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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

September 9, 2008

David C. Moody, Manager
U.S. Department of Energy
Carlsbad Field Office
P.O. Box 3090
Carlsbad, New Mexico 88221

RE: Discharge Permit Renewal and Modification, DP-831, Waste Isolation Pilot Plant

Dear Mr. Moody:

The New Mexico Environment Department (NMED) issues the enclosed Discharge Permit Renewal and Modification, DP- 831 to the U.S. Department of Energy (DOE) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20.6.2 NMAC.

The Discharge Permit Renewal and Modification contains terms and conditions that shall be complied with by the DOE and are enforceable by NMED pursuant to WQCC 20.6.2.3104, WQA, NMSA 1978 § 74-6-5 and §74-6-10. Issuance of this Discharge Permit Renewal and Modification does not relieve the DOE of its responsibility to comply with the WQA, WQCC Regulations, or any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

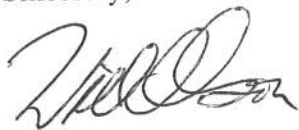
Pursuant to 20.6.2.3109.H.4 NMAC, this Discharge Permit Renewal and Modification shall expire on **September 9, 2013**. You must submit an application for renewal at least 120 days before the permit expiration date.

080919



David C. Moody, WIPP
September 9, 2008
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Sincerely,



William C. Olson, Chief
Ground Water Quality Bureau

WCO:clm

Enclosure: Discharge Permit Renewal and Modification DP-831

xc: Mary Ann Menetrey, Program Manager, MECS (Encl)
Steve Zappe, Staff Manager, HWB (Encl)
Gary Beatty, Manager, District IV, Roswell

GROUND WATER DISCHARGE PERMIT RENEWAL AND MODIFICATION
U.S. DEPARTMENT OF ENERGY
WASTE ISOLATION PILOT PLANT, DP-831
September 9, 2008

I. INTRODUCTION

The New Mexico Environment Department (NMED) renews and modifies Discharge Permit, DP-831, to the U.S. Department of Energy's Waste Isolation Pilot Plant (WIPP) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§ 74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20.6.2 NMAC.

NMED's purpose in issuing this Discharge Permit Renewal and Modification, and in imposing the requirements and conditions specified herein, is to control the discharge of water contaminants from the WIPP into ground water and surface water, so as to protect ground water and surface water for present and potential future use as domestic and agricultural water supply and other uses; to abate pollution of ground and surface water; and to protect public health. In issuing this Discharge Permit Renewal and Modification, NMED has determined that the requirements of 20.6.2.3109.C NMAC have been met.

Facility Description

The WIPP is a hazardous and radioactive waste disposal facility operated by the U.S. Department of Energy (DOE). The WIPP is constructed in a bedded salt formation 2,150 feet below ground surface. DP-831 covers the discharge of domestic effluent, storm water and miscellaneous process waters to various lined impoundments at the facility.

Domestic wastewater from the facility and industrial wastewaters from two compressed air systems are discharged to seven synthetically lined facultative sewage lagoons (Facultative Lagoon System) that include Evaporation Ponds A, B and C; Polishing Ponds 1B and 2B; and Settling Ponds 1A and 2A. Brine, purge waters and miscellaneous non-hazardous process waters are discharged to the H-19 Evaporation Pond and Evaporation Ponds B and C of the Facultative Lagoon System. Storm water runoff at the facility is collected in the synthetically lined Storm Water Infiltration Control (SWIC) Ponds A, 1 and 2.

Salt and other subsurface materials mined during construction as well as currently mined salt are stored on the surface in three stockpiles. The stockpiles include the Salt Storage Extension (SSE) Cells A and B that are being used to store salt currently, or in the future, as it is mined out from the underground panels at the WIPP. Storm water runoff from the SSE is collected in the synthetically lined Salt Storage Extension Basin (SSEB). The existing Salt Pile that was previously used has been capped with a synthetic and earthen cover. Storm water runoff from the Salt Pile is collected in synthetically lined diversion ditches and diverted to the synthetically lined Salt Pile Evaporation Pond (SPEP). The Site and Preliminary and Design Validation (SPDV) material pile was constructed as the shafts were excavated when construction first began

at the WIPP site. The SPDV material pile was closed in the year 2000 with a cover consisting of a geosynthetic liner installed on 6 inches of bedding material and covered with a minimum of three feet of earthen material.

Location of Discharge

The WIPP facility is located approximately 26 miles east of Carlsbad, New Mexico in Sections 20, 21, 28 and 29, T22S, R31E, Eddy County.

Quantity, Quality, and Flow Characteristics of the Discharge

The permitted discharge consists of up to 23,000 gallons per day (gpd) of domestic effluent and industrial wastewaters; up to 150,000 gpd of brine, purge waters and non-hazardous process waters; a designed flow of 4,224,835 gpd of storm water runoff based on a 24-hour, 25-year storm event; and mined salt placed in Salt Storage Extension Cells A and B. The discharged waters contain contaminants or toxic pollutants that may exceed water quality standards set forth in WQCC Regulations 20.6.2.3103 NMAC for nitrate, chloride, sulfate and total dissolved solids. These discharged waters may move directly or indirectly into ground water.

Characteristics of Ground Water

Regional ground water beneath the site exists in the Culebra and Magenta Members of the Rustler Formation at approximate depths of 483 feet and 357 feet below ground level, respectively. Ground water also exists in the Dewey Lake Formation in the southwest portion of the WIPP site at well WQSP-6A, and as discontinuous lenses in the region beneath and surrounding the WIPP Site (16 Sections of the WIPP Land Withdrawal Area). Depth to ground water in the Dewey Lake Formation in well WQSP-6A is approximately 164 feet below ground surface and contains a total dissolved solids concentration of approximately 3,400 mg/L. A zone of shallow anthropogenic subsurface water (SSW) located underneath the WIPP facility at a depth of approximately 60-80 feet below ground surface has a TDS concentration ranging from approximately 1,500 to 165,000 mg/L.

General

The WIPP Discharge Plan Renewal and Modification consists of the materials in the Discharge Plan submitted by the DOE dated December 20, 2007. In addition, the discharge plan includes, in part, information and materials submitted as part of the original discharge plan approved on January 16, 1992, amended on August 28, 1995, renewed on July 3, 1997, amended on June 12, 1998, amended on January 24, 2000, renewed on April 29, 2003, modified on December 22, 2003, and modified again on December 29, 2006. The discharges at this site shall be managed in accordance with the Discharge Permit Renewal and Modification Application dated December 20, 2007 as conditioned by this Discharge Permit Renewal and Modification.

Changes as incorporated in this Discharge Permit Renewal and Modification include the following:

1. The minimum operating freeboard allowed for the Facultative Lagoon System and the H-19 Evaporation Pond is decreased from two feet to one foot.
2. The Facultative Lagoon System is permitted to accept non-hazardous industrial wastewater from two compressed air systems.
3. Up to 50,000 gpd of brine, purge waters, and miscellaneous non-hazardous process waters are permitted to be discharged into Evaporation Pond C of the Facultative Lagoon System up to the capacity of the pond with one foot of freeboard.
4. The maximum daily discharge rate to the H-19 Evaporation Pond is increased from 8,000 to 50,000 gpd up to the capacity of the pond with one foot of freeboard.
5. The maximum daily discharge rate to Evaporation Pond B is increased from 2,000 to 50,000 gpd up to the capacity of the pond with one foot of freeboard.
6. Quarterly monitoring for Pu²³⁸, Pu^{238/240}, U²³⁴, U²³⁵, U²³⁸, Am²⁴¹ and Sr⁹⁰ in the Facultative Lagoon System and the H-19 Evaporation Pond is no longer required.
7. Quarterly monitoring for selenium, chromium and nitrate in the SSW piezometers and wells, well WQSP-6A, and Storm Water Infiltration Control Ponds A, 1 and 2 is no longer required.
8. Semiannual monitoring for chloride has been added for Evaporation Ponds B and C of the Facultative Lagoon System and the H-19 Evaporation Pond. Semiannual monitoring for Total Kjeldahl Nitrogen (TKN) has been added for well WQSP-6A.
9. The accuracy of water level measurements in the Storm Water Infiltration Control Ponds is changed from a 100th of a foot to a 10th of a foot.

Pursuant to 20.6.2.3109.E NMAC, NMED reserves the right to modify permit requirements in the event NMED determines that the requirements of 20.6.2 NMAC are being, or may be, violated or standards of 20.6.2.3103 NMAC are being, or may be, violated. This may include a determination by NMED that operational practices approved under this Discharge Permit Renewal and Modification are not protective of ground and surface water quality, and that a modification is necessary to protect water quality or abate water pollution. Permit modification may include, but is not limited to, lining or relining impoundments, changing discharge locations, changing waste management practices, expanding monitoring requirements, and implementing abatement of water pollution.

Issuance of this Discharge Permit Renewal and Modification does not relieve the DOE of its responsibility to comply with all conditions or requirements of the WQA, WQCC Regulations, and any other applicable federal, state, and/or local laws and regulations such as zoning requirements and nuisance orders.

II. FINDINGS

In issuing this Discharge Permit Renewal and Modification, NMED finds:

1. The DOE is discharging effluent or impacted water at the WIPP Facility so that such effluent may move directly or indirectly into ground water within the meaning of 20.6.2.3104 NMAC.
2. Ground water (located at well WQSP 6A) in the Southwest portion of the WIPP Land Withdrawal Area has an existing concentration of 10,000 milligrams per liter or less of total dissolved solids within the meaning of 20.6.2.3101.A NMAC.
3. The discharges at the WIPP Facility are not subject to any of the exemptions of 20.6.2.3105 NMAC.
4. The WIPP Facility is located at a place of withdrawal of water for present or reasonable foreseeable future use within the meaning of 20.6.2.3101A NMAC.

III. CONDITIONS FOR APPROVAL

The following conditions shall be complied with by the DOE and are enforceable by NMED. The DOE is permitted to discharge water contaminants subject to the following conditions.

OPERATIONS

1. The DOE shall conduct the operational requirements set forth below, including investigations, in accordance with the WQCC Regulations at sections 20.6.2.3106.C and 3107 NMAC to ensure compliance with 20.6.1 and 20.6.2 NMAC.

Permitted Discharge Flow Rates

2. During the term of this Discharge Permit Renewal and Modification, the DOE shall manage discharges as follows. [20.6.2.3109 NMAC]
 - a. The DOE is permitted to discharge no more than 23,000 gallons per day of domestic effluent and non-hazardous industrial wastewater from two compressed air systems to the Facultative Lagoon System (Evaporation Ponds A, B and C; Polishing Ponds 1B and 2B; and Settling Ponds 1A and 2A) for treatment and evaporation.
 - b. The DOE is permitted to discharge no more than 50,000 gallons per day of brine, purge waters and miscellaneous non-hazardous wastewaters to the H-19 Evaporation Pond. The pond capacity is 346,085 gallons allowing for one foot of freeboard.
 - c. The DOE is permitted to discharge no more than 50,000 gpd of brine, purge waters and miscellaneous non-hazardous wastewaters to Evaporation Pond B up to the capacity of

the pond with one foot of freeboard. The pond capacity is 500,000 gallons allowing for two feet of freeboard.

- d. The DOE is permitted to discharge no more than 50,000 gpd of brine, purge waters and miscellaneous non-hazardous wastewaters to Evaporation Pond C up to the capacity of the pond with one foot of freeboard. The pond capacity is 500,000 gallons allowing for two feet of freeboard.
- e. The DOE is permitted to collect storm water runoff from the Salt Pile to the Salt Pile Evaporation Pond (SPEP) at a designed flow of 1,677,633 gallons per day based on a 25 year/24 hour storm event (3.90 inches). The pond capacity is 5,506,989 gallons not allowing for any freeboard.
- f. The DOE is permitted to collect storm water runoff from the Salt Storage Extension to the Salt Storage Extension Basin (SSEB) at a designed flow of 2,547,202 gallons per day based on a 25 year/24 hour storm event (3.90 inches). The pond capacity is 4,170,732 gallons not allowing for any freeboard.
- g. The DOE is permitted to place mined salt and associated minerals from the excavated panels, drifts and shafts in the nuclear waste repository into Salt Storage Extension Cells A and B.

Pond Maintenance and Inspections

3. The DOE shall properly operate and maintain all impoundments covered by this permit. The DOE shall maintain the capacity of the H-19 Evaporation Pond, the Facultative Lagoon System, SSEB and SPEP to store and evaporate the maximum daily discharge volume allowed by this discharge permit while maintaining one foot of freeboard at all times. In the event that a minimum of one foot of freeboard can not be maintained at all times, the DOE shall submit a corrective action plan to manage discharge volumes to the NMED for approval. [20.6.2.3109 NMAC]
4. The DOE shall measure the thickness of the sludge blanket in each pond of the Facultative Lagoon System every five years. When sludge accumulation exceeds 1/3 of the total depth of any pond, the DOE shall remove the sludge in a manner, which is protective of the pond liner. Removed sludge shall be contained, transported, and disposed of in accordance with all local, state, and federal (e.g., 40 CFR Part 503) regulations. [20.6.2.3109 NMAC]
5. The DOE shall perform visual inspection of the Facultative Lagoon System, H-19 Pond and surrounding berms on a monthly basis. The water surface of the ponds shall be kept free of floating plants and debris. Berms surrounding the ponds shall be kept free of all deep-rooted plants. Berms shall be inspected for signs of wind or water erosion and damage from burrowing animals. In the event berms show signs of damage, the DOE shall submit to the NMED for approval a plan for protection of the berms, which may include the emplacement of rip rap or other methods for armoring the berms. [20.6.2.3109 NMAC]

6. Within 180 days of the issuance of this Discharge Permit, the DOE shall submit, for NMED approval, a plan for controlling storm water and minimizing erosion of the earthen cover of the Salt Pile. The plan shall assess and potentially incorporate options including, but not limited to 1) rock armoring of the side slopes, 2) recontouring of the top surface, 3) the use of alternate borrow sources for cover material, and 4) revegetation of the top surface and side slopes. [20.6.2.3109 NMAC]

Cover Maintenance and Inspections

7. The DOE shall conduct regular maintenance of the earthen covers on the Salt Pile and the SPDV pile. Inspections shall be conducted monthly and after storm events of 2 inches or greater in a 24-hour period to evaluate potential erosion and vegetation success of the cover. In the event of significant erosion or failure of vegetative success, the DOE shall provide a plan and schedule for repair within 90 days of discovery. General observations and cover repairs shall be reported to NMED pursuant to Condition 14 below. [20.6.2.3109 NMAC]

MONITORING AND REPORTING

8. The DOE shall conduct the following monitoring, reporting, and other requirements listed below in accordance with the WQCC Regulations at 20.6.2.3107 NMAC and the monitoring plan submitted by the DOE dated December 20, 2007. A summary of monitoring requirements is attached to this permit as Table 1. A monitoring schedule is attached as Table 2. [20.6.2.3107 NMAC]

Sampling and Field Measurements

9. Discharge Volumes – The DOE shall measure discharge volumes to all impoundments covered under this discharge Permit Renewal and Modification as follows. [20.6.2.3107 NMAC]
 - a. The volume of domestic effluent discharged to the Facultative Lagoon System shall be measured using a totalizing flow meter on the influent to the system or the totalizing meter that measures total domestic water usage. Volumes of other authorized discharges to the facultative lagoon system shall be calculated by a time/volume method or volumetric measurement of the transport container(s). NMED may require comprehensive laboratory analyses of such wastewater prior to discharge when NMED determines that additional information is needed. Monthly meter readings, the units of measurement, monthly discharge volumes and other volumetric calculations for the previous 6-month period shall be submitted to NMED semi-annually in the monitoring reports required in Condition 14 below.
 - b. The volume and origin of all wastewater discharged to the H-19 Evaporation Pond that is derived from miscellaneous non-hazardous sources shall be measured and reported to NMED. Discharge volumes to the H-19 Evaporation Pond shall be calculated by a time/volume method or volumetric measurement of the transport container(s). NMED

may require comprehensive laboratory analyses of such wastewater prior to discharge when NMED determines that additional information is needed. Monthly discharge volumes and other volumetric calculations for the previous 6-month period shall be submitted to NMED semi-annually in the monitoring reports required in Condition 14 below.

10. Surface Impoundments – The DOE shall measure water levels and analyze for water quality as follows.

- a. The water depth shall be measured monthly to the nearest tenth of a foot (0.1 ft) in the SSEB, SPEP, and SWIC Ponds A, 1 and 2. The approximate volume of storm water shall be calculated and a water quality sample collected in each of the five storm water collection ponds once per year after a selected significant storm event where a sufficient quantity of water has collected in the respective ponds. Water quality sampling shall be conducted as required in Condition 9b.
- b. Confirmation of one foot of freeboard shall be conducted monthly on the H-19 Evaporation Pond and each impoundment in the Facultative Lagoon System.
- c. Samples shall be collected from the influent to the Facultative Lagoon System semi-annually and analyzed for the parameters in Groups 2 and 3 listed in Condition 11 below and Table 1, Monitoring Summary. Samples shall be collected semi-annually from the H-19 Evaporation Pond and analyzed for the parameters in Group 2 listed in Condition 11 below and Table 1, Monitoring Summary. A single sample shall be collected annually after a selected significant storm event from each of the storm water ponds, SSEB, SPEP, and SWIC Ponds A, 1 and 2 and analyzed for the parameters in Group 2 listed in Condition 12 below and Table 1, Monitoring Summary.

Analytical results, water level measurements and freeboard confirmation for surface impoundments shall be reported to NMED as required in Condition 14 below. [20.6.2.3107 NMAC]

11. Ground Water Monitoring Wells – The DOE shall measure water depths and analyze for water quality as follows.

- a. Depth to the water table shall be measured to the nearest hundredth of a foot (0.01 ft) above msl, quarterly in piezometers/monitoring wells PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-8, PZ-9, PZ-10, PZ-11, PZ-12, PZ-13, PZ-14, PZ-15, C-2505, C-2506, C-2507, C-2811 and WQSP-6A.
- b. Samples shall be collected from piezometers/monitoring wells PZ-1, PZ-5, PZ-6, PZ-7, PZ-9, PZ-10, PZ-11, PZ-12, PZ-13, C-2507, C-2811 and WQSP-6A semi-annually and analyzed for the parameters in Groups 1 and 2 listed in Condition 12 below.
- c. Samples shall be collected from monitoring well WQSP-6A semi-annually and analyzed for the parameters in Group 3 listed in Condition 12 below.

Analytical results and water level measurements for monitoring wells shall be reported to NMED as required in Condition 14. below. [20.6.2.3107 NMAC]

Analysis

12. The DOE shall analyze samples of ground water and water from surface impoundments for the specific parameters listed below and based on the schedule in the attached Table 1. Samples of ground water from monitoring wells shall be analyzed for the parameters listed in Groups 1, 2 and 3 as noted below. Samples collected from surface impoundments shall be analyzed for the parameters listed in Group 2.

Group 1: Field parameters (analysis to be performed in the field): water level, temperature, pH and electrical conductivity.

Group 2: General chemistry parameters: sulfate, chloride and total dissolved solids.

Group 3: Nitrate-nitrogen and total Kjeldahl nitrogen.

Copies of signed laboratory analysis sheets shall be maintained at the WIPP facility and made available to NMED staff upon request. [20.6.2.3107 NMAC]

Methodology

13. Unless otherwise approved in writing by NMED, the DOE shall conduct sampling and analysis in accordance with the most recent editions of the following documents.
[20.6.2.3107 NMAC]

- a. American Public Health Association, *Standard Methods for Examination of Water and Wastewater*.
- b. U.S. Environmental Protection Agency, *Methods for Chemical Analysis of Water and Waste*.
- c. U.S. Geological Survey, *Techniques for Water Resource Investigations of the U.S. Geological Survey*.
- d. American Society for Testing and Materials, *Annual Book of ASTM Standards, Part 31, Water*.
- e. U.S. Geological Survey, et al., *National Handbook of Recommended Methods for Water Data Acquisition*.
- f. Surface water monitoring must also be conducted according to test procedures approved under Title 40 CFR Part 136.

- g. New Mexico Environment Department, Hazardous Waste Bureau Position Paper, *Use of Low-Flow and Other Non-Traditional Sampling Techniques for RCRA Compliant Groundwater Monitoring*.

Reporting

14. The DOE shall submit to NMED semi-annual monitoring reports by the last day of January and July of each year. Reports shall include the following information. [20.6.2.3107 NMAC]
- a. A summary of all activities related to permitted discharges during the preceding 6 month period. Activities may include general operations, construction or demolition of structures, erosion features, maintenance and repairs to liners, pipelines, covers, berms and other facility components covered by this Discharge Permit Renewal and Modification, water management, water quality and ground water level trends, and precipitation patterns.
 - b. A single table in a paper and electronic format (EXCEL spreadsheet) of water level measurements and water quality data with only those constituents analyzed and water levels measured during a single event shown in columns. Tabulated field measurements to include temperature, pH and electrical conductivity corrected to 25 degrees Celsius. Monitoring sites shall be shown in rows. The second column shall contain the date of the sampling event. Values exceeding standards shall be bolded. Any constituent not analyzed for a particular site shall be shown as "NA", any site not sampled shall be shown as "NS" with an associated reason, and any site not measured for water levels shall be shown as "NM" with an associated reason.
 - c. A single table as described in Condition 13b above that includes all available ground water data to date shall be submitted annually. For each monitoring well, the name of the well shall be entered in the far left column in a row by itself. Sampling events, beginning with the earliest event first, shall be entered in subsequent rows with the sampling date in the second column and the corresponding analytical data in columns further to the right. Each new sampling event shall be added as an additional row to the existing spreadsheet with the corresponding date of the sampling event noted in the second column next to the monitoring well name.
 - d. Discharge volumes, water depths, and calculated storm water volumes for all permitted impoundments at the facility.
 - e. Copies of the signed laboratory analyses sheet shall be kept onsite and made available to NMED upon request.
 - f. Hydrographs shall be submitted annually for all monitoring wells and piezometers covered under Condition 11a of this Discharge Permit Renewal and Modification. At a minimum, graphs shall include the previous five years of water level data, or for new wells, all data since the well was installed. Data for several wells may be included on one graph.

- g. A potentiometric map for the WIPP facility area shall be submitted annually. The map shall incorporate the most recent water level data for all monitoring wells and piezometers installed in the shallow subsurface water (SSW).

CONTINGENCY MEASURES

15. In the event that monitoring indicates ground water standards as defined in Section 20.6.2.3103 NMAC are exceeded in ground water in wells that previously did not exceed ground water standards, or the extent or magnitude of any existing concentrations of water contaminants is significantly increasing, the DOE shall collect a confirmatory sample from the monitoring well(s) within 15 days to confirm the initial sampling results. Within 30 days of confirmation of ground water contamination, the DOE shall submit an abatement plan to NMED, which includes a site investigation to define the source, nature and extent of contamination; a proposed abatement option; and a schedule for its implementation. The site investigation and selection of an abatement option shall be consistent with the requirements and provisions of 20.6.2.4101, 4103, 4106.C & E, 4107, 4108 and 4112 NMAC. [20.6.2.3107A(10) NMAC]
16. In the event of a pipeline break, pump failure, pond overflow or other system failure at the WIPP Facility, discharged water shall be contained, pumped and transferred to areas of the facility that impose minimal impacts to ground water quality. Failed components shall be repaired or replaced as soon as possible and no later than 72 hours from the time of failure. For good cause shown, the DOE may request NMED approval of an extension of the schedule for the repair or replacement of a failed component. [20.6.2.3107A(10) NMAC]
17. In the event of a spill or release that is not authorized by this Discharge Permit Renewal and Modification, the DOE shall initiate the notification and corrective actions required in 20.6.2.1203 NMAC. The DOE shall take immediate corrective action to contain and remove or mitigate the damage caused by the discharge. Within 24 hours of discovery of the discharge, the DOE shall verbally notify the NMED and provide the information outlined in 20.6.2.1203.A.1 NMAC. Within seven days of discovering the discharge, the DOE shall submit a written report to NMED verifying the oral notification and providing any additional information or changes. The DOE shall submit a corrective action report within 15 days after the discovery of the discharge. [20.6.2.1203 NMAC]

CLOSURE

18. The DOE shall close the facilities covered under this Discharge Permit Renewal and Modification in accordance with the closure plan in the March 4, 2005 discharge permit application, the closure plan in the WIPP Hazardous Waste Facility Permit (HWFP) dated January 30, 2003, and the WIPP Land Management Plan as conditioned by this Discharge Permit Renewal and Modification. [20.6.2.3107A(11) NMAC]

Surface Impoundments

19. Upon cessation of operation, the DOE shall close all impoundments at the facility covered by this Discharge Permit. Remaining liquids in each impoundment shall be removed and/or evaporated. All sludge shall be sampled to determine if hazardous constituents exist and managed and/or disposed of in accordance with applicable regulations. All piping and other ancillary components shall be plugged or removed. Synthetic liners shall be removed or ripped in place. All impoundments shall be backfilled with clean fill materials and graded to create positive drainage. The final regraded surface shall be contoured to surrounding topography and shall be revegetated with natural grasses that include a seed mix approved by NMED. [20.6.2.3107A(11) NMAC]

Salt Piles and Salt Storage Area

20. Upon cessation of operation, all mined salt at the WIPP facility shall be removed from the site. The DOE is permitted to use the mined salt as backfill in shafts and as interior fill material in berms and permanent markers after closure. All mined salt remaining after backfilling and after construction of surface structures shall be removed from the site. The DOE shall submit a plan and schedule for salt tailings removal to NMED for approval within 120 days prior to the facility closure. The WIPP Land Management Plan reflects the Land Withdrawal Act's requirements for disposition of the salt. Section I-1d of the WIPP's Hazardous Waste Facility permit also addresses closure activities that include closure of the salt storage areas in accordance with the provisions of the WIPP Land Management Plan. The salt storage area will be reclaimed in the manner described in these documents. [20.6.2.3107A(11) NMAC]

Post-closure Monitoring

21. The DOE shall continue ground water monitoring in all wells covered under DP-831 as described in Condition 10 of this Permit Renewal and Modification for two years after the closure activities described in Conditions 18 and 19 are completed to confirm the absence of ground water contamination. If monitoring results show that the ground water standards in Section 20.6.2.3103 NMAC are being exceeded, the DOE shall implement the contingency plan described in Condition 15 of this Discharge Permit Renewal and Modification. Following notification from NMED that post-closure monitoring may cease, the DOE shall submit a plan to plug and abandon specified monitoring wells not needed for long-term monitoring. Upon NMED approval, the DOE shall plug and abandon the wells in accordance with *NMED Guidelines for Monitoring Well Construction and Abandonment* (copy enclosed) or alternative methods approved by NMED. When all post-closure requirements have been met, the DOE may request to terminate the discharge permit. [20.6.2.3107A(11) NMAC]

IV. GENERAL TERMS AND CONDITIONS

The DOE shall comply with the following general conditions, which shall be enforceable by NMED.

Record Keeping

22. The DOE shall maintain at its facility a written record (unalterable electronic images maintained electronically and available at the site constitutes a written record) of all data and information on monitoring of ground water, surface water, and seepage pursuant to this Discharge Permit Renewal and Modification including the following. [20.6.2.3107A NMAC]
 - a. The date, exact time, and exact location of each sample collection or field measurement;
 - b. The name of the person who performed each sample collection or field measurement;
 - c. The date of the analysis of each sample;
 - d. The name and address of the laboratory and the name of the authorized manager or his designee verifying that the laboratory report is complete and accurate.
 - e. The analytical technique or method used to analyze each sample or take each field measurement;
 - f. The results of each analysis or field measurement, including the raw data; and,
 - g. A description of the quality assurance and quality control procedures used.
23. Such data and information as described in Condition 22, shall also be maintained on all split and duplicate samples, spike and blank samples, and repeat samples. [20.6.2.3107A NMAC]
24. The DOE shall maintain a written record of any spills, seeps, or leaks of effluent, leachate or process fluids not authorized by this Discharge Permit Renewal and Modification. [20.6.2.3107A NMAC]
25. The DOE shall maintain a written record of the operation, maintenance and repair of all facilities/equipment used to treat, store, or dispose of wastewater; to measure flow rates; to monitor water quality; or, to collect other data required by this Discharge Permit Renewal and Modification. This record shall include repair, replacement or calibration of any monitoring equipment and repair or replacement of any fixed equipment used in the conveyance of waters covered by this permit. [20.6.2.3107A NMAC]
26. Notwithstanding any company record retention policy to the contrary, until such time as NMED determines that all closure measures have been completed in accordance with the requirements of this Discharge Permit Renewal and Modification, the DOE shall retain copies of all data, records, reports, and other documents generated pursuant to this Discharge Permit. Such record retention period may be increased by the NMED at any time upon written notice to the DOE. [20.6.2.3107A NMAC]

27. All such data, records, reports, and other documents generated pursuant to this Discharge Permit Renewal and Modification, shall be provided to the NMED upon request. [20.6.2.3107A NMAC]

Inspection and Entry

28. The DOE shall allow the Secretary or an authorized representative of NMED, upon the presentation of credentials, to conduct the following actions. [20.6.2.3107D NMAC] [74-6-9.B & E WQA]
- a. Enter at reasonable times upon or through any property or premises owned or controlled by the DOE or at any other location where records are kept under the conditions of this Discharge or any Federal or WQCC regulation.
 - b. Inspect and copy, at reasonable times, records required to be kept under the conditions of this Discharge Permit Renewal and Modification or pursuant to State or Federal water quality regulations.
 - c. Inspect any facility, equipment (including monitoring and control equipment for treatment works), practices or operations regulated or required under this Discharge Permit Renewal and Modification or under any Federal or WQCC regulations.
 - d. Sample or monitor at reasonable times for the purpose of assuring compliance with this Discharge Permit Renewal and Modification or as otherwise authorized by the New Mexico Water Quality Act, any effluent, water contaminant, or receiving water at any location before or after the discharge.
29. Nothing in this Discharge Permit Renewal and Modification shall be construed as limiting in any way the inspection and entry authority of the NMED under the WQA, the WQCC Regulations, or any other applicable law or regulation. [20.6.2.3107 NMAC]

Duty to Provide Information

30. Within a reasonable time after a request from the NMED, which time may be specified by the NMED, the DOE shall provide the NMED with any relevant information to determine whether cause exists for modifying, terminating, or renewing this Discharge Permit Renewal and Modification, or to determine whether the DOE is in compliance with this Discharge Permit Renewal and Modification. [20.6.2.3107D NMAC][74-6-9.B & E WQA]
31. Nothing in this Discharge Permit Renewal and Modification shall be construed as limiting in any way the information gathering authority of NMED under the WQA, the WQCC Regulations, or any other applicable law or regulation. [20.6.2.3107D NMAC][74-6-9.B & E WQA]

Spills, Leaks and Other Unauthorized Discharges

32. This Discharge Permit Renewal and Modification authorizes only those discharges specified herein. Any discharge not authorized by this Discharge Permit Renewal and Modification is a violation of the WQCC Regulations at 20.6.2.3104 NMAC. The DOE must report any such discharge to the NMED, and take corrective action to contain and remove or mitigate the damage caused by the discharge. [20.6.2.1203 NMAC]

Modifications and Amendments

33. The DOE shall notify the NMED of any changes to its wastewater collection or disposal system, including any changes in the wastewater flow rate or the volume of wastewater storage, or of any other changes to its mining operations or processes that would result in any significant change in the discharge of water contaminants. The DOE shall obtain the NMED approval, as a modification to this Discharge Permit Renewal and Modification pursuant to section 20.6.2.3109.E, F, or G NMAC, prior to any increase in the quantity of a discharge, or any increase in the concentration of water contaminants discharged, above those levels approved in this Discharge Permit Renewal and Modification. [20.6.2.3107C NMAC]

Enforcement

34. Any violation of the requirements and conditions of this Discharge Permit Renewal and Modification, including any failure or refusal to allow the NMED to enter and inspect records or facilities, or any refusal or failure to provide the NMED with records or information, may subject the DOE to an enforcement action. Pursuant to WQA § 74-6-10(A) and (B), such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, suspending or terminating the Discharge Permit Renewal and Modification, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil penalties, or both. Pursuant to the WQA §§ 74-6-10(C) and 74-6-10.1, civil penalties of up to \$15,000 per day of noncompliance may be assessed for each violation of the WQA § 74-6-5, the WQCC regulations, or this Discharge Permit Renewal and Modification, and civil penalties of up to \$10,000 per day of noncompliance may be assessed for each violation of any other provision of the WQA, or any regulation standard, or order adopted pursuant to such other provision. For certain violations specified in the WQA § 74-6-10.2, criminal penalties may also apply. In any action to enforce this Discharge Permit Renewal and Modification, the DOE waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit Renewal and Modification. The DOE does not waive any argument as to the weight such evidence should be given. [74-6 WQA]

Compliance with Other Laws

35. Nothing in this Discharge Permit Renewal and Modification shall be construed in any way as relieving the DOE of its obligation to comply with all applicable Federal, State, and local laws, regulations, permits, or orders. The DOE does not waive any rights under such

applicable federal, state and local laws, regulations, permits, or orders except as expressly provided in this Discharge Permit Renewal and Modification. [20.6.2 NMAC]

Liability

36. The approval of this Discharge Permit Renewal and Modification does not relieve the DOE of liability should the operation result in actual pollution of surface or ground water which may be actionable under other laws and/or regulations. [20.6.2.3109 NMAC]

Right to Appeal

37. The DOE may file a petition for a hearing before the WQCC on this Discharge Permit Renewal and Modification. Such petition must be made in writing to the WQCC within thirty (30) days after the DOE receives this Discharge Permit Renewal and Modification. Unless a timely petition for a hearing is made, the decision of NMED shall be final. [74-6-5.N WQA]

Transfer

38. Prior to any transfer of ownership, control, or possession of the WIPP facility or any portion thereof, the DOE shall notify the proposed transferee in writing of the existence of this Discharge Permit Renewal and Modification and include a copy of this Permit Renewal and Modification with the notice. The DOE shall deliver or send by certified mail to the NMED a copy of the notification and proof that such notification has been received by the proposed transferee. [20.6.2.3111 NMAC]

Term

The effective date of this Discharge Permit Renewal and Modification is the date it is issued and signed by the Chief of the Ground Water Quality Bureau. The term of this Discharge Permit Renewal and Modification expires five (5) years from the date it was issued. To renew this Discharge Permit Renewal and Modification, the DOE must submit an application for renewal at least 120 days before the expiration date. [74-6-5.H WQA][20.6.2.3109.H NMAC]

Issued this 9th day of Sept., 2008



William C. Olson, Chief
Ground Water Quality Bureau
New Mexico Environment Department

Under authority delegated by the Secretary of the New Mexico Environmental Department

**WASTE ISOLATION PILOT PLANT, DP-831
 DISCHARGE PERMIT MODIFICATION
 MONITORING SUMMARY**

Monitoring Reports are due by: 31-JAN, 31-JUL

Table 1: Monitoring Summary

Annual Sampling Frequency	Annual Reporting Frequency	Number of Sites	Sampling Description
12	2	4	Discharge volumes to Facultative Lagoons, H-19 pond & Evaporation Ponds B & C.
12	2	5	Depth of water in SSEB, SPEP & SWIC Ponds A, 1 & 2.
12	2	8	Freeboard confirmation in H-19 Pond and Facultative Lagoons.
1	1	5	Approximate storm water volume in SSEB, SPEP & SWIC Ponds A, 1 & 2.
2	2	2	SO ₄ , Cl & TDS semi-annually in Facultative Lagoon Influent, H-19 Pond, and Evaporation Ponds B & C.
1	1	5	SO ₄ , Cl & TDS annually in SSEB, SPEP & SWIC Ponds A, 1 & 2.
4	2	20	Water levels quarterly in 20 monitoring wells and piezometers (see Table 2).
2	2	12	Field parameters, SO ₄ , Cl & TDS semi- annually in 12 monitoring wells and piezometers (Table 2).
2	2	2	TKN & NO ₃ in Facultative Lagoon Influent and monitoring well WQSP-6A (see Table 2).
1	1	12	Historical monitoring data submitted annually.
		20	Hydrographs submitted annually.
12	2	2	Monthly inspections of all covers.
12	2	13	Monthly inspections of all ponds.
1	1	1	Potentiometric map submitted annually.
2	2	1	Activities report submitted semi-annually

Table 2: Ground Water Monitoring Schedule

Completion Formation	Well Number	Sampling					Notes
		type	Q1	Q2	Q3	Q4	
Santa Rosa	PZ-1	pz	W	W,1,2	W	W,1,2	
Santa Rosa	PZ-2	pz	W	W	W	W	
Santa Rosa	PZ-3	pz	W	W	W	W	

Completion Formation	Well Number	Sampling					Notes
		type	Q1	Q2	Q3	Q4	
Santa Rosa	PZ-4	pz	W	W	W	W	
Santa Rosa	PZ-5	pz	W	W,1,2	W	W,1,2	
Santa Rosa	PZ-6	pz	W	W,1,2	W	W,1,2	
Santa Rosa	PZ-7	pz	W	W,1,2	W	W,1,2	
Santa Rosa	PZ-8	pz	W	W	W	W	
Santa Rosa	PZ-9	pz	W	W,1,2	W	W,1,2	
Santa Rosa	PZ-10	pz	W	W,1,2	W	W,1,2	
Santa Rosa	PZ-11	pz	W	W,1,2	W	W,1,2	
Santa Rosa	PZ-12	pz	W	W,1,2	W	W,1,2	
Santa Rosa	PZ-13	pz	W	W,1,2	W	W,1,2	
Santa Rosa	PZ-14	pz	W	W	W	W	
Gatuna	PZ-15	pz	W	W	W	W	
Santa Rosa	C-2505	mw	W	W	W	W	
Santa Rosa	C-2506	mw	W	W	W	W	
Santa Rosa	C-2507	mw	W	W,1,2	W	W,1,2	
Dewey Lake	C-2811	mw	W	W,1,2	W	W,1,2	
Dewey Lake	WQSP-6A	mw	W	W,1,2,3	W	W,1,2,3	

Explanation to Abbreviations and Symbols

<p><u>Type:</u> mw = monitoring well pz = piezometer</p>	<p><u>Sampling Quarter:</u> Q1 = Jan-Mar Q2 = Apr-Jun Q3 = Jul-Sep Q4 = Oct-Dec</p>
<p><u>Sampling Analytical Suites:</u> 1 = Field parameters: Temp, pH, specific conductance 2 = General chemistry parameters: SO₄, Cl & TDS 3 = TKN & NO₃ W = Depth to water measurement to the nearest 0.1 foot.</p>	

Submit all monitoring reports to: Clint Marshall
 Ground Water Quality Bureau
 P.O. Box 26110
 Santa Fe, New Mexico 87502