessibility to those portions of the underground where monitoring activities occur. The UCP contains a compliance schedule including a proposed timeline, including dates, for achieving underground recovery and attaining compliance with these Permit-required activities. Before these activities can resume, however, certain prerequisite activities must be performed in order to establish the safety and habitability of the work areas in the underground. A status of these activities, as described in future updates to the UCP, will be reflected in the monthly reports, as required by Paragraph 18(c) of AO2.

Volatile Organic Compound (VOC) Monitoring

Repository VOC monitoring activities (required by Permit Part 4, Section 4.6.2, including Table 4.6.2.3, and associated requirements in Attachment N) are not currently being performed due to the inaccessibility of those portions of the underground required to perform these activities. Additionally, 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) cannot currently be performed due to the inaccessibility of those portions of the underground needed to perform these activities.

Surface VOC monitoring is being conducted in lieu of underground monitoring during re-entry and recovery operations utilizing portable passive air sampling kits. Surface monitoring is being performed to assure that the Permit environmental performance standards (i.e., carcinogenic and non-carcinogenic risk due to VOC emissions from the disposed waste) for surface-based non-waste workers are met. 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 and at an off-site location (WQSP-4) approximately a mile southeast of the Training Building. These samples are used to quantify VOC exposure to a receptor in the Training Building. The sample on-site and the sample at location WQSP-4 are used to quantify VOC concentrations in the ambient air. Acquisitions in both full-scan and selective ion monitoring (SIM) gas chromatography/mass spectroscopy (GC/MS) mode are acquired to ensure a good quantification. Scan parameters, as seen in SIM mode, provide more averages over a smaller peak width, resulting in superior spectra and less noise; therefore better compound detection and sensitivity with results in parts per trillion (ppt). Full-scan mode monitors the tentatively identified compounds (TIC) over a range of

masses and is required for confidence and confirmation of results in parts per billion (ppb). Both modes of GC/MS results are provided (full-scan and SIM). In accordance with Paragraph 19 of AO2, the Permittees began monitoring for trichloroethylene as a target analyte on May 12, 2014.

Disposal room VOC monitoring is not being conducted in the underground as stated above. This does not pose a threat to underground waste workers because waste handling is not underway in the underground, and no emplacement rooms are active. Disposal room monitoring will be restarted prior to resuming waste emplacement activities.

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. Not all geomechanical monitoring activities that require the manual reading of underground equipment can be performed due to inaccessible portions of the underground. However, visual inspections of the underground areas during recent re-entries have provided information regarding the stability of the underground and identified those areas that require bolting. Bolting has resumed as part of recovery activities in the underground. More than 2,100 bolts have been installed in the underground since bolting activities resumed in November 2014, with catch up bolting approximately 75 percent complete.

Hydrogen and Methane Monitoring

Hydrogen and methane monitoring activities (required by Permit Part 4, Section 4.6.5 and associated requirements in Attachment N1) cannot currently be performed due to the inaccessibility of those portions of the underground where these activities are performed. This does not pose a threat to underground waste workers because underground activities are not underway in the vicinity of Panels 3 and 4. Hydrogen and methane monitoring will be restarted during recovery.

Mine Ventilation Rate Monitoring

Mine ventilation rate monitoring activities (required by Permit Part 4, Section 4.6.4 and associated requirements of Attachment O) are currently being performed. However, due to reduced air flow in the underground because of operating in filtration mode, the minimum running annual average ventilation rate set forth by the Permit cannot be maintained. 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). The calculated running annual average ventilation flow rate as of May 31, 2015, was approximately 59,954 SCFM. Surface VOC monitoring is being used to ensure the reduced flow rate does not pose a threat to the surface non-waste worker.

3.0 Summary of waste shipment information and any other relevant records that document the site of origin, volumes and receipt dates of TRU waste that is currently located at the facility WHB and parking area unit, as requested per Paragraph 14(c) of AO1, and information specifying the deadlines for each individual waste assembly as it relates to AO1, as requested per Paragraph 14(d) of AO1:

Waste is currently being stored in the Waste Handling Building (WHB). Since the submittal of the last monthly report, there has been no additional waste placed in storage in the WHB, and there were no changes to the storage deadlines during this reporting period. Therefore, Attachment 2, *TRU Mixed Waste Currently in Storage at the WIPP Facility*, and Attachment 4, *Surface and Underground Derived Waste Currently in Storage at the WIPP Facility* are currently reserved.

4.0 Location of any environmental monitoring equipment, including the identification of whether they are stationary, mobile, or permanent. This includes, but is not limited to, VOC monitoring stations, radiological monitoring stations, meteorological monitoring, surface water monitoring, vegetation sampling. The reports shall include dates of deployment and sampling, and all data that has been produced by these monitoring stations for his reporting period, as requested per Paragraph 14(f) of AO1:

See Attachment 3, *Environmental Monitoring,* which includes tables with the locations of environmental monitoring equipment (including identification whether they are stationary, mobile, or permanent) and new data for this reporting period. Aerial photos and diagrams displaying monitoring locations are included. The following briefly describes the monitoring information in Attachment 3, *Environmental Monitoring*.

- VOC monitoring stations – Portable surface monitoring equipment has been deployed since February 25, 2014. Samples are being collected twice each week at the locations indicated in Attachment 3. The results are included in Attachment 3, *Environmental Monitoring*.
- Radiological monitoring – During this reporting period, monitoring results were below minimum detectable concentrations. The results are included in Attachment 3, *Environmental Monitoring*.
    - Groundwater samples – Groundwater samples were obtained on the dates shown in Attachment 3.

5.0 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:

In accordance with Paragraph 17(b) of AO2, the draft *Underground Derived Waste Storage Plan (UDWSP)* was submitted to the NMED by June 26, 2014 for review and comment. On December 2, 2014, NMED provided comments on the UDWSP and notified the

Permittees that the draft UDWSP had been approved. The Permittees addressed the comments, incorporated changes and resubmitted the UDWSP to NMED on January 6, 2015. During this reporting period, no additional derived waste was generated. As recovery efforts progress, any derived waste produced will be reported in Attachment 4, *Surface and Underground Derived Waste Currently in Storage at the WIPP Facility*, which is currently reserved.

6.0 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 monthly report. Accordingly, Attachment 5, *Status of RCRA Contingency Plan Required Activities*, is currently reserved.

7.0 The monthly 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, no additional requirements were placed upon the Permittees by any other state or federal agency relating to corrective actions or recovery and as a result of the incidents referenced in Paragraphs 8 and 9 of AO2, including requirements by other segments of the U.S. Department of Energy (DOE). Attachment 6, *Corrective Actions Required for Recovery*, is currently reserved.

8.0 The Permittees shall provide documentation of the "as found" condition of Panel 7, including relevant photographs of the waste, as requested per Paragraph 18(i) of AO2:

On May 20, 2015, isolation of all waste containers from the LANL nitrate salt bearing waste stream that was determined to be responsible for the 2014 radiological release was completed with the closure of Panel 7, Room 7. WIPP personnel completed installation of the intake and exhaust side steel bulkheads. Radiological monitoring equipment was installed at the W-170, S-2180 drift for Panel 7 and the air monitoring tubing from Panel 7, Room 7, was capped and terminated. Photographs of the closure activities are provided in Attachment 7, *As-Found Condition of Panel 7*. Also in Panel 7, radiological mitigation is progressing. Decontamination water spraying is continuing to be performed on the ribs, floor and back of Rooms 1 through 6 of Panel 7 with the goal of down posting from an airborne contamination area, based on radiological surveys.

9.0 The Permittees shall provide documentation of the "as found" condition of Panel 6 partial closure system, including relevant photographs, as requested per Paragraph 18(j) of AO2:

During this reporting period, WIPP personnel have completed the initial closure of Panel 6. Workers completed installation of the substantial barrier (chain link, brattice cloth, mined salt) and steel bulkheads on both the intake and exhaust sides of Panel 6. Radiological monitoring equipment was installed and the air monitoring tubing was capped and terminated. Photographs of the closure activities are provided in Attachment 9, *As-Found Condition of Panel 6*.

10.0 The Permittees shall provide a status of recovery-related activities relative to the underground per Paragraph 18(e)(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:

Consistent with the WIPP Recovery Plan, the focus of underground entries has been on radiological characterization and rollback, geotechnical evaluation, habitability surveys, clean up, electrical and mechanical evaluation of systems, and equipment and repairs as needed to support bolting and initial panel closure activities. During this reporting period, work activities included initial closure of Panel 6 and closure of Panel 7, Room 7. Activities in contaminated areas will be performed using separate equipment and personnel protective equipment. Attachment 8, *Panel 7 Recovery-Related Work*, provides a map of the current status of the WIPP underground rollback areas during this reporting period.

More than 2,100 bolts have been installed in the underground since bolting activities resumed in November 2014, with catch up bolting approximately 75 percent complete. Bolting activities are prioritized based on geotechnical inspections and surveys. The number of pieces of diesel equipment that can be operated for roof bolting is limited by the available ventilation in the work area and the minimum ventilation flow rate assigned to each piece of equipment based on Mine Safety and Health Administration air quality requirements. Due to these limitations, ventilation adjustments will have to be made as a prerequisite in each location where bolting equipment will operate to ensure equipment airflow requirements are met.

Additional recovery activities underground are progressing, which includes electrical distribution restoration and combustible material removal/storage. Electrical distribution restoration is 80 percent complete, and combustible material removal/storage is also 80 percent complete. Establishment of an underground Combustible Restricted Area to protect the egress of underground WIPP workers in the event of another fire is nearing completion.

Also during this reporting period, work is continuing on the interim ventilation system (IVS). This system includes two skid-mounted HEPA filter units and fan units which will be placed on concrete foundations and connected to ductwork that exits the underground. The IVS will augment the existing underground ventilation system and provide additional airflow for underground operations. Initial excavation for the two fan/filter concrete pads and electrical structure is complete. Photographs in Attachment 10, *Interim Ventilation System Prep Work*, depict work activities related to the IVS.

As the Permittees continue to conduct recovery-related activities, additional descriptions will be provided in subsequent reports.

Attachment 1
Surface and Underground Inspections

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
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	5/27/15	N/A	
Exhaust Shaft	Underground Operations	Quarterly	PM041099 Inspecting for Deterioration and Leaks/Spills	Current	5/27/15	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	5/26/15	N/A	
Self-Rescuers	Underground Operations	Quarterly	WP 04-AU1026 Inspecting for Deterioration and Functionality in accordance with MSHA requirements	Current	5/31/15	N/A	
Underground Openings—Roof Bolts and Travelways	Underground Operations	Weekly	WP 04-AU1007 Inspecting for Deterioration	Current	5/28/15	N/A	
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	5/25/15	N/A	Hoist is operational for conveyance of equipment and emergency egress.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Explosion-Isolation Walls	Underground Operations	Quarterly	Integrity and Deterioration of Accessible Areas	Current	5/13/15	N/A	
Bulkhead in Filled Panels	Underground Operations	Monthly	Integrity and Deterioration of Accessible Areas	Current	5/13/15	N/A	
MSHA Air Quality Monitor	Maintenance/ Underground Operations	Daily	WP 12-IH1828 Inspecting for Air Quality Monitoring Equipment Functional Check	Current	5/31/15	N/A	
Ambulances (Surface) and related emergency supplies and equipment	Emergency Services	Weekly	12-FP0030 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	5/31/15	N/A	
Ambulances (Underground) and related emergency supplies and equipment	Emergency Services	Weekly	12-FP0030 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current for Ambulance on Site	5/30/15	N/A	There are two underground ambulances on the equipment list, but one is still awaiting arrival to the site. Pre-operational inspections are being performed on the other ambulance.
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	Current	1/8/15	N/A	
Fire Extinguishers (Surface)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Current	5/31/15	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Fire Extinguishers (Underground)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Current	5/31/15	N/A	
Fire Hoses	Emergency Services	Annually (minimum)	12-FP0031 Inspecting for Deterioration and Leaks/Spills	Current	2/28/15	N/A	
Fire Hydrants	Emergency Services	Semiannual/ annually	12-FP0034 Inspecting for Deterioration and Leaks/Spills	Current	3/28/15: (Semiannual) 7/15/14: (Annual)	N/A	
Fire Pumps	Emergency Services	Weekly/ annually	WP 12-FP0026 Inspecting for Deterioration, Leaks/Spills, valves, and panel lights	Current	5/25/15	N/A	
Fire Sprinkler Systems	Emergency Services	Monthly/ quarterly	WP 12-FP0025 Inspecting for Deterioration, Leaks/Spills, static pressures, and removable strainers	Current	5/25/15, 5/26/15, 5/27/15	N/A	
Fire and Emergency Response Trucks (Surface Fire Trucks)	Emergency Services	Weekly	12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Current	5/30/15	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
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 for vehicle on site.	5/31/15	N/A	There are 8 underground fire suppression vehicles on the equipment list, with seven awaiting arrival to the site. Weekly inspections are being performed to the on-site underground fire suppression vehicle.
Hazardous Material Response Equipment	Emergency Services	Weekly	12-FP0033 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	5/26/15	N/A	
Miners First Aid Station	Emergency Services	Quarterly	12-FP0035 Inspecting for Required Equipment	Current	4/1/15	N/A	
Personal Protective Equipment (not otherwise contained in emergency vehicles or issued to individuals): —Self-Contained Breathing Apparatus	Emergency Services	Weekly	12-FP0029 Inspecting for Deterioration and Pressure	Current (See Comment)	4/25/15 (See Comment)	N/A	Self-Contained Breathing Apparatuses are currently located on the emergency vehicles and weekly inspections are being performed as related emergency supplies and equipment are updated.
Rescue Truck (Surface)	Emergency Services	Weekly	12-FP0030 and 12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Current	5/28/15	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Rescue Trucks (Underground)	Emergency Services	Weekly	12-FP0030 and 12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Not Current for truck on site.	2-8-14		There are two underground rescue trucks on the equipment list, but one is still awaiting arrival to the site. Pre-operational inspections are not being performed on the on-site rescue truck because the inspection procedure is being revised. Because the rescue truck is currently not operating, underground emergency response compensatory measures including fire and medical, have been implemented.
Vehicle Siren (Surface Vehicles)	Emergency Services	Weekly	Functional Test included with inspection of the Ambulances, Fire Trucks, and Rescue Trucks	Current	5/28/15 5/29/15 5/30/15	N/A	
Vehicle Siren (Underground Vehicles)	Emergency Services	Weekly	Functional Test included with inspection of the Ambulances, Fire Trucks, and Rescue Trucks	Current/ U/G Ambulance Only	5/30/15	N/A	
Adjustable Center of Gravity Lift Fixture	Waste Handling	Preoperational	WP 05-WH1410 Inspecting for Mechanical Operability and Deterioration	Current	5/31/15 (41-T-037) 10/23/14 (41-T-038) 5/19/15 (41-T-032) 4/13/15 (41-T-036)	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Contact-Handled (CH) TRU Underground Transporter	Waste Handling	Preoperational	WP 05-WH1603 Inspecting for Mechanical Operability, Deterioration, and area around transporter clear of obstacles	Current	2/5/14	When waste disposal operations resume	Equipment not in use due to the fire and radiological events.
Conveyance Loading Car	Waste Handling	Preoperational	WP 05-1406 Inspecting for Mechanical Operability, Deterioration, path clear of obstacles and guards in the proper place	Current	12/15/14 (41-H-018)	When waste disposal operations resume	Equipment not in use due to the fire and radiological events. The preoperational inspection was completed for training purposes and in support of preventive maintenance only. Inspection not intended for daily operations.
Facility Transfer Vehicle	Waste Handling	Preoperational	WP 05-WH1204 Inspecting for Mechanical Operability, Deterioration, path clear of obstacles, and guards in the proper place	Current	5/13/15 (41-H-020A) 5/05/15 (41-H-020B)	N/A	
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 Mechanical Operability, Deterioration, and On board fire suppression system	Current	5/21/15 (41-H-009) 5/23/15 (41-H-013) 5/06/15 (41-H-051) 5/30/15 (41-H-012D) 5/28/15 (41-H-012E) 5/23/15 (74-H-010B)	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
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 Mechanical Operability, Deterioration, and On board fire suppression system	Current	5/20/15 (52-H-126)	When waste disposal operations resume	One 6-ton forklift in the underground is now is service in Panel 7. The inspection was completed as shown as pre-operational. Other forklifts are not in use due to the fire and radiological event.
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	5/27/15 (Weekly) 5/30/15 (Daily)	N/A	
TRU Mixed Waste Decontamination Equipment	Waste Handling	Annually	WP 05-WH1101 Inspecting for Required Equipment	Current	12/30/14	N/A	Annual 2014 Inspection. This is an annual inspection and not needed for daily operation.
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	Current	2/5/14	When waste disposal operations resume	Waste handling operations are suspended therefore preoperational inspections are not being performed.
TDOP Upender	Waste Handling	Preoperational	WP 05-WH1010 Inspecting for Mechanical Operability and Deterioration	Current	10/9/13	When waste disposal operations resume	No change. This is a pre-operational inspection and is not needed for daily operations.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Waste Handling Cranes	Waste Handling	Preoperational	WP 05-WH1407 Inspecting for Mechanical Operability, Deterioration, and Leaks/Spills	Current	1/6/15 (41-T-151A) 4/15/14 (41-T-151B) 5/31/15 (41-T-151D)	N/A	There are four cranes, but the pre-operational inspections were only performed on the cranes listed. The other crane will be inspected prior to use.
Push-Pull Attachment (Surface)	Waste Handling	Preoperational	WP 05-WH1401 Inspecting for Damage and Deterioration	Current	4/15/15 (41-T-160A) 5/23/15 (41-T-160B)	N/A	
Push-Pull Attachment (Underground)	Waste Handling	Preoperational	WP 05-WH1401 Inspecting for Damage and Deterioration	Current	2/5/14	When waste disposal operations resume	Equipment not in use due to the fire and radiological events. The preoperational inspection was completed for training purposes and in support of preventive maintenance only. Inspection not intended for daily operations.
Trailer Jockey	Waste Handling	Preoperational	WP 05-WH1405 Inspecting for Mechanical Operability and Deterioration	Current	3/26/15 (41-H-151B) 5/23/15 (41-H-151A) 5/30/15 (41-H-046)	N/A	There are three trailer jockeys. Inspections are only performed if the equipment is used on the shift.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Bolting Robot	Waste Handling	Preoperational	WP 05-WH1203 Mechanical Operability	Current	6/29/12	When waste disposal operations resume	Equipment not in use due to the fire and radiological events. The preoperational inspection was completed for training purposes and in support of preventive maintenance only. Inspection not intended for daily operations.
Yard Transfer Vehicle	Waste Handling	Preoperational	WP 05-WH1205 Mechanical Operability, clear of obstacles and Guards in proper place	Current	7/29/14 (41-H-021A) 5/23/15 (41-H-021B)	N/A	
Payload Transfer Station	Waste Handling	Preoperational	WP 05-WH1208 Mechanical Operability, Deterioration, and Guards in proper place	Current	12/16/14 (41-Z-041)	N/A	
Monorail Hoist	Waste Handling	Preoperational	WP 05-WH1202 Mechanical Operability, and leaks/spills	Current	5/19/15 (41-H-027)	N/A	
Bolting Station	Waste Handling	Preoperational	WP 05-WH1203 Mechanical Operability, Deterioration, and Guards in proper place	Current	3/23/15 (41-T-053A) (41-T-054A)	N/A	
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	5/30/15 (#1) 5/30/15 (#2)	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Central Monitoring System (CMS)	Facility Operations	Continuous	Automatic Self-Checking	Current	5/31/15	N/A	
Mine Pager Phones (between surface and underground)	Facility Operations	Monthly	WP 04-PC3017 Testing of PA and Underground Alarms and Mine Page Phones at essential locations	Current	5/28/15	N/A	
Mine Pager Phones (underground)	Facility Operations	Monthly	WP 04-PC3017 Testing of PA and Underground Alarms and Mine Page Phones at essential locations	Current	5/28/15	N/A	
Public Address (and Intercom System) on Surface	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	5/28/15	N/A	
Public Address (and Intercom System) in Underground	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	5/28/15	N/A	
Radio Equipment	Facility Operations	Daily	Radios are operated daily and are repaired upon failure	Current	5/31/15	N/A	
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	5/31/15	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
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	5/31/15	N/A	
Facility Inspections (Water Diversion Berms)	Facility Engineering	Annually	WP 10-WC3008 Inspecting for Damage, Impediments to water flow, and Deterioration	Current	9/7/14	N/A	
Eye Wash and Shower Equipment (Surface)	Equipment Custodian	Weekly	WP 12-IS1832 Inspecting for Deterioration	Current	5/26/15-5/28/15	N/A	
Eye Wash and Shower Equipment (Underground)	Equipment Custodian	Weekly	WP 12-IS1832 Inspecting for Deterioration	Current	5/24/15	N/A	
Perimeter Fence, Gates, Signs	Security	Daily	PF0-008 Inspecting for Deterioration and Posted Warnings	Current	5/31/15	N/A	
Underground—Geomechanical Instrumentation System (GIS)	Geotechnical Engineering	Monthly	WP 07-EU1301 Inspecting for Deterioration	Current	5/26/15	N/A	Complete at accessible areas.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Ventilation Exhaust	Maintenance Operations	Quarterly	IC041098 Check for Deterioration and Calibration of Mine Ventilation Rate Monitoring Equipment	Not Current	41F30703 Fan A (11/9/13) 41F30704 Fan B (5/20/13) 41F30702 Fan C (12/18/13)	N/A	The 700 horsepower fans are not in use because underground ventilation system is operating in filtration mode.

[1] Inspection proposed start date of first quarter of calendar year 2016, is an estimate from the WIPP Recovery Plan. Inspections may be initiated prior to 3/31/16 as work zones are released in the underground. Therefore, 3/31/16 is a "placeholder," and proposed start dates may be revised as recovery work progresses.

Attachment 2
TRU Mixed Waste Currently in Storage at the WIPP Facility (reserved)

Attachment 3
Environmental Monitoring

Attachment 3 contains the following environmental monitoring data:

- VOC Monitoring
- Radiological Monitoring
    - Groundwater samples

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	3/25/2015	3/31/2015	9229	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.42
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Butane	106-97-8	PPBV		6.52 NJ
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		2.98 NJ
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.84 NJ
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.82 NJ
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Isobutane	75-28-5	PPBV		3.68 NJ
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Pentane	109-66-0	PPBV		4 NJ
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.18 NJ
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Propane	74-98-6	PPBV		6.06 NJ
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	56.2 J
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	83.5 J
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U

Qualifiers:

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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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	3/25/2015	3/31/2015	9229	WQSP-4	Toluene	108-88-3	PPTV	200	433.88
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Chloroform	67-66-3	PPTV	200	11.76 J
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	36.12 J
CEMRC	3/25/2015	3/31/2015	9229	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.3 J
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	4.38
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Butane	106-97-8	PPBV		6.16 NJ
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		2.84 NJ
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.72 NJ
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.92 NJ
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.52 NJ
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.84 NJ
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.08 NJ

Qualifiers:

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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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Propane	74-98-6	PPBV		6.18 NJ
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	49.64 J
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	157.96 J
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	15.6 J
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	327.72
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	17.36 J
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	31.18 J
CEMRC	3/25/2015	3/31/2015	9231	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	4238.66
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Toluene	108-88-3	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Butane	106-97-8	PPBV		2.175 NJ

Qualifiers:

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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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	3/26/2015	3/31/2015	9232	WQSP-4	Dichlorodifluoromethane	75-71-8	PPBV		0.345 NJ
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Pentane	109-66-0	PPBV		1.23 NJ
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Propane	74-98-6	PPBV		2.19 NJ
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	58.58 J
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	84.92 J
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Toluene	108-88-3	PPTV	150	105.12 J
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Chloroform	67-66-3	PPTV	150	12.57 J
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	20.12 J
CEMRC	3/26/2015	3/31/2015	9232	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U

Qualifiers:

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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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Isobutane	75-28-5	PPBV		1.12 NJ
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Pentane	109-66-0	PPBV		0.96 NJ
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Propane	74-98-6	PPBV		2 NJ
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	59 J
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	94.08 J
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	97.16 J
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	12.32 J
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	20.3 J
CEMRC	3/26/2015	3/31/2015	9233	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.96
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U

Qualifiers:

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/1/2015	4/13/2015	9234	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Benzene	71-43-2	PPBV		0.48 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Butane	106-97-8	PPBV		7.41 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		3.045 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		1.2 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		1.23 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Cyclopropane, ethyl-	1191-96-4	PPBV		0.525 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Heptane	142-82-5	PPBV		0.585 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Hexanal	66-25-1	PPBV		0.315 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Hexane, 3-methyl-	589-34-4	PPBV		0.585 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Isobutane	75-28-5	PPBV		4.14 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Nonanal	124-19-6	PPBV		0.45 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Pentane	109-66-0	PPBV		4.32 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.455 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Pentane, 3-methyl-	96-14-0	PPBV		0.78 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Propane	74-98-6	PPBV		5.7 NJ
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	56.52 J
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	90.48 J
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Toluene	108-88-3	PPTV	150	1033.23
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Chloroform	67-66-3	PPTV	150	12.68 J

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/1/2015	4/13/2015	9234	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	48.65 J
CEMRC	4/1/2015	4/13/2015	9234	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	1.14
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Benzene	71-43-2	PPBV		0.48 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Butane	106-97-8	PPBV		9.38 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		4.38 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		1.92 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		2.26 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Cyclopropane, ethyl-	1191-96-4	PPBV		0.74 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Heptane	142-82-5	PPBV		0.9 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Hexane, 3-methyl-	589-34-4	PPBV		0.74 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Isobutane	75-28-5	PPBV		5.06 NJ

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Pentane	109-66-0	PPBV		5.84 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		2.06 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Pentane, 3-methyl-	96-14-0	PPBV		1.18 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Propane	74-98-6	PPBV		7.62 NJ
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	51.42 J
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	162.54 J
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	16.4 J
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	1137.5
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	19.22 J
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	68.76 J
CEMRC	4/1/2015	4/13/2015	9235	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	39.62 J
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.4
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/2/2015	4/13/2015	9236	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Butane	106-97-8	PPBV		6.6 NJ
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		2.78 NJ
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.7 NJ
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.58 NJ
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Isobutane	75-28-5	PPBV		3.64 NJ
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Pentane	109-66-0	PPBV		3.48 NJ
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		0.94 NJ
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Propane	74-98-6	PPBV		6.02 NJ
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	53.96 J
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	87.88 J
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Toluene	108-88-3	PPTV	200	419.12
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Chloroform	67-66-3	PPTV	200	10.96 J
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	30.3 J
CEMRC	4/2/2015	4/13/2015	9236	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/2/2015	4/13/2015	9237	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.3 J
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Butane	106-97-8	PPBV		5.96 NJ
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		2.68 NJ
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.66 NJ
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.7 NJ
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.24 NJ
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.24 NJ
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.88 NJ
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Propane	74-98-6	PPBV		5.14 NJ
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	51.62 J
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	157.84 J
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	16.56 J
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	313.96
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	16.08 J
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/2/2015	4/13/2015	9237	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	30.24 J
CEMRC	4/2/2015	4/13/2015	9237	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	25.74 J
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.4
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Butane	106-97-8	PPBV		6.64 NJ
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		2.88 NJ
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.64 NJ
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.58 NJ
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Isobutane	75-28-5	PPBV		3.68 NJ
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Pentane	109-66-0	PPBV		3.5 NJ
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		0.94 NJ
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Propane	74-98-6	PPBV		6.02 NJ
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	36.74 J

Qualifiers:

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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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/8/2015	4/13/2015	9238	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	83.22 J
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Toluene	108-88-3	PPTV	200	419.26
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Chloroform	67-66-3	PPTV	200	10.32 J
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	26.08 J
CEMRC	4/8/2015	4/13/2015	9238	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.32 J
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Butane	106-97-8	PPBV		6.32 NJ
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		2.72 NJ
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.5 NJ
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.44 NJ

Qualifiers:

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

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.52 NJ
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Nonanal	124-19-6	PPBV		0.42 NJ
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.12 NJ
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.76 NJ
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Propane	74-98-6	PPBV		5.24 NJ
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	42.16 J
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	114.8 J
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	352.98
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	12.18 J
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	24.3 J
CEMRC	4/8/2015	4/13/2015	9240	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.44
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U

Qualifiers:

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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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/9/2015	4/13/2015	9241	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Butane	106-97-8	PPBV		7.4 NJ
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		3.18 NJ
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.96 NJ
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.86 NJ
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Heptane	142-82-5	PPBV		0.42 NJ
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Isobutane	75-28-5	PPBV		4.02 NJ
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Pentane	109-66-0	PPBV		4.28 NJ
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.28 NJ
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Propane	74-98-6	PPBV		6.44 NJ
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	35.12 J
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	82.36 J
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Toluene	108-88-3	PPTV	200	470.58
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Chloroform	67-66-3	PPTV	200	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	34.26 J
CEMRC	4/9/2015	4/13/2015	9241	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.3	0.435
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Butane	106-97-8	PPBV		6.21 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		2.73 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.93 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.885 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Cyclopropane, ethyl-	1191-96-4	PPBV		0.315 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Hexanal	66-25-1	PPBV		0.645 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.51 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Nonanal	124-19-6	PPBV		0.54 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.465 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.11 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Propane	74-98-6	PPBV		4.74 NJ
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	150	36.48 J
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	150	131.42 J

Qualifiers:

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/9/2015	4/13/2015	9242	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	150	15.36 J
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Toluene	108-88-3	PPTV	150	461.88
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Chloroform	67-66-3	PPTV	150	13.19 J
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	150	29.22 J
CEMRC	4/9/2015	4/13/2015	9242	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	150	18.86 J
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.21 J
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Acetone	67-64-1	PPBV		0.48 NJ
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Butane	106-97-8	PPBV		5.175 NJ
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.42 NJ
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.495 NJ

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/15/2015	4/24/2015	9243	WQSP-4	Dichlorodifluoromethane	75-71-8	PPBV		0.33 NJ
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Isobutane	75-28-5	PPBV		2.805 NJ
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Nonanal	124-19-6	PPBV		0.36 NJ
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Pentane	109-66-0	PPBV		2.565 NJ
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Propane	74-98-6	PPBV		4.23 NJ
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	59.91 J
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	84.84 J
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Toluene	108-88-3	PPTV	150	232.34
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Chloroform	67-66-3	PPTV	150	12.15 J
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	28.59 J
CEMRC	4/15/2015	4/24/2015	9243	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.18 J
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.22 J
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U

Qualifiers:

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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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/15/2015	4/24/2015	9244	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Butane	106-97-8	PPBV		5.64 NJ
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		2.58 NJ
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.42 NJ
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.14 NJ
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Pentane	109-66-0	PPBV		2.76 NJ
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Propane	74-98-6	PPBV		5.1 NJ
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	60.56 J
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	195.58 J
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	19.02 J
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	217.24
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	22.32 J
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	27.22 J
CEMRC	4/15/2015	4/24/2015	9244	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	38.14 J
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/16/2015	4/24/2015	9245	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.21 J
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Acetone	67-64-1	PPBV		0.33 NJ
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Butane	106-97-8	PPBV		4.515 NJ
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.345 NJ
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.375 NJ
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Dichlorodifluoromethane	75-71-8	PPBV		0.36 NJ
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Isobutane	75-28-5	PPBV		2.475 NJ
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Pentane	109-66-0	PPBV		2.265 NJ
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Propane	74-98-6	PPBV		3.84 NJ
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	53.37 J
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	92.73 J
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Toluene	108-88-3	PPTV	150	214.19
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Chloroform	67-66-3	PPTV	150	13.16 J
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U

Qualifiers:

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/16/2015	4/24/2015	9245	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	26.84 J
CEMRC	4/16/2015	4/24/2015	9245	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.24 J
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Acetone	67-64-1	PPBV		0.46 NJ
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Butane	106-97-8	PPBV		6.16 NJ
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.48 NJ
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.42 NJ
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.34 NJ
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.06 NJ
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Propane	74-98-6	PPBV		5.02 NJ
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	71 J
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	128.58 J

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/16/2015	4/24/2015	9246	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	268.42
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	16.38 J
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	37.18 J
CEMRC	4/16/2015	4/24/2015	9246	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.42
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Acetone	67-64-1	PPBV		0.46 NJ
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Butane	106-97-8	PPBV		5.8 NJ
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.52 NJ
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.64 NJ

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/22/2015	5/1/2015	9247	WQSP-4	Isobutane	75-28-5	PPBV		3.18 NJ
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Pentane	109-66-0	PPBV		3.34 NJ
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		0.86 NJ
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Propane	74-98-6	PPBV		5.42 NJ
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	65.88 J
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	85.98 J
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Toluene	108-88-3	PPTV	200	419.6
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Chloroform	67-66-3	PPTV	200	14.72 J
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	28.56 J
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	35.66 J
CEMRC	4/22/2015	5/1/2015	9247	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.44
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.34 J
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/22/2015	5/1/2015	9249	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Acetone	67-64-1	PPBV		0.5 NJ
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Butane	106-97-8	PPBV		5.66 NJ
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		2.2 NJ
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.46 NJ
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.52 NJ
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.12 NJ
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.08 NJ
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.76 NJ
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Propane	74-98-6	PPBV		5.52 NJ
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	66.76 J
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	403.6
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	61.52 J
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	364.76
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	39.56 J
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	31.82 J
CEMRC	4/22/2015	5/1/2015	9249	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	114.04 J
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/23/2015	5/1/2015	9250	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.42
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Butane	106-97-8	PPBV		6.09 NJ
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		2.78 NJ
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.77 NJ
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.71 NJ
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Cyclopropane, ethyl-	1191-96-4	PPBV		0.3 NJ
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Isobutane	75-28-5	PPBV		3.26 NJ
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Pentane	109-66-0	PPBV		3.57 NJ
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.02 NJ
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Propane	74-98-6	PPBV		4.85 NJ
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	55.44 J
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	99.21 J
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	5.99 J
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Toluene	108-88-3	PPTV	150	435.03

Qualifiers:

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

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/23/2015	5/1/2015	9250	WQSP-4	Chloroform	67-66-3	PPTV	150	12.45 J
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	33.42 J
CEMRC	4/23/2015	5/1/2015	9250	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.42
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Butane	106-97-8	PPBV		7.66 NJ
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		3.38 NJ
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.94 NJ
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.94 NJ
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Isobutane	75-28-5	PPBV		4.12 NJ
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Pentane	109-66-0	PPBV		4.28 NJ
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.18 NJ
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Propane	74-98-6	PPBV		6.82 NJ

Qualifiers:

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	51.04 J
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	152.34 J
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	17.52 J
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	451.16
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	16.12 J
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	38.9 J
CEMRC	4/23/2015	5/1/2015	9251	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	27.26 J
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.495
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Butane	106-97-8	PPBV		8.205 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		3.315 NJ

Qualifiers:

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

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/29/2015	5/1/2015	9252	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.81 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.9 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Cyclopropane, ethyl-	1191-96-4	PPBV		0.405 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Heptane	142-82-5	PPBV		0.375 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Isobutane	75-28-5	PPBV		4.5 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Nonanal	124-19-6	PPBV		0.495 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Pentane	109-66-0	PPBV		4.245 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.155 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Propane	74-98-6	PPBV		8.22 NJ
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	59.34 J
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	96.3 J
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Toluene	108-88-3	PPTV	150	483.87
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Chloroform	67-66-3	PPTV	150	15.18 J
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	43.4 J
CEMRC	4/29/2015	5/1/2015	9252	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.34 J
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U

Qualifiers:

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.66
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Butane	106-97-8	PPBV		12.32 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		5.16 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		1.28 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		1.76 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Cyclopropane, ethyl-	1191-96-4	PPBV		0.66 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Heptane	142-82-5	PPBV		0.58 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Isobutane	75-28-5	PPBV		6.74 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Pentane	109-66-0	PPBV		6.56 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.86 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Pentane, 3-methyl-	96-14-0	PPBV		1 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Propane	74-98-6	PPBV		10.02 NJ
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	75.64 J
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	344.6
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	50 J
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	667.88

Qualifiers:

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Notes:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	33.58 J
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	65.86 J
CEMRC	4/29/2015	5/1/2015	9253	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	95.6 J
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.34 J
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Butane	106-97-8	PPBV		8.92 NJ
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		3.66 NJ
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.96 NJ
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		1.12 NJ
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Cyclopropane, ethyl-	1191-96-4	PPBV		0.4 NJ
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Heptane	142-82-5	PPBV		0.46 NJ
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Isobutane	75-28-5	PPBV		4.82 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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/30/2015	5/1/2015	9254	WQSP-4	Pentane	109-66-0	PPBV		5.02 NJ
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.36 NJ
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Propane	74-98-6	PPBV		8.26 NJ
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	53.6 J
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	91.26 J
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Toluene	108-88-3	PPTV	200	385.08
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Chloroform	67-66-3	PPTV	200	12.96 J
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	39.4 J
CEMRC	4/30/2015	5/1/2015	9254	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.3 J
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.32 J
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	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).
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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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

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	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Butane	106-97-8	PPBV		8.5 NJ
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		3.54 NJ
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.88 NJ
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.9 NJ
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Isobutane	75-28-5	PPBV		4.6 NJ
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Pentane	109-66-0	PPBV		4.76 NJ
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.28 NJ
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Propane	74-98-6	PPBV		7.74 NJ
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	55.88 J
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	283.14
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	41.92 J
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	339.74
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	28.58 J
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	39.72 J
CEMRC	4/30/2015	5/1/2015	9255	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	78.1 J

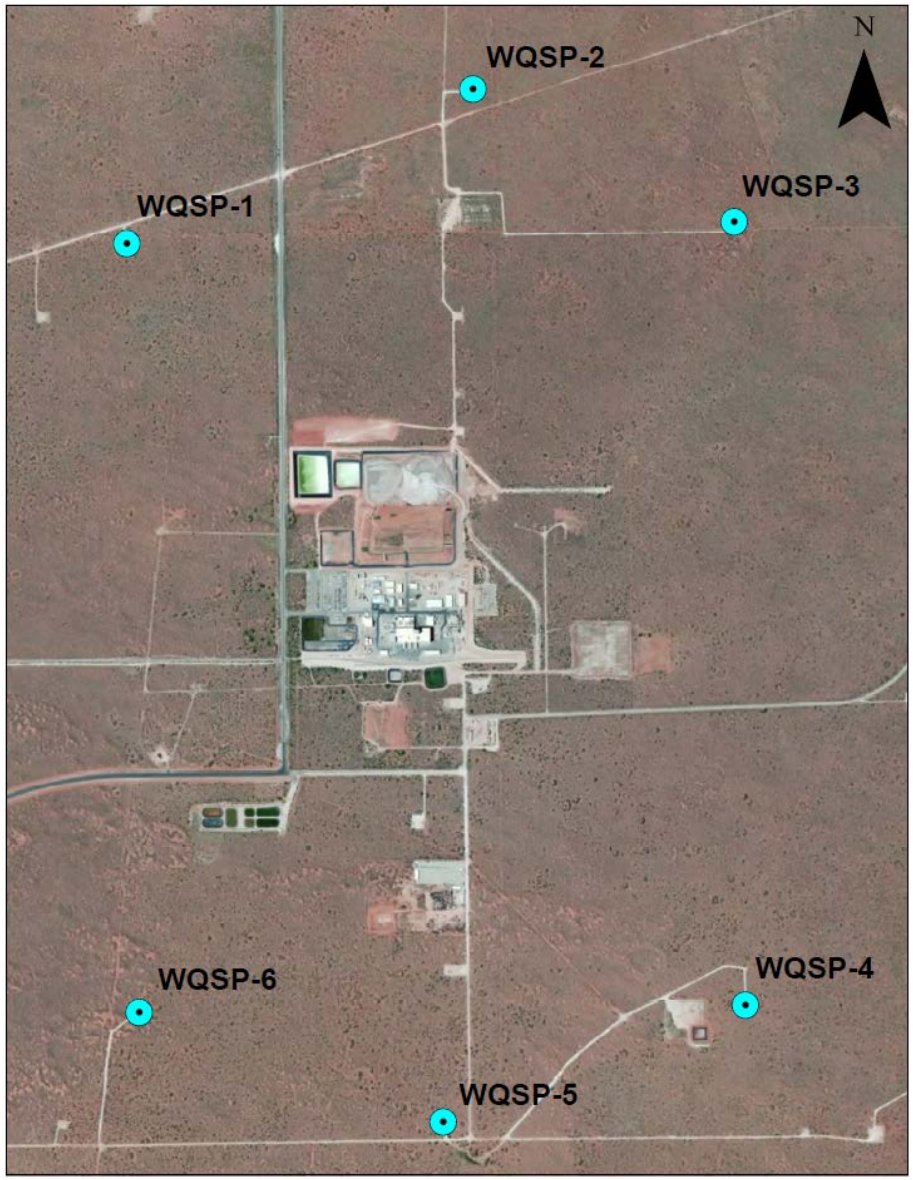
Qualifiers:

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:

(1) Starting with samples collected on or after May 12, 2014, trichloroethylene (TCE) is a target analyte in compliance with Administrative Order dated 5/12/2014. For samples collected before 5/12/2014, TCE is an additional requested analyte; not a Permit-prescribed target analyte but included in the laboratory quantitative analysis.

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



Groundwater Sampling Locations

Environmental Monitoring & Hydrology Groundwater Sampling

Location	Sample ID Number	Sample Date	WIPP Labs Radiochemistry		
			Am-241 (dpm/L)	Pu-238 (dpm/L)	Pu-239/240 (dpm/L)
WQSP-2	GW-WQ2-C-R37-N8	3/24/2015	Below MDC	Below MDC	Below MDC
WQSP-2 (Duplicate)	GW-WQ2-C-R37-N8D	3/24/2015	Below MDC	Below MDC	Below MDC
Field Blank	GW-BU2-C-R37-N9	3/24/2015	Below MDC	Below MDC	Below MDC

MDC ranges are:

MDC Am-241 (dpm/L): 4.21E-02 to 8.64E-02

MDC Pu-238 (dpm/L): 3.01E-02 to 5.96E-02

MDC Pu-239/240 (dpm/L): 2.59E-02 to 8.56E-02

Attachment 4
Surface and Underground Derived Waste Currently in Storage at the WIPP Facility
(reserved)

Attachment 5
Status of RCRA Contingency Plan Required Activities (reserved)

Attachment 6
Corrective Actions Required for Recovery (reserved)

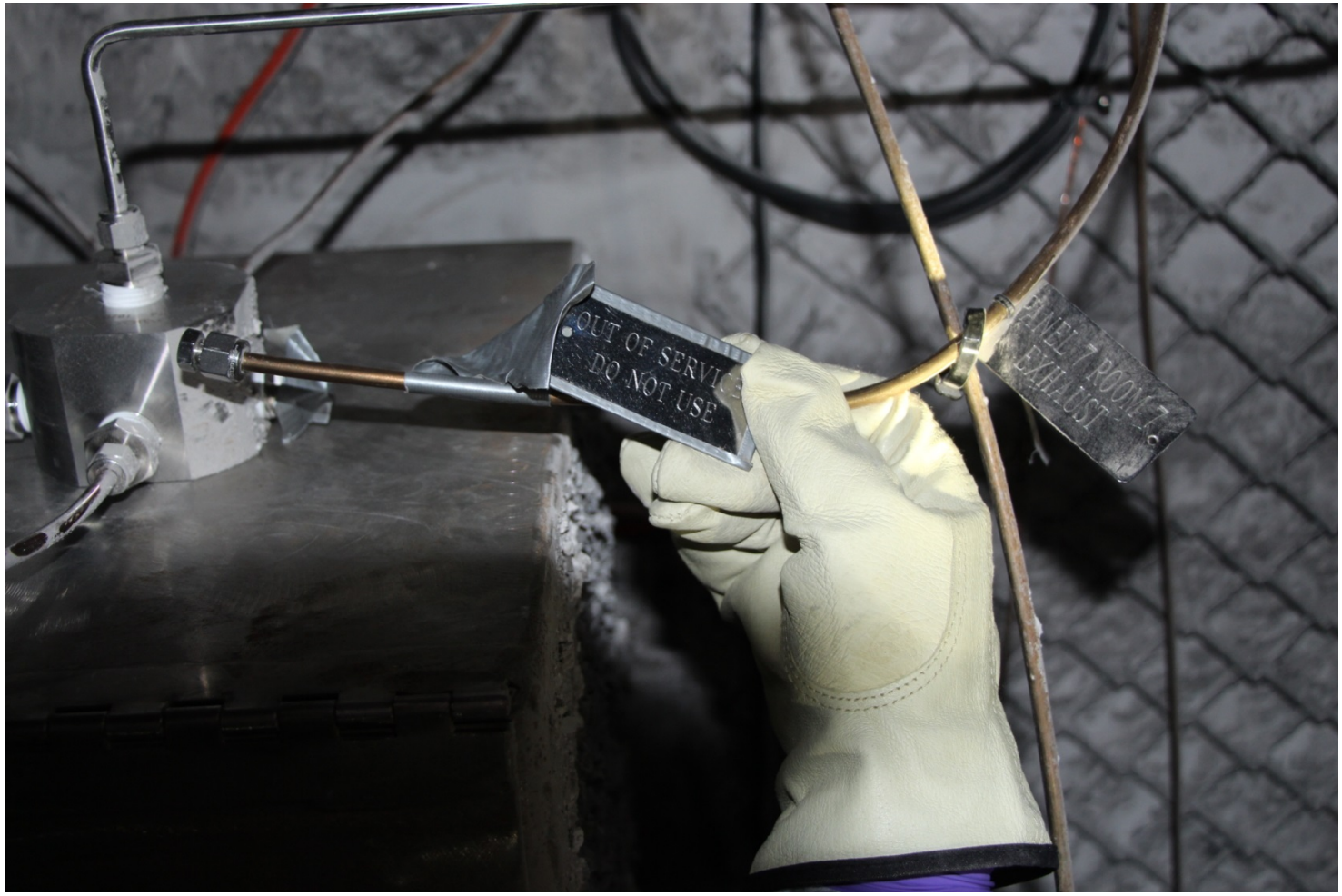
Attachment 7
As-Found Condition of Panel 7

Closure Work Activities for Panel 7, Room 7 – Bulkhead Installation in Progress in Drift S-2520

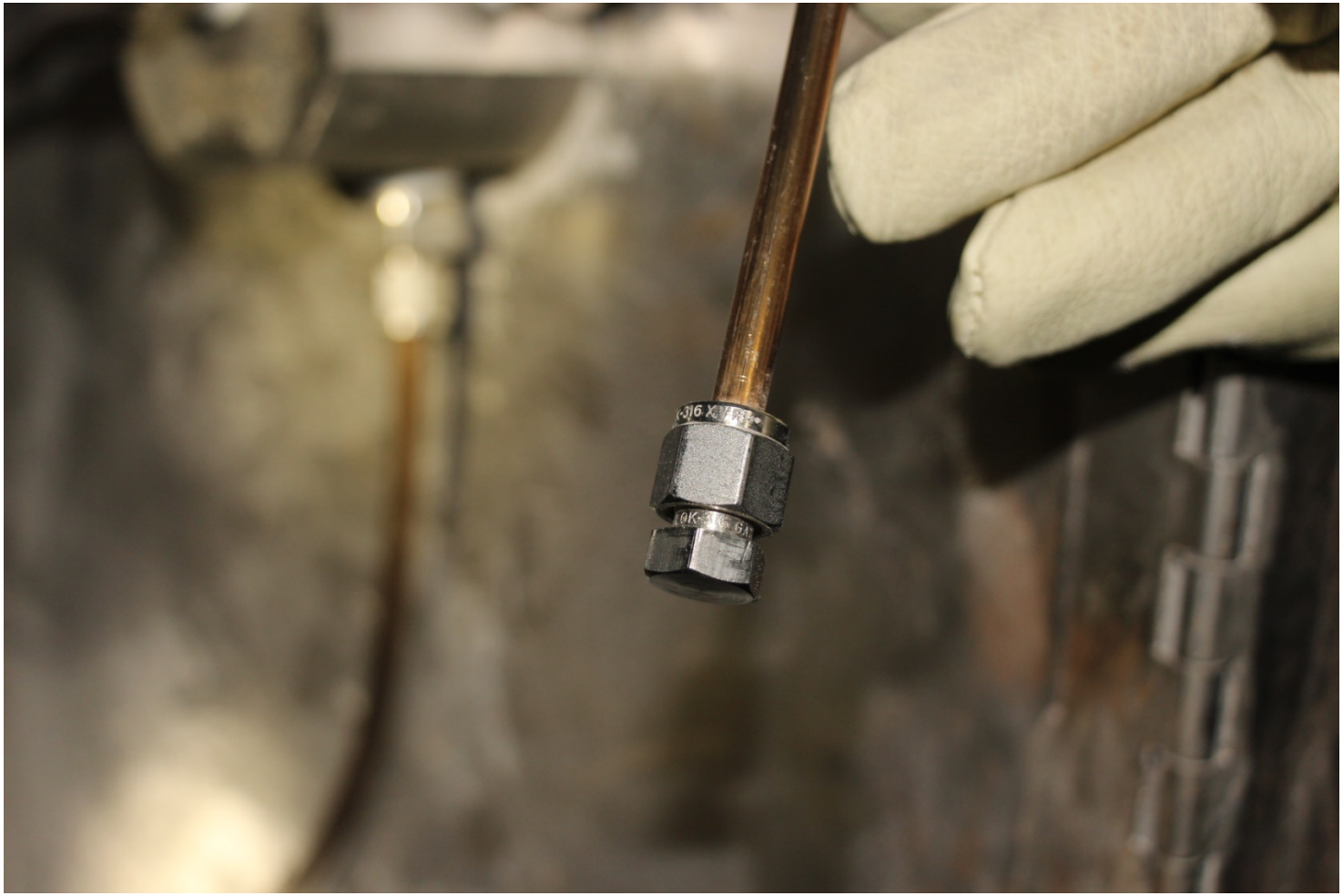
Closure Work Activities for Panel 7, Room 7 – Bulkhead Installation in Progress in Drift S-2520

Closure Work Activities for Panel 7, Room 7 – Bulkhead Installation in Progress in Drift S-2520

Panel 7, Room 7 – Bulkhead Closure Complete in Drift S-2520



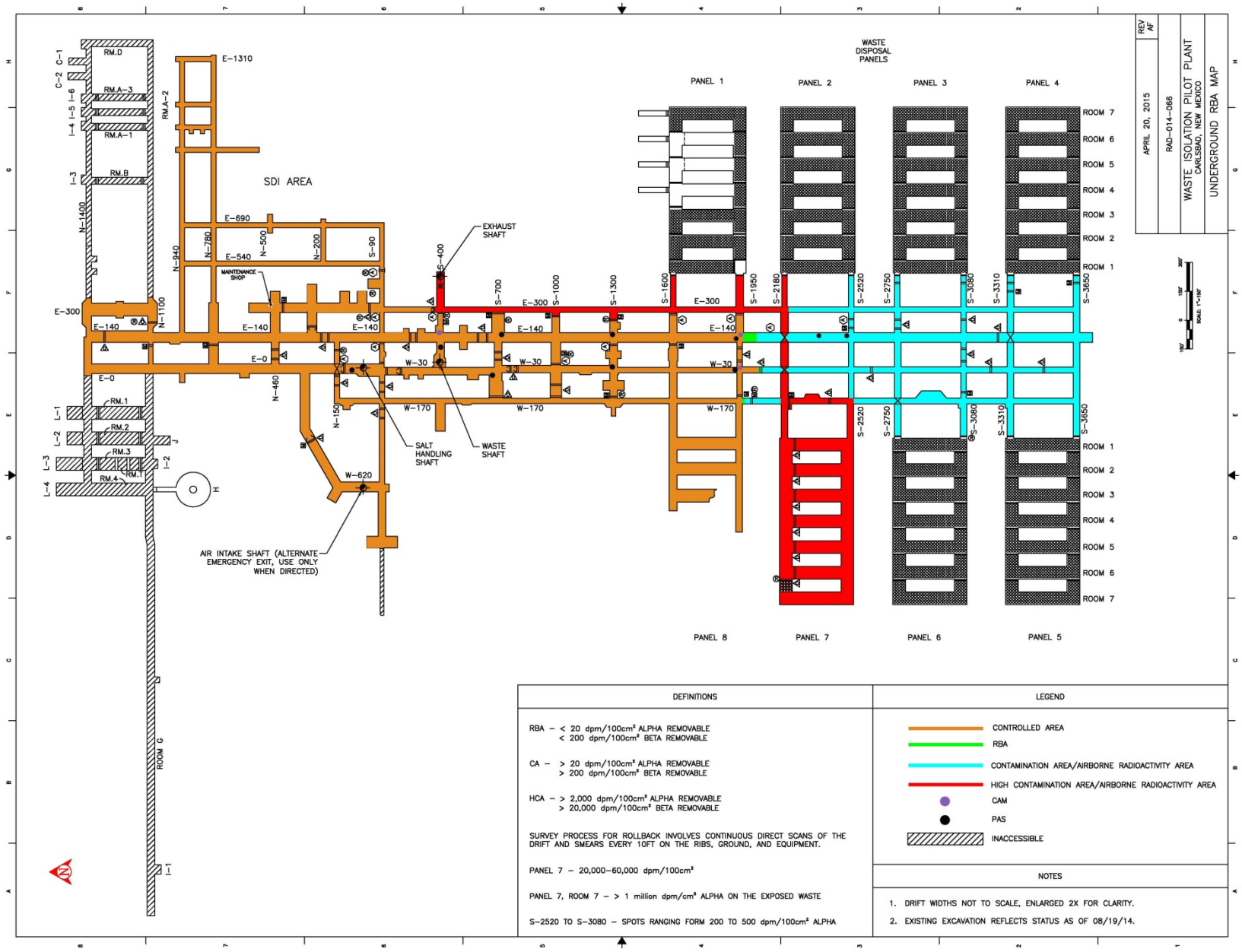
Panel 7, Room 7 – Air Monitoring Tubing Capped and Terminated



Panel 7, Room 7 – Air Monitoring Tubing Capped and Terminated

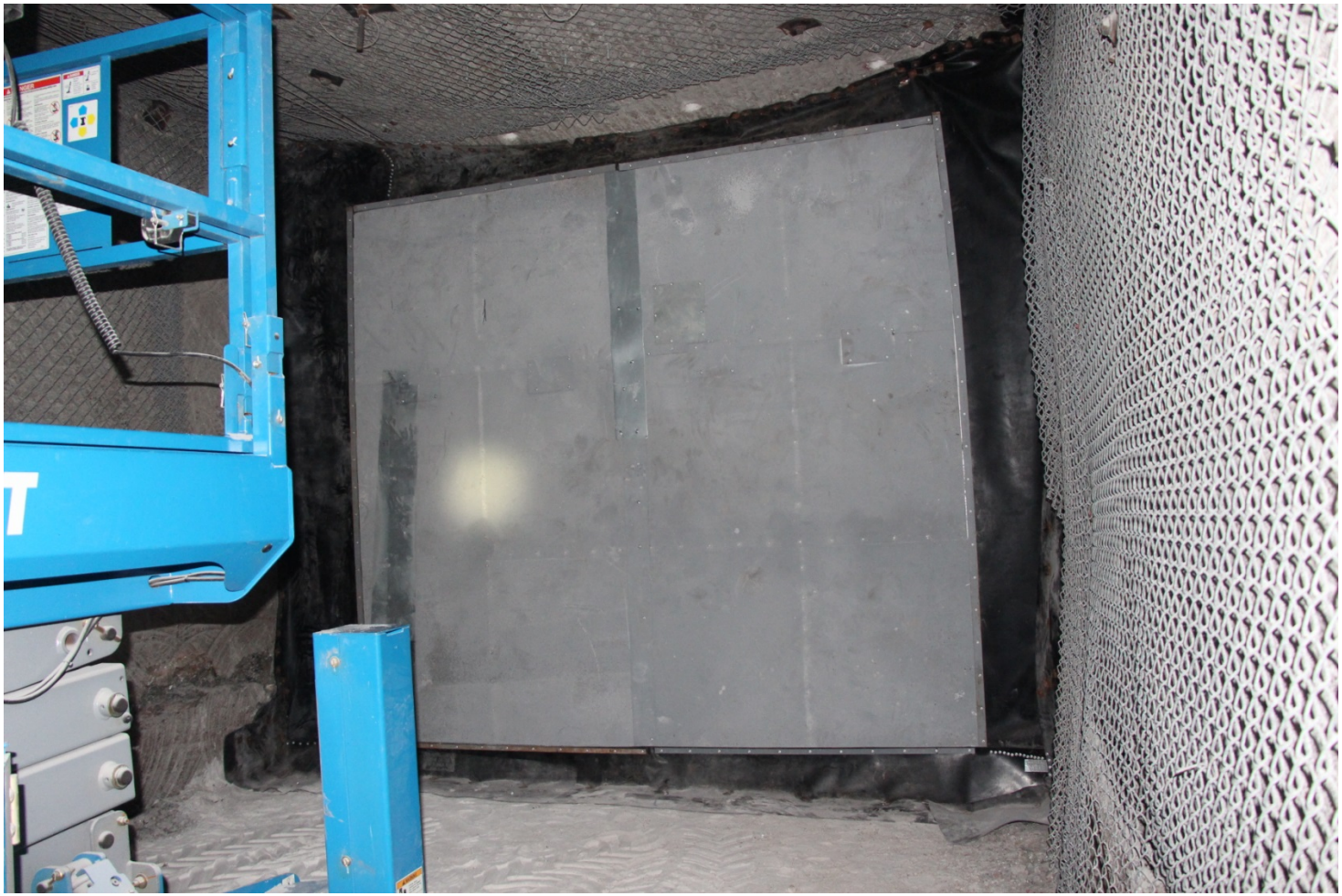
Panel 7, Room 7 Closure Activities – Placement of iCAM in Panel 7 Exhaust Drift S-2180

Attachment 8
Panel 7 Recovery-Related Work



Status of the WIPP Underground Rollback Areas for this Reporting Period
April 20, 2015

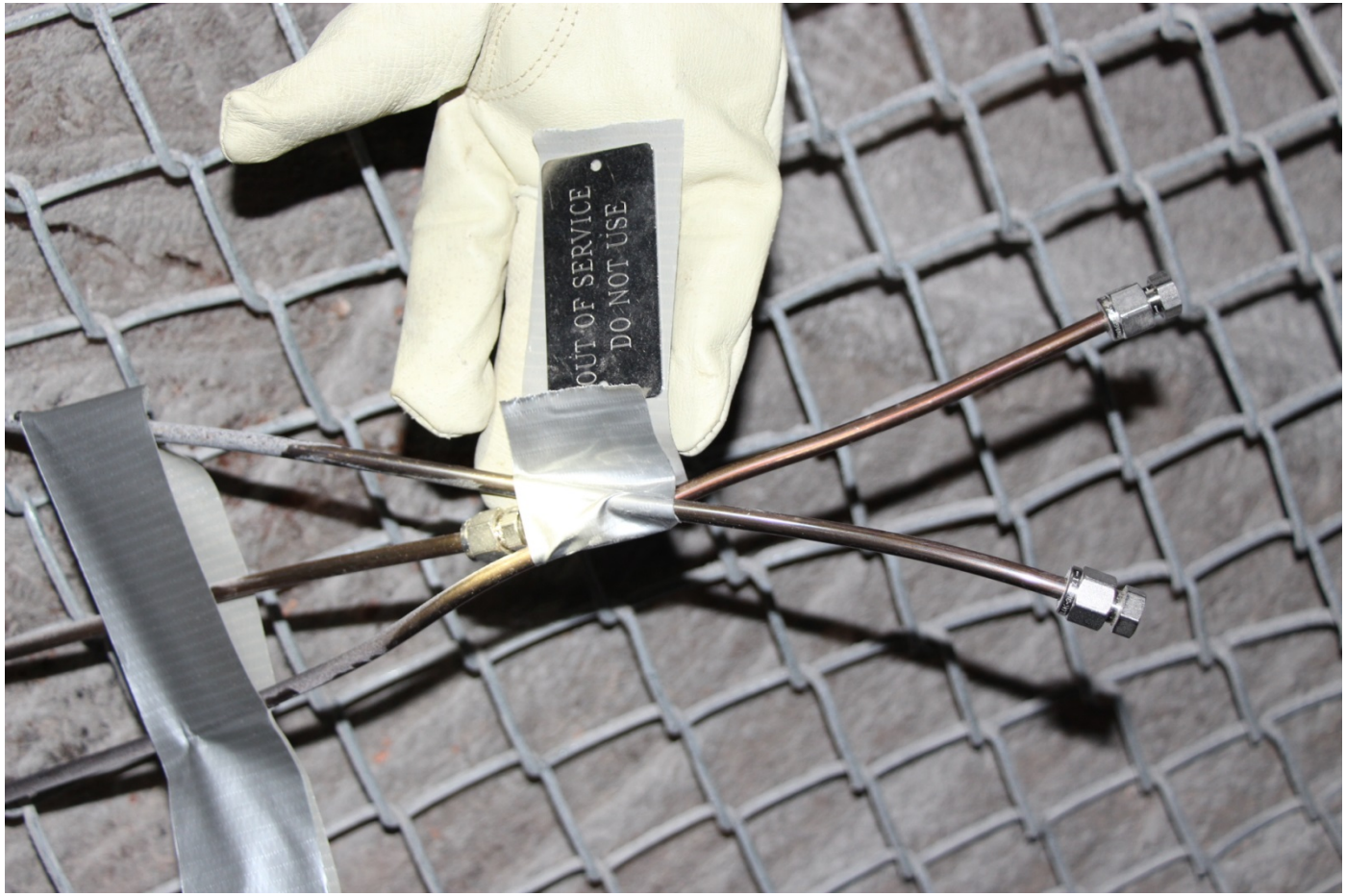
Attachment 9
As-Found Condition of Panel 6



S-3080 Panel 6 Initial Closure – Bulkhead Installation in Progress

S-3080 Panel 6 Initial Closure – Bulkhead Closure Complete

Panel 6 Initial Closure – Air Monitoring Tubing Capped and Terminated



Panel 6 Initial Closure – Air Monitoring Tubing Capped and Terminated

Panel 6 Initial Closure – Placement of iCAMs in Panel 6 Intake (S-2750) and Exhaust (S-3080) Drifts

Attachment 10
Interim Ventilation System Prep Work

Interim Ventilation System – Excavation and Foundation Work

Interim Ventilation System – Excavation and Foundation Work

Interim Ventilation System – Excavation and Foundation Work

Interim Ventilation System – Concrete Foundation Work