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

NOV 27 2018

Mr. John E. Kieling, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Subject: Transmittal of the Waste Isolation Pilot Plant Project 2018 Waste Minimization Report, Permit Number NM4890139088-TSDF

Dear Mr. Kieling:

The purpose of this letter is to provide you with the Waste Isolation Pilot Plant (WIPP) Project 2018 Waste Minimization Report.

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

Please contact Mr. Michael R. Brown of the Carlsbad Field Office at (575) 234-7476, if you have any questions regarding this certification.

Sincerely,

Todd Shrader, Manager
Carlsbad Field Office

Bruce C. Covert, Project Manager
Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure

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*ED denotes electronic distribution

WASTE ISOLATION PILOT PLANT PROJECT
2018 WASTE MINIMIZATION CERTIFICATION

In accordance with 20.4.1.500 NMAC (incorporating 40 CFR §264.73(b)(9)), this document certifies that the U.S. Department of Energy and Nuclear Waste Partnership LLC, herein referred to as the Permittees, have a Waste Minimization Program to reduce the volume and toxicity of hazardous and mixed waste generated at the Waste Isolation Pilot Plant (WIPP) facility. This certification addresses the period from October 1, 2017, through September 30, 2018.

Waste minimization is achieved to the degree determined to be economically practicable by the Permittees. Methods implemented at the WIPP facility for treatment, storage, or disposal are the most practicable methods currently available to minimize the present and future threat to human health and the environment.

The WIPP Project Waste Minimization Certification is maintained in the Operating Record, as required by the Hazardous Waste Facility Permit, Part 1, Section 1.7.10.2. and 20.4.1.500 NMAC (incorporating 40 CFR §264.73(b)(9)).

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 fines and imprisonment for knowing violations.

Todd Shrader, Manager
Carlsbad Field Office

Bruce C. Covert, Project Manager
Nuclear Waste Partnership LLC

Waste Isolation Pilot Plant Project 2018 Waste Minimization Report

A waste minimization program is in place at the Waste Isolation Pilot Plant (WIPP) Project. The goal of this program is to reduce the volume and toxicity of hazardous and mixed wastes generated at the facility. The purpose of this report is to comply with the WIPP Hazardous Waste Facility Permit (Permit) Part 2, Section 2.4. which states:

The Permittees shall implement and maintain a waste minimization program to reduce the volume and toxicity of hazardous and mixed wastes generated at the facility, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.73(b)(9)). The waste minimization program shall include proposed, practicable methods of treatment and storage currently available to the Permittees to minimize the present and future threat to human health and the environment. The waste minimization program shall include the following items:

1. *Written policies or statements that outline goals, objectives, and methods for source reduction and recycling of hazardous and mixed waste at the facility;*

2. *Employee training or incentive programs designed to identify and implement source reduction and recycling opportunities for all hazardous and mixed wastes;*

3. *Source reduction or recycling measures implemented in the last five years or planned for the next federal fiscal year;*

4. *Estimated dollar amounts of capital expenditures and operating costs devoted to source reduction and recycling of hazardous and mixed waste;*

5. *Factors which have prevented implementation of source reduction or recycling;*

6. *Summary of additional waste minimization efforts that could be implemented at the facility that analyzes the potential for reducing the quantity and toxicity of each waste stream through production process changes, production reformulations, recycling, and all other appropriate means including an assessment of the technical feasibility, cost, and potential waste reduction for each option;*

7. *Flow charts and/or tables summarizing all hazardous and mixed waste streams produced by the facility by quantity, type, building or area, and program; and*

8. *Demonstration of the need to use those processes which produce a particular hazardous or mixed waste due to a lack of alternative processes, available technology, or available alternative processes that would produce less volume or less toxic waste.*

The Permittees shall submit to the Secretary a report regarding progress made in the waste minimization program in the previous year. The report shall address items 1 – 8 above, shall show changes from the previous report, and shall be submitted annually by December 1 for the year ending the previous September 30th.

This report was prepared by the Permittees (the U.S. Department of Energy [DOE] - Carlsbad Field Office [CBFO] and the Nuclear Waste Partnership LLC [NWP]) in accordance with Permit Part 2, Section 2.4. This report describes how the Permittees addressed items 1-8 during Fiscal Year (FY) 2018, period beginning October 1, 2017, and ending September 30, 2018. This report describes any changes made since the previous report.

1. *Written policies or statements that outline goals, objectives, and methods for source reduction and recycling of hazardous and mixed waste at the facility.*

The WIPP Environmental Policy Statement, DOE/WIPP 04-3310 publicly establishes the WIPP Project strategic level environmental objectives. This policy formally communicates standards that ensure facility personnel practice environmental protection as a core business principle. This commitment is documented by the implementation of the WIPP facility Environmental Management System (EMS), DOE/WIPP 05-3318, made evident through the Permittees' International Organization for Standardization (ISO) 14001:2015 certification. Certification to the ISO 14001:2015 standard is verified through an independent third-party auditing body. Continued certification to the ISO standard embeds continuous improvement into facility operations, specifically through the EMS program that requires improvements related to waste minimization and recycling.

The Permittees are committed to *"...continually plan, perform, assess, and improve the environmental performance of the WIPP."* The environmental policy statement (DOE/WIPP 04-3310) was reported and updated active as of April 17, 2018. The Environmental Management System (DOE/WIPP 05-3318) was reported and updated active as of April 25, 2018. The facility's ISO 14001:2015 certification remains in conformance as of May 28, 2018, remaining relevant through May 28, 2021.

The Permittees continue to communicate and educate facility personnel regarding the data required for accurate reporting under the waste minimization programs. These actions are implemented through EMS core support programs including the WIPP Sustainable Procurement Plan (WP 02-EC.07) and the WIPP Pollution Prevention (P2) Program Plan (WP 02-EC.11). These core program plans implement standards that outline, define, and support the waste minimization strategy mandated by Executive Order (EO) 13834, Efficient Federal Operations, and those required by the DOE under Orders 436.1 and 436.1-1. Core program components are captured and reported through the EMS.

2. *Employee training or incentive programs designed to identify and implement source reduction and recycling opportunities for all hazardous and mixed wastes.*

Every WIPP facility employee receives General Employee Training (GET). This includes content communicating general awareness of the Permittees' EMS program, the waste management and recycling expectation, site pollution prevention strategy, facility waste minimization strategy, the sustainability and resilience expectation, including policy standards related to emergency response procedures. Facility personnel involved in universal or special site generated waste management, low-level waste handling activities, and/or emergency response receive additional training to ensure that they are qualified to perform their assigned task. The majority of these training courses contain elements in which waste minimization, source reduction, and recycling strategies are included; in addition, managers and supervisors receive training, as applicable to their positions, which includes a review of the P2 program.

During FY 18, procurement classes continue to include the General Services Administration (GSA) purchasing standard emphasizing the use of the GSA Sustainable facilities tool (SFtool) to determine any given product's sustainability requirement. Those key expectations ensure source reduction and waste minimization strategy are communicated specific to acquiring products with the following classifications. Classifications include recycled content, BioPreferred and/or BioBased content, EnergyStar, Water Sense, SaferChoice - less toxic chemicals, Significant New Alternative Policy (SNAP), Electronic Procurement Evaluation Assessment Tool (EPEAT), Federal Energy Management Program (FEMP), Ozone Depleting Substance (ODS) exclusions and the importance of reducing site generated Greenhouse Gas (GHG) emissions.

In FY 18, ENV 100 was created as an e-learning training module, with a terminal objective to provide general knowledge regarding the EMS and how it affects work at the WIPP Project. The information provides a general working knowledge referencing ISO 14001:2015, EO 13693 predecessor of EO 13834, DOE Order 436.1, and the Permit. The ENV course is required to be taken initially by all existing employees and new hires and then biennially thereafter. No other changes to the training program were implemented during FY 18.

During FY 17, the P2 program coordinator designed and implemented a behavioral incentive opportunity to educate visitors, staff, and contractors to the applied single stream recycling method. The banner campaign continued throughout FY 18, reinforced by multiple site wide emails, flyers, kiosk postings, and cabinet displays encouraging participation and proper use of single stream recycling bins and associated recycling centers.

The logo "Sustainable WIPP" was introduced as a site incentive program during FY 18. This logo was coordinated to be released to commemorate Earth Day. Employees were presented with a Polo shirt displaying the new Sustainable WIPP logo. These shirts were well received by WIPP Project staff, providing the P2 and sustainability programs the opportunity to promote program awareness of the Sustainable WIPP awards through continued participation. In September 2018, the first of the Sustainable WIPP recognition award ceremonies was held. The ceremony recognized a group effort to reduce paper use by 4,000 pounds annually when the team promoted and implemented a program making our waste confirmation process paperless.

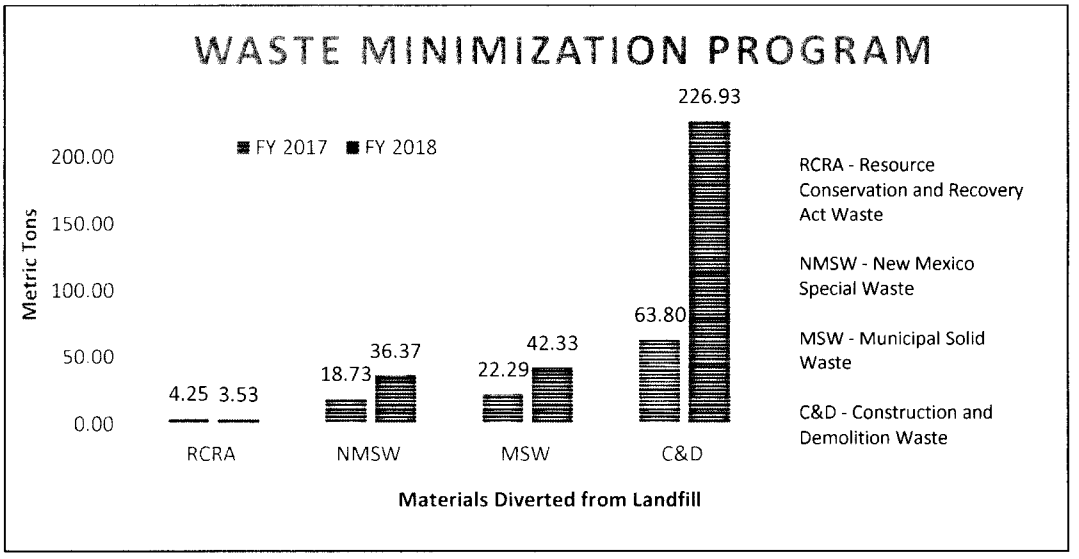
In August 2018, a pollution prevention opportunity assessment (PPOA) was completed. The PPOA identified an opportunity specific to the new onsite cafeteria subcontractor. The P2 program provided 800 bio-degradable food containers to the subcontractor and focused on inspiring behavioral change though awareness. The pilot program has been well received; the vendor has expressed interest in devoting resources to purchase the same pilot program food containers. This future intention supports a Sustainable WIPP Project by increasing participation in the EMS and P2 related program expectations.

3. *Source reduction or recycling measures implemented in the last five years or planned for the next federal fiscal year.*

The Permittees maintain an active recycling/reuse program and strive to continually improve performance in this area. Over the past five years, the Permittees' recycling/reuse program at the WIPP Project has encompassed the following materials:

- Aluminum Cans
- Antifreeze
- Asphalt/Concrete
- Batteries (e.g., NiCad, Lithium, Alkaline, Lead Acid)
- Cardboard
- Chain-Link Fence
- Circuit Boards
- Electrical Ballasts
- Electronics
- Office Equipment
- Lamps/Lighting Fixtures
- Metals (various)
- Paper
- Plastic
- Tires
- Ink/Toner cartridges
- Used Oil and Oil Filters
- Wood Pallets
- Anti-Freeze

In FY 18, the WIPP facility diverted 309 Metric Tons from New Mexico landfills. The graph below compares FY 17 and FY 18.



In FY 18, the WIPP facility participated in National Clean Off Your Desk Day (January 8, 2018), the date of which corresponded with an all-day safety pause. The effort generated 38,148 pounds of material, which was diverted from local landfills. The Permittees' Property Management Organization donated and/or diverted recovered products, including computer servers, file cabinets, and office supplies having an asset value of $65,893, to five area schools.

4. *Estimated dollar amounts of capital expenditures and operating costs devoted to source reduction and recycling of hazardous and mixed waste.*

The Permittees' FY 18 budget for promoting and implementing P2 and waste minimization was $212,264. This funding allocation was used for staffing, awareness, maintenance, and implementation of the WIPP EMS and Waste Minimization Program.

As with the previous year, significant focus during FY 18 was placed on continuous improvement. The PPOAs were used to identify areas for additional P2 enhancement and awareness. Through these assessments, it was determined that the updating of site-recycling receptacles, which was initiated in FY 16, needed further action.

In FY 18, the program reconditioned and rebranded three of the four remaining initially-proposed 15 recycling centers (11 completed in FY 17). With the P2 program reviews, it was determined the five-stream collection center should be expanded to include a trash receptacle. Therefore, an additional 14, six-stream collection centers were deployed in prominent areas of recycle material collection. In addition, a PPOA determined that some locations needed a larger office-paper collection receptacle. As a result, the P2 program deployed ten 35-gallon paper collection receptacles. The actions also included a consistent visual message with the goal of encouraging expanded program participation. In FY 18, funding related to this program was $21,253. The P2 program scrap account contributed another $32,264 that enabled the purchase of 16 additional, six-stream collection centers for distribution in the first quarter of FY 19.

5. *Factors which have prevented implementation of source reduction or recycling.*

The facility EMS program initiated the creation and implementation of an Environmental Management System Steering Committee (EMSSC). The committee is administered by senior level management reporting directly to top management. The committee's base responsibility is to ensure support and funding to the EMS and its supporting programs, including P2 and waste minimization as required by the ISO standard. This EMS program enhancement was implemented with the intent to support and decrease probable factors having the potential to prevent EMS, P2 and sustainability program improvements. The inaugural meeting of the EMSSC occurred in March 2018.

There continues to be no factors that prevent the implementation of the WIPP waste minimization program. The EMS supported improvements specific to education and communication related to project environmental targets and P2 program strategy. Facility personnel continue to remain encouraged as evident in their participation in the waste minimization and recycling programs. The EMS program coordinator provides, to interested parties, a copy of the annual waste diversion rate upon request. The goal of reducing toxicity and volume of hazardous waste generated on site remains functional. Waste streams that have the potential to generate hazardous waste are reviewed regularly to ensure minimization of hazardous constituents while incorporating waste reduction, recycling, and reuse whenever possible.

6. *Summary of additional waste minimization efforts that could be implemented at the facility that analyzes the potential for reducing the quantity and toxicity of each waste stream through production process changes, production reformulations, recycling, and all other appropriate means including an assessment of the technical feasibility, cost, and potential waste reduction for each option.*

Continuous efforts are made to support overall waste minimization efforts and increase incorporation of environmental standards at the WIPP facility. Coordination occurs with procurement to re-emphasize, to those conducting procurement efforts, the importance of procuring environmentally-safe products, or products with a percentage of recyclable materials, as well as meeting environmentally-recognized standards for water consumption, energy use, and toxic factors. These same principles are also conveyed to engineering, work control, and project planning with the goal that environmental considerations be incorporated into new projects, site reconditioning efforts, and general procurement processes.

Subcontractors are required, through clauses in statements of work, to properly manage waste streams to meet environmental requirements and to incorporate sustainable procurement practices for their required items/supplies when conducting work at the WIPP facility.

Documents used to implement these practices are the WIPP Pollution Prevention Program Plan (WP 02-EC.11), WIPP Sustainable Procurement Plan (WP 02-EC.07), and the WIPP Electronic Management Policy Statement (DOE/WIPP 11-3474)

7. *Flow charts and/or tables summarizing all hazardous and mixed waste streams produced by the facility by quantity, type, building or area, and program.*

The following summary tables summarize the type and amount of hazardous, mixed low-level, and low-level waste generated by the Permittees between October 1, 2017, and September 30, 2018.

Hazardous, Mixed Low-Level and Low-Level Radioactive Waste Summary Table			
Type of Waste Generated	**Area/Program**	**FY 2017 Metric Tons**	**FY 2018 Metric Tons**
Hazardous Waste			
Waste Water	Waste Shaft and Exhaust Shaft	0.00	1.25
Spill Clean-up	Emergency Response	0.11	0.21
Fluorescent Lamps	Maintenance	0.02	0.01
Miscellaneous	Maintenance	0.31	0.04
Expired or Spent Batteries	Maintenance	0.00	0.21
Flammable Liquids	Maintenance	2.15	1.81
	Total Hazardous Waste	**2.59**	**3.53**
Mixed Low Level Waste			
Spent Filters, Personal Protective Equipment, NiCad Batteries	Recovery Activities	0.0	0.0
Low Level Waste			
Brine Water, Miscellaneous clean-up debris and HEPA filters	Recovery Activities	20.27	19.62
	Total Radioactive and Mixed Waste	**20.27**	**19.62**

8. *Demonstration of the need to use those processes which produce a particular hazardous or mixed waste due to a lack of alternative processes, available technology, or available alternative processes that would produce less volume or less toxic waste.*

The waste minimization process is a function where "users" of products conduct a review of the items being used that may be generate hazardous waste(s). The goal of the review is to challenge the user to review various alternatives and select a product that meets the necessary level of performance but is, at the same time, conducive to environmental consideration. When a product or item cannot be found as a substitute to meet enhanced environmental criteria, a non-sustainable justification form is completed by the user. This form states that either an alternative could not be found or an item or product is not available.

Waste minimization is an ongoing continuous improvement process. The goal is to continue to improve the implementation of alternative processes and available technologies to decrease the environmental footprint on the environment. In summary, through this overarching waste minimization process, using alterative processes to create less volume and less toxic waste is the goal.

This report will be placed on the Information Repository in accordance with Permit Part 1, Section 1.14.2.