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

NOV 13 2014

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. Tom Blaine, Division Director
Environmental Health Division
Harold Runnels Building
1190 Saint Francis Drive, Room 4050
Santa Fe, NM 87502-5469

Subject: Monthly Report for the reporting period ending October 31, 2014, as required by NMED Administrative Orders dated February 27, 2014, and May 12, 2014, and as amended by NMED Directive dated August 29, 2014

Dear Mr. Kieling and Mr. Blaine:

The purpose of this letter is to transmit the monthly report for the reporting period ending October 31, 2014, as requested by the February 27, 2014, and May 12, 2014, Administrative Orders, issued under the authority of the New Mexico Hazardous Waste Act § 74-4-13 from Ryan Flynn to Messrs. Hellstrom, Franco, Cook, and McQuinn, and as amended by the August 29, 2014, directive 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,

DC Bryson for

Jose R. Franco, Manager
Carlsbad Field Office

James Harris for

Robert L. McQuinn, Project Manager
Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure

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Monthly Status Report for the New Mexico Environment Department Administrative Orders

Reporting Period October 1, 2014, through October 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. Additionally, the directive modified the reporting provisions found in AO1 and AO2. This report reflects these modifications.

This report serves to fulfill the reporting requirements set forth by AO1 and AO2, as amended by the NMED directive dated August 29, 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 were required to submit a revised draft underground compliance plan (UCP), initially submitted to the NMED 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, the majority of 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 and reentry. 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 the order 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, in accordance 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 to the NMED was submitted to the NMED by June 26, 2014. On September 24, 2014, the NMED notified the Permittees that its 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, in accordance 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 (Building 489 North Air Intake) of the Training Building, 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. In accordance with Paragraph 19 of AO2, the Permittees began monitoring for trichloroethylene as a target analyte on May 12, 2014.

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 equipment 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 rock-bolting.

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.

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 ventilation rate set forth by the Permit cannot be maintained. Because the ventilation

system has been operating in filtration mode since February 14, 2014, with a flow rate of approximately 60,000 standard cubic feet per minute (SCFM), the Permittees will not be able to maintain the minimum running annual average ventilation flow rate of 260,000 SCFM required by Permit Part 4, Section 4.5.3.2. During this reporting period, the calculated running annual average ventilation flow rate was approximately 154,949 SCFM.

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 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.

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*.
    - 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.
    - 700 Exhaust Fan Water Samples – Water samples were obtained on the dates and locations 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* was submitted to the NMED by June 26, 2014 for review and comment. Furthermore, the NMED will review and provide comments on any revisions to the *Underground Derived Waste Storage Plan.* However, during this reporting period, no additional derived waste was generated. As recovery efforts progress, any derived waste produced will be reported in Attachment 4, *Surface and Underground Derived Waste Currently in Storage at the WIPP Facility*, which is currently reserved.

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

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

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

During this reporting period, no additional requirements were placed upon the Permittees by any other state or federal agency relating to corrective actions or recovery and as a result of the incidents referenced in Paragraphs 8 and 9 of AO2, including requirements by other segments of the DOE. As additional Judgments of Need (JONs) are identified as a result of the completion of subsequent phases of the Accident Investigation Board (AIB) 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. In early October, an entry was made to the waste face at Panel 7, Room 7, to verify conditions in preparation for the deployment of the Project REACH boom, which will provide video of all waste stacks and between the waste stacks to support the AIB investigation. Dimensional checks of the room and bolting conditions were verified since the

last entry into this room; no issues were identified. There have been no photographs taken in Panel 7 since those which were initially submitted to the NMED on June 13, 2014. Therefore, this attachment is currently reserved.

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. Bolting will be initiated in this area in the coming weeks to support Panel 6 initial closure activities. These efforts will commence when the bolter and sufficient support equipment have been cleaned or decontaminated and PMs have been performed to meet safety requirements. There have been no photographs taken in Panel 6.

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

Consistent with the WIPP Recovery Plan, the focus of underground entries has been on radiological characterization and rollback, geotechnical evaluation, habitability surveys, clean up, electrical and mechanical evaluation of systems, and equipment and repair (if needed) to support bolting and installation of the initial closures in Panel 6. More than 60% of the underground has been radiologically characterized and rolled back to a Radiological Buffer Area (RBA) or Controlled Area, 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 and W-30), and will continue towards the drifts (S-2750 and S-3080) that access Panel 6 to support Panel 6 initial closure activities. The S-1000 lunchroom, break-room and maintenance shops are now accessible, allowing for improved personnel habitability and availability of tools for underground equipment preventative maintenance. Maintenance crews are cleaning and inspecting electrical panels in the RBAs to ensure no soot from the fire is present. Electrical distribution panels were cleaned and power restored for lights and some receptacles in the north maintenance shop. Power is now back to Underground Services Offices and at the Connex at the Salt Shaft Station. Attachment 8, *Panel 7 Recovery-Related Work*, provides a map of the current status of the WIPP underground rollback areas during this reporting period.

The Salt and Air Intake Shafts/Hoists have been available to support limited access to the underground and have undergone weekly inspections. The waste hoist has been returned to service for equipment conveyance. 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 is being removed to uncover the Waste Hoist counter weights which are attached to the guide ropes. In addition, personnel performed scaling of salt-crusted areas along the entire length of the Waste Hoist Shaft. Once the final hoist inspection is performed, the waste hoist will be fully operational, which will allow more personnel to access the underground since this conveyance is much larger for the purpose of emergency egress. The waste hoist is expected to be fully operational in November.

The forklift to be used for bolting activities, final waste shaft PMs, and moving equipment associated with Project REACH was returned to service; this was the first diesel-powered vehicle to be returned to service in the underground. Preventative maintenance activities have also been completed on the lube truck and are underway on the bolter, both of which are needed to support bolting activities. Bolting in un-contaminated areas is anticipated to begin by mid-November. Roof bolting will be initiated in the E-140 drift and then progress south towards the entrance areas of Panel 6. Ventilation airflow checks have been performed in the maintenance shop and areas where bolting will be initially performed.

The 860A fan, which is part of the mine ventilation and filtration system, was successfully restarted during this reporting period in order to perform scheduled maintenance on the other two fans that are part of the ventilation system when operating in filtration mode. Following the radiological event on February 14, 2014, the 860A fan ran for approximately two months. Since that time, the 860B or 860C fans have been operating to continue the ventilation air filtration process.

During this reporting period, certain underground eyewash stations and permanently-located fire extinguishers, as well as the underground ambulance, were inspected, refurbished/replaced if needed and returned to service. Radiological rollback has also allowed access to some mine phones and public address system locations within a limited area. As a result, operability tests have been performed for these underground mine phones and public address system locations.

As radiological rollback continues towards Panel 6, mine phones in the Panel 6 area will be checked and will be repaired and have batteries replaced, if necessary. Self-contained self-rescuer caches will be restocked, if needed, in the drifts to Panel 6. As the Permittees continue to conduct recovery 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	10/25/14	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	10/25/14	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	10/01/14	N/A	Respirators quarterly inspections are current. The Self Contained Self Rescuers (SCSRs) in the underground are not accessible at this time, therefore inspections cannot be performed.

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 re-entry 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	10/31/14	November	Hoist is operational for conveyance of equipment and not for personnel.
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	10/25/14	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	10/26/14	N/A	
Ambulances (Underground) and related emergency supplies and equipment	Emergency Services	Weekly	12-FP0030 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Not Current	10/26/14	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. The first inspection on the ambulance was completed.
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.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Fire Extinguishers (Surface)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Current	10/31/14	N/A	
Fire Extinguishers (Underground)	Emergency Services	Monthly	12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Not Current	10/31/14	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	11/23/13: (Annual) 3/28/14: (Semiannual)	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 Pumps	Emergency Services	Weekly/annually	WP 12-FP0026 Inspecting for Deterioration, Leaks/Spills, valves, and panel lights	Current	10/27/14	N/A	
Fire Sprinkler Systems	Emergency Services	Monthly/ quarterly	WP 12-FP0025 Inspecting for Deterioration, Leaks/Spills, static pressures, and removable strainers	Current	10/27/14, 10/28/14	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	10/31/14	N/A	
Fire and Emergency Response Trucks (Underground Rescue Truck)	Emergency Services	Weekly	12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	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.
Hazardous Material Response Equipment	Emergency Services	Weekly	12-FP0033 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	10/18 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
Miners First Aid Station	Emergency Services	Quarterly	12-FP0035 Inspecting for Required Equipment	Not Current	2/8/14	3/31/16	As miners first aid stations are recovered and put back into normal service the inspections will be scheduled and performed and dates noted in this table.
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	10/25/14	N/A	
Rescue Truck (Surface)	Emergency Services	Weekly	12-FP0030 and 12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Current	10/30/14	N/A	
Rescue Truck (Underground)	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.
Vehicle Siren (Surface Vehicles)	Emergency Services	Weekly	Functional Test included with inspection of the Ambulances, Fire Trucks, and Rescue Trucks	Current	10/30/14 10/31/14	N/A	
Vehicle Siren (Underground Vehicles)	Emergency Services	Weekly	Functional Test included with inspection of the Ambulances, Fire Trucks, and Rescue Trucks	Not Current	2/8/14	3/31/16	See entries above for ambulances, fire trucks and rescue trucks.

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
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) 10/19/14 (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	10/8/14 (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.
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	10/25/14 (41-H-020A) 10/14/14 (41-H-020B)	N/A	There are two transfer vehicles, but the pre-operational inspection was only performed on the one fixture listed. The other fixtures will be inspected prior to use.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Forklifts Used for Waste Handling (Electric and Diesel forklifts, Push-Pull Attachment) on Surface	Waste Handling	Preoperational	WP 05-WH1201, WP 05-WH1207, WP 05-WH1401, WP 05-WH1402, WP 05-WH1403, and WP 05-WH1412 Inspecting for Mechanical Operability, Deterioration, and On board fire suppression system	Current	10/12/14 (41-H-009) 10/26/14 (41-H-013) 10/15/14 (41-H-051) 8/9/14 (41-T-051) 9/11/14 (41-H-012D) 10/26/14 (41-H-012E) 10/26/14 (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.
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	10/29/14 (Weekly) 10/31/14 (Daily)	N/A	
TRU Mixed Waste Decontamination Equipment	Waste Handling	Annually	WP 05-WH1101 Inspecting for Required Equipment	Current	12/31/13	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Underground TRU Mixed Waste Disposal Area	Waste Handling	Preoperational	WP 05-WH1810 Inspecting for Deterioration, Leaks/Spills, mine pager phones, equipment, unobstructed access, signs, debris, and ventilation	Current	2/5/14	When waste disposal operations resume	Waste handling operations are suspended therefore preoperational inspections are not being performed.
TDOP Upender	Waste Handling	Preoperational	WP 05-WH1010 Inspecting for Mechanical Operability and Deterioration	Current	10/9/13	When waste disposal operations resume	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	10/23/14 (41-T-151A) (41-T-151B) (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	10/26/14 (41-T-160A) (41-T-160B)	N/A	
Push-Pull Attachment (Underground)	Waste Handling	Preoperational	WP 05-WH1401 Inspecting for Damage and Deterioration	Current	2/5/14	When waste disposal operations resume	Equipment not in use due to the fire and radiological events.
Trailer Jockey	Waste Handling	Preoperational	WP 05-WH1405 Inspecting for Mechanical Operability and Deterioration	Current	9/9/14 (41-H-151B) 10/19/14 (41-H-151A)	N/A	There are three Trailer Jockeys, but the pre-operational inspection was only performed on the one listed. The other Trailer Jockeys will be inspected prior to use.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status (Current/ Not Current)	Date of Last Inspection	Proposed Start Date (if Not Current or Equipment Not in Use)[1]	Comments
Bolting Robot	Waste Handling	Preoperational	WP 05-WH1203 Mechanical Operability	Current	6/29/12	When waste disposal operations resume	Equipment 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) 10/26/14 (41-H-021B)	N/A	There are two yard transfer vehicles (YTVs), but the pre- operational inspection was only performed on the one YTV listed. The other YTV will be inspected prior to use.
Payload Transfer Station	Waste Handling	Preoperational	WP 05-WH1208 Mechanical Operability, Deterioration, and Guards in proper place	Current	10/25/14 (41-Z-041)	N/A	
Monorail Hoist	Waste Handling	Preoperational	WP 05-WH1202 Mechanical Operability, and leaks/spills	Current	10/26/14 (41-H-027)	N/A	
Bolting Station	Waste Handling	Preoperational	WP 05-WH1203 Mechanical Operability, Deterioration, and Guards in proper place	Current	10/26/14 (41-T-053A) (41-T-054A)	N/A	
Backup Power Supply Diesel Generators	Facility Operations	Monthly	WP 04-ED1301 Inspecting for Mechanical Operability and Leaks/Spills by starting and operating both generators. Results of this inspection are logged in accordance with WP 04-AD3008.	Current	10/26/14 (#1) 10/26/14 (#2)	N/A	
Central Monitoring System (CMS)	Facility Operations	Continuous	Automatic Self-Checking	Current	10/26/14	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
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	10/30/14	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.	10/30/14	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	10/30/14	N/A	
Public Address (and Intercom System) in Underground	Facility Operations	Monthly	WP 04-PC3017 Testing of PA and Underground Alarms and Mine Page Phones at essential locations Systems operated in test mode	Not Current	10/30/14	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	10/26/14	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
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	10/26/14	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	10/26/14	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	10/27/14, 10/28/14, 10/29/14	N/A	
Eye Wash and Shower Equipment (Underground)	Equipment Custodian	Weekly	WP 12-IS1832 Inspecting for Deterioration	Not Current	10/28/14	3/31/16	Eye wash 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	10/26/14	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
Underground—Geomechanical Instrumentation System (GIS)	Geotechnical Engineering	Monthly	WP 07-EU1301 Inspecting for Deterioration	Current	10/28/14	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 horse power 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 3/31/16as 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
- Surface Water Sampling
- Biota (Fauna) Sampling
- Exhaust Fan Water Sampling

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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Methylene Chloride	75-09-2	0.4	U
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	9/24/2014	9/26/2014	9087	Training Building	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Chlorobenzene	108-90-7	0.4	U
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Toluene	108-88-3	0.4	0.3 J
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Chloroform	67-66-3	0.4	U
CEMRC	9/24/2014	9/26/2014	9087	Training Building	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	9/24/2014	9/26/2014	9087	Training Building	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	9/24/2014	9/26/2014	9087	Training Building	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Acetone	67-64-1		1.08 NJ
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Butane	106-97-8		6.36 NJ
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Cyclohexane, methyl-	108-87-2		0.44 NJ
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Cyclopentane, methyl-	96-37-7		0.48 NJ
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Isobutane	75-28-5		3.42 NJ
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Pentane	109-66-0		2.54 NJ
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Pentane, 2-methyl-	107-83-5		0.72 NJ
CEMRC	9/24/2014	9/26/2014	9087	Training Building	Propane	74-98-6		5.14 NJ
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	0.4	0.18 J
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Chlorobenzene	108-90-7	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.

10/29/2014 8:50 AM

Page 1 of 20

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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Toluene	108-88-3	0.4	0.32 J
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Acetone	67-64-1		1.1 NJ
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Butane	106-97-8		6.1 NJ
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Butane, 2-methyl-	78-78-4		2.64 NJ
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2		0.44 NJ
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7		0.5 NJ
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Isobutane	75-28-5		3.28 NJ
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Pentane	109-66-0		2.5 NJ
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5		0.66 NJ
CEMRC	9/24/2014	9/26/2014	9085	Building 489 Air Intake	Propane	74-98-6		4.84 NJ
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Methylene Chloride	75-09-2	0.4	U
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Chlorobenzene	108-90-7	0.4	U
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Toluene	108-88-3	0.4	U
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Chloroform	67-66-3	0.4	U
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U

Qualifiers:

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Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	MRL (ppbv)*	Concentration (ppbv)
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Acetone	67-64-1		1.94 NJ
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Butane	106-97-8		3.26 NJ
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Dichlorodifluoromethane	75-71-8		0.44 NJ
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Isobutane	75-28-5		2.26 NJ
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Nonanal	124-19-6		1.4 NJ
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Pentane	109-66-0		1.18 NJ
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Propane	74-98-6		2.8 NJ
CEMRC	9/25/2014	9/26/2014	9089	WQSP-4	Silanol, trimethyl-	1066-40-6		0.52 NJ
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Methylene Chloride	75-09-2	0.4	U
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	9/25/2014	9/26/2014	9091	Training Building	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Chlorobenzene	108-90-7	0.4	U
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Toluene	108-88-3	0.4	0.2 J
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Chloroform	67-66-3	0.4	U
CEMRC	9/25/2014	9/26/2014	9091	Training Building	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	9/25/2014	9/26/2014	9091	Training Building	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	9/25/2014	9/26/2014	9091	Training Building	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Acetone	67-64-1		1.9 NJ
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Butane	106-97-8		3.22 NJ
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Isobutane	75-28-5		2.64 NJ

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Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	MRL (ppbv)*	Concentration (ppbv)
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Nonanal	124-19-6		1.28 NJ
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Pentane	109-66-0		1.2 NJ
CEMRC	9/25/2014	9/26/2014	9091	Training Building	Propane	74-98-6		2.9 NJ
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	0.4	0.18 J
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Toluene	108-88-3	0.4	U
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Acetone	67-64-1		2.02 NJ
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Butane	106-97-8		2.98 NJ
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Dichlorodifluoromethane	75-71-8		0.42 NJ
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Isobutane	75-28-5		2.44 NJ
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Nonanal	124-19-6		0.58 NJ
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Pentane	109-66-0		1.12 NJ
CEMRC	9/25/2014	9/26/2014	9090	Building 489 Air Intake	Propane	74-98-6		2.84 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Carbon Tetrachloride	56-23-5	0.4	U

Qualifiers:

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U = Compound not detected above the MDL.
NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs)

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Toluene	108-88-3	0.4	0.44
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Chloroform	67-66-3	0.4	U
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Acetone	67-64-1		1.02 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Butane	106-97-8		7.08 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Butane, 2-methyl-	78-78-4		3.22 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Cyclohexane, methyl-	108-87-2		0.54 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Cyclopentane, methyl-	96-37-7		0.62 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Isobutane	75-28-5		3.94 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Nonanal	124-19-6		0.68 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Pentane	109-66-0		2.86 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Pentane, 2-methyl-	107-83-5		0.78 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Propane	74-98-6		5.68 NJ
CEMRC	10/1/2014	10/3/2014	9094	WQSP-4	Silanol, trimethyl-	1066-40-6		0.58 NJ
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/1/2014	10/3/2014	9093	Training Building	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Chlorobenzene	108-90-7	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.

10/29/2014 8:50 AM

Page 5 of 20

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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Toluene	108-88-3	0.4	0.42
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Chloroform	67-66-3	0.4	U
CEMRC	10/1/2014	10/3/2014	9093	Training Building	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/1/2014	10/3/2014	9093	Training Building	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/1/2014	10/3/2014	9093	Training Building	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Acetone	67-64-1		0.9 NJ
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Butane	106-97-8		7.2 NJ
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Cyclohexane, methyl-	108-87-2		0.52 NJ
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Cyclopentane, methyl-	96-37-7		0.46 NJ
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Isobutane	75-28-5		3.9 NJ
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Nonanal	124-19-6		0.46 NJ
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Pentane	109-66-0		2.84 NJ
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Pentane, 2-methyl-	107-83-5		0.78 NJ
CEMRC	10/1/2014	10/3/2014	9093	Training Building	Propane	74-98-6		5.9 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Toluene	108-88-3	0.4	0.5
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Acetone	67-64-1		0.82 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Butane	106-97-8		7.48 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Butane, 2-methyl-	78-78-4		3.32 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2		0.54 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7		0.5 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Isobutane	75-28-5		4.12 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Nonanal	124-19-6		0.56 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Pentane	109-66-0		3.04 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5		0.86 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Propane	74-98-6		6.1 NJ
CEMRC	10/1/2014	10/3/2014	9092	Building 489 Air Intake	Silanol, trimethyl-	1066-40-6		0.5 NJ
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/2/2014	10/3/2014	9096	Training Building	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Toluene	108-88-3	0.4	0.46
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Chloroform	67-66-3	0.4	U
CEMRC	10/2/2014	10/3/2014	9096	Training Building	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/2/2014	10/3/2014	9096	Training Building	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/2/2014	10/3/2014	9096	Training Building	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Trichloroethylene (1)	79-01-6	0.4	U

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

Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Acetone	67-64-1		0.8 NJ
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Butane	106-97-8		7.12 NJ
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Cyclohexane, methyl-	108-87-2		0.64 NJ
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Cyclopentane, methyl-	96-37-7		0.58 NJ
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Isobutane	75-28-5		3.88 NJ
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Pentane	109-66-0		2.96 NJ
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Pentane, 2-methyl-	107-83-5		0.9 NJ
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Propane	74-98-6		5.56 NJ
CEMRC	10/2/2014	10/3/2014	9096	Training Building	Silanol, trimethyl-	1066-40-6		2.58 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Toluene	108-88-3	0.4	0.54
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	1-Hexanol, 2-ethyl-	104-76-7		0.5 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Acetone	67-64-1		1.24 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Butane	106-97-8		7.1 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2		0.66 NJ

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Notes:

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

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

10/29/2014 8:50 AM

Page 8 of 20

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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7		0.58 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Isobutane	75-28-5		4.26 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Nonanal	124-19-6		0.66 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Pentane	109-66-0		2.98 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5		0.92 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Propane	74-98-6		5.58 NJ
CEMRC	10/2/2014	10/3/2014	9095	Building 489 Air Intake	Silanol, trimethyl-	1066-40-6		0.46 NJ
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/8/2014	10/13/2014	9099	Training Building	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Toluene	108-88-3	0.4	0.52
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Chloroform	67-66-3	0.4	U
CEMRC	10/8/2014	10/13/2014	9099	Training Building	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/8/2014	10/13/2014	9099	Training Building	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/8/2014	10/13/2014	9099	Training Building	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Acetone	67-64-1		0.76 NJ
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Butane	106-97-8		9.32 NJ
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Butane, 2-methyl-	78-78-4		4.2 NJ
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Cyclohexane, methyl-	108-87-2		0.8 NJ
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Cyclopentane, methyl-	96-37-7		0.88 NJ
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Isobutane	75-28-5		5 NJ

Qualifiers:

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Notes:

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

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

Validated VOC Monitoring Data – Surface Sampling at the WIPP

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

Lab	Sample Date	Analysis Date	Sample ID	Location	Compound	CAS	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Pentane	109-66-0		3.92 NJ
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Pentane, 2-methyl-	107-83-5		1.1 NJ
CEMRC	10/8/2014	10/13/2014	9099	Training Building	Propane	74-98-6		8.3 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Toluene	108-88-3	0.4	0.7
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Acetone	67-64-1		0.88 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Butane	106-97-8		9.7 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Butane, 2-methyl-	78-78-4		4.44 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Cyclohexane, methyl-	108-87-2		0.92 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Cyclopentane, methyl-	96-37-7		0.84 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Heptane	142-82-5		0.42 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Isobutane	75-28-5		5.16 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Pentane	109-66-0		4 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Pentane, 2-methyl-	107-83-5		1.18 NJ
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Propane	74-98-6		7.5 NJ

Qualifiers:

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

Notes:

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

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

10/29/2014 8:50 AM

Page 10 of 20

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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/8/2014	10/13/2014	9102	Building 489 North Air Intake	Silanol, trimethyl-	1066-40-6		0.68 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	0.4	0.38 J
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Toluene	108-88-3	0.4	0.7
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Acetone	67-64-1		0.64 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Butane	106-97-8		9.38 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Butane, 2-methyl-	78-78-4		4.34 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2		0.84 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7		0.8 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Cyclopropane, ethyl-	1191-96-4		0.42 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Isobutane	75-28-5		5.1 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Pentane	109-66-0		3.92 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5		1.14 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Propane	74-98-6		7.38 NJ
CEMRC	10/8/2014	10/13/2014	9097	Building 489 Air Intake	Silanol, trimethyl-	1066-40-6		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.

* 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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Toluene	108-88-3	0.4	0.54
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Chloroform	67-66-3	0.4	U
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Acetone	67-64-1		0.98 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Butane	106-97-8		7.52 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Butane, 2-methyl-	78-78-4		3.38 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Cyclohexane, methyl-	108-87-2		0.58 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Cyclopentane, methyl-	96-37-7		0.64 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Isobutane	75-28-5		4.1 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Nonanal	124-19-6		0.8 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Pentane	109-66-0		3.08 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Pentane, 2-methyl-	107-83-5		0.86 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Propane	74-98-6		6.12 NJ
CEMRC	10/9/2014	10/13/2014	9101	WQSP-4	Silanol, trimethyl-	1066-40-6		0.46 NJ
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Carbon Tetrachloride	56-23-5	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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/9/2014	10/13/2014	9104	Training Building	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Toluene	108-88-3	0.4	0.4
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Chloroform	67-66-3	0.4	U
CEMRC	10/9/2014	10/13/2014	9104	Training Building	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/9/2014	10/13/2014	9104	Training Building	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/9/2014	10/13/2014	9104	Training Building	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Acetone	67-64-1		1.48 NJ
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Butane	106-97-8		6.34 NJ
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Butane, 2-methyl-	78-78-4		3 NJ
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Cyclohexane, methyl-	108-87-2		0.5 NJ
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Isobutane	75-28-5		3.52 NJ
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Nonanal	124-19-6		0.72 NJ
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Pentane	109-66-0		2.54 NJ
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Propane	74-98-6		4.78 NJ
CEMRC	10/9/2014	10/13/2014	9104	Training Building	Silanol, trimethyl-	1066-40-6		1.08 NJ
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	0.4	0.72
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Toluene	108-88-3	0.4	0.5
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Chloroform	67-66-3	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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	0.4	0.22 J
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Acetone	67-64-1		1.08 NJ
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Butane	106-97-8		6.9 NJ
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Cyclohexane, methyl-	108-87-2		0.5 NJ
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Isobutane	75-28-5		3.84 NJ
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Nonanal	124-19-6		0.48 NJ
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Pentane	109-66-0		2.84 NJ
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Pentane, 2-methyl-	107-83-5		0.78 NJ
CEMRC	10/9/2014	10/13/2014	9105	Building 489 North Air Intake	Propane	74-98-6		5.3 NJ
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Toluene	108-88-3	0.4	0.44
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Acetone	67-64-1		1.14 NJ

Qualifiers:

J = Estimated value; below laboratory's method reporting limit (MRL), but above method detection limit (MDL).
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NJ = Presumptive evidence of the presence of the compound at an estimated quantity; only used for tentatively identified compounds (TICs).

Notes:

(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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Butane	106-97-8		6.76 NJ
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Butane, 2-methyl-	78-78-4		3.06 NJ
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2		0.5 NJ
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7		0.52 NJ
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Isobutane	75-28-5		3.78 NJ
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Pentane	109-66-0		2.74 NJ
CEMRC	10/9/2014	10/13/2014	9103	Building 489 Air Intake	Propane	74-98-6		5.6 NJ
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Toluene	108-88-3	0.4	0.48
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Chloroform	67-66-3	0.4	U
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Acetone	67-64-1		0.44 NJ
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Butane	106-97-8		10.36 NJ
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Butane, 2-methyl-	78-78-4		4.7 NJ
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Cyclohexane, methyl-	108-87-2		0.7 NJ
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Cyclopentane, methyl-	96-37-7		0.7 NJ
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Isobutane	75-28-5		5.3 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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Pentane	109-66-0		4.36 NJ
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Pentane, 2-methyl-	107-83-5		1.16 NJ
CEMRC	10/15/2014	10/20/2014	9109	WQSP-4	Propane	74-98-6		7.58 NJ
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/15/2014	10/20/2014	9107	Training Building	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Toluene	108-88-3	0.4	0.44
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Chloroform	67-66-3	0.4	U
CEMRC	10/15/2014	10/20/2014	9107	Training Building	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/15/2014	10/20/2014	9107	Training Building	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/15/2014	10/20/2014	9107	Training Building	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Acetone	67-64-1		0.72 NJ
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Butane	106-97-8		10.08 NJ
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Butane, 2-methyl-	78-78-4		4.32 NJ
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Cyclohexane, methyl-	108-87-2		0.68 NJ
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Cyclopentane, methyl-	96-37-7		0.68 NJ
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Isobutane	75-28-5		5.2 NJ
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Pentane	109-66-0		4.08 NJ
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Pentane, 2-methyl-	107-83-5		1.1 NJ
CEMRC	10/15/2014	10/20/2014	9107	Training Building	Propane	74-98-6		7.76 NJ
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Methylene Chloride	75-09-2	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.

10/29/2014 8:50 AM

Page 16 of 20

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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Toluene	108-88-3	0.4	0.48
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Butane	106-97-8		10.26 NJ
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Cyclohexane, methyl-	108-87-2		0.72 NJ
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Cyclopentane, methyl-	96-37-7		0.86 NJ
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Isobutane	75-28-5		5.36 NJ
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Pentane	109-66-0		4.26 NJ
CEMRC	10/15/2014	10/20/2014	9108	Building 489 North Air Intake	Propane	74-98-6		8.5 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/16/2014	10/20/2014	9111	Training Building	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Toluene	108-88-3	0.4	0.42
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Chloroform	67-66-3	0.4	U
CEMRC	10/16/2014	10/20/2014	9111	Training Building	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/16/2014	10/20/2014	9111	Training Building	1,1,2,2-Tetrachloroethane	79-34-5	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.

10/29/2014 8:50 AM

Page 17 of 20

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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/16/2014	10/20/2014	9111	Training Building	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Acetone	67-64-1		0.8 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Butane	106-97-8		9.02 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Butane, 2-methyl-	78-78-4		3.9 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Cyclohexane, methyl-	108-87-2		0.66 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Cyclopentane, methyl-	96-37-7		0.74 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Isobutane	75-28-5		4.76 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Pentane	109-66-0		3.5 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Pentane, 2-methyl-	107-83-5		1 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Propane	74-98-6		6.86 NJ
CEMRC	10/16/2014	10/20/2014	9111	Training Building	Silanol, trimethyl-	1066-40-6		0.56 NJ
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Carbon Tetrachloride	56-23-5	0.4	U
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Toluene	108-88-3	0.4	0.42
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Acetone	67-64-1		0.52 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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Butane	106-97-8		9.08 NJ
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Butane, 2-methyl-	78-78-4		4.06 NJ
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Cyclohexane, methyl-	108-87-2		0.68 NJ
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Cyclopentane, methyl-	96-37-7		0.66 NJ
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Isobutane	75-28-5		4.8 NJ
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Pentane	109-66-0		3.62 NJ
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Pentane, 2-methyl-	107-83-5		1.02 NJ
CEMRC	10/16/2014	10/20/2014	9112	Building 489 North Air Intake	Propane	74-98-6		7.48 NJ
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Methylene Chloride	75-09-2	0.4	U
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Carbon Tetrachloride	56-23-5	0.4	0.32 J
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	1,1,1-Trichloroethane	71-55-6	0.4	U
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Chlorobenzene	108-90-7	0.4	U
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Toluene	108-88-3	0.4	0.48
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Chloroform	67-66-3	0.4	U
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	1,1-Dichloroethylene	75-35-4	0.4	U
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	1,1,2,2-Tetrachloroethane	79-34-5	0.4	U
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	1,2-Dichloroethane	107-06-2	0.4	U
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Trichloroethylene (1)	79-01-6	0.4	U
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Acetone	67-64-1		0.68 NJ
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Butane	106-97-8		9.24 NJ
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Butane, 2-methyl-	78-78-4		4.06 NJ
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Cyclohexane, methyl-	108-87-2		0.68 NJ
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Cyclopentane, methyl-	96-37-7		0.66 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	MRL (ppbv)*	Concentration (ppbv)
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Isobutane	75-28-5		4.8 NJ
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Pentane	109-66-0		3.78 NJ
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Pentane, 2-methyl-	107-83-5		1.04 NJ
CEMRC	10/16/2014	10/20/2014	9110	Building 489 Air Intake	Propane	74-98-6		7 NJ

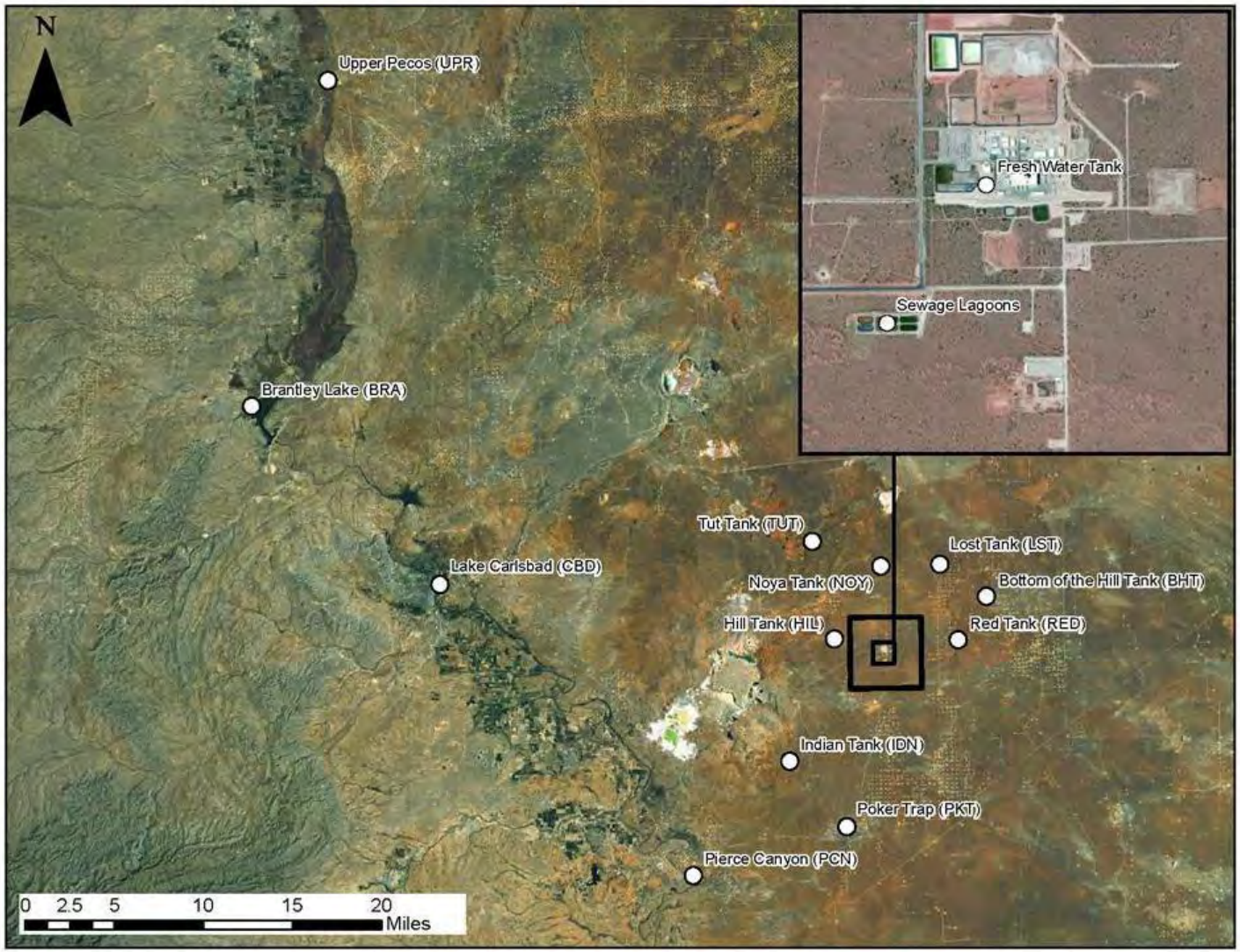
Qualifiers:

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 (TIC's).

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.



Surface Water Sampling Locations

Surface Watering Sampling Locations (continued)
Samples of Opportunity, August 23, 2014

Surface Water Sampling Locations (continued)
Samples of Opportunity, August 26, 2014

Environmental Surface Water Sampling

Location	Sample ID Number	Sample Date	WIPP Labs Radiochemistry		
			Am-241 (dpm/L)	Pu-238 (dpm/L)	Pu-239/240 (dpm/L)
Noya Tank	WS-NOY-20140814-1.1	8/14/2014	Below MDC	Below MDC	Below MDC
Red Tank	WS-RED-20140814-1.1	8/14/2014	Below MDC	Below MDC	Below MDC
Indian Tank	WS-IDN-20140818-1.1	8/18/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity†	WS-SOO-20140823-1.5	8/23/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity (Dupe)†	WS-SOO-20140823-2.5	8/23/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity†	WS-SOO-20140823-3.5	8/23/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity†	WS-SOO-20140823-4.5	8/23/2014	Below MDC	Below MDC	Below MDC
Blank	WS-BLK-20140823-5.5	8/23/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity†	WS-SOO-20140826-1.4	8/26/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity (Dupe)†	WS-SOO-20140826-2.4	8/26/2014	Below MDC	Below MDC	Below MDC
Sample of Opportunity†	WS-SOO-20140826-3.4	8/26/2014	Below MDC	Below MDC	Below MDC
Blank	WS-BLK-20140826-4.4	8/26/2014	Below MDC	Below MDC	Below MDC

† These samples were collected during an opportunistic rain event. The samples were taken from the WIPP site building roof top and roadway drainage.

MDC ranges are:

MDC Am-241 (dpm/L): 4.34E-02 to 8.34E-02

MDC Pu-238 (dpm/L): 2.84E-02 to 6.69E-02

MDC Pu-239/240 (dpm/L): 3.01E-02 to 6.60E-02

Environmental Biota Sampling - Fauna (October 31, 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 Rabbit/Sample of Opportunity	BR-SOO-20140814-1.1	8/14/2014	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 1.88E-02

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

Exhaust Fan Characterization Sampling (October 31, 2014)

Sample Description	Sample ID Number	Sample Date	WIPP Labs Radiochemistry		
			Am-241 (dpm/L)	Pu-238 (dpm/L)	Pu-239/240 (dpm/L)
700 Fan Ductwork Condensate	WST-14-081	9/24/2014	Below MDC	N/A	N/A
700 Fan Ductwork Condensate	WST-14-082	9/24/2014	Below MDC	N/A	N/A
700 Fan Ductwork Condensate	WST-14-083	9/24/2014	Below MDC	N/A	N/A
700 Fan Ductwork Condensate	WST-14-084	9/24/2014	Below MDC	N/A	N/A
700 Fan Ductwork Condensate	WST-14-085	9/24/2014	Below MDC	N/A	N/A
Field Blank	WST-14-086	9/24/2014	Below MDC	N/A	N/A

Samples collected per procedure WP 02-EC1001.

MDC ranges are:

MDC Am-241 (dpm/L): 29.8 to 70.8

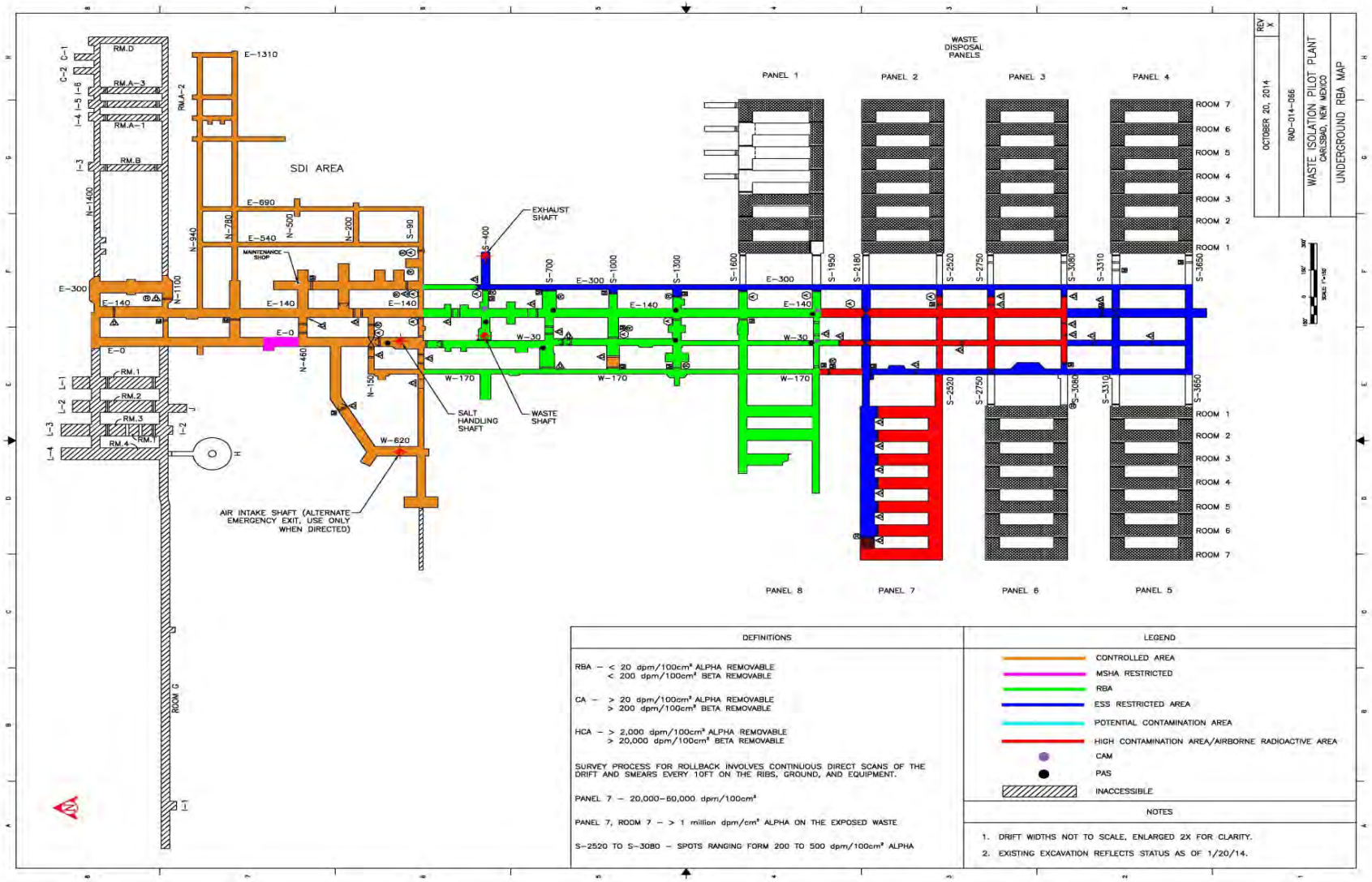
Attachment 4
Surface and Underground Derived Waste Currently in Storage at the WIPP Facility
(reserved)

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

October 20, 2014