



Department of Energy
 Carlsbad Field Office
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SEP 29 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
 New Mexico Environment Department
 Harold Runnels Building
 1190 Saint Francis Drive, Room 4050
 Santa Fe, NM 87502-5469

Subject: Monthly Report for the Reporting Period ending August 31, 2015, as required by NMED Administrative Orders dated February 27, 2014 and May 12, 2014, as amended by NMED Directives dated August 29, 2014, December 9, 2014, and July 15, 2015

Dear Mr. Kieling and Ms. Roberts:

The purpose of this letter is to transmit the monthly report for the reporting period ending August 31, 2015, as required by the February 27, 2014, and May 12, 2014, Administrative Orders, issued under the authority of the New Mexico Hazardous Waste Act § 74-4-13 from 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 and the July 15, 2015 directive from Ms. Kathryn Roberts to Messrs. Bryson and Breidenbach. 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. Anthony Stone at (575) 234-7475.

Sincerely,

Original Signatures on File

Dana C. Bryson/Acting Manager
 Carlsbad Field Office

Philip J. Breidenbach, Project Manager
 Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure

R. Maestas, NMED * ED
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Monthly Status Report for the New Mexico Environment Department Administrative Orders

Reporting Period August 1, 2015, through August 31, 2015

Introduction

The New Mexico Environment Department (NMED) issued two Administrative Orders (AOs) to provide requirements for monitoring and reporting to the NMED concerning the status of recovery from two events. 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 radiological event occurred in the WIPP underground facility.

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.

On May 20, 2014, NMED issued a third administrative order (AO3) requiring the submittal of a WIPP Nitrate Salt Waste Container Isolation Plan. The order prescribed that updates be provided on the plan's implementation via technical calls and written updates. On July 15, 2015, NMED issued a letter describing modification to the May 20, 2014 administrative order and amendment to the reporting requirements pertaining to all CY 2014 administrative orders. Initial closure of Panel 6 and closure of Panel 7, Room 7 were completed in accordance with the plan; therefore, the technical calls and written updates memorializing those calls have ceased pursuant to the July 15, 2015 letter from the NMED.

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

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

Attachment 1, *Surface and Underground Inspections*, shows the current status of each Permit-required inspection, including accessibility of underground equipment for personnel performing the inspections. The Permit-related inspection list was taken from Permit Attachment E, Table E-1. Inspections and preventive maintenance (PM) are not required for equipment that is out of service. 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. Prior to commencing RH TRU waste handling operations, PMs and/or inspections will be brought into current/compliant status.

The underground ambulance # 3 was received at WIPP on August 20, 2015, and seven new underground fire suppression vehicles arrived on-site August 31, 2015. A photograph of the new vehicle is shown in Attachment 7, *Panel 7 & Other Recovery-Related Work*. After pre-operational inspections are performed satisfactorily, the equipment will go into service and NMED will be notified of their in-service date. It is expected to bring the new equipment on-line at the end of September or the early October timeframe.

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, 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 comment. 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. Currently, certain monitoring activities cannot be performed due to restrictions on the access 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. 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) including room-based VOC monitoring activities (required by Permit Part 4, Sections 4.4.3 and 4.6.3, Tables 4.4.1 and 4.6.3.2, and associated requirements in Attachment N) are not currently being performed due to radioactive contamination.

Surface VOC monitoring is being conducted in lieu of underground monitoring during 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 non-waste workers are satisfied. 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 (surface worker) 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. 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. 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. More than 3,500 bolts have been installed in the underground since bolting activities resumed in November 2014, and catchup bolting is approximately 85 percent complete. Catchup bolting in the E-140 drift is complete, and bolting in the E-300 exhaust drift is ongoing.

Hydrogen and Methane Monitoring

Hydrogen and methane monitoring activities (required by Permit Part 4, Section 4.6.5 and associated requirements in Attachment N1) are not currently being performed due to radioactive contamination. 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 addressed during recovery.

Mine Ventilation Rate Monitoring

Mine ventilation rate monitoring activities (required by Permit Part 4, Section 4.6.4 and associated requirements of Permit Attachment O) are currently being performed. 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. Pursuant to the Nitrate Salt Bearing Waste Container Isolation Plan, Revision 2, Section 3, high-efficiency particulate air (HEPA) filtration of underground exhaust air is continuing. The ventilation system has been operating in filtration mode since February 14, 2014, with a flow rate of approximately 60,000 standard cubic feet per minute (SCFM). The calculated running annual average ventilation flow rate as of August 31, 2015, was 59,834 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:

Since the submittal of the last monthly report, there has been no additional waste placed in storage in the WHB; therefore, Attachment 2, *TRU Mixed Waste Currently in Storage at the WIPP Facility*, is currently reserved. Attachment 2 was last updated June 30, 2015.

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*.
 - Sediment samples – Sediment samples were obtained on the dates shown in Attachment 3.
 - Biota/Vegetation samples – Vegetation samples were obtained on the date 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. Since the submittal of the last monthly report, no additional derived waste was generated; therefore, Attachment 4, *Surface and Underground Derived Waste Currently in Storage at the WIPP Facility*, is currently reserved. Attachment 4 was last updated June 30, 2015.

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. Attachment 5, *Status of RCRA Contingency Plan Required Activities*, was last updated November 30, 2014.

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*, was last updated April 30, 2015.

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 nitrate salt bearing waste containers was completed with the closure of Panel 7, Room 7. This action item is complete; therefore, status updates are no longer required.

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:

WIPP personnel completed the initial closure of Panel 6 in May 2015. This action item is complete; therefore, status updates are no longer required.

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:

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.

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.

During this reporting period, progress continued on contamination mitigation in Panel 7, Rooms 1-5, and the S-2520 drift. Brattice cloth and a layer of previously mined salt have been installed on the floor in E-140 from S-1950 to S-2520 and from S-2520 to the entrance of Panel 7 to create a new, radiologically clean walking/driving surface. Photographs, figures, and an updated radiological rollback map are shown in Attachment 7, *Panel 7 & Other Recovery-Related Work*.

Also, during this reporting period, the interim ventilation system (IVS) fan units arrived at the WIPP facility. The IVS was briefly described in the Notification of Planned Change to the Permitted Facility provided to the NMED on August, 26 2014. Attachment 8, *Interim Ventilation System & Supplemental Ventilation System Work Activities*, includes photographs of the IVS fan units.

Progress has also continued on the Supplemental Ventilation System (SVS). The fan unit was successfully installed in the S-90 drift after being downloaded to the underground. Additional underground electrical and infrastructure work remains to be completed. Attachment 8, *Interim Ventilation System & Supplemental Ventilation System Work Activities*, includes photographs of the SVS fan unit in the underground.

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

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

On May 20, 2015, isolation of nitrate salt bearing waste containers was completed with the closure of Panel 7, Room 7. WIPP personnel also completed the initial closure of Panel 6 in May 2015. Initial closure of Panel 6, and closure of Panel 7, Room 7 were completed in accordance with the plan. Any written updates to information in the Plan will be provided with the existing monthly report in accordance with an NMED letter dated July 15, 2015. Attachment 9, *WIPP Nitrate Salt Bearing Waste Container Isolation Plan Information Required by Administrative Order 3*, is reserved for updates to information in the Nitrate Salt Bearing Waste Container Isolation Plan.

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	8/26/15	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	8/25/15	N/A	
Self-Rescuers	Underground Operations	Quarterly	WP 04-AU1026 Inspecting for Deterioration and Functionality in accordance with MSHA requirements	Current	6/30/15	N/A	
Underground Openings—Roof Bolts and Travelways	Underground Operations	Weekly	WP 04-AU1007 Inspecting for Deterioration	Current	8/27/15	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	8/31/15	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
Explosion-Isolation Walls	Underground Operations	Quarterly	Integrity and Deterioration of Accessible Areas	Not Current	5/13/15	11/30/15	Access prohibited to Panels 3 and 4.
Bulkhead in Filled Panels	Underground Operations	Monthly	Integrity and Deterioration of Accessible Areas	Not Current	8/18/15	11/30/15	Access prohibited to Panels 3 and 4. Inspections on Panel 6 and Panel 7 bulkheads are current for August.
MSHA Air Quality Monitor	Maintenance/ Underground Operations	Daily	WP 12-IH1828 Inspecting for Air Quality Monitoring Equipment Functional Check	Current	8/31/15		
Ambulances (Surface) and related emergency supplies and equipment	Emergency Services	Weekly	12-FP0030 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	8/30/15	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	8/29/15	10/31/15	Pre-operational inspections are being performed on the on-site underground ambulance. A second underground ambulance arrived at the WIPP site on August 20, 2015. It is expected to go into service in October 2015.
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	7/1/15	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 (Surface)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Current	8/31/15	N/A	
Fire Extinguishers (Underground)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Current	8/31/15	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) 8/1/15 – 8/6/15: (Annual)	N/A	
Fire Pumps	Emergency Services	Weekly/ annually	WP 12-FP0026 Inspecting for Deterioration, Leaks/Spills, valves, and panel lights	Current	8/24/15	N/A	
Fire Sprinkler Systems	Emergency Services	Monthly/ quarterly	WP 12-FP0025 Inspecting for Deterioration, Leaks/Spills, static pressures, and removable strainers	Current	8/24/15, 8/26/15	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	8/28/15, 8/29/15, 8/30/15	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.	8/29/15, 8/30/15	10/31/15	There are 8 underground fire suppression vehicles on the equipment list. Weekly inspections have been performed on the single underground fire suppression vehicle that was previously on-site (prior to August 2015). The other seven underground fire suppression vehicles arrived on-site August 31, 2015. These vehicles are expected to go into service in October 2015.
Hazardous Material Response Equipment	Emergency Services	Weekly	12-FP0033 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	8/25/15	N/A	
Miners First Aid Station	Emergency Services	Quarterly	12-FP0035 Inspecting for Required Equipment	Current	7/1/15	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	8/28/15, 8/29/15, 8/30/15	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.

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 Truck (Surface)	Emergency Services	Weekly	12-FP0030 and 12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Not Current	8/6/15	Upon return to the WIPP site following repairs	Rescue Truck was off-site for repairs for part of August. It is scheduled to return in September. Emergency response compensatory measures including fire and medical, have been implemented.
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	11/30/15	There are two underground rescue trucks on the equipment list, but one is still awaiting arrival to the site. The arrival of the second rescue truck is anticipated for October 2015. Pre-operational inspections are not being performed on the on-site rescue truck because the inspection procedure is being revised to address specific requirements for this vehicle. 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	8/28/15, 8/29/15, 8/30/15	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
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	8/29/15, 8/30/15	N/A	
Adjustable Center of Gravity Lift Fixture	Waste Handling	Preoperational	WP 05-WH1410 Inspecting for Mechanical Operability and Deterioration	Current	8/12/15 (41-T-037) 10/23/14 (41-T-038) 7/10/15 (41-T-032) 4/13/15 (41-T-036)	N/A	
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	7/23/15 (52-H-008A)	N/A	One of three transporters is now in service. This is a pre-operational check needed only prior to use. This transporter is in the uncontaminated area of the mine.
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	7/13/15 (41-H-018)	N/A	This is a pre-operational inspection and is not needed for daily operations. Pre-operational inspection performed for training.
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	7/14/15 (41-H-020A) 7/10/15 (41-H-020B)	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) 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	7/09/15 (41-H-009) 7/8/15 (41-H-013) 6/10/15 (41-H-051) 7/29/15 (41-H-012D) 8/22/15 (41-H-012E) 5/23/15 (74-H-010B)	N/A	
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)	N/A	One 6-ton forklift in the underground is now in 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	8/26/15 (Weekly) 8/30/15 (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.

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
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.
Waste Handling Cranes	Waste Handling	Preoperational	WP 05-WH1407 Inspecting for Mechanical Operability, Deterioration, and Leaks/Spills	Current	1/6/15 (41-T-151A) 7/7/15 (41-T-151B) 7/23/15 (41-T-151C) 8/12/15 (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	7/08/15 (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.

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
Trailer Jockey	Waste Handling	Preoperational	WP 05-WH1405 Inspecting for Mechanical Operability and Deterioration	Current	8/30/15 (41-H-151A) 8/29/15 (41-H-151B) 7/10/15 (41-H-046)	N/A	There are three trailer jockeys. Inspections are only performed if the equipment is used on the shift.
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) 7/21/15 (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	8/07/15 (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	

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
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	8/09/15 (#1) 8/09/15 (#2)	N/A	
Central Monitoring System (CMS)	Facility Operations	Continuous	Automatic Self-Checking	Current	8/30/15	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	8/27/15	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	8/27/15	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	8/27/15	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	8/27/15	N/A	
Radio Equipment	Facility Operations	Daily	Radios are operated daily and are repaired upon failure	Current	8/31/15	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
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	8/31/15	N/A	
Water Tank Level	Facility Operations	Daily	SDD-WD00 Inspecting for Deterioration, and water levels. Results of this inspection are logged in accordance with WP 04-AD3008.	Current	8/31/15	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	8/25/15-8/31/15	N/A	
Eye Wash and Shower Equipment (Underground)	Equipment Custodian	Weekly	WP 12-IS1832 Inspecting for Deterioration	Current	8/24/15, 8/29/15	N/A	
Perimeter Fence, Gates, Signs	Security	Daily	PF0-008 Inspecting for Deterioration and Posted Warnings	Current	8/31/15	N/A	
Underground— Geomechanical Instrumentation System (GIS)	Geotechnical Engineering	Monthly	WP 07-EU1301 Inspecting for Deterioration	Current	8/25/15	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)	No date set because the 700 fans are not used while in filtration mode.	The 700 horsepower fans are not in use because underground ventilation system is operating in filtration mode.

¹Routine inspections are proposed to begin with resumption of normal operations.

Attachment 2
TRU Mixed Waste Currently in Storage at the WIPP Facility (reserved)
[Last updated June 30, 2015]

Attachment 3
Environmental Monitoring

Attachment 3 contains the following environmental monitoring information:

- VOC Monitoring Map & Data
- Radiological Monitoring Maps & Data
 - Sediment samples
 - Biota/Vegetation 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	6/17/2015	7/2/2015	9283	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.9
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Acetone	67-64-1	PPBV		0.54 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Benzene	71-43-2	PPBV		0.36 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Butane	106-97-8	PPBV		10.95 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		5.085 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		1.245 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		1.995 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Cyclopropane, ethyl-	1191-96-4	PPBV		0.9 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Heptane	142-82-5	PPBV		0.57 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Hexanal	66-25-1	PPBV		0.72 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Hexane, 3-methyl-	589-34-4	PPBV		0.765 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Isobutane	75-28-5	PPBV		5.805 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).

R = Sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample. This qualifier may also be used for data anomalies.

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.

9/1/2015 9:12 AM

Page 1 of 26

* 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	6/17/2015	7/2/2015	9283	WQSP-4	Nonanal	124-19-6	PPBV		0.69 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Pentane	109-66-0	PPBV		5.835 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.785 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Pentane, 3-methyl-	96-14-0	PPBV		1.065 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Propane	74-98-6	PPBV		7.035 NJ
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	59.78 J
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	92.91 J
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Toluene	108-88-3	PPTV	150	899.55
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Chloroform	67-66-3	PPTV	150	12.83 J
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	63.59 J
CEMRC	6/17/2015	7/2/2015	9283	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	10.61 J
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	1.58
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	0.3 J
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.48
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Chloroform	67-66-3	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.

9/1/2015 9:12 AM

Page 2 of 26

* 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	6/17/2015	7/2/2015	9284	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	0.58
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Butane	106-97-8	PPBV		7.38 NJ
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.66 NJ
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		1.14 NJ
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.86 NJ
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.76 NJ
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.06 NJ
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Propane	74-98-6	PPBV		6.48 NJ
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	84.36 J
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	1544.72
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	306.22
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	489.12
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	129.26 J
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	37.58 J
CEMRC	6/17/2015	7/2/2015	9284	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	591.72

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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.

9/1/2015 9:12 AM

Page 3 of 26

* 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	6/18/2015	7/2/2015	9286	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.56
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Acetone	67-64-1	PPBV		0.68 NJ
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Butane	106-97-8	PPBV		6.16 NJ
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		2.7 NJ
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.56 NJ
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.5 NJ
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Isobutane	75-28-5	PPBV		3.28 NJ
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Pentane	109-66-0	PPBV		3.28 NJ
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		0.88 NJ
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Propane	74-98-6	PPBV		5.02 NJ
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	59.58 J
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	109.32 J

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Notes:

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9/1/2015 9:12 AM

Page 4 of 26

* 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	6/18/2015	7/2/2015	9286	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	10.78 J
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Toluene	108-88-3	PPTV	200	558.18
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Chloroform	67-66-3	PPTV	200	13.3 J
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	29.4 J
CEMRC	6/18/2015	7/2/2015	9286	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	13.4 J
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.84
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.54
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	0.28 J
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Acetone	67-64-1	PPBV		1.88 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Butanal	123-72-8	PPBV		0.74 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Butane	106-97-8	PPBV		5.84 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.

9/1/2015 9:12 AM

Page 5 of 26

* 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	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		2.68 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Cycloheptane	291-64-5	PPBV		0.9 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.52 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.74 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Hexanal	66-25-1	PPBV		2.06 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.88 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Nonanal	124-19-6	PPBV		0.74 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.16 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.92 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Propane	74-98-6	PPBV		4.98 NJ
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	70.54 J
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	818.76
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	127.92 J
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	539.86
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	83.76 J
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	29.58 J
CEMRC	6/18/2015	7/2/2015	9287	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	283.5

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Notes:

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9/1/2015 9:12 AM

Page 6 of 26

* 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	6/24/2015	7/2/2015	9288	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.2 J
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Butane	106-97-8	PPBV		2.28 NJ
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Isobutane	75-28-5	PPBV		1.26 NJ
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Pentane	109-66-0	PPBV		1.06 NJ
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Propane	74-98-6	PPBV		2.08 NJ
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	49.94 J
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	108.32 J
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Toluene	108-88-3	PPTV	200	193.56 J
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Chloroform	67-66-3	PPTV	200	10.58 J
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	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.

9/1/2015 9:12 AM

Page 7 of 26

* 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	6/24/2015	7/2/2015	9288	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	12.78 J
CEMRC	6/24/2015	7/2/2015	9288	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.36 J
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.18 J
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Butane	106-97-8	PPBV		2.28 NJ
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Isobutane	75-28-5	PPBV		1.24 NJ
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Pentane	109-66-0	PPBV		1.1 NJ
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Propane	74-98-6	PPBV		2.02 NJ
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	52.22 J
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	365.32
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	79.88 J
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	191.94 J

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9/1/2015 9:12 AM

Page 8 of 26

* 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	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	27.44 J
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	13.54 J
CEMRC	6/24/2015	7/2/2015	9289	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	107.14 J
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Toluene	108-88-3	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Chloroform	67-66-3	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.6	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Butane	106-97-8	PPBV		1.89 NJ
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Pentane	109-66-0	PPBV		0.84 NJ
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Propane	74-98-6	PPBV		1.98 NJ
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Methylene Chloride	75-09-2	PPTV	300	46.29 J
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	300	99.54 J

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9/1/2015 9:12 AM

Page 9 of 26

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	300	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Chlorobenzene	108-90-7	PPTV	300	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Toluene	108-88-3	PPTV	300	131.46 J
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Chloroform	67-66-3	PPTV	300	10.2 J
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	300	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	300	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	300	U
CEMRC	6/25/2015	7/2/2015	9290	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	300	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Butane	106-97-8	PPBV		1.88 NJ
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Pentane	109-66-0	PPBV		0.84 NJ
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Propane	74-98-6	PPBV		1.68 NJ

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9/1/2015 9:12 AM

Page 10 of 26

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	45.64 J
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	161.98 J
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	16.56 J
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	127.52 J
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	15.54 J
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	U
CEMRC	6/25/2015	7/2/2015	9291	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	26.22 J
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.28 J
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Acetone	67-64-1	PPBV		0.64 NJ

Qualifiers:

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R = Sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample. This qualifier may also be used for data anomalies.

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.

9/1/2015 9:12 AM

Page 11 of 26

* 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	6/30/2015	7/6/2015	9292	WQSP-4	Butane	106-97-8	PPBV		4.8 NJ
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.48 NJ
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Isobutane	75-28-5	PPBV		2.52 NJ
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Pentane	109-66-0	PPBV		2.38 NJ
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Propane	74-98-6	PPBV		4.38 NJ
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	63.08 J
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	103.14 J
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	19.02 J
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Toluene	108-88-3	PPTV	200	296.08
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Chloroform	67-66-3	PPTV	200	12.4 J
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	19.86 J
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	24.96 J
CEMRC	6/30/2015	7/6/2015	9292	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.6	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.6	0.51 J
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.6	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.6	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.6	0.3 J
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.6	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.

9/1/2015 9:12 AM

Page 12 of 26

* 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	6/30/2015	7/6/2015	9294	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.6	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.6	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.6	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.6	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Butane	106-97-8	PPBV		5.34 NJ
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Isobutane	75-28-5	PPBV		2.82 NJ
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Pentane	109-66-0	PPBV		2.55 NJ
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Propane	74-98-6	PPBV		5.19 NJ
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	300	67.62 J
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	300	473.4
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	300	92.79 J
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	300	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Toluene	108-88-3	PPTV	300	298.47 J
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Chloroform	67-66-3	PPTV	300	35.25 J
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	300	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	300	U
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	300	23.85 J
CEMRC	6/30/2015	7/6/2015	9294	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	300	128.16 J
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U

Qualifiers:

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Notes:

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9/1/2015 9:12 AM

Page 13 of 26

* 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	7/1/2015	7/6/2015	9295	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.48
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Acetone	67-64-1	PPBV		0.64 NJ
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Butane	106-97-8	PPBV		4.8 NJ
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Isobutane	75-28-5	PPBV		2.48 NJ
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Nonanal	124-19-6	PPBV		0.94 NJ
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Pentane	109-66-0	PPBV		2.46 NJ
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Propane	74-98-6	PPBV		4.1 NJ
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	56.84 J
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	105.26 J
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Toluene	108-88-3	PPTV	200	517.02
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Chloroform	67-66-3	PPTV	200	12.02 J
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	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.

9/1/2015 9:12 AM

Page 14 of 26

* 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	7/1/2015	7/6/2015	9295	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	24.8 J
CEMRC	7/1/2015	7/6/2015	9295	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.6	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.6	0.36 J
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.6	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.6	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.6	0.39 J
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.6	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.6	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.6	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.6	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.6	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Butane	106-97-8	PPBV		4.65 NJ
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Isobutane	75-28-5	PPBV		2.4 NJ
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Pentane	109-66-0	PPBV		2.25 NJ
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Propane	74-98-6	PPBV		4.29 NJ
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	300	59.85 J
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	300	373.53
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	300	53.07 J
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	300	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Toluene	108-88-3	PPTV	300	424.05

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Notes:

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9/1/2015 9:12 AM

Page 15 of 26

* 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	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Chloroform	67-66-3	PPTV	300	37.29 J
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	300	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	300	U
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	300	20.49 J
CEMRC	7/1/2015	7/6/2015	9296	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	300	142.86 J
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.22 J
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Acetone	67-64-1	PPBV		0.68 NJ
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Butane	106-97-8	PPBV		3.74 NJ
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Isobutane	75-28-5	PPBV		2.06 NJ
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Pentane	109-66-0	PPBV		1.76 NJ
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Propane	74-98-6	PPBV		3.88 NJ

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Notes:

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9/1/2015 9:12 AM

Page 16 of 26

* 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	7/8/2015	7/16/2015	9297	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	72.6 J
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	102.82 J
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Toluene	108-88-3	PPTV	200	232.64
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Chloroform	67-66-3	PPTV	200	15.18 J
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	29.94 J
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	25.02 J
CEMRC	7/8/2015	7/16/2015	9297	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.6	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.6	0.78
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.6	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.6	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.6	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.6	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.6	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.6	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.6	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.6	0.24 J
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Acetone	67-64-1	PPBV		0.78 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).

R = Sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample. This qualifier may also be used for data anomalies.

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.

9/1/2015 9:12 AM

Page 17 of 26

* 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	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Butane	106-97-8	PPBV		2.13 NJ
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Pentane	109-66-0	PPBV		0.9 NJ
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Propane	74-98-6	PPBV		2.37 NJ
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	300	85.41 J
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	300	756.48
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	300	151.65 J
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	300	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Toluene	108-88-3	PPTV	300	201 J
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Chloroform	67-66-3	PPTV	300	62.94 J
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	300	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	300	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	300	U
CEMRC	7/8/2015	7/16/2015	9298	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	300	240.75 J
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.6	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.6	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.6	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.6	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Toluene	108-88-3	PPBV	0.6	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Chloroform	67-66-3	PPBV	0.6	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.6	U, R

Qualifiers:

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Notes:

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9/1/2015 9:12 AM

Page 18 of 26

* 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	7/9/2015	7/16/2015	9299	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.6	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.6	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.6	2.67 R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Acetone	67-64-1	PPBV		2.97 NJ, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Butane	106-97-8	PPBV		3.6 NJ, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Isobutane	75-28-5	PPBV		2.58 NJ, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Pentane	109-66-0	PPBV		1.77 NJ, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Propane	74-98-6	PPBV		3.78 NJ, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Methylene Chloride	75-09-2	PPTV	300	131.46 J, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	300	117.63 J, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	300	14.07 J, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Chlorobenzene	108-90-7	PPTV	300	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Toluene	108-88-3	PPTV	300	261.42 J, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Chloroform	67-66-3	PPTV	300	128.31 J, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	300	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	300	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	300	U, R
CEMRC	7/9/2015	7/16/2015	9299	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	300	2602.86 R
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.6	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.6	0.33 J
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.6	U

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Notes:

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9/1/2015 9:12 AM

Page 19 of 26

* 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	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.6	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.6	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.6	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.6	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.6	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.6	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.6	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Acetone	67-64-1	PPBV		0.72 NJ
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Butane	106-97-8	PPBV		3.48 NJ
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Pentane	109-66-0	PPBV		1.68 NJ
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Propane	74-98-6	PPBV		3.45 NJ
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	300	71.55 J
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	300	338.85
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	300	60.18 J
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	300	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Toluene	108-88-3	PPTV	300	241.74 J
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Chloroform	67-66-3	PPTV	300	31.29 J
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	300	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	300	U
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	300	19.5 J
CEMRC	7/9/2015	7/16/2015	9300	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	300	99.81 J

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9/1/2015 9:12 AM

Page 20 of 26

* 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	7/15/2015	7/24/2015	9301	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.4 R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Chloroform	67-66-3	PPBV	0.4	0.3 J, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	7.32 R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Acetone	67-64-1	PPBV		3.6 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Butanal	123-72-8	PPBV		0.8 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Butane	106-97-8	PPBV		4.8 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.56 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Cyclotetrasiloxane, octamethyl-	556-67-2	PPBV		11.16 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Cyclotrisiloxane, hexamethyl-	541-05-9	PPBV		19.46 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Isobutane	75-28-5	PPBV		4.58 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Pentane	109-66-0	PPBV		2.22 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Propane	74-98-6	PPBV		4 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Tetrachloroethylene	127-18-4	PPBV		1.82 NJ, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	100.64 J, R

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9/1/2015 9:12 AM

Page 21 of 26

* 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	7/15/2015	7/24/2015	9301	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	167.32 J, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	63.1 J, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Toluene	108-88-3	PPTV	200	404.96 R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Chloroform	67-66-3	PPTV	200	300.7 R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	33.44 J, R
CEMRC	7/15/2015	7/24/2015	9301	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	7204.2 R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.76 R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.4 R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	2.18 R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Acetone	67-64-1	PPBV		2.2 NJ, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Butane	106-97-8	PPBV		5.86 NJ, R

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9/1/2015 9:12 AM

Page 22 of 26

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.74 NJ, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Isobutane	75-28-5	PPBV		3.86 NJ, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Pentane	109-66-0	PPBV		2.74 NJ, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Propane	74-98-6	PPBV		4.66 NJ, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	91.1 J, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	748.68 R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	151.38 J, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	395.16 R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	131.7 J, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	27.64 J, R
CEMRC	7/15/2015	7/24/2015	9302	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	2106.48 R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.68 R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U, R

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Notes:

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9/1/2015 9:12 AM

Page 23 of 26

* 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	7/16/2015	7/24/2015	9304	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	3.4 R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Acetone	67-64-1	PPBV		1.6 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Butane	106-97-8	PPBV		8.82 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.96 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.98 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Cyclopropane, ethyl-	1191-96-4	PPBV		0.64 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Isobutane	75-28-5	PPBV		5.38 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Pentane	109-66-0	PPBV		4.14 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.28 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Propane	74-98-6	PPBV		7.3 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Tetrachloroethylene	127-18-4	PPBV		0.52 NJ, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Methylene Chloride	75-09-2	PPTV	200	103.64 J, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	200	128.04 J, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	200	20.68 J, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Chlorobenzene	108-90-7	PPTV	200	U, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Toluene	108-88-3	PPTV	200	708.2 R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Chloroform	67-66-3	PPTV	200	140.22 J, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	200	25.84 J, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U, R

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).

R = Sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample. This qualifier may also be used for data anomalies.

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.

9/1/2015 9:12 AM

Page 24 of 26

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Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	200	43.02 J, R
CEMRC	7/16/2015	7/24/2015	9304	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	200	3346.4 R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.74 R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.6 R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	0.24 J, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	5.12 R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Acetone	67-64-1	PPBV		3.04 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Butanal	123-72-8	PPBV		0.9 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Butane	106-97-8	PPBV		7.06 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.74 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.68 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Cyclotetrasiloxane, octamethyl-	556-67-2	PPBV		0.7 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Cyclotrisiloxane, hexamethyl-	541-05-9	PPBV		1.94 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Hexanal	66-25-1	PPBV		1.94 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Isobutane	75-28-5	PPBV		5.54 NJ, R

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.

9/1/2015 9:12 AM

Page 25 of 26

* 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	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.16 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Propane	74-98-6	PPBV		6.76 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Tetrachloroethylene	127-18-4	PPBV		0.92 NJ, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	106.42 J, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	717.94 R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	178.4 J, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	609.64 R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	250.08 R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	38.02 J, R
CEMRC	7/16/2015	7/24/2015	9305	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	4974.08 R

Qualifiers:

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

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R = Sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample. This qualifier may also be used for data anomalies.

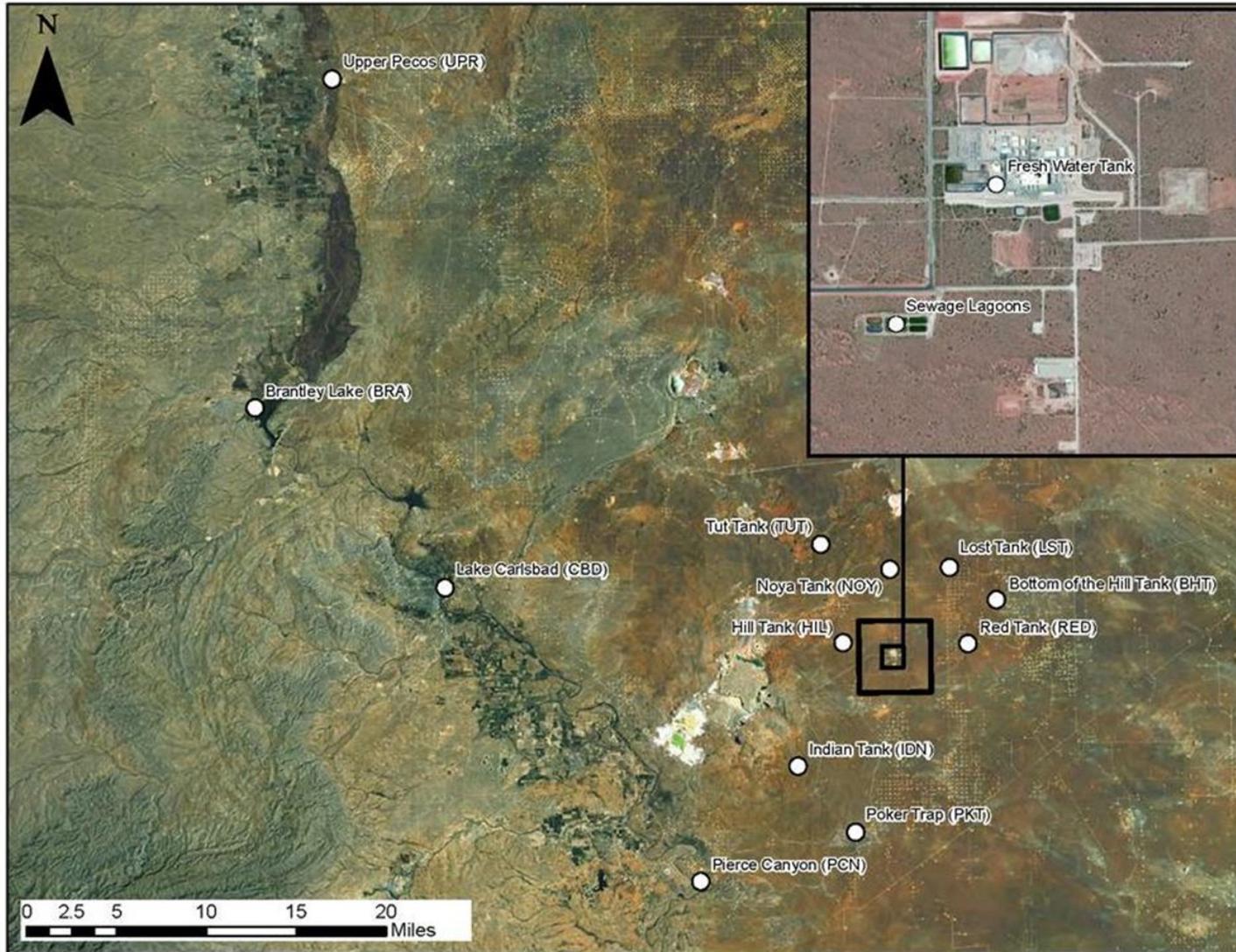
Notes:

(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.

9/1/2015 9:12 AM

Page 26 of 26

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



Sediment Sampling Locations

Environmental Monitoring & Hydrology Sediment Sampling

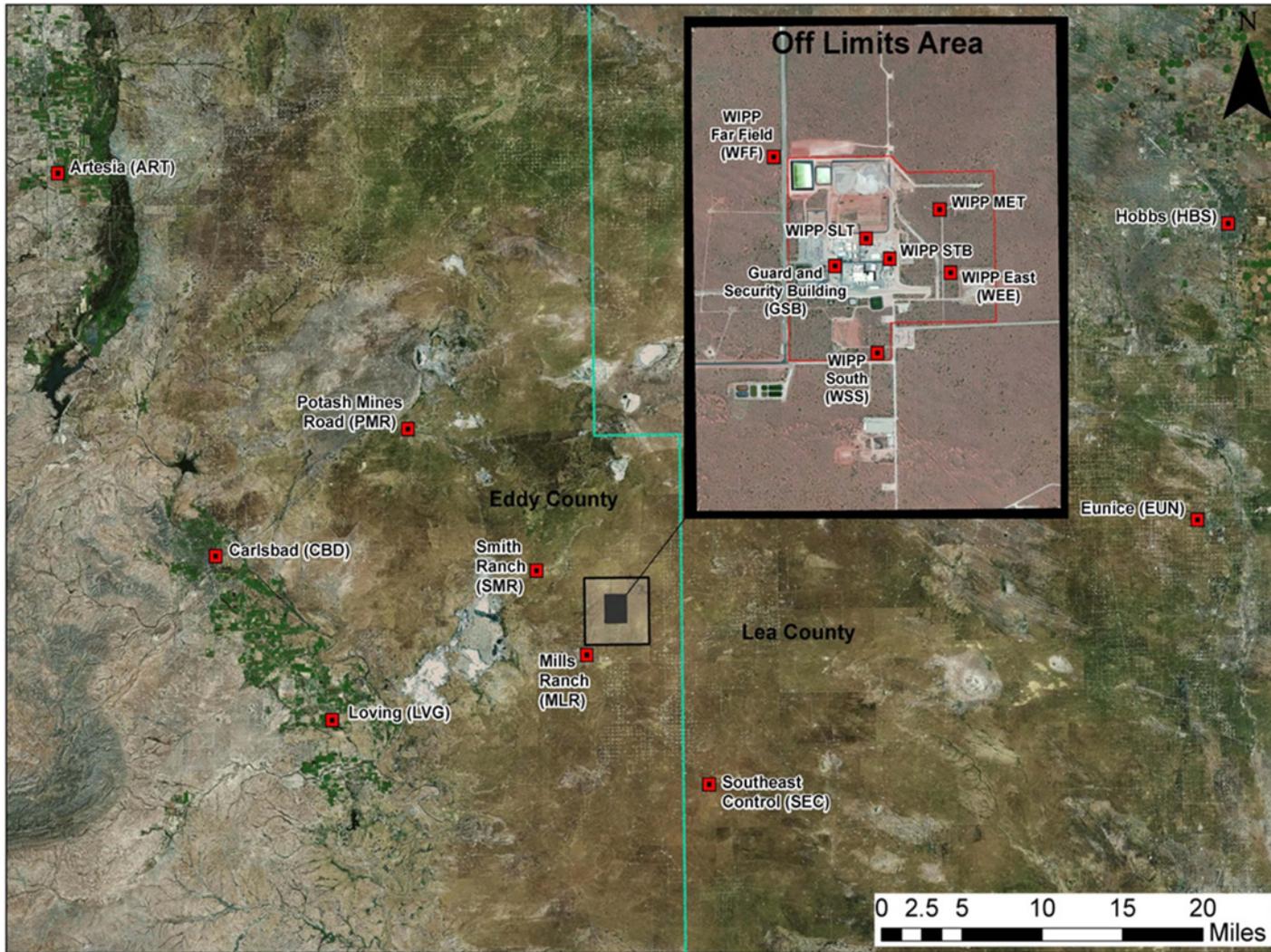
Location	Sample ID Number	Sample Date	WIPP Labs Radiochemistry		
			Am-241 (dpm/g)	Pu-238 (dpm/g)	Pu-239/240 (dpm/g)
Indian Tank	SB-IDN-20150608-1.1	6/8/2015	Below MDC	Below MDC	Below MDC
Pierce Canyon	SB-PCN-20150611-1.1	6/11/2015	Below MDC	Below MDC	Below MDC
Lake Carlsbad	SB-CBD-20150611-1.1	6/11/2015	Below MDC	Below MDC	Below MDC
Brantley Lake	SB-BRA-20150611-1.1	6/11/2015	Below MDC	Below MDC	Below MDC
Upper Pecos River	SB-UPR-20150611-1.2	6/11/2015	Below MDC	Below MDC	Below MDC
Upper Pecos River (Dup)	SB-UPR-20150611-2.2	6/11/2015	Below MDC	Below MDC	Below MDC
Poker Trap	SB-PKT-20150612-1.1	6/12/2015	Below MDC	Below MDC	Below MDC
Red Tank	SB-RED-20150612-1.1	6/12/2015	Below MDC	Below MDC	Below MDC
Hill Tank	SB-HIL-20150615-1.1	6/15/2015	Below MDC	Below MDC	Below MDC

MDC ranges are:

MDC Am-241 (dpm/g): 3.11E-02 to 5.00E-02

MDC Pu-238 (dpm/g): 1.63E-02 to 6.48E-02

MDC Pu-239/240 (dpm/g): 2.96E-02 to 4.37E-02



Biota/Vegetation Sampling Locations

Environmental Monitoring & Hydrology Biota Sampling – Vegetation

Location	Sample ID Number	Sample Date	WIPP Labs Radiochemistry		
			Am-241 (dpm/g)	Pu-238 (dpm/g)	Pu-239/240 (dpm/g)
WIPP Far Field	BV-WFF-20150622-1.1	6/22/2015	Below MDC	Below MDC	Below MDC
WIPP East	BV-WEE-20150622-1.2	6/22/2015	Below MDC	Below MDC	Below MDC
WIPP East (Duplicate)	BV-WEE-20150622-2.2	6/22/2015	Below MDC	Below MDC	Below MDC

MDC ranges are:

MDC Am-241 (dpm/g): 2.32E-02 to 3.64E-02

MDC Pu-238 (dpm/g): 1.58E-02 to 3.16E-02

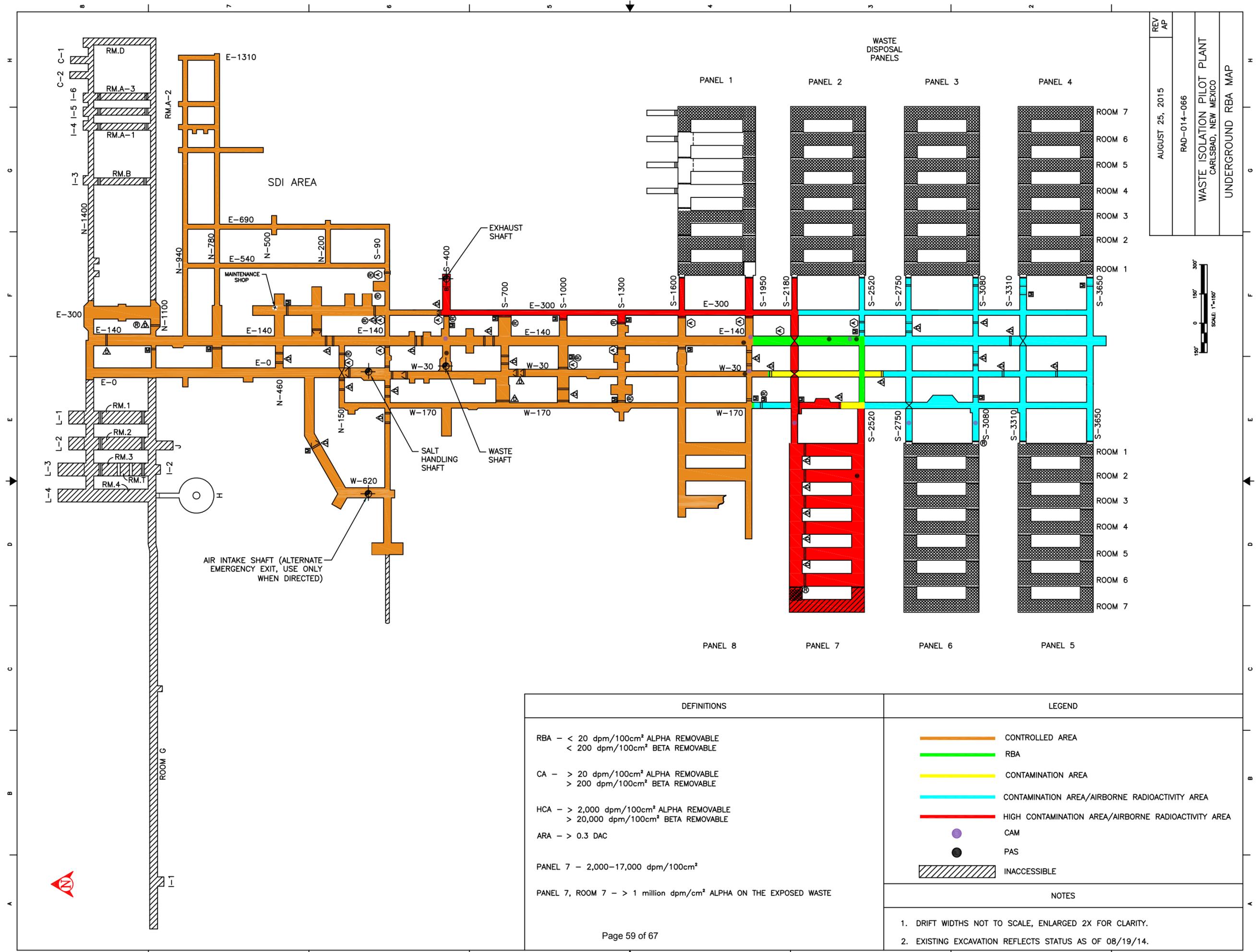
MDC Pu-239/240 (dpm/g): 1.05E-02 to 2.88E-02

Attachment 4
Surface & Underground Derived Waste Currently in Storage at the WIPP Facility (reserved)
[Last updated June 30, 2015]

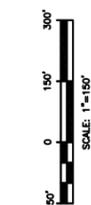
Attachment 5
Status of RCRA Contingency Plan Required Activities (reserved)
[Last updated November 30, 2014]

Attachment 6
Corrective Actions Required for Recovery (reserved)
[Last updated April 30, 2015]

Attachment 7
Panel 7 & Other Recovery-Related Work



REV	AP
AUGUST 25, 2015	
RAD-014-066	
WASTE ISOLATION PILOT PLANT CARLSBAD, NEW MEXICO	
UNDERGROUND RBA MAP	

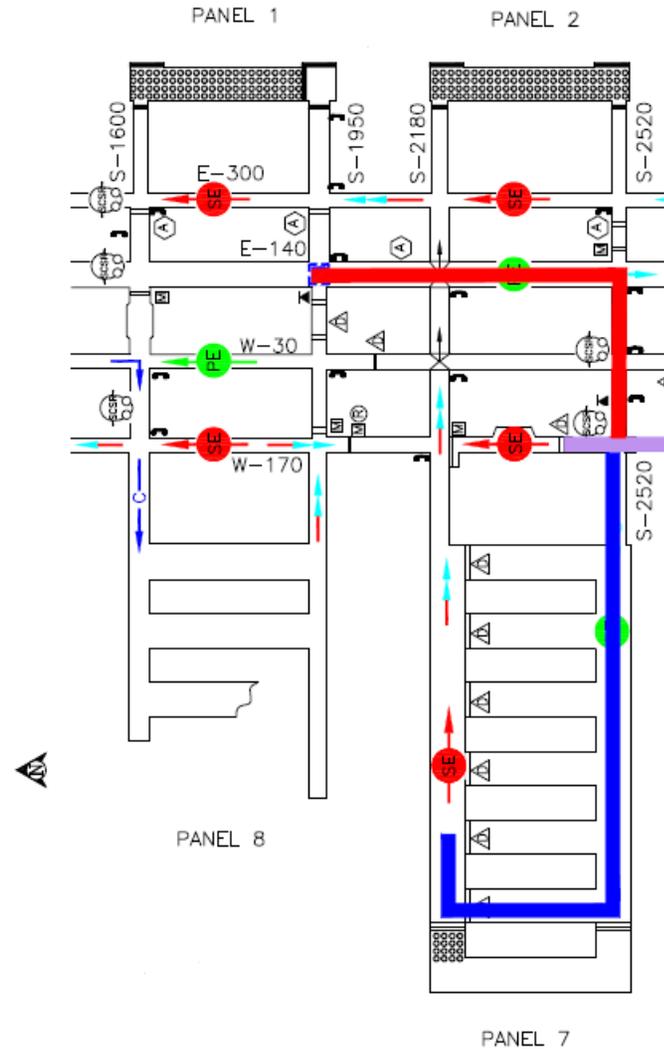


DEFINITIONS
RBA - < 20 dpm/100cm ² ALPHA REMOVABLE < 200 dpm/100cm ² BETA REMOVABLE
CA - > 20 dpm/100cm ² ALPHA REMOVABLE > 200 dpm/100cm ² BETA REMOVABLE
HCA - > 2,000 dpm/100cm ² ALPHA REMOVABLE > 20,000 dpm/100cm ² BETA REMOVABLE
ARA - > 0.3 DAC
PANEL 7 - 2,000-17,000 dpm/100cm ²
PANEL 7, ROOM 7 - > 1 million dpm/cm ² ALPHA ON THE EXPOSED WASTE

LEGEND
CONTROLLED AREA
RBA
CONTAMINATION AREA
CONTAMINATION AREA/AIRBORNE RADIOACTIVITY AREA
HIGH CONTAMINATION AREA/AIRBORNE RADIOACTIVITY AREA
CAM
PAS
INACCESSIBLE

NOTES
1. DRIFT WIDTHS NOT TO SCALE, ENLARGED 2X FOR CLARITY.
2. EXISTING EXCAVATION REFLECTS STATUS AS OF 08/19/14.

Underground Floor Area with Brattice Cloth & Salt Layer



- THE PURPLE AREA ALLOWS ROOM FOR EQUIPMENT TO TURN AROUND. SALT & BRATTICE CLOTH WILL BE PLACED IN THIS AREA. W170/S2520 IS AN ESTABLISHED TRANSITION POINT. THIS WILL BE A CLEAN TO CONTAMINATION TRANSITION AREA.
- THE CURRENT APPROACH WILL NOT HAVE SALT & BRATTICE CLOTH IN THE AREA FOR DECONTAMINATION.
- SALT & BRATTICE CLOTH WILL BE PLACED IN THIS AREA.



Brattice Cloth with Salt Layer Installed from S-1950 to S-2520



New Underground Fire Suppression Vehicle

Attachment 8
Interim Ventilation System & Supplemental Ventilation System
Equipment and Work Activities



Interim Ventilation System Fan/Filter Units Arriving at the WIPP Facility



Supplemental Ventilation System Fan Unit Located in the S-90 Drift



Supplemental Ventilation System Fan Unit with Louvered Regulator

Attachment 9
WIPP Nitrate Salt Bearing Waste Container Isolation Plan
Information Required by Administrative Order 3 (reserved)
[Last updated July 31, 2015]