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

JAN 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

Mr. Butch Tongate
Deputy Secretary and Acting Division Director
Environmental Health 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 December 31, 2014, as required by NMED Administrative Orders dated February 27, 2014, May 12, 2014, and May 20, 2014, as amended by NMED Directives dated August 29, 2014, and December 9, 2014

Dear Mr. Kieling and Mr. Tongate:

The purpose of this letter is to transmit the monthly report for the reporting period ending December 31, 2014, as requested by the February 27, 2014, May 12, 2014, and May 20, 2014, Administrative Orders, issued under the authority of the New Mexico Hazardous Waste Act § 74-4-13 from Ryan Flynn to Messrs. Hellstrom, Franco, Cook, and McQuinn, and as amended by the August 29, 2014, and December 9, 2014, directives from Ryan Flynn to Messrs. Franco and McQuinn. This 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 in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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

Sincerely,

Jose R. Franco, Manager
Carlsbad Field Office

Robert L. McQuinn, Project Manager
Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure

T. Kliphuis, NMED	*ED
R. Maestas, NMED	ED
C. Smith, NMED	ED
S. Holmes, NMED	ED
J. Sales, EPA ED	
CBFO M&RC	

*ED denotes electronic distribution

CBFO:EPD:GTB:MN:15-1411:UFC 5486.00

Monthly Status Report for the New Mexico Environment Department Administrative Orders

Reporting Period December 1, 2014, through December 31, 2014

Introduction

On February 5, 2014, a vehicle fire occurred in the Waste Isolation Pilot Plant (WIPP) underground, resulting in normal operations and waste shipments from generator sites being temporarily suspended. On February 14, 2014, while the fire investigation was still underway, a continuous air monitor detected airborne radiation in the WIPP underground facility, causing the ventilation exhaust to automatically shift to high efficiency particulate air (HEPA) filtration mode. The ventilation system has been operating in filtration mode since that time. Entries into Panel 7 in the underground have confirmed that at least one container from a nitrate salt bearing waste stream from Los Alamos National Laboratory has been breached and is most likely the source of the release. Further investigations are currently ongoing as part of Project REACH to collect additional information regarding the release. Shipments of waste to the WIPP facility have been suspended.

The New Mexico Environment Department (NMED) has issued two Administrative Orders (AOs) to address certain activities relative to the WIPP Hazardous Waste Facility Permit (Permit) that cannot be performed because the underground is inaccessible for normal activities. The AOs provide requirements for monitoring and reporting to the NMED concerning the status of recovery from the two events. The first administrative order (AO1) issued on February 27, 2014, addressed above-ground compliance, and required a weekly report to be submitted with regard to surface-related requirements of the Permit. On May 12, 2014, a second administrative order (AO2) was issued to address, in part, Permit-required activities that cannot currently be performed due to restriction on access to the underground. The second administrative order changed the reporting period from weekly to biweekly, with additional information required to supplement the information required by AO1. A directive from the Secretary of the NMED was issued on August 29, 2014, which amended the reporting frequency from biweekly to monthly for reporting required under AO1 and AO2 with the submittal being due to NMED no later than the 15th of the month for activities conducted during the previous month. A new directive from the Secretary of the NMED was issued on December 9, 2014, which amended the submittal frequency for this report. The new due date for the monthly submittal shall be the last day of the subsequent month for activities conducted during the previous month.

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

In accordance with Paragraph 17(a) of AO2, and a subsequent letter from the NMED dated September 24, 2014, the Permittees submitted a revised draft of the underground compliance plan (UCP) on October 30, 2014, for NMED's review and comments. Pertinent elements of the WIPP Recovery Plan were integrated into the UCP as these elements pertain to the Permit-

related requirements addressed by the AOs. The monthly reports serve to provide a status of recovery-related activities, as outlined in AO1 and AO2. In accordance with Paragraph 18(a) of AO2, subsequent reports will identify new information since the previous reporting period.

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

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

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

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

In accordance with Paragraph 17(a) of AO2, the draft UCP was submitted to the NMED by June 26, 2014. On September 24, 2014, the NMED notified the Permittees that review of the draft UCP had been suspended pending the release of the WIPP Recovery Plan. Currently, certain monitoring activities cannot be performed due to the inaccessibility to those portions of the underground where monitoring activities occur. The UCP contains a compliance schedule including a proposed timeline, including dates, for achieving underground recovery and attaining compliance with these Permit-required activities. Before these activities can resume, however, certain prerequisite activities must be

performed in order to establish the safety and habitability of the work areas in the underground. A status of these activities, as described in future updates to the UCP, will be reflected in the monthly reports, as required by Paragraph 18(c) of AO2.

Volatile Organic Compound (VOC) Monitoring

Repository VOC monitoring activities (required by Permit Part 4, Section 4.6.2, including Table 4.6.2.3, and associated requirements in Attachment N) are not currently being performed due to the inaccessibility of those portions of the underground required to perform these activities. Additionally, room-based VOC monitoring activities (required by Permit Part 4, Sections 4.4.3 and 4.6.3, Tables 4.4.1 and 4.6.3.2, and associated requirements in Attachment N) cannot currently be performed due to the inaccessibility of those portions of the underground needed to perform these activities.

Surface VOC monitoring is being conducted in lieu of underground monitoring during re-entry and recovery operations utilizing portable passive air sampling kits. Surface monitoring is being performed to assure that the Permit environmental performance standards (i.e., carcinogenic and non-carcinogenic risk due to VOC emissions from the disposed waste) for surface-based non-waste workers are met. Samples are being collected twice each week at three locations on-site and one location off-site. These samples are 24-hour VOC samples collected on the surface southeast (Training Building), west (Building 489 Intake), and north of the Training Building (Building 489 North Air Intake), with an off-site location approximately a mile southeast of the Training Building at location WQSP-4. These samples are used to quantify VOC exposure to a receptor in the Training Building. The samples on-site and at location WQSP-4 are used to quantify background VOC concentrations in the ambient air. Acquisitions in both Full-Scan and SIM (Selective Ion Monitoring) GC/MS (Gas Chromatography/Mass Spectroscopy) mode are acquired to ensure a good mapping. Scan parameters, as seen in SIM mode, provide more averages over a smaller peak width, resulting in superior spectra and less noise; therefore better compound detection and sensitivity with results in parts per trillion (ppt). Full-scan mode monitors the tentatively identified compounds (TIC) over a range of masses and is required for confidence and confirmation of results in parts per billion (ppb). Both modes of GC/MS results are provided (Full-Scan and SIM). In accordance with Paragraph 19 of AO2, the Permittees began monitoring for trichloroethylene as a target analyte on May 12, 2014.

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

Geomechanical Monitoring

The purpose of geomechanical monitoring is to confirm the structural integrity of the underground repository. Geomechanical monitoring data are currently being transmitted electronically via remote instruments located in Rooms 6 and 7 of Panel 7 in accordance with Permit Part 4, Section 4.6.1, associated requirements in Attachment A2-5b(2), and Attachment E, Table E-2. Not all geomechanical monitoring activities that require the manual reading of underground equipment can currently be performed due to the inaccessibility of those portions of the underground where these activities are performed.

However, visual inspections of the underground areas during recent re-entries have provided information regarding the stability of the underground and identified those areas that require bolting. Bolting has been resumed as part of recovery activities in the underground.

Hydrogen and Methane Monitoring

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

Mine Ventilation Rate Monitoring

Mine ventilation rate monitoring activities (required by Permit Part 4, Section 4.6.4 and associated requirements of Attachment O) are currently being performed. However, due to reduced air flow in the underground because of operating in filtration mode, the minimum running annual average ventilation rate set forth by the Permit cannot be maintained. The ventilation system has been operating in filtration mode since February 14, 2014, with a flow rate of approximately 60,000 standard cubic feet per minute (SCFM). During this reporting period, the calculated running annual average ventilation flow rate was approximately 96,914 SCFM. Surface VOC monitoring is being used to ensure the reduced flow rate does not pose a threat to the surface non-waste worker.

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

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

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

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

displaying monitoring locations are included. The following briefly describes the monitoring information in Attachment 3, *Environmental Monitoring*.

- VOC monitoring stations – Portable surface monitoring equipment has been deployed since February 25, 2014. Samples are being collected twice each week at the locations indicated in Attachment 3. The results are included in Attachment 3, *Environmental Monitoring*.
- Radiological monitoring – During this reporting period, monitoring results were below minimum detectable concentrations. The results are included in Attachment 3, *Environmental Monitoring*.
    - Environmental air samples – Stationary low volume air samplers continuously sample air at the locations shown in Attachment 3.
    - Surface water samples – Surface water samples were obtained on the dates and at the locations shown in Attachment 3.
    - Biota (fauna) samples – Biotic samples were obtained on the dates shown in Attachment 3.

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

In accordance with Paragraph 17(b) of AO2, the draft *Underground Derived Waste Storage Plan (UDWSP)* was submitted to the NMED by June 26, 2014 for review and comment. On December 2, 2014, NMED provided comments on the UDWSP and notified the Permittees that the draft UDWSP had been approved. NMED requested that the Permittees address the comments, incorporate changes and resubmit the UDWSP to NMED by January 6, 2015. During this reporting period, no additional derived waste was generated. As recovery efforts progress, any derived waste produced will be reported in Attachment 4, *Surface and Underground Derived Waste Currently in Storage at the WIPP Facility*, which is currently reserved.

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

There has been no change in the status of the RCRA Contingency Plan implementation since the submittal of the last monthly report. Accordingly, Attachment 5, *Status of RCRA Contingency Plan Required Activities*, is currently reserved.

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

Two reports, *Office of Enterprise Assessments Review of the Waste Isolation Pilot Plant Recovery Plan for Operating Diesel Equipment with Available Underground Airflows* and *Office of Enterprise Assessments Review of the Waste Isolation Pilot Plant Conduct of Maintenance Recovery Plan*, were released by the DOE's Offices of Nuclear Safety and Environmental Assessments; Environment, Safety and Health Assessments; and Enterprise Assessments in December 2014. Since the Office of Enterprise Assessment reviews, CBFO and NWP have begun addressing the identified deficiencies, evaluating compensatory measures, and are seeking external expertise to help review, evaluate and recommend solutions to the ventilation needs for diesel equipment operations. The reports are under evaluation and the actions will be reported next month.

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). As additional Judgments of Need are identified as a result of the completion of subsequent phases of the Accident Investigation Board radiological release event investigation, they will be provided in Attachment 6, *Corrective Actions Required for Recovery*, which is currently reserved.

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

Attachment 7, *As-Found Condition of Panel 7*, was provided to the NMED on June 13, 2014. During this reporting period, Project REACH components were deployed to the underground. Assembly of the Project REACH components (including the boom) has been completed in Panel 7, Room 7. A mechanical and electrical checkout has been successfully performed for the equipment. There have been no photographs taken in Panel 7 since those that were initially submitted to the NMED on June 13, 2014. Therefore, Attachment 7 is currently reserved. The Project REACH camera is located at the waste face in Panel 7, Room 7, and is expected to be operated the first week of January to take images in support of the incident investigation. It is anticipated that it will take about three weeks to photograph the entire room.

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:

Geotechnical surveys were performed in the area of the Panel 6 entrance. Radiological personnel have begun performing surveys at the entrance of Panel 6 to determine if the area can be rolled back to a Radiological Buffer Area in preparation of Panel 6 initial closure activities, and bolting activities will be initiated in this area in the coming weeks. These efforts will commence when the bolter and sufficient support equipment have been cleaned or decontaminated and preventative maintenance has been performed to meet

safety requirements. There have been no photographs taken in Panel 6 since the February 2014 incidents.

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

Consistent with the WIPP Recovery Plan, the focus of underground entries has been on radiological characterization and rollback, geotechnical evaluation, habitability surveys, clean up, electrical and mechanical evaluation of systems, and equipment and repairs as needed to support bolting and installation of the initial closures in Panel 6. More than 60 percent of the underground has been radiologically characterized and confirmed to be free of radiological contamination requiring no personal protective equipment for entry. Ongoing radiological rollback activities were started near the shaft areas, have progressed towards the south end of the underground via the main drifts (i.e., E-140 W-30, and W-170), and will continue towards the drifts (S-2200 and S-2900) that access Panel 6 to support Panel 6 initial closure activities. Maintenance crews are cleaning and inspecting electrical panels and switch stations in the controlled areas to ensure no soot from the fire is present. Attachment 8, *Panel 7 Recovery-Related Work*, provides a map of the current status of the WIPP underground rollback areas during this reporting period.

Decontamination preparation activities were performed in the underground, with test applications of a water wash and fixative in a clean area in the north end of the mine. This was followed by a demonstration of the effectiveness of these methods in Panel 7. The effectiveness of fixing and decontamination methods was evaluated in the S-2520 drift of Panel 7 between Rooms 4 and 5. The initial fixative applications and water spray demonstrations indicated that these methods are effective in attenuating/fixing contamination. Preparations are underway to begin fixing and decontaminating in Panel 7 in January.

The Salt and Air Intake Shafts/Hoists have been available to support access to the underground and have undergone weekly inspections. Preventative maintenance and preoperational checks continue in support of placing the Waste Hoist back into full service. The Waste Hoist has been returned to service for equipment conveyance and emergency egress which allows for up to 75 personnel to enter the underground, thereby increasing the pace of safety-related activities such as bolting and initial panel closure. The Waste Shaft sump at the bottom of the shaft is the lowest point of the mine and, therefore, collects water from areas of the mine such as the Exhaust Shaft. Accumulated water has been removed to uncover the Waste Hoist counter weights that are attached to the guide ropes. Salt buildup is now being removed in order to allow necessary clearance between guide rope weights and the sump. Once the guide rope weights are uncovered and inspected, the hoist will be available for normal transport of personnel into the underground.

Priorities continue to include resumption of bolting and the initial closure of Panel 6. Maintenance of a forklift has been completed. Preventive maintenance is in progress for a bolter, lube truck, and haul truck, which are used for bolting activities and moving equipment associated with bolting activities. Bolting in un-contaminated areas continued through this reporting period, with cleaning and maintenance activities underway to prepare equipment for bolting in contaminated areas. Cleaning and maintenance was

completed for another bolter and this bolter is available for use in uncontaminated areas. Preparations for bolting in contaminated areas are underway. Bolting equipment from Panel 7 is being prepared for bolting in the contaminated access areas to Panel 6 prior to installing the bulkheads and run-of-mine salt. Workers practiced bolting in clean areas donning radiological personal protective equipment in preparation for bolting activities in contaminated areas. Bolting activities are prioritized based on geotechnical inspections and surveys. Bolting activities have been performed in the E-140 drift from S-700 to S-1950; more than 285 bolts have been removed and more than 255 bolts installed in this drift. The number of pieces of diesel equipment that can be operated for roof bolting is limited by the available ventilation in the work area and the minimum ventilation flow rate assigned to each piece of equipment based on Mine, Safety, and Health Administration air quality requirements. Due to these limitations, ventilation adjustments will have to be made as a prerequisite in each location where bolting equipment will operate to ensure equipment airflow requirements are met.

The interim ventilation system, consisting of two skid mounted fan and high efficiency particulate air (HEPA) filter units, is progressing. Fabrication of the HEPA skids and fans is underway and the procurement package for ductwork and long-lead electrical components has been issued. In addition, the safety basis documents that support safety basis authorizations for Panel 6 initial closure and Panel 7, Room 7 closure have been approved by the DOE.

The NWP interim performance measurement baseline for WIPP recovery was conditionally approved by the DOE. The performance measurement baseline supports the WIPP Recovery Plan with the necessary detail for securing funding and monitoring recovery progress.

During this reporting period, certain underground eyewash stations, permanently-located fire extinguishers, first aid stations and the underground ambulance, were inspected, refurbished and replaced as needed and returned to service. Annual fire extinguisher inspections were completed in accessible areas. Radiological rollback has allowed access to some mine phones, radio, and public address system locations within a limited area. As a result, operability tests have been performed for these devices. As radiological rollback continues towards Panel 6, mine phones in the Panel 6 area will be checked and repaired, and batteries will be replaced, if necessary. Self-contained self-rescuer caches will be restocked, if needed, in the drifts to Panel 6. Habitability activities have started near the shaft areas and are progressing towards the south end of the underground via drifts E-140, W-30, and W-170. Habitability activities will continue toward drifts S-2750 and S-3080, which provide access to Panel 6.

On December 10, 2014 WIPP conducted its annual full scale emergency response exercise (Annual Horizon-14) to demonstrate and evaluate the ability of the Emergency Response Organization to recognize, respond to, contain, and mitigate an operational emergency at the site. Multiple local agencies (e.g., State of New Mexico, Mine Safety and Health Administration, Carlsbad Fire Department, Carlsbad Medical Center, and both Eddy and Lea Counties) joined the WIPP Emergency Operations Center and Joint Information Center for the exercise.

Ongoing visual checks are being performed to evaluate the extent of soot accumulation on electrical equipment and, if necessary, to clean the equipment. As of this reporting period, underground electrical cleaning was approximately 60 percent complete. Cleaning of

switch station #4 has been completed and the electrical loads have been restored with power. In addition, switch station #2 cleaning has been completed and power restored, and cleaning of switch station #6 is ongoing.

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

Attachment 1
Surface and Underground Inspections

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Air Intake Shaft Hoist	Underground Operations	Preoperational	WP 04-HO1004 Inspecting for Deterioration, Safety Equipment, Communication Systems, and Mechanical Operability in accordance with Mine Safety and Health Administration (MSHA) requirements	Current	12/31/14	N/A	Inspection performed daily before Hoist is declared in service.
Exhaust Shaft	Underground Operations	Quarterly	PM041099 Inspecting for Deterioration and Leaks/Spills	Not Current	12/31/13 (Due 3/31/14)	TBD	Shaft is not accessible due to the fire and radiological events, and inspections cannot be performed.
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	12/31/14	N/A	Inspection performed daily before Hoist is declared in service.
Self-Rescuers	Underground Operations	Quarterly	WP 04-AU1026 Inspecting for Deterioration and Functionality in accordance with MSHA requirements	Current for W65 Self-Rescuer Respirators Not Current for SCSRs	12/31/14	N/A	Self-rescuers quarterly inspections are current. As Self Contained Self Rescuers (SCSRs) in the underground become accessible, they are inspected and restocked/replaced as needed.

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 Openings—Roof Bolts and Travelways	Underground Operations	Weekly	WP 04-AU1007 Inspecting for Deterioration	Not Current	1/29/14	3/31/16	Not all areas of the underground are accessible, therefore inspections cannot be performed. Note that partial underground openings inspections are being performed by recovery teams, but not the full weekly underground openings inspection.
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	12/31/14	January	Hoist is operational for conveyance of equipment and emergency egress.
Explosion-Isolation Walls	Underground Operations	Quarterly	Integrity and Deterioration of Accessible Areas	Not Current	2/3/14: (Panel 1 and Panel 2) 11/4/13: (Panel 5)	3/31/16	Structures are not accessible due to the fire and radiological events, and inspections cannot be performed.
Bulkhead in Filled Panels	Underground Operations	Monthly	Integrity and Deterioration of Accessible Areas	Not Current	N/A	3/31/16	Area is not accessible due to the fire and radiological events, and inspections cannot be performed.
MSHA Air Quality Monitor	Maintenance/ Underground Operations	Daily	WP 12-IH1828 Inspecting for Air Quality Monitoring Equipment Functional Check	Current	12/31/14	N/A	Inspection performed prior to underground entry.

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
Ambulances (Surface) and related emergency supplies and equipment	Emergency Services	Weekly	12-FP0030 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	12/28/14	N/A	
Ambulances (Underground) and related emergency supplies and equipment	Emergency Services	Weekly	12-FP0030 Inspecting for Mechanical Operability, Deterioration, and Required Equipment		12/27/14	3/31/16	
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	Not Current	2/8/14	3/31/16	Not all equipment is accessible due to the fire and radiological events, therefore inspections cannot be performed. As pieces of equipment are returned to service as part of the underground recovery, the Permit required inspections will be scheduled and performed and the inspection dates will be noted in this table.
Fire Extinguishers (Surface)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Current	12/31/14	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Fire Extinguishers (Underground)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Not Current	12/31/14	3/31/16	Fire extinguishers are being returned to service. However, not all fire extinguishers are accessible due to the fire and radiological events, therefore inspections cannot be performed. As extinguishers are returned to service as part of the underground recovery, the Permit required inspections will be scheduled and performed and the inspection dates will be noted in this table. Currently all fire extinguishers in the U/G have been inspected in accessible areas, except those located in Panel 6.
Fire Hoses	Emergency Services	Annually (minimum)	12-FP0031 Inspecting for Deterioration and Leaks/Spills	Current	3/26/14	N/A	
Fire Hydrants	Emergency Services	Semiannual/ annually	12-FP0034 Inspecting for Deterioration and Leaks/Spills	Current	7/15/14: (Annual) 8/28/14: (Semiannual)	N/A	
Fire Pumps	Emergency Services	Weekly/annually	WP 12-FP0026 Inspecting for Deterioration, Leaks/Spills, valves, and panel lights	Current	12/29/14	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 Sprinkler Systems	Emergency Services	Monthly/ quarterly	WP 12-FP0025 Inspecting for Deterioration, Leaks/Spills, static pressures, and removable strainers	Current	12/22/14, 12/23/14, 12/24/14	N/A	A series of building fire sprinkler systems are inspected on a weekly basis so that a complete system inspection is accomplished on a monthly basis.
Fire and Emergency Response Trucks (Seagrave Fire Apparatus, Emergency One Apparatus)	Emergency Services	Weekly	12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Current	12/26/14	N/A	
Fire and Emergency Response Trucks (Underground Rescue Truck)	Emergency Services	Weekly	12-FP0030 and 12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Not Current	2/8/14	3/31/16	As the underground rescue truck is returned to service as part of the recovery, the Permit required inspections will be scheduled and performed and the inspection dates will be noted in this table.
Hazardous Material Response Equipment	Emergency Services	Weekly	12-FP0033 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	12/30/14	N/A	
Miners First Aid Station	Emergency Services	Quarterly	12-FP0035 Inspecting for Required Equipment	Current	12/15/14	3/31/16	
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	12/27/14	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Rescue Truck (Surface)	Emergency Services	Weekly	12-FP0030 and 12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Current	12/25/14	N/A	
Vehicle Siren (Surface Vehicles)	Emergency Services	Weekly	Functional Test included with inspection of the Ambulances, Fire Trucks, and Rescue Trucks	Current	12/25/14, 12/26/14, 12/28/14	N/A	
Vehicle Siren (Underground Vehicles)	Emergency Services	Weekly	Functional Test included with inspection of the Ambulances, Fire Trucks, and Rescue Trucks	Current	12/27/14	3/31/16	
Adjustable Center of Gravity Lift Fixture	Waste Handling	Preoperational	WP 05-WH1410 Inspecting for Mechanical Operability and Deterioration	Current	10/14/14 (41-T-037) 10/23/14 (41-T-038) 12/30/14 (41-T-032)	N/A	There are four ACGLFs, but the pre-operational inspection was only performed on the one fixture listed. The other ACGLFs will be inspected prior to use.
Contact-Handled (CH) TRU Underground Transporter	Waste Handling	Preoperational	WP 05-WH1603 Inspecting for Mechanical Operability, Deterioration, and area around transporter clear of obstacles	Current	2/5/14	When waste disposal operations resume	Equipment not in use due to the fire and radiological events.
Conveyance Loading Car	Waste Handling	Preoperational	WP 05-1406 Inspecting for Mechanical Operability, Deterioration, path clear of obstacles and guards in the proper place	Current	11/30/14 (41-H-018)	When waste disposal operations resume	Equipment not in use due to the fire and radiological events. The preoperational inspection was completed for training purposes 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
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	12/26/14 (41-H-020A) 11/10/14 (41-H-020B)	N/A	
Forklifts Used for Waste Handling (Electric and Diesel forklifts, Push-Pull Attachment) on Surface	Waste Handling	Preoperational	WP 05-WH1201, WP 05-WH1207, WP 05-WH1401, WP 05-WH1402, WP 05-WH1403, and WP 05-WH1412 Inspecting for Mechanical Operability, Deterioration, and On board fire suppression system	Current	12/18/14 (41-H-009) 12/28/14 (41-H-013) 12/26/14 (41-H-051) 8/9/14 (41-T-051) 12/28/14 (41-H-012D) 12/28/14 (41-H-012E) 12/28/14 (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	2/5/14	When waste disposal operations resume	Equipment not in use due to the fire and radiological events.

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
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	12/24/14 (Weekly) 12/28/14 (Daily)	N/A	
TRU Mixed Waste Decontamination Equipment	Waste Handling	Annually	WP 05-WH1101 Inspecting for Required Equipment	Current	12/31/13	N/A	
Underground TRU Mixed Waste Disposal Area	Waste Handling	Preoperational	WP 05-WH1810 Inspecting for Deterioration, Leaks/Spills, mine pager phones, equipment, unobstructed access, signs, debris, and ventilation	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	Equipment not in use due to the fire and radiological events.
Waste Handling Cranes	Waste Handling	Preoperational	WP 05-WH1407 Inspecting for Mechanical Operability, Deterioration, and Leaks/Spills	Current	11/08/14 (41-T-151A) (41-T-151B) 12/03/14 (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	11/09/14 (41-T-160A) 12/28/14 (41-T-160B)	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
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.
Trailer Jockey	Waste Handling	Preoperational	WP 05-WH1405 Inspecting for Mechanical Operability and Deterioration	Current	9/9/14 (41-H-151B) 12/28/14 (41-H-151A) 11/30/14 (41-H-046)	N/A	
Bolting Robot	Waste Handling	Preoperational	WP 05-WH1203 Mechanical Operability	Not Current	6/29/12	When waste disposal operations resume	Equipment is currently out of service.
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) 12/26/14 (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	12/28/14 (41-H-027)	N/A	
Bolting Station	Waste Handling	Preoperational	WP 05-WH1203 Mechanical Operability, Deterioration, and Guards in proper place	Current	12/28/14 (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	12/27/14 (#1) 12/27/14 (#2)	N/A	
Central Monitoring System (CMS)	Facility Operations	Continuous	Automatic Self-Checking	Current	12/28/14	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	Not Current	12/26/14	N/A	Mine phone tests are performed in the accessible areas each day an entry is made. U/G rollback is ongoing, so not all locations are accessible at this time.
Mine Pager Phones (underground)	Facility Operations	Monthly	WP 04-PC3017 Testing of PA and Underground Alarms and Mine Page Phones at essential locations	Not Current.	12/26/14	N/A	Mine phone tests are performed in the accessible areas each day an entry is made. U/G radiological characterization and rollback is ongoing, so not all locations are accessible at this time.
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	12/26/14	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
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	Not Current	12/26/14	N/A	Tests are being performed in the accessible areas each day an entry is made. U/G radiological characterization and rollback is ongoing, so not all locations are accessible at this time.
Radio Equipment	Facility Operations	Daily	Radios are operated daily and are repaired upon failure	Current	12/28/14	N/A	
Uninterruptible Power Supply (Central UPS)	Facility Operations	Daily	WP 04-ED1542 Inspecting for Mechanical Operability and Deterioration with no malfunction alarms. Results of this inspection are logged in accordance with WP 04- AD3008.	Current	12/28/14	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	12/28/14	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	12/30/14, 12/31/14	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
Eye Wash and Shower Equipment (Underground)	Equipment Custodian	Weekly	WP 12-IS1832 Inspecting for Deterioration	Not Current	12/29/14	3/31/16	Eyewash stations are being brought back into service. As equipment is returned to service as part of the recovery, the Permit required inspections will be scheduled and performed and the inspection dates will be noted in this table. Four eyewash stations are currently in service
Perimeter Fence, Gates, Signs	Security	Daily	PF0-010 Inspecting for Deterioration and Posted Warnings	Current	12/28/14	N/A	
Underground—Geomechanical Instrumentation System (GIS)	Geotechnical Engineering	Monthly	WP 07-EU1301 Inspecting for Deterioration	Current	12/31/14	N/A	Complete at accessible areas.
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)	3/31/16	The 700 horsepower fans are not in use because underground ventilation system is operating in filtration mode.

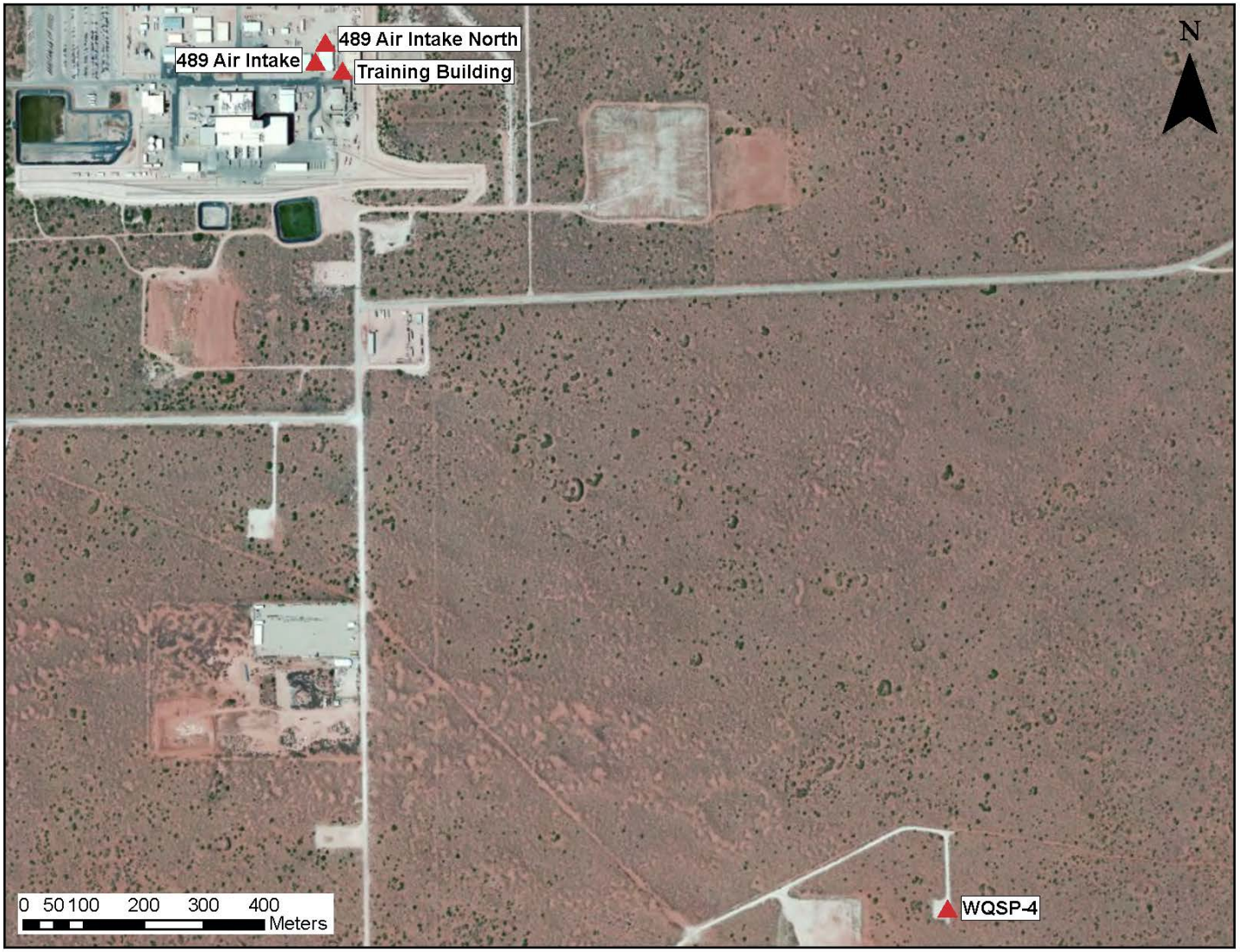
[1] Inspection proposed start date of first quarter of calendar year 2016, is an estimate from the WIPP Recovery Plan. Inspections may be initiated prior to 3/31/16 as work zones are released in the underground. Therefore, 3/31/16 is a "placeholder," and proposed start dates may be revised as recovery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

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

Attachment 3
Environmental Monitoring

This attachment contains the following environmental monitoring data:

- VOC Monitoring
- Radiological Monitoring
  - Environmental Air Sampling
  - Surface Water Sampling
  - Fauna



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	11/5/2014	11/7/2014	9129	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	Toluene	108-88-3	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	Acetone	67-64-1	PPBV		0.52 NJ
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	Butane	106-97-8	PPBV		1.88 NJ
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	Dichlorodifluoromethane	75-71-8	PPBV		0.46 NJ
CEMRC	11/5/2014	11/7/2014	9129	WQSP-4	Propane	74-98-6	PPBV		1.9 NJ
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Toluene	108-88-3	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

12/18/2014 1:17 PM

* 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	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Acetone	67-64-1	PPBV		0.56 NJ
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Butane	106-97-8	PPBV		1.98 NJ
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Dichlorodifluoromethane	75-71-8	PPBV		0.48 NJ
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Isobutane	75-28-5	PPBV		1.12 NJ
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Pentane	109-66-0	PPBV		0.6 NJ
CEMRC	11/5/2014	11/7/2014	9128	Building 489 North Air Intake	Propane	74-98-6	PPBV		1.88 NJ
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Acetone	67-64-1	PPBV		0.56 NJ
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Butane	106-97-8	PPBV		1.82 NJ
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Dichlorodifluoromethane	75-71-8	PPBV		0.44 NJ
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Isobutane	75-28-5	PPBV		1.02 NJ
CEMRC	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Pentane	109-66-0	PPBV		0.6 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

12/18/2014 1:17 PM

* 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	11/5/2014	11/7/2014	9126	Building 489 Air Intake	Propane	74-98-6	PPBV		1.84 NJ
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Toluene	108-88-3	PPBV	0.4	0.48
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Butane	106-97-8	PPBV		8.8 NJ
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		4.16 NJ
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.58 NJ
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.76 NJ
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Isobutane	75-28-5	PPBV		4.88 NJ
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Pentane	109-66-0	PPBV		3.16 NJ
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		0.84 NJ
CEMRC	11/6/2014	11/7/2014	9132	WQSP-4	Propane	74-98-6	PPBV		7.76 NJ
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Toluene	108-88-3	PPBV	0.4	0.42
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Acetone	67-64-1	PPBV		0.42 NJ
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Butane	106-97-8	PPBV		9.06 NJ
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Butane, 2-methyl-	78-78-4	PPBV		3.88 NJ
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.58 NJ
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.56 NJ
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Isobutane	75-28-5	PPBV		4.94 NJ
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Pentane	109-66-0	PPBV		3.22 NJ
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.86 NJ
CEMRC	11/6/2014	11/7/2014	9131	Building 489 North Air Intake	Propane	74-98-6	PPBV		8.26 NJ
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.6
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Butane	106-97-8	PPBV		10.02 NJ
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		4.32 NJ
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.72 NJ
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.7 NJ
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Isobutane	75-28-5	PPBV		5.52 NJ
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.66 NJ
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.96 NJ
CEMRC	11/6/2014	11/7/2014	9130	Building 489 Air Intake	Propane	74-98-6	PPBV		8.68 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.735
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Butane	106-97-8	PPBV		12.6 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		5.82 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		1.2 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		1.185 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Cyclopropane, ethyl-	1191-96-4	PPBV		0.45 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Heptane	142-82-5	PPBV		0.63 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Isobutane	75-28-5	PPBV		6.705 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Pentane	109-66-0	PPBV		5.025 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.5 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Pentane, 3-methyl-	96-14-0	PPBV		0.78 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Propane	74-98-6	PPBV		8.985 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.84
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Benzene	71-43-2	PPBV		0.345 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Butane	106-97-8	PPBV		12.18 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		5.715 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		1.17 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		1.155 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Cyclopropane, ethyl-	1191-96-4	PPBV		0.465 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Heptane	142-82-5	PPBV		0.615 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Hexane, 3-methyl-	589-34-4	PPBV		0.48 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Isobutane	75-28-5	PPBV		6.48 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Pentane	109-66-0	PPBV		4.68 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.455 NJ
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Propane	74-98-6	PPBV		9.285 NJ
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	52.38 J
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	91.2 J
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	6.06 J
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Toluene	108-88-3	PPTV	150	755.37
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Chloroform	67-66-3	PPTV	150	16.44 J
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	44.43 J
CEMRC	12/3/2014	12/5/2014	9135	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	51.17 J
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	86.81 J
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

12/18/2014 1:17 PM

* 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	12/3/2014	12/5/2014	9138	WQSP-4	Toluene	108-88-3	PPTV	150	866.88
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Chloroform	67-66-3	PPTV	150	14.69 J
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	44.88 J
CEMRC	12/3/2014	12/5/2014	9138	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.18 J
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Toluene	108-88-3	PPBV	0.4	0.6
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Butane	106-97-8	PPBV		15.22 NJ
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Butane, 2-methyl-	78-78-4	PPBV		6.82 NJ
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		1.24 NJ
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		1.32 NJ
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Cyclopropane, ethyl-	1191-96-4	PPBV		0.52 NJ
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Heptane	142-82-5	PPBV		0.64 NJ
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Isobutane	75-28-5	PPBV		7.98 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Pentane	109-66-0	PPBV		5.78 NJ
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.7 NJ
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Propane	74-98-6	PPBV		12.98 NJ
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPTV	200	52.1 J
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	195.64 J
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	26.6 J
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Toluene	108-88-3	PPTV	200	606.78
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Chloroform	67-66-3	PPTV	200	23.36 J
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	45.5 J
CEMRC	12/3/2014	12/5/2014	9134	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	55.68 J
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.4	0.2 J
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.4	0.72
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.4	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.4	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

12/18/2014 1:17 PM

* 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	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Butane	106-97-8	PPBV		15.84 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		7.16 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		1.36 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		1.38 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Cyclopropane, ethyl-	1191-96-4	PPBV		0.54 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Heptane	142-82-5	PPBV		0.7 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Isobutane	75-28-5	PPBV		8.38 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Pentane	109-66-0	PPBV		6.08 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.74 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Pentane, 3-methyl-	96-14-0	PPBV		0.9 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Propane	74-98-6	PPBV		13.06 NJ
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	200	51.92 J
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	200	201.96
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	200	23.34 J
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	200	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Toluene	108-88-3	PPTV	200	737.68
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Chloroform	67-66-3	PPTV	200	24.6 J
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	200	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	200	U
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	200	49.44 J
CEMRC	12/3/2014	12/5/2014	9133	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	200	46.82 J
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPBV	0.3	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Toluene	108-88-3	PPBV	0.3	0.75
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Acetone	67-64-1	PPBV		0.51 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Benzene	71-43-2	PPBV		0.33 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Butane	106-97-8	PPBV		11.61 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Butane, 2-methyl-	78-78-4	PPBV		5.37 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		1.275 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		1.425 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Cyclopropane, ethyl-	1191-96-4	PPBV		0.525 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Heptane	142-82-5	PPBV		0.645 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Isobutane	75-28-5	PPBV		6.06 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Pentane	109-66-0	PPBV		4.74 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.53 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Pentane, 3-methyl-	96-14-0	PPBV		0.855 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Propane	74-98-6	PPBV		8.415 NJ
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPTV	150	46.62 J

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

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	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPTV	150	130.68 J
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	150	14.1 J
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Toluene	108-88-3	PPTV	150	760.1
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Chloroform	67-66-3	PPTV	150	17.75 J
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPTV	150	47.51 J
CEMRC	12/4/2014	12/5/2014	9137	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPTV	150	24.12 J
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.3	0.54
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.3	0.87
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.3	0.195 J
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Acetone	67-64-1	PPBV		0.495 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Benzene	71-43-2	PPBV		0.36 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Butane	106-97-8	PPBV		12.045 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		1.35 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		1.485 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Cyclopropane, ethyl-	1191-96-4	PPBV		0.54 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Heptane	142-82-5	PPBV		0.69 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Hexane, 3-methyl-	589-34-4	PPBV		0.555 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Isobutane	75-28-5	PPBV		6.315 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Pentane	109-66-0	PPBV		4.875 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		1.605 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Pentane, 3-methyl-	96-14-0	PPBV		0.87 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Propane	74-98-6	PPBV		8.715 NJ
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	150	64.2 J
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	150	583.5
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	150	107.7 J
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Toluene	108-88-3	PPTV	150	868.44
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Chloroform	67-66-3	PPTV	150	55.77 J
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	150	54.99 J
CEMRC	12/4/2014	12/5/2014	9136	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	150	219.09
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.525
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Butane	106-97-8	PPBV		9.36 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Butane, 2-methyl-	78-78-4	PPBV		5.07 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.915 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		1.05 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Cyclopropane, ethyl-	1191-96-4	PPBV		0.405 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Heptane	142-82-5	PPBV		0.42 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Isobutane	75-28-5	PPBV		4.92 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Pentane	109-66-0	PPBV		3.945 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		1.23 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Propane	74-98-6	PPBV		6.69 NJ
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	53.03 J
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	84.92 J
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Toluene	108-88-3	PPTV	150	531.29
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Chloroform	67-66-3	PPTV	150	14.55 J

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

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	12/10/2014	12/12/2014	9141	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	42.54 J
CEMRC	12/10/2014	12/12/2014	9141	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.3	0.195 J
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Toluene	108-88-3	PPBV	0.3	0.39
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Acetone	67-64-1	PPBV		0.705 NJ
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Butane	106-97-8	PPBV		8.34 NJ
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.615 NJ
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.615 NJ
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Dichlorodifluoromethane	75-71-8	PPBV		0.315 NJ
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Isobutane	75-28-5	PPBV		4.44 NJ
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Pentane	109-66-0	PPBV		3.27 NJ
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.885 NJ
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Propane	74-98-6	PPBV		6.165 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

12/18/2014 1:17 PM

* 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	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Tetrachloroethylene	127-18-4	PPBV		0.36 NJ
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPTV	150	56.31 J
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPTV	150	219.09
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	150	29.87 J
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Toluene	108-88-3	PPTV	150	415.71
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Chloroform	67-66-3	PPTV	150	28.1 J
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPTV	150	33.78 J
CEMRC	12/10/2014	12/12/2014	9139	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPTV	150	50.66 J
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.3	0.48
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.3	0.435
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.3	0.135 J
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Acetone	67-64-1	PPBV		0.72 NJ
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Butane	106-97-8	PPBV		8.43 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.645 NJ
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.675 NJ
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Dichlorodifluoromethane	75-71-8	PPBV		0.33 NJ
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Heptane	142-82-5	PPBV		0.315 NJ
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Isobutane	75-28-5	PPBV		4.455 NJ
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.36 NJ
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.93 NJ
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Propane	74-98-6	PPBV		6.12 NJ
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	150	66 J
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	150	495.11
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	150	72.69 J
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Toluene	108-88-3	PPTV	150	443.57
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Chloroform	67-66-3	PPTV	150	52.79 J
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	150	34.68 J
CEMRC	12/10/2014	12/12/2014	9140	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	150	153.86
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Carbon Tetrachloride	56-23-5	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Chlorobenzene	108-90-7	PPBV	0.3	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Toluene	108-88-3	PPBV	0.3	0.36
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Acetone	67-64-1	PPBV		0.63 NJ
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Butane	106-97-8	PPBV		7.935 NJ
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Cyclohexane, methyl-	108-87-2	PPBV		0.6 NJ
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Cyclopentane, methyl-	96-37-7	PPBV		0.54 NJ
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Dichlorodifluoromethane	75-71-8	PPBV		0.33 NJ
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Isobutane	75-28-5	PPBV		4.215 NJ
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Pentane	109-66-0	PPBV		3.18 NJ
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Pentane, 2-methyl-	107-83-5	PPBV		0.87 NJ
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Propane	74-98-6	PPBV		5.52 NJ
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Methylene Chloride	75-09-2	PPTV	150	65.27 J
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Carbon Tetrachloride	56-23-5	PPTV	150	94.85 J
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	1,1,1-Trichloroethane	71-55-6	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Toluene	108-88-3	PPTV	150	383.76
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Chloroform	67-66-3	PPTV	150	16.16 J
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	1,2-Dichloroethane	107-06-2	PPTV	150	31.4 J
CEMRC	12/11/2014	12/12/2014	9144	WQSP-4	Trichloroethylene (1)	79-01-6	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.3	0.195 J
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Toluene	108-88-3	PPBV	0.3	0.42
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Acetone	67-64-1	PPBV		0.825 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Butane	106-97-8	PPBV		8.055 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.63 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.585 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Dichlorodifluoromethane	75-71-8	PPBV		0.315 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Heptane	142-82-5	PPBV		0.33 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Isobutane	75-28-5	PPBV		4.275 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Pentane	109-66-0	PPBV		3.33 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.915 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Propane	74-98-6	PPBV		5.97 NJ
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Methylene Chloride	75-09-2	PPTV	150	62.16 J

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

12/18/2014 1:17 PM

* 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	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	PPTV	150	203.49
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	150	29.49 J
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Toluene	108-88-3	PPTV	150	432.5
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Chloroform	67-66-3	PPTV	150	26.63 J
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	PPTV	150	32.55 J
CEMRC	12/11/2014	12/12/2014	9142	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	PPTV	150	46.25 J
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Methylene Chloride	75-09-2	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPBV	0.3	0.15 J
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Chlorobenzene	108-90-7	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Toluene	108-88-3	PPBV	0.3	0.42
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Chloroform	67-66-3	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPBV	0.3	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Butane	106-97-8	PPBV		8.13 NJ
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Butane, 2-methyl-	78-78-4	PPBV		4.335 NJ
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2	PPBV		0.645 NJ
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7	PPBV		0.57 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	UNITS	MRL*	Concentration
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Dichlorodifluoromethane	75-71-8	PPBV		0.39 NJ
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Heptane	142-82-5	PPBV		0.33 NJ
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Isobutane	75-28-5	PPBV		4.35 NJ
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Pentane	109-66-0	PPBV		3.285 NJ
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5	PPBV		0.885 NJ
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Propane	74-98-6	PPBV		5.295 NJ
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Methylene Chloride	75-09-2	PPTV	150	61.52 J
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	PPTV	150	173.96
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	PPTV	150	20.58 J
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Chlorobenzene	108-90-7	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Toluene	108-88-3	PPTV	150	427.16
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Chloroform	67-66-3	PPTV	150	22.07 J
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	PPTV	150	U
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	PPTV	150	32 J
CEMRC	12/11/2014	12/12/2014	9143	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	PPTV	150	31.29 J

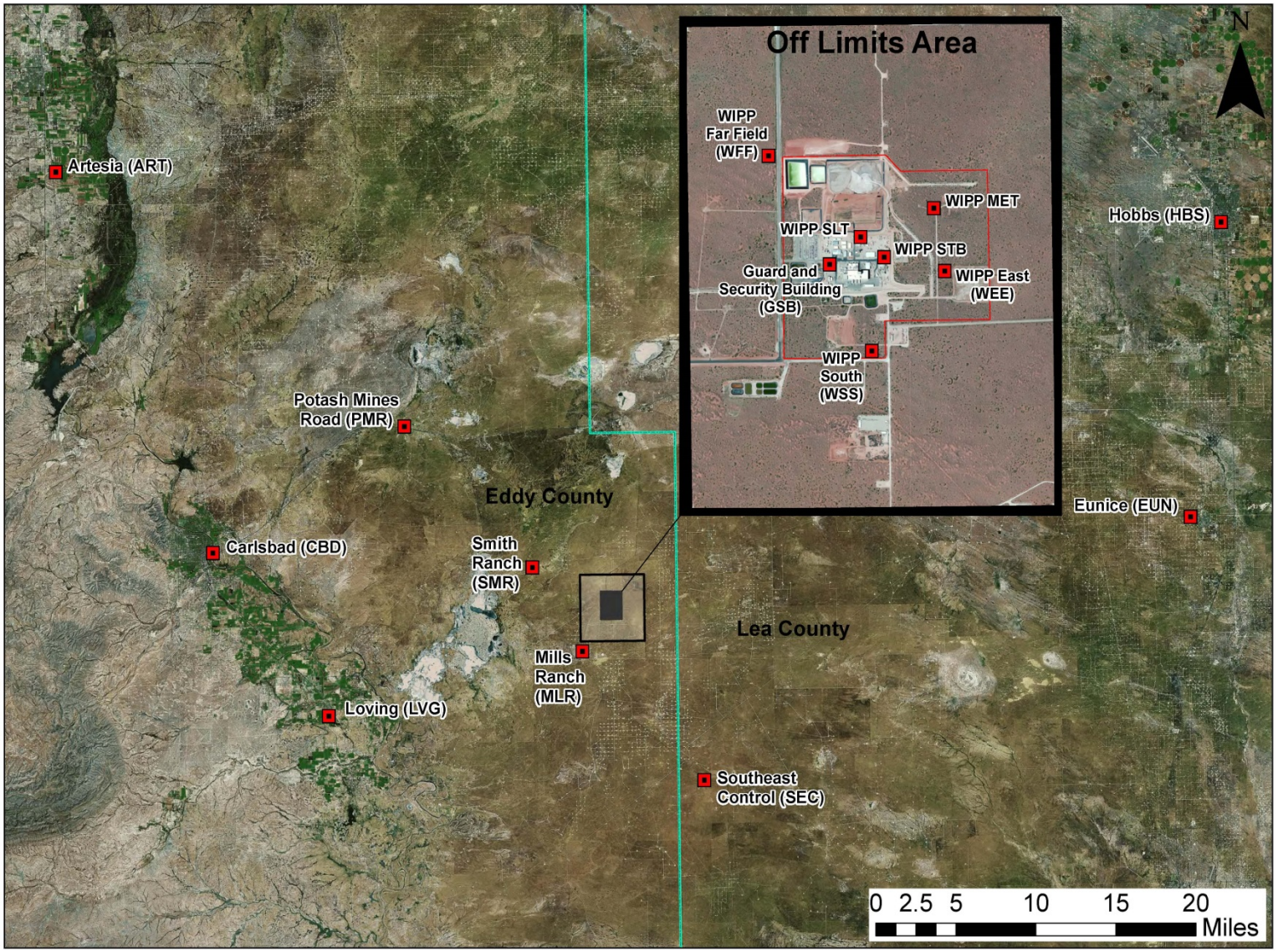
Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

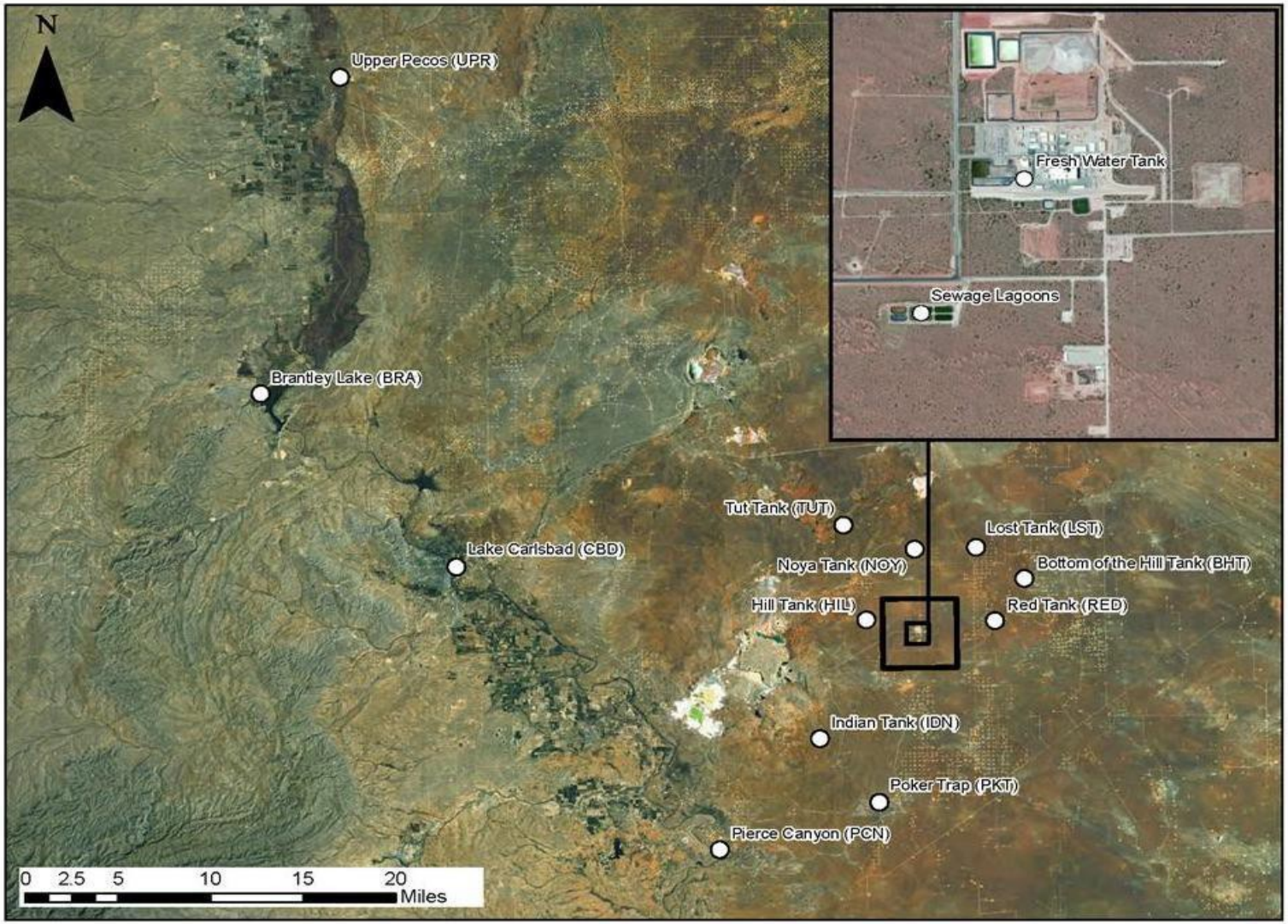
Notes:

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

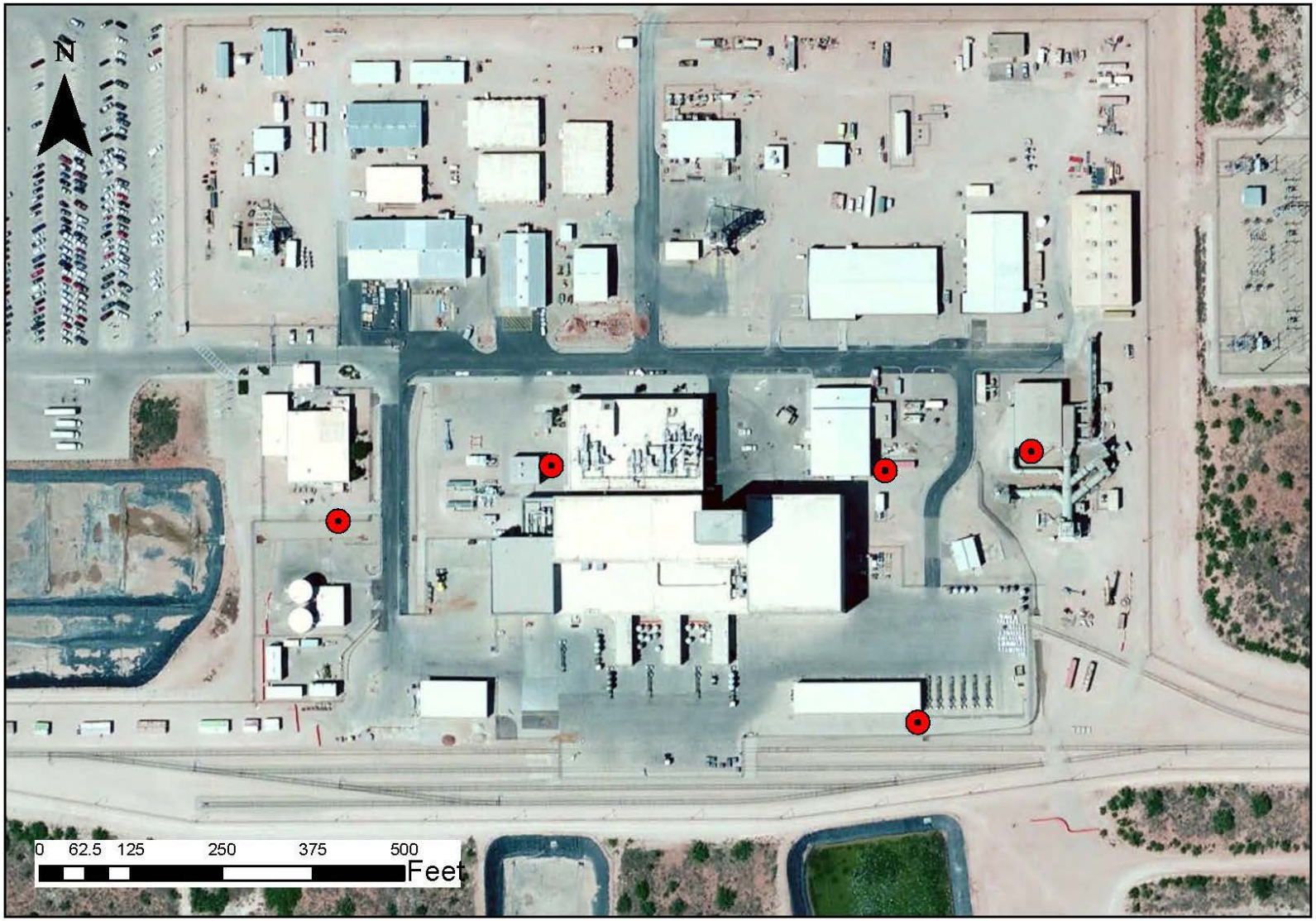
* A value will not appear in the MRL column for TICs.



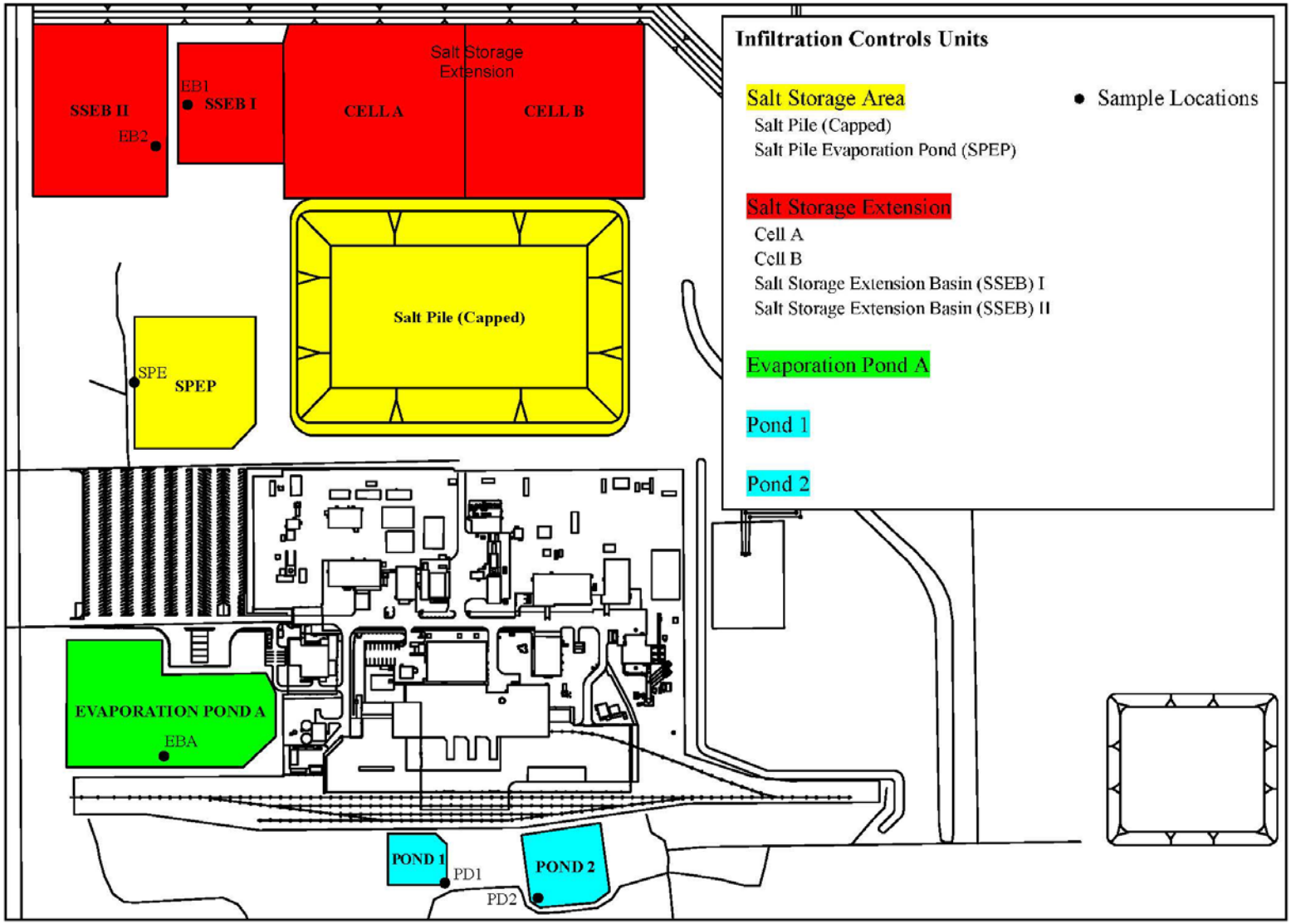
Environmental Air Sampling Locations



Surface Water Sampling Locations



Surface Water Sampling Locations (continued)
Samples of Opportunity, September 18, 2014



Surface Water Sample Locations

Environmental Monitoring & Hydrology Airborne Sampling

Location	Sample ID Number	Sample Date	WIPP Labs Radiochemistry		
			Am-241 (dpm/sample)	Pu-238 (dpm/sample)	Pu-239/240 (dpm/sample)
WIPP Far Field (WFF)	EE-WFF-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
WIPP East (WEE)	EE-WEE-20141014-1.2	10/20/2014	Below MDC	Below MDC	Below MDC
WIPP East (WEE) co-located	EE-WEE-20141014-2.2	10/20/2014	Below MDC	Below MDC	Below MDC
WIPP South (WSS)	EE-WSS-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Mills Ranch (MLR)	EE-MLR-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Carlsbad (CBD)	EE-CBD-20141014-1.2	10/20/2014	Below MDC	Below MDC	Below MDC
Carlsbad (CBD) co-located	EE-CBD-20141014-2.2	10/20/2014	Below MDC	Below MDC	Below MDC
Smith Ranch (SMR)	EE-SMR-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Southeast Control (SEC)	EE-SEC-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Meteorology Tower Building (MET)	EE-MET-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Salt Hoist (SLT)	EE-SLT-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Southeast of Training Building (STB)	EE-STB-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Guard and Security Building (GSB)	EE-GSB-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Artesia (ART)	EE-ART-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Eunice (EUN)	EE-EUN-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Hobbs (HBS)	EE-HBS-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Loving (LVG)	EE-LVG-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC
Potash Mines Road (PMR)	EE-PMR-20141014-1.1	10/20/2014	Below MDC	Below MDC	Below MDC

MDC ranges are:

MDC Am-241 (dpm/sample): 1.89E-02 to 5.05E-01

MDC Pu-238 (dpm/sample): 1.89E-02 to 1.57E+01

MDC Pu-239/240 (dpm/sample): 1.70E-02 to 5.94E-01

Environmental Monitoring & Hydrology Surface Water Sampling

December 18, 2014

Location	Sample ID Number	Sample Date	WIPP Labs Radiochemistry		
			Am-241 (dpm/L)	Pu-238 (dpm/L)	Pu-239/240 (dpm/L)
Poker Trap	WS-PKT-20140911-1.1	9/11/2014	Below MDC	Below MDC	Below MDC
Lost Tank	WS-LST-20140911-1.1	9/11/2014	Below MDC	Below MDC	Below MDC
Bottom of the Hill Tank	WS-BHT-20140915-1.1	9/15/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity	WS-SOO-20140918-1.7	9/18/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity	WS-SOO-20140918-2.7	9/18/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity	WS-SOO-20140918-3.7	9/18/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity	WS-SOO-20140918-4.7	9/18/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity (Dup)	WS-SOO-20140918-5.7	9/18/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity	WS-SOO-20140918-6.7	9/18/2014	Below MDC	Below MDC	Below MDC
Blank	WS-BLK-20140918-7.7	9/18/2014	Below MDC	Below MDC	Below MDC
Salt Storage Pond 1	WS-SSP1-20141003-1.2	10/3/2014	Below MDC	Below MDC	Below MDC
Salt Storage Pond 1 (Dup)	WS-SSP1-20141003-2.2	10/3/2014	Below MDC	Below MDC	Below MDC
Salt Storage Pond 2	WS-SSP2-20141003-1.1	10/3/2014	Below MDC	Below MDC	Below MDC
Salt Storage Pond 3	WS-SSP3-20141003-1.1	10/3/2014	Below MDC	Below MDC	Below MDC
Storm Water Pond 1	WS-SWP1-20141003-1.1	10/3/2014	Below MDC	Below MDC	Below MDC
Storm Water Pond 2	WS-SWP2-20141003-1.1	10/3/2014	Below MDC	Below MDC	Below MDC
Storm Water Pond 3	WS-SWP3-20141003-1.1	10/3/2014	Below MDC	Below MDC	Below MDC
Blank	WS-BLK-20141003-1.1	10/3/2014	Below MDC	Below MDC	Below MDC

MDC ranges are:

MDC Am-241 (dpm/L): 4.34E-02 to 1.10E-01

MDC Pu-238 (dpm/L): 2.84E-02 to 9.47E-02

MDC Pu-239/240 (dpm/L): 3.01E-02 to 7.60E-02

Environmental Monitoring & Hydrology Biota Sampling - Fauna

December 18, 2014

Tissue Type/Location	Sample ID Number	Sample Date	WIPP Labs Radiochemistry		
			Am-241 (dpm/g)	Pu-238 (dpm/g)	Pu-239/240 (dpm/g)
Biotic Fish/Pierce Canyon	BF-PCN-20140904-1.1	9/4/2014	Below MDC	Below MDC	Below MDC

MDCs ranges are:

MDC Am-241 (dpm/g): 2.01E-02 to 2.92E-02

MDC Pu-238 (dpm/g): 1.39E-02 to 2.60E-02

MDC Pu-239/240 (dpm/g): 8.63E-03 to 1.40E-02

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

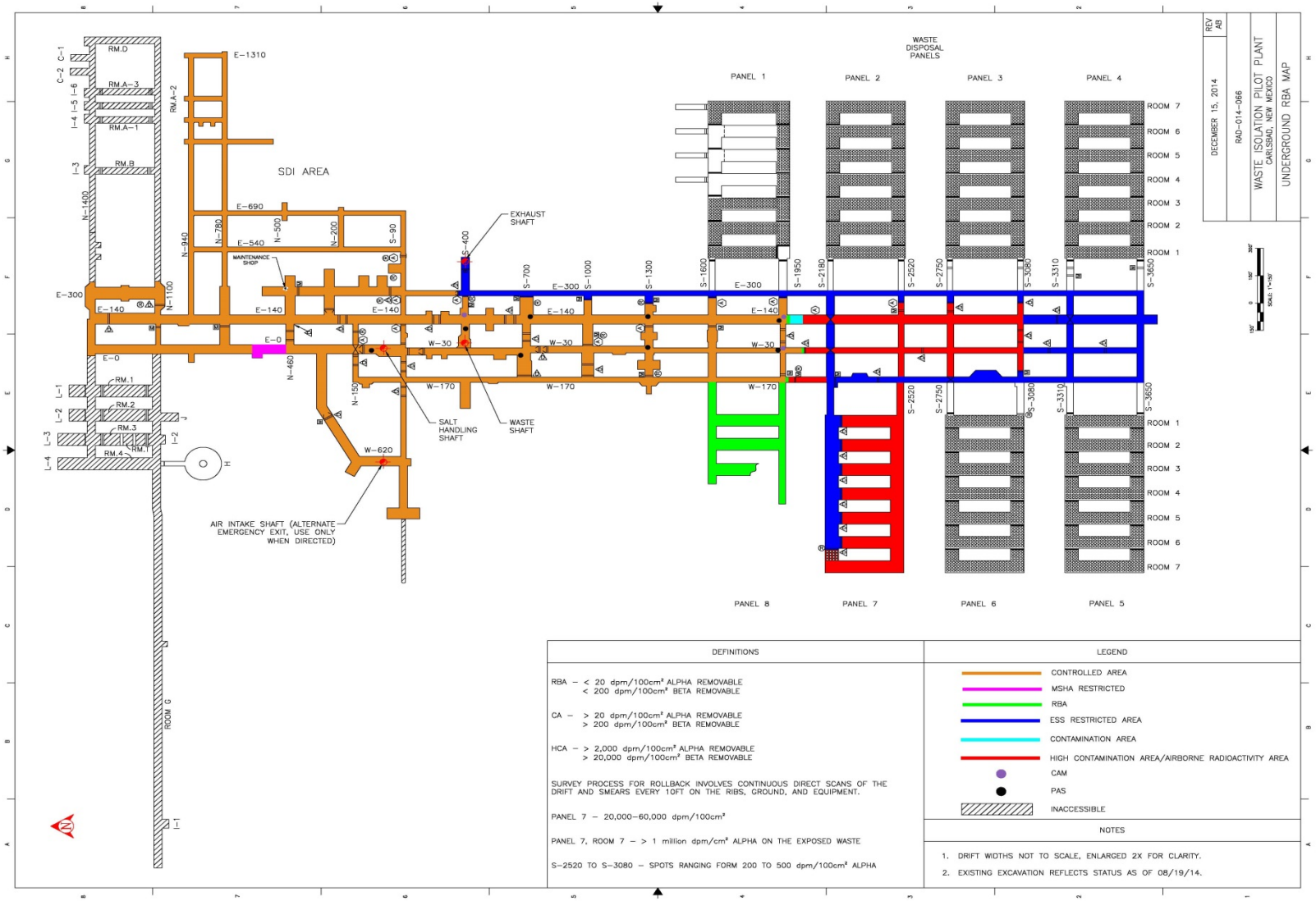
Attachment 5
Status of RCRA Contingency Plan Required Activities (reserved)

Attachment 6

Corrective Actions Required for Recovery (reserved)

Attachment 7
As-Found Condition of Panel 7 (reserved)

Attachment 8
Panel 7 Recovery-Related Work



Status of the WIPP Underground Rollback Areas for this Reporting Period
December 15, 2014