



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

SEP 16 2015

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

Ms. Kathryn Roberts, Director  
Resource Protection Division  
New Mexico Environment Department  
Harold Runnels Building  
1190 Saint Francis Drive, PO Box 5496  
Santa Fe, NM 87502-5469

Subject: Fifth Supplement to the Report of Implementation of the Waste Isolation Pilot Plant Facility Resource Conservation and Recovery Act Contingency Plan on April 11, 2014

Dear Mr. Kieling and Ms. Roberts:

On April 11, 2014, the Department of Energy (DOE) Carlsbad Field Office (CBFO) and Nuclear Waste Partnership LLC (NWP), Co-Permittees of Hazardous Waste Facility Permit (NM4890139088-TSDF), implemented the Resource Conservation and Recovery Act (RCRA) Contingency Plan and filed a report with the New Mexico Environment Department (NMED) on April 28, 2014, documenting implementation of the Plan. The Permittees then provided updated information in four Supplements to Report of Implementation of the Waste Isolation Pilot Plant Facility Resource Conservation and Recovery Act Contingency Plan on April 11, 2014. These supplements were provided to the NMED on July 7, 2014, August 18, 2014, March 23, 2015, and May 8, 2015. Implementation of the Plan was in anticipation of investigation of the source of a radiological release from the facility that occurred on February 14, 2014.

The purpose of this letter is to provide the NMED with the additional supplemental information collected since the report was filed. This information has been obtained as a result of ongoing investigations related to the February 14, 2014 radiological event as part of the Los Alamos National Laboratory extent of condition evaluation.

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

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

Sincerely,

**Original Signatures on File**

Dana C. Bryson, Acting Manager  
Carlsbad Field Office

Philip J. Breidenbach, Project Manager  
Nuclear Waste Partnership LLC

Enclosure

cc: w/ enclosure  
R. Maestas, NMED \* ED  
S. Holmes, NMED ED  
C. Smith, NMED ED  
J. Sales, EPA ED  
CBFO M&RC

\*ED denotes electronic distribution

**Fifth Supplement to the Report of Implementation of the Waste Isolation Pilot Plant Facility Resource Conservation and Recovery Act Contingency Plan on April 11, 2014**

On April 11, 2014, the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) and Nuclear Waste Partnership LLC (NWP), Permittees of Hazardous Waste Facility Permit (NM4890139088-TSDF), implemented the Resource Conservation and Recovery Act (RCRA) Contingency Plan. The Permittees subsequently filed a report with the New Mexico Environment Department (NMED) on April 28, 2014, documenting implementation of the RCRA Contingency Plan. On July 7, 2014, the Permittees provided updated information in the "Supplement to the Report of Implementation of the Waste Isolation Pilot Plant (WIPP) Facility Resource Conservation and Recovery Act Contingency Plan on April 11, 2014." Another supplement, the "Second Supplement to the Report of Implementation of the Waste Isolation Pilot Plant Facility Resource Conservation and Recovery Act Contingency Plan on April 11, 2014," was submitted by the Permittees on August 18, 2014. The "Third Supplement to the Report of Implementation of the Waste Isolation Pilot Plant Facility Resource Conservation and Recovery Act Contingency Plan on April 11, 2014" was submitted by the Permittees on March 23, 2015. The "Fourth Supplement to the Report of Implementation of the Waste Isolation Pilot Plant Facility Resource Conservation and Recovery Act Contingency Plan on April 11, 2014" was submitted by the Permittees on May 8, 2015.

Investigations related to the February 14, 2014, radiological event are ongoing as part of the Los Alamos National Laboratory (LANL) extent of condition investigation. The information provided below is an additional supplement to the information provided in the previous reports based on recent findings by LANL. A summary of this information was reported verbally to the NMED on September 1, 2015.

**The name and quantity of material(s) involved**

The DOE Accident Investigation Board has concluded that container LA00000068660 from LANL waste stream LA-MIN02-V.001 was the only container that was breached in the February 14, 2014 event. This is a waste stream that contains nitrate salts. The EPA hazardous waste numbers (HWNs) assigned to this waste stream were identified by the generator at the time of characterization, and provided to the Permittees in a waste stream profile form. These HWNs are D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, and F005.

Because video investigations of the source of the release in Panel 7, Room 7, show evidence that a thermal reaction occurred in drum LA00000068660, the Permittees



have determined that the subject waste container appears to have exhibited the characteristic of ignitability after it was disposed. The Technical Assessment Team concluded that the thermal reaction was the result of incompatible materials, including nitrate salts in the container along with the physical conditions within the container that led to the reaction. Los Alamos National Laboratory and the Permittees initiated investigations to determine if other containers from waste stream LA-MIN02-V.001 and other nitrate salt bearing waste streams also contain incompatible materials including nitrate salts that could, under similar physical conditions exhibit the characteristic of ignitability and, consequently, should be provisionally assigned an additional HWN (D001). Pending receipt of additional information, the Permittees provisionally applied HWN D001 to 425 containers (this includes drum LA00000068660) from LANL waste streams LA-MIN02-V.001, LA-MHD01.001, and LA-MIN04-S.001. These wastes containers have been disposed of in Panel 5, Room 1; Panel 6, Rooms 1 through 6; and Panel 7, Room 7, in the underground WIPP facility (Panel 5, Room 1 (2 containers); Panel 6, Room 1 (216 containers); Panel 6, Room 2 (101 containers); Panel 6, Room 3 (41 containers); Panel 6, Room 4 (7 containers); Panel 6, Room 5 (1 container); Panel 6, Room 6 (2 containers); and Panel 7, Room 7 (55 containers)). Continuing investigation and analysis by both the Permittees and LANL may provide additional information concerning the waste streams.

In addition to the 425 containers described above the Permittees are provisionally applying HWN D001 for the characteristic of ignitability to 192 waste containers that have been disposed at the WIPP facility. The Permittees are also provisionally applying the D002 HWN for the characteristic of corrosivity to 88 of these containers. The additions apply specifically to containers from LANL homogeneous solids waste stream LA-CIN01.001 and LANL debris waste stream LA-MHD01.001. One hundred eighty-nine (189) of these containers are located in Panel 6 (16 containers in Room 1; 110 containers in Room 2; 39 containers in Room 3; 23 containers in Room 4; one (1) container in Room 5) and three (3) containers are located in Panel 7, Room 7.

The application of this HWN is based on information provided to the Permittees by LANL resulting from the LANL ongoing extent of condition evaluation. The LANL Permittees applied D001 and D002 to containers pending the outcome of sampling and analysis for nitrates and pH testing. Therefore, the WIPP Permittees are also applying D001 and D002 pending the outcome of LANL's sampling, analysis and testing.

Because the evaluations and investigations are ongoing, the application of the D001 and D002 HWNs to these containers is considered provisional and may change to include and/or remove containers and/or waste streams in the future.

The Permit Part 2, Section 2.3.3.7, specifies that wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (HWNs D001, D002, or D003) are not acceptable at the WIPP facility.

**An assessment of actual or potential hazards to human health or the environment, where this is applicable**

On May 8, 2014, the Permittees suspended the authorization for certification of certain waste streams, including LA-MIN02-V.001, via the WIPP Form process. This halted shipment of additional containers of these wastes from LANL. This action was taken to protect human health and the environment. On May 20, 2014, the NMED ordered the Permittees to prepare and submit for approval a plan to isolate the disposed nitrate salt bearing waste by closing Panel 6 and Panel 7, Room 7, in order to protect human health and the environment. The Permittees responded to the order by preparing the WIPP Nitrate Salt Bearing Waste Container Isolation Plan, which was submitted to the NMED on May 30, 2014. The NMED approved two portions of the plan, which provide protection to human health and the environment. Specifically, the NMED approved the continued use of the underground filtration system in Sections 3.2.1 and 3.4.1 and the expedited initial Panel 6 closure portion of the plan identified in Sections 3.2.2 and 3.3.2 and provided comments on the plan on August 5, 2014. The Permittees responded to the comments and submitted the revised plan on September 30, 2014. On March 20, 2015, the NMED approved Revision 1 of the plan with the exception of Sections 3.2.3 and 3.3.3, which include the proposed activities for permanent closure of Panel 6. The approval process for permanent closure of all panels will be subject to public participation requirements in accordance with 40 CFR §270.42. The Permittees implemented this plan including the continued operation of the underground repository in filtration mode and have installed the approved initial closures of Panel 6 and the approved closure for Panel 7, Room 7. An explosion isolation wall had previously been installed in Panel 5.