

**WIPP's Hazardous Waste Facility Permit
Renewal Application — 9101**

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ABSTRACT

Hazardous waste permits issued by the New Mexico Environment Department (NMED) have a maximum term of 10-years from the permit's effective date. The permit condition in the Waste Isolation Pilot Plant's (WIPP) Hazardous Waste Facility Permit [1] (HWFP) governing renewal applications, directs the Permittees to submit a permit application 180 days prior to expiration of the Permit.

On October 27, 1999, the Secretary of the NMED issued to the United States Department of Energy (DOE), the owner and operator of WIPP, and to Washington TRU Solutions LLC (WTS), the Management and Operating Contractor and the cooperator of WIPP, a HWFP to manage, store, and dispose hazardous waste at WIPP. The DOE and WTS are collectively known as the Permittees. The HWFP is effective for a fixed term not to exceed ten years from the effective date of the Permit. The Permittees may renew the HWFP by submitting a new permit application at least 180 calendar days before the expiration date, of the HWFP.

The Permittees are not proposing any substantial changes in the Renewal Application. First, the Permittees are seeking the authority to dispose of Contact-Handled and Remote-Handled TRU mixed waste in Panel 8. Panels 4 through 7 have been approved in the WIPP Hazardous Waste Facility Permit as it currently exists. No other change to the facility or to the manner in which hazardous waste is characterized, managed, stored, or disposed is being requested.

Second, the Permittees also seek to include the *Mine Ventilation Rate Monitoring Plan* [2], as Attachment Q in the HWFP. This Plan has existed as a separate document since May 2000. The NMED has requested that the Plan be submitted as part of the Renewal Application. The Permittees have been operating to the Mine Ventilation Rate Monitoring Plan since the Plan was submitted.

Third, some information submitted in the original WIPP RCRA Part B Application [3] has been updated, such as demographic information. The Permittees will submit this information in the Renewal Application.

As none of the proposed changes requested in the Renewal Application are substantial, a streamlined submittal package is being prepared while adequately addressing all necessary regulatory information requirements. Changes that could enhance the Permit the Permittees are addressing by Class 1 and Class 2 permit modifications prior to submittal of the Renewal Application.

INTRODUCTION

When the hazardous waste regulator, either an authorized state program or the Environmental Protection Agency (EPA), issues a permit for the treatment, storage, and/or disposal of hazardous waste, the permittee's authorization to perform "permitted" activities does not last forever; the permit has a specified duration. The requirement for a duration or "term" of a HWFP flows down from statutes, to the regulations, and finally the requirement becomes a "condition" of the HWFP for a specific facility. While the HWFP is still in effect, the permittee must prepare and submit a new application to treat, store, and/or dispose of hazardous waste before their existing permit expires. This submittal is what is referred to as a "renewal application."

In most respects, the process of a permit renewal application is identical to applying for the original permit, including the public participation process. A Part A application, providing basic information about the facility and how it proposes to operate, is required. Additionally, a Part B application, a narrative with much more specific information, must be provided. The required information for the facility must be submitted to the regulating entity in a timely manner so that the administrative process may be completed. Since the time frame is rarely adequate for the regulator and public to review and comment; issue a draft permit; and (if necessary) conduct the public hearing process; there are provisions to allow continuing operations of the hazardous waste facility.

Though the WIPP is truly a unique facility, in that it is a deep geologic disposal facility for TRU mixed waste, its HWFP contains the general permit provisions that govern other hazardous waste facilities. Included in the general permit provisions are conditions for permit renewal, the term of the permit, and the duty to reapply if the Permittees wish to continue in any permitted activities.

REQUIREMENTS

Depending upon the state and its analysis of the permit application, hazardous waste permits have a fixed term not to exceed 10 years. A fixed term of a maximum of 10 years has its basis in statute, the *Amendment of Solid Waste Disposal Act* [4] Section 3005.(c).(3). Accordingly, authorized states have codified the a maximum ten year fixed term in their state hazardous waste regulations and impose the maximum fixed ten year term as a permit condition. New Mexico has codified this requirement in the New Mexico Hazardous Waste Regulations [5] and has established the maximum 10 year term in the WIPP HWFP.

If the Permittees wish to continue with any activity regulated by its HWFP, the Permittees must submit a permit renewal application at least 180 days prior to the expiration date of the HWFP. The WIPP HWFP is effective for a fixed term not to exceed ten years from the effective date of the Permit. The Permittees may renew the HWFP by submitting a new permit application at least 180 calendar days before the expiration date.

The requirements for submitting a Renewal Application is much like submitting an original application for a treatment, storage, or disposal permit. The Renewal Application consists of essentially two parts: 1) the Part A application and 2) the Part B application. Additionally, the New Mexico Hazardous Waste Regulations have adopted the regulatory provisions for the administrative process codified in 20.4.1.901 NMAC (New Mexico Administrative Code) incorporating 40 CFR 124. 31-32. These two regulatory citations pertain to the procedures for decision making pertaining to the Resource Conservation and Recovery Act (RCRA), specifically, the pre-submittal public process. The information required by these citations is submitted along with the Renewal Application and becomes a part of the Administrative Record for the Renewal Application.

These citations require that the applicant:

- hold at least one meeting with the public in order to solicit questions from the community
- inform the community of proposed hazardous waste management activities
- submit a summary of the meeting, along with the list of attendees and their addresses (voluntarily provided by the attendees)
- shall provide public notice in all of the following forms:
 - A newspaper advertisement in a newspaper of general circulation in the county that hosts the proposed location of the facility.
 - A visible and accessible sign on a clearly marked sign at or near the facility
 - A broadcast media announcement at least once on at least one local radio station or television station.
 - A notice to the permitting agency

The WIPP Hazardous Waste Facility Permit addresses the requirement to renew the Permit in three places in Module 1 of the HWFP under *General Permit Conditions*. First, it sets forth the option to reapply for a permit. Second, it states the Permit term or duration. Third, the ability of the Permittees to continue permitted activities while the Renewal Application is being processed is addressed. These permit conditions mirror the requirements under the New Mexico Hazardous Waste Regulations and RCRA.

SCOPE OF REQUESTED CHANGES

A renewal application is, in effect, a new permit application, the Permittees may submit any changes to the HWFP they wish to make in:

- The way waste is managed, stored, and disposed at the facility
- Procedures, systems, and equipment
- The manner in which waste is analyzed and confirmed

There are no substantial technical changes proposed for the WIPP HWFP Renewal Application. The most notable change is the request for authorization to dispose of TRU mixed waste in Panel 8. Waste management and disposal are identical to that for waste emplaced in Panels 1 through 7. To understand this proposed change, a bird's eye view of the repository is presented in Figure 1, *Spatial View of the WIPP*; and Figure 2, *Repository Horizon*.

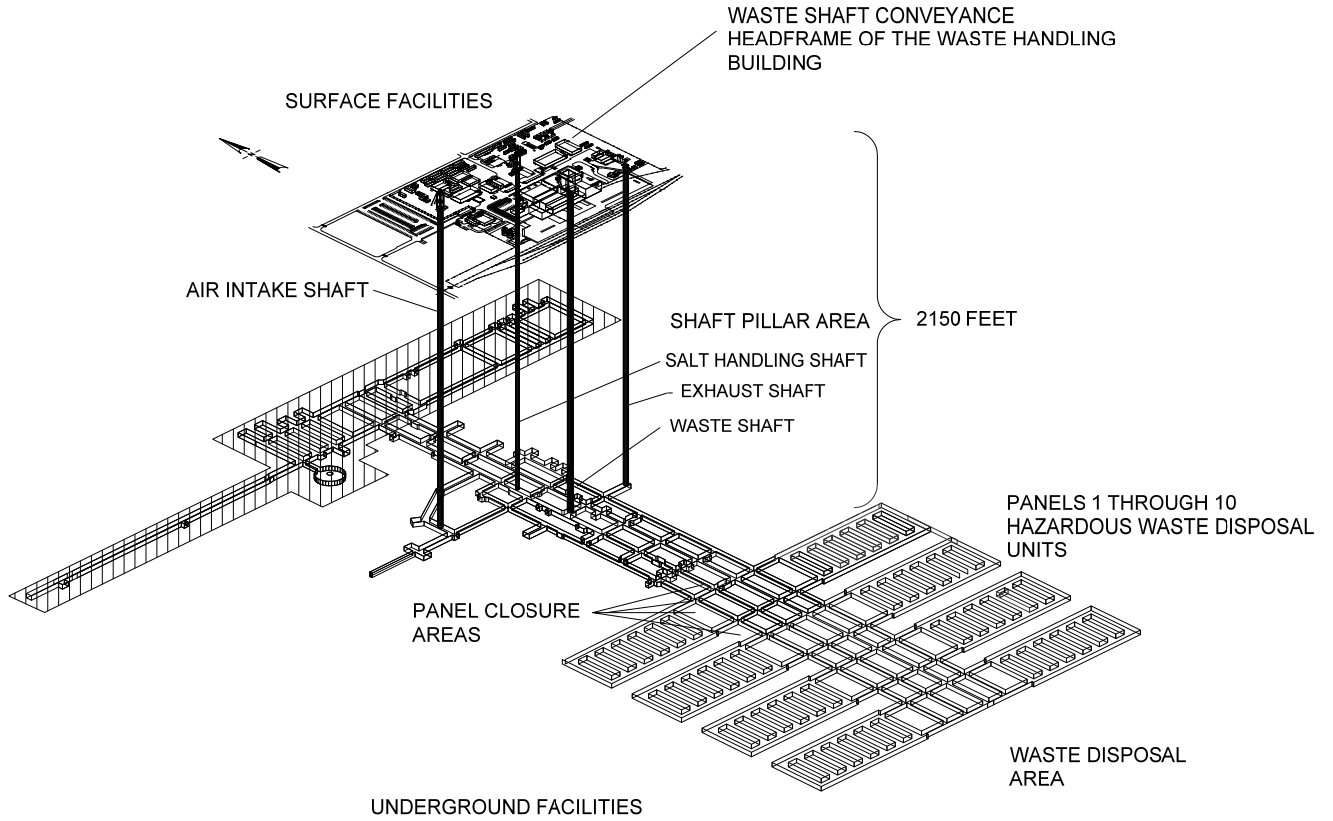


Figure 1. Spatial view of the WIPP

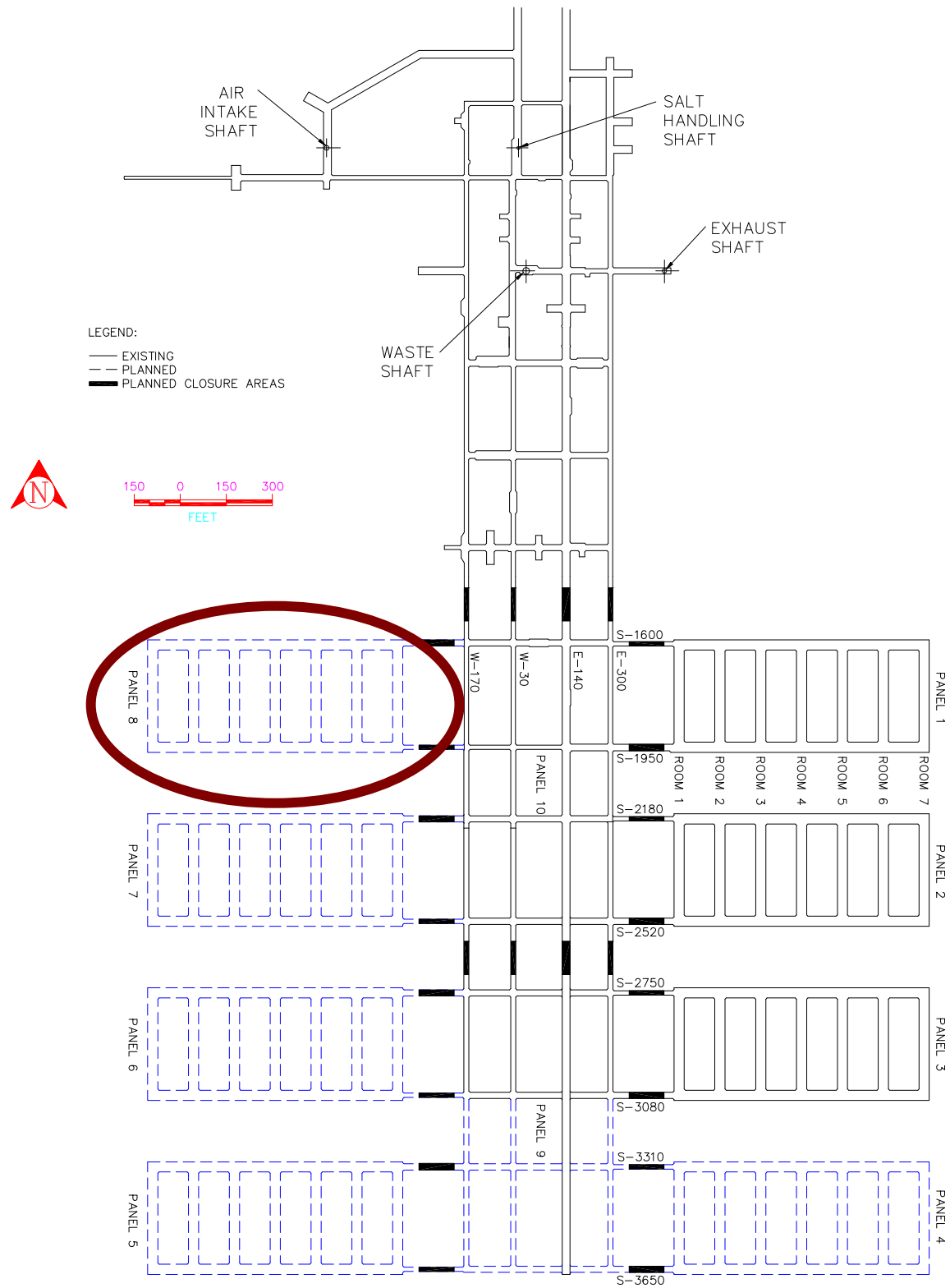


Figure 2. Repository horizon (Panel 8 shown in circle)

At 2150 feet below the surface of the earth, the WIPP is a deep geologic repository for defense generated TRU mixed waste. TRU mixed waste is received at the WIPP from various Department of Energy generator/storage sites around the country and stored on the surface in the Parking Area Unit or Waste Handling Building. The waste is then moved to the underground repository for permanent disposal in one of the Hazardous Waste Management Units known as disposal "panels." Each panel has seven disposal rooms. Each room is 91.4 meters (300 feet) long, 9.14 meters (30 feet) wide and 3.96 meters (13 feet) high, approximately. Design for Panel 8 will be the same as with the previous seven panels.

On July 8, 2005, the NMED granted the Permittees a Class 3 permit modification, allowing the Permittees to construct and dispose of TRU-mixed waste in Panels 4 through 7. Previous panels were approved in the original WIPP Hazardous Waste Facility Permit. However, disposal of TRU mixed waste was not permitted in Panel 8. Only Panel 8's construction (i.e., mining and outfitting) and certification was permitted in the 2005 modification. The request to dispose of TRU-mixed waste in Panel 8 is the only additional permitted activity being sought in the Renewal Application. No other change to the facility or to the manner in which hazardous waste is characterized, managed, stored, or disposed is being requested.

The Permittees also seek to include the *Mine Ventilation Rate Monitoring Plan*, into the HWFP. The Mine Ventilation Rate Monitoring Plan specifies a monitoring program that will result in the collection of data of adequate quantity and quality to allow the Permittees to demonstrate compliance with the ventilation requirements of the Permit. As required, the Permittees transmitted the Plan to the regulator within 90 days from issuance of the Permit. The Permittees received comments from the regulator and re-transmitted the Plan in May 2000. The Permittees have been operating to the Mine Ventilation Rate Monitoring Plan since the time of the Plan's submittal. In the Renewal Application, the Permittees have proposed some clarifying language from the May 2000 version and referenced flow rate values to the permit conditions established in Module IV of the HWFP. The Mine Ventilation Rate Monitoring Plan, however, has never formally been included by the regulator in WIPP's HWFP. By including the Mine Ventilation Rate Monitoring Plan in the Renewal Application, the Plan will be included as part of the public process.

GENERAL CONTENTS OF THE RENEWAL APPLICATION

Part A of the Permit Application must include the information required by 40 CFR 270.13, *Contents of Part A of the permit application*. The part A information provides the basic identifying information on the facility, its location, the owners and operators of the facility, what activities are to be performed that require a permit, figures, maps, and wastes that are to be either treated, stored, and/or disposed. Also, a couple of EPA forms must be completed containing similar identifying information.

The Part B of the Permit Application must include WIPP specific information required by 40 CFR §270.14, *Contents of Part B: General Requirements*, as well as WIPP specific information required by 40 CFR §270.15, *Specific Part B information requirements for containers*; and 40 CFR §270.23, *Specific Part B information requirements for miscellaneous units*.

The general requirements for a Part B application apply to all facilities to seek to treat, store, and/or dispose of hazardous waste. The questions request much more specific and detailed information about the facility and the applicant provides the answer in a narrative format. Information provided in the Part B application assists the regulator in the establishment of permit conditions.

Applicants also provide information about the containers and the containment system as a whole for the facility in the Part B. For example, container specifics, control of run-on, secondary containment,

compatibility of containment materials is included. Although not applicable at the WIPP, air emission control equipment must be addressed by some applicants.

The Renewal Application must reflect improvements in the state of control of measurement technology and changes in applicable regulations since the Permit was issued. Additionally, the permit application is subject to 20.4.1.901 NMAC, which includes the NMED administrative process. As part of the administrative process, pre-submittal public meetings are required, and certain information from the pre-submittal public meetings is included as part of the administrative record for the Renewal Application.

All this information may be a bit overwhelming, so the Permittees have organized the Renewal Application for ease of the reviewer (regulator or interested public). A “READ ME” document is provided up front that describes the basic organization and contents of the Renewal Application. Following the READ ME document, an introduction offers a background of the WIPP and the Renewal Application layout and design. Next, a regulatory crosswalk of the requirements for the Renewal Application lists:

- the regulatory requirement citation
- a description of the requirement
- the location in the Renewal Application where the requirement is met
- If the requirement is not applicable, the reason why it is not applicable

This regulatory crosswalk allows the reviewer to go from the citation and the requirement, to where in the Renewal Application the requirement is met in one view.

A summary of proposed permit text changes is included that contains the exact language the Permittees seek to modify to affect the desired change in the HWFP. Proposed text changes are identified in ~~redline/strike-out~~ format. For those who wish to print the document and do not have a color printer, new text is also double underlined and shaded so that proposed text can be readily identified.

In presenting the necessary information for Part A and B applications, the Permittees believe that the requirement be represented verbatim from the regulations. The Permittees response to the information requirement follows each requirement, is indented, and displayed in blue font. In this manner, it is apparent which statement is the regulatory requirement and which is the Permittees response.

STRATEGIC APPROACH

As with most states, New Mexico has received authorization from the Environmental Protection Agency to administer the environmental program in New Mexico, including the hazardous waste program. New Mexico’s Hazardous Waste Regulations do not stipulate the processing time for all aspects of an application, including the time necessary to provide an adequate review of the application to ensure all technical information is complete. With that in mind, the Permittees have purposefully not included a number of modifications to the HWFP they are currently considering. There are no Class 3 permit modification requests which the Permittees are considering. Class 3 permit modification requests can be characterized as being more substantial and complex changes to a permit, and they take the longest time to process.

The Permittees plan to remove other permit tasks that may utilize the regulator resources by submitting Class 2 permit modifications before submittal or the Renewal Application. Class 2 modifications are characterized as being less substantial than Class 3 modifications. By regulation, the regulator must

either approve or deny the Class 2 modification request within 120 days. By removing the demands on the regulator's resources, more focus can be given to process the Renewal Application.

However, and probably more importantly, the WIPP HWFP Renewal Application contains no significant technical issues. This should make the review period for the state less than what one could expect if several complex technical changes were being requested.

For years, under the first term of the HWFP, the Permittees have been constructing, outfitting, and disposing of TRU mixed waste in the disposal panels that precede Panel 8. The reason the Permittees were not granted the authorization to dispose of TRU mixed waste in the 2005 Class 3 modification to add Panels 4 through 7 is that Panel 8 would not be needed for disposal operations until the second term of the Permit. Assumptions of the shipping rates from DOE TRU waste generator/storage sites places the planning basis date for beginning disposal operations in Panel 8 at August 2016. Should the regulator establish a permit term of ten years, as is the case in the current HWFP, the need date for Panel 8 disposal authorization is towards the end of the second term of the HWFP. The effective date and expiration date for the second term of the HWFP is contingent upon the date the regulator issues the second term permit and the duration (or term) of that permit.

The Permittees have been operating in accordance with the Mine Ventilation Rate Monitoring Plan since the HWFP became effective. Indeed, ventilation flow rate information required by the Plan has been provided to the NMED on a regular basis. Some grammatical changes and clarifying language have been added, but no technical changes to the Plan are being requested.

SCHEDULE

If the Permittees wish to continue with any activity regulated by its HWFP, the Permittees must submit a permit renewal application at least 180 days prior to the expiration date of the HWFP. The WIPP HWFP was issued on October 27, 1999. There was a 30 day waiting period when the HWFP was issued, which places the effective date of the HWFP on November 26, 1999. Considering a ten year term for the HWFP, the expiration date of the HWFP is November 26, 2009. Calculating the date 180 day before the expiration date, we arrive at the date May 30, 2009. Being a Saturday with State offices closed, the Renewal Application will be submitted prior to the May 30, 2009, date.

In the most optimistic of scenarios, the WIPP could be issued a permit shortly after the end of the public comment period. The date of the public comment period is established by the regulator subsequent to a determination of technical completeness. If the regulator requires additional technical information they may issue a Notice of Deficiency to obtain additional information. As the plan for the Renewal Application was to eliminate technical changes, the Permittees believe no Notice of Deficiency will be forthcoming, and are hopeful that a draft Permit is issued expeditiously.

CONCLUSION

The Permittees evaluated their need for modifications to the HWFP and determined that desired modifications can be handled outside of the process for the Renewal Application. Without proposed changes that had significant technical issues, it is the Permittees hope that the NMED can evaluate and act upon the Renewal Application expeditiously. If technical changes were requested in the Renewal Application, the time required after submittal of the document would likely be protracted and the resource needs of the Permittees, NMED, and public stakeholders would be much greater. Any desired modification in the way the Permittees manage, store, and dispose of TRU mixed waste would take longer to achieve and would use more taxpayer dollars.

REFERENCES

1. *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*, Permit Number NM4890139088-TSDF, October 23, 2008
2. *Waste Isolation Pilot Plant Mine Ventilation Rate Monitoring Plan*, May 2000
3. *Waste Isolation Pilot Plant Resource Recovery Conservation and Recovery Act Part B Application*, DOE/WIPP 91-005, Revision 6, 1996
4. *Amendment of Solid Waste Disposal Act*, Section 3005.(c).(3)., 1980
5. *New Mexico Hazardous Waste Regulations*, 20.4.1.901. NMAC