



Department of Energy
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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

NMED
Hazardous Waste Bureau

Subject: Transmittal of the Waste Isolation Pilot Plant Project 2015 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 2015 Waste Minimization Report. This report, required by and prepared in accordance with the WIPP Hazardous Waste Facility Permit Part 2, Section 2.4, will be placed in the Information Repository.

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.

If you have any questions regarding this certification, please contact Mr. George T. Basabilvazo of the Carlsbad Field Office at (575) 234-7488.

Sincerely,

Todd Shrader, Manager
Carlsbad Field Office

for Todd Shrader

Philip J. Breidenbach, Project Manager
Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure
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*ED denotes electronic distribution



Waste Isolation Pilot Plant Project 2015 Waste Minimization Report

A waste minimization program is in place at the Waste Isolation Pilot Plant (WIPP) Project 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.

PROGRESS

This report was prepared by the Permittees (the U.S. Department of Energy Carlsbad Field Office and Nuclear Waste Partnership LLC) in accordance with Permit Part 2, Section 2.4. This report describes how the WIPP project addressed items 1-8 for the period from October 1, 2014, through September 30, 2015, and 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) is the written policy statement that provides a strong commitment to pollution prevention (P2) and its continual improvement. In the policy statement, the Permittees commit to “...continually plan, perform, assess, and improve the environmental performance of the WIPP project.” There have been no changes to the policy statement since it was last updated (July 2014) to incorporate commitment of the new Nuclear Waste Partnership LLC management.

In addition, the Permittees continue to implement the WIPP Pollution Prevention Program Plan, WP 02-EC.11. The Plan identifies and outlines the core components of the P2 program at the WIPP project and how the P2 related requirements of DOE Order 436.1 are implemented. The core components include annual P2 targets, defined responsibilities, communication, awareness activities, performing assessments to identify waste minimization or reduction opportunities, a recycling program, training, sustainable procurement, and reporting. No changes were made to the plan in fiscal year (FY) 2015.

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

Every WIPP employee receives General Employee Training. The training includes content related to waste management, P2, waste minimization, and emergency response procedures. Employees involved in waste generation or handling activities and emergency response receive additional training to ensure that they are fully qualified to perform their tasks. Most of these training programs have elements in which waste minimization, source reduction, and recycling strategies are included. In addition, managers receive manager and supervisor training, as applicable to their positions, which includes a review of the P2 program.

During FY 2015, procurement classes continued to include content for requirements to give purchasing preference to products that have recycled or biobased content, use less energy or water, are less toxic, do not use ozone depleting substances, or emit lower greenhouse gases.

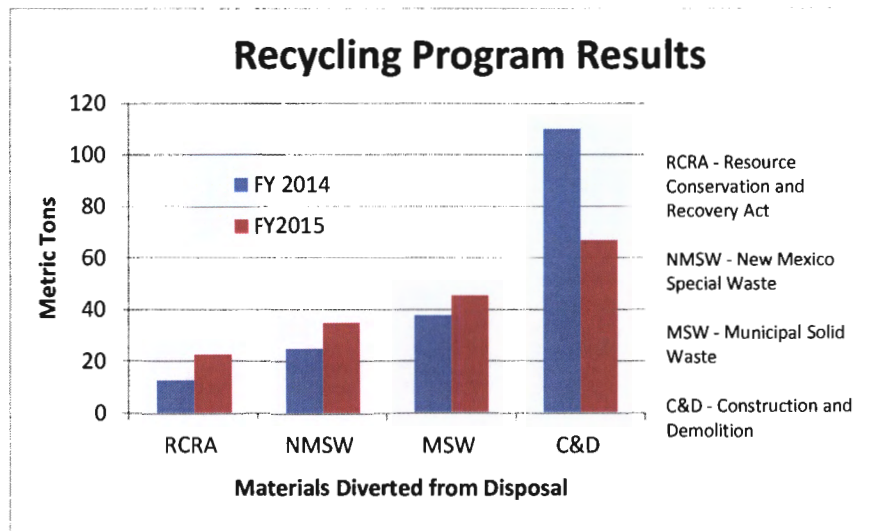
The recycling program was the focus of communications during Earth Day week 2015. Posters were displayed highlighting accomplishments of the recycling program and the WIPP personnel who make the recycling program a success.

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
- Batteries (e.g., NiCad, Lithium, Alkaline, lead acid)
- Cardboard
- Chain-link fence
- Circuit boards
- Electrical Ballasts
- Electronics
- Office Equipment (e.g., file cabinets)
- Lamps
- Metals (various)
- Mined salt
- Paper
- Plastic
- Tires
- Toner cartridges
- Used oil and oil filters
- Wood pallets
- Wood waste (spools, timbers, and crating materials)

In FY 2015, 170 metric tons of materials were diverted for recycling. The graph below compares FY 2014 and FY 2015.



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

The Permittees' FY 2015 budget for promoting and implementing P2 and waste minimization was \$150,000. This money was used for staffing to maintain and implement the WIPP waste minimization program and to maintain P2 awareness.

As part of assessing how best to replace existing, worn, recycling bins across the WIPP facilities, recycle bins were purchased and placed in conference rooms in FY 2014 as prototypes for replacement of all bins. These new bins were redeployed to other building locations in FY 2015 and a second enhanced bin was selected and placed in conference rooms for segregation of waste/recycle material generated during conference room use. The cost of the bins was \$6,800.

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

There continues to be no factors that have prevented the implementation of the WIPP waste minimization program to reduce the volume and toxicity of hazardous waste generated. Proposed waste streams that could generate hazardous wastes are reviewed regularly to ensure minimization of the hazardous constituents and to incorporate 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.*

A core component of the WIPP P2 program is conducting pollution prevention opportunity assessments (PPOAs). Assessments are performed on selected processes and/or waste streams to evaluate potential for waste minimization, source reduction or recycling. In FY 2015, the Permittees performed four PPOAs and implemented the practicable P2 opportunities identified in the assessments. Summaries of the assessments and their results are as follows.

Emergency Operations Center

As elements of improving the WIPP project's emergency response capability, staff increases, equipment upgrades and overall program enhancements were implemented. One of these enhancements was the creation of a state of the art Emergency Operations Center (EOC) in the Skeen-Whitlock Building. To create the approximately 4,000 square foot EOC, existing building space was remodeled to create 4 offices, 2 conference rooms, 4 cubical work stations, and 41 emergency response work stations to include 31 large scale wall monitors for event tracking. To ensure that environmental considerations were integrated into the remodeling project, the project manager, requisitioner, procurement department, and P2 Coordinator collaborated to ensure that sustainable products were used and recycling and reuse of replaced materials was practiced to the extent practicable. Recycled content carpet, cubical dividers, and furniture as well as low volatile organic compound (VOC) paints and carpet adhesives, and energy efficient electronics were incorporated into the remodel.

Training Program Improvements

The WIPP facility's Training Building was also remodeled to support improvements to the training program. As was done for the EOC, applicable sustainability considerations were incorporated into the building's remodel components of paint,

carpet, furniture, and electronic equipment. The areas updated during this remodeling project included the classrooms and entrance areas. Another facet of the training program improvements is a significant increase in the use of online training modules resulting in the need for less paper copies of related course materials.

Modular Office Buildings

In support of the recovery efforts in 2015, three modular office buildings were brought to the WIPP Facility with each one of these accommodating approximately 24 work stations. These provided additional office space for new WIPP staff as existing office spaces were fully utilized. Although these buildings are leased for only a three year period, the decision was made to incorporate sustainability as in the new EOC and Training Building remodel. Consequently, water-efficient fixtures (bearing the Water Sense® label) and energy-efficient heating, ventilation, air conditioning systems, windows, and lighting fixtures were specified and procured. Increased levels of insulation and reflective surfaces (cool roofs) were also specified for the buildings.

Underground Equipment

As a function of WIPP recovery after the events of February 2014, a hybrid roof bolter and electric forklift were put into service in the underground for reducing diesel equipment emissions. The roof bolter is used for securing and stabilizing the ceilings in all of the accessible areas of the underground and the forklift is primarily used at the underground waste shaft station for loading and unloading heavy items. As the WIPP Facility works to increase ventilation flow in the underground, the hybrid roof bolter can be operated in either battery power or diesel mode. When used in the electric mode it produces no hydrocarbon emissions, requires no diesel fuel, and reduces the frequency of diesel refueling. Using these pieces of equipment improves the air quality and recovery of the underground, reduces the potential for waste generation from refueling and fuel storage and supports quicker transition of areas to a non-controlled status which equates to reductions in recovery waste generated.

- 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 table summarizes hazardous and mixed waste generated by the Permittees, at the WIPP Project, from October 1, 2014, to September 30, 2015, and does not include materials that were recycled.

Hazardous and Mixed Waste Summary Table			
Type of Waste Generated	Area/Program	FY 2014 Metric Tons	FY 2015 Metric Tons
Hazardous Waste			
Lab Waste	Lab	0.01	0.01
Waste Water	Waste Shaft and Exhaust Shaft Interception Borehole	10.36	0.00
Off-spec and Expired	Lab	0.02	0.09

Hazardous and Mixed Waste Summary Table			
Type of Waste Generated	Area/Program	FY 2014 Metric Tons	FY 2015 Metric Tons
Materials			
Spent Filters (air, Granulated Activated Carbon / Zeolite)	Maintenance	0.28	0.00
Spill Clean-up (Gasoline, Floor Stripper)	Emergency Services	0.10	0.22
Broken Fluorescent Lamps	Maintenance	0.04	0.00
Miscellaneous (i.e. gasoline and water mixed, non-punctured aerosol cans)	Maintenance	0.05	0.13
Total Hazardous Waste		10.86	0.45
Mixed Waste			
Spent Filters, Personal Protective Equipment, NiCad Batteries	Recovery Activities	1.82	2.43
Total Mixed Waste		1.82	2.43
Total Waste		12.68	2.88

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.*

Processes required for successful operations at the WIPP Project generate hazardous/mixed waste as noted in the table above. The waste minimization program to reduce the volume and toxicity of hazardous and mixed wastes generated has been implemented and maintained. Processes that have the potential to generate hazardous/mixed waste are monitored to ensure present and future protection of human health and the environment. Processes are also evaluated through PPOAs, as appropriate to identify any new options/technology for waste minimization or recycling.

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