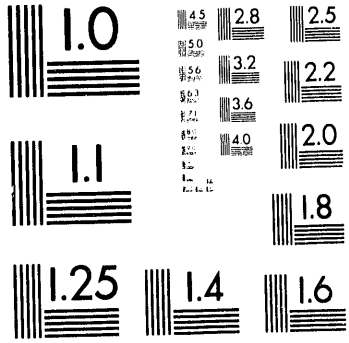
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1 of 2

FACT SHEET

Intent to Issue Permits for the Operation of
A Hazardous Waste Storage Facility under the
New Mexico Hazardous Waste Act (NMHWA)
and the Hazardous and Solid Waste Amendments of 1984 (HSWA)

Waste Isolation Pilot Plant (WIPP)
Carlsbad, New Mexico

Facility Name:	Waste Isolation Pilot Plant (WIPP)
EPA ID Number:	NM4890139088
Location:	The facility is located north of Jal Highway (State Highway 128) in Eddy County, New Mexico. The facility consists of 16 sections of federal land in Township 22 South, Range 31 East. The WIPP site is located approximately 20 miles east of Loving, and 26 miles east of Carlsbad.
Landowner:	U.S. Department of Energy (DOE)
Operator:	Westinghouse Electric Corporation Waste Isolation Division

Introduction of Facility and Purpose of Permit:

The U.S. Department of Energy (DOE) and the Waste Isolation Division (WID) of the Westinghouse Electric Corporation have requested permits from the State of New Mexico and the Environmental Protection Agency (EPA) to receive and manage hazardous waste at the Waste Isolation Pilot Plant (WIPP). The WIPP is located in southeastern New Mexico, approximately 26 miles east of the city of Carlsbad. In 1980, Congress authorized WIPP "for the express purpose of providing a research and development facility to demonstrate the safe disposal of radioactive waste resulting from the defense activities and programs of the United States." This research will be conducted during a "test phase," during which various tests or experiments will be performed to assess WIPP's viability for long-term disposal. DOE has indicated that it must manage TRU-mixed waste within the WIPP during the test phase. The waste will be transferred to WIPP from only two sites, the Idaho National Engineering Laboratory (INEL) and the Rocky Flats Plant (RFP) in Colorado. TRU-mixed waste contains both transuranic radioactive and a hazardous waste component(s), and the hazardous waste component is regulated under the New Mexico Hazardous Waste Regulations (HWMR-7). Since the WIPP will receive hazardous waste from off-site facilities, a permit to operate a hazardous waste

storage facility in accordance with HWMR-7 is required for any area of the WIPP where waste will be stored.

The WIPP facility consists of surface buildings and structures, an underground network of subsurface mined openings and vertical shafts which connect the surface and subsurface areas. The New Mexico Environment Department (NMED) received a permit application from DOE and WID which requested a permit to operate a hazardous waste container storage area in the Waste Handling Building and to operate two miscellaneous hazardous waste management (Subpart X) units within a portion of the subsurface mined openings. The NMED has reviewed the permit application and determined that the application, as modified by the conditions of the draft permit, adequately addresses the requirements of the New Mexico Hazardous Waste Act and the New Mexico Hazardous Waste Management Regulations.

The State permit to operate the hazardous waste management units at the WIPP will be issued to both the owner and operator of the WIPP. The permit will allow the owner and operator to store hazardous waste within the Waste Handling Building and within Bin Scale Test Rooms 1 and 3 of Panel 1 in the underground mined openings, under specific conditions cited within the permit. The permit will be issued for storage of waste during the test phase only, and the term of the permit will be 10 years. The permit will only allow the owner and operator to receive contact handled (CH) TRU-mixed waste. The permit will not allow disposal of TRU-mixed waste and will require the complete removal of hazardous waste and hazardous waste constituents from the facility prior to the expiration of the permit, unless a new or revised permit is issued.

The NMED has based the State draft permit on Revision 3 of the RCRA Part B permit application submitted by DOE and WID, as well as associated attachments and clarifying information submitted by the Permittees. In addition to NMED HWMR-7 requirements and EPA HSWA requirements, WIPP must meet additional requirements of a number of other agencies and statues which have jurisdiction or regulatory authority over operations at the WIPP facility. The DOE and WID have and will continue to generate plans and procedures documents in response to requirements of these other agencies or statutes. The NMED understands that many of these documents will discuss issues related both directly and indirectly to topics/etc. addressed within the State draft permit. Issues discussed in documents prepared to meet requirements of other regulations include the types and quantities of TRU-mixed waste, the types of subsurface rooms used for testing, and the number and types of containers that DOE and WID would like to use for test phase experiments at the WIPP. However, the conditions of the permit issued to DOE and WID by the NMED will supersede all other documents with regard to storage and management of TRU-mixed waste. For example, if the DOE and WID desire to add to the types of TRU-mixed waste, the type of subsurface rooms used for experiments, or

the number or type of containers which are used to manage TRU-mixed waste beyond that set forth in the draft permit, then DOE and WID must submit a request for permit modification to the NMED. Any TRU-mixed waste management activity described in a document that is not reflected in the draft permit shall not be allowed unless DOE or WID requests a permit modification. That request shall be subject to public notice and hearing.

There are a number of operational and waste handling activity issues concerning the WIPP which are not within the purview of the draft permit or that NMED does not have statutory or regulatory authority under the New Mexico Hazardous Waste Act or Hazardous Management Waste Regulations. Examples of these issues include: transportation of waste to and from the WIPP, handling and management of radioactive materials and the radioactive component of the TRU-mixed waste; the types of experiments to be conducted at WIPP (except to ensure that the experiments will not result in a release of hazardous waste or constituents); and compliance with regulations enforced by other agencies, such as the Mine Safety and Health Administration.

Description of the Permit:

Joint hazardous waste permits will be issued by both the New Mexico Environment Department (NMED) and the U.S. Environmental Protection Agency. The NMED and the U.S. EPA both must issue permits to the facility in order for WIPP to have a full Resource Conservation and Recovery Act (RCRA) permit to operate.

The permit proposed by the New Mexico Environment Department (NMED), which is found in draft permit modules I through V,under the NMHWA describes the structures, equipment, and procedures WIPP is required to comply with in order to store hazardous mixed waste. Hazardous mixed waste will be stored in specially designed containers in both above- and below-ground locations which are further described in the remainder of the fact sheet.

The permit proposed by the U.S. Environmental Protection Agency (EPA), which is found in draft permit module VI, implements the requirements imposed by the federal Hazardous and Solid Waste Amendments of 1984 (HSWA), such as hazardous waste minimization, hazardous waste land disposal restrictions, air emission standards for hazardous waste process vents, and corrective action to investigate possible releases from Solid Waste Management Units (SWMUs).

Waste to be Managed:

The types of waste to be managed during the Test Phase experiments at the site will be limited to Group I, contact handled (CH), Transuranic (TRU) mixed waste. The TRU-mixed waste designation refers to waste which contains both a transuranic radioactive and

a hazardous waste component. TRU-mixed waste accepted at the site will be classified as contact handled waste, which is defined as TRU waste whose external surface (container) dose rate does not exceed 200 mrem per hour. The Group I designation refers to the type of TRU-mixed waste which will be placed into the container, and includes such items as clothing (boots, overalls, gloves etc.), lead shielding, glassware, paper, debris, etc., which are contaminated with hazardous constituents and radioactive components. A more complete definition of the type of waste can be found in Permit Attachment II-1, the Waste Analysis Plan. The State permit also allows the storage of derived wastes, which are mixed wastes generated from on-site operations with the experimental TRU-mixed waste.

Units to be Permitted:

The DOE and WID have requested a hazardous waste permit from the State to operate three hazardous waste management units at the WIPP site. The first unit is a hazardous waste container storage area which will be located above ground within the Waste Handling Building (WHB), which is facility Building #411. The second and third units are miscellaneous hazardous waste management units, which consist of Bin Scale Test Rooms (BSTRs) 1 and 3 located within Panel 1 of the underground mined openings.

Waste Handling Building

The Waste Handling Building (WHB) consists of a totally enclosed area of approximately 84,000 square feet. Of that 84,000 square feet, approximately 36,000 square feet will be permitted to store and manage TRU-mixed waste. The hazardous waste container storage area of the WHB will consist of three distinct interconnected rooms which will manage the waste. The rooms are: (1) Inventory and Preparation Area (IPA), approximately 27,000 square feet; (2) the Site Generated Waste Room (SGWR), approximately 5,250 square feet; and (3) the Overpack and Repair Room (OPRR), approximately 3,750 square feet. These rooms will be used to store TRU-mixed waste consisting of the test phase experiment wastes and "derived" wastes which are generated during the Test Phase and during closure.

The concrete floor, floor trenches and sump of the IPA, SGWR, and OPRR will be covered with an impermeable coating. The WHB ventilation system will be operated in such a manner that the interior of the WHB will be maintained at a lower atmospheric pressure than the outside of the building, thus mitigating potential contaminant release to the atmosphere through openings or air leakage points. The exhaust from the WHB ventilation system will be filtered prior to discharge to the atmosphere. The three areas of the WHB will be permitted to store a total of 172 test bin containers and four 55-gallon drums of derived wastes. It is anticipated that some of the 172 test bins that may be stored will be empty test bins.

During closure of the facility, the IPA room will be permitted to store up to 500, 55-gallon drums of derived waste. Complete decontamination of the two subsurface BSTRs and the WHB could generate relatively significant quantities of waste, necessitating the maximum 500 drum storage capacity during closure. In addition, up to 12 spent activated carbon canisters could be stored in the WHB during closure.

Bin Scale Test Rooms (BSTRs)

The BSTRs 1 and 3 are located within Panel 1 of the subsurface mined openings. The BSTRs are classified as miscellaneous hazardous waste management units since hazardous waste will be stored in units which do not have specific technical standards under New Mexico HWMR-7. The BSTRs are located within the bedded salt of the Salado Formation, and are approximately 2150 feet below the surface. BSTRs 1 and 3 have nominal dimensions of 13 feet high, 33 feet wide and 300 feet long, with an approximate floor area of 9,900 square feet. The two BSTRs will store TRU-mixed waste during test phase experiments as well as "derived" waste which is generated during the test phase. Test bins are carbon steel and polyethylene lined, with a nominal volume of 330 gallons. Each test bin will be completely enclosed in a carbon steel standard waste box/radiological control boundary (SWB/RCB) that has an approximate volume of 410 gallons. The SWB/RCB will also act as secondary containment for the test bin.

Derived waste will be stored in standard 55-gallon steel drums with polyethylene liners. Secondary containment is provided by either over packing four drums into a SWB or placing the drums on a steel portable containment tray.

The capacity of BSTR 1 is 68 test bins to store TRU-mixed waste, 8 empty baseline bins, 16 drums of derived waste within 4 SWBs, and 2 drums on a portable containment tray. BSTR 1 may also store up to 12 spent carbon canisters. The capacity of BSTR 3 is 104 test bins (inside RCBs) and 2 drums of derived waste on a portable containment tray.

Both of the BSTRs have been equipped with an engineering feature which consists of 10-foot long rock bolts, which are designed to enhance room stability. In addition, BSTR 1 has been equipped with a supplementary roof support system consisting of roof bolts, steel channel sets, and a wire rope/wire mesh lacing system to enhance the roof stability. The system is discussed further in Module IV and Permit Attachments III-1, IV-5, and IV-6. The permit application submitted by DOE and WID did not specify that a similar system would be used in BSTR 3. Therefore, the draft permit, under permit conditions IV.B.6 and I.J.1, requires the Permittees to demonstrate to NMED that a supplementary support system which can achieve the same degree of safety as the existing BSTR 1 supplementary system will be in place prior to acceptance of waste in BSTR 3.

Each of the BSTRs is also equipped with a geomechanical monitoring system which allows measurements to be taken to determine the nature and amount of wall, floor and ceiling movements within the BSTR. Analyses of the slat movement around the BSTR will provide advance warning of potential roof stability problems and allow for safe retrieval of waste if required. This system is described more fully in Module IV, and Permit Attachments III-1, IV-5, and IV-6.

Each test bin stored in a BSTR will be connected to an air emission collection, control, and monitoring system designed to prevent the release of volatile organic hazardous constituents to the atmosphere. In addition, the air entering and exiting each BSTR will be monitored on a regular basis to ensure that releases of volatile organic hazardous constituents have not occurred. These systems are more fully addressed in the unit description contained in Module IV, and in Permit Attachments III-1, IV-1, IV-2, and IV-3.

Organization of the Draft Permit:

The WIPP draft permit generally follows the format specified by NMED and used by the Department for other New Mexico permits. The draft permit also incorporates the format specified in the EPA guidance entitled the "Model RCRA Permit for Hazardous Waste Management Facilities," Office of Solid Waste, U.S. Environmental Protection Agency, September, 1988.

The WIPP draft permit is divided into six modules, each which will be briefly described in this fact sheet. The first two modules, Modules I and II, are entitled "General Permit Conditions" and "General Facility Conditions," respectively, and are generally applicable (included within) to all RCRA permits. Module I addresses such issues as permit expiration date, and the Department's authorization to inspect and obtain samples. Module II establishes permit conditions for such issues as security, training, waste analysis, and waste characterization. Module II also addresses emergency procedures (contingency plan) and general closure requirements.

Module III addresses the engineering design and operations of the above ground hazardous waste container storage area referred to as the Waste Handling Building. For example, this module describes the design requirements for the building, the secondary containment system, and the containers used to manage waste. The module also specifies the maximum number of waste containers which can be managed in the unit and how the containers will be managed, stored and inspected to minimize the potential for release of hazardous constituents to the environment. Module IV addresses the same issues concerning the design and operation of the Bin Scale Test Rooms (BSTRs) which are located in the subsurface mined openings. Module V addresses the groundwater monitoring program requirements for the WIPP facility. Module VI contains permit conditions that

are required by the Hazardous and Solid Waste Amendments of 1984 (HSWA) under EPA authority.

Draft Permit Issues:

This section of the fact sheet addresses conditions within the permit which may be of widespread public interest or that may raise issues of concern. In order to facilitate public review, issues and conditions are discussed by permit module.

Module I

Module I of the draft permit contains a compliance schedule which is included as permit conditions I.J.1 through I.J.13. Under HWMR-7, pt. IX and 40 CFR 270.33, a permit may include a schedule of compliance which requires the facility to submit certain information or documents within a specified time period. The draft permit contains several compliance schedules which may be of interest to the public. The first is that by December 31, 1996, the Permittees must identify the name and location of the off-site, out-of-state interim storage facility(s) which will receive all of the TRU-mixed waste managed at the WIPP at the time of closure. In a related compliance schedule, the Permittees must identify, within a year of permit issuance, the name and location of the off-site facility to which TRU-mixed waste from the WIPP will be shipped if waste removal is required prior to identification of an interim storage facility. The second compliance schedule of interest requires the Permittees to submit detailed design plans for the proposed roof support and geomechanical monitoring systems in BSTR 3 to NMED for approval prior to managing waste in BSTR 3. Another compliance schedule issue requires the Permittees to provide a sampling and analysis plan and obtain samples in accordance with that plan to determine natural background levels (if any) of hazardous waste constituents in the below-ground salt formation prior to accepting waste at the facility. This information will be used to help demonstrate that all hazardous waste and hazardous constituents have been removed from the BSTRs at closure.

Module II

Module II addresses waste characterization and waste analysis plan requirements, as well as facility security, general inspection requirements, personnel training, preparedness and prevention, the facility contingency plan, and general closure requirements.
Relative to waste characterization, a number of issues may be of interest to the public, including waste acceptance criteria. The draft permit limits WIPP to accepting waste only from INEL and RFP, while imposing waste acceptance criteria that are similar to those currently in place at WIPP, including restrictions on accepting explosive/flammable wastes and reactive wastes, free liquid limitations to <1%, and visual waste examination requirements.

Waste which may be managed in WIPP during the test phase have also been identified as an issue of concern to the public. The draft permit restricts WIPP to accepting only contact handled Group I TRU-mixed wastes, which is a waste grouping that includes waste categories such as combustibles and noncombustibles, benelex and plexiglass, firebrick and ceramic crucibles, graphite, filters, glass supercompacted waste, leaded rubber and metal wastes which have been contaminated with hazardous and TRU radioactive components. Combining of waste categories within a given bin is allowed because compatibility has been demonstrated.

Permit conditions within Module II require that Group I waste be characterized at the generator site via headspace gas analysis (in accordance with previously determined EPA requirements), process knowledge, real-time radiography (RTR), and visual examination. Chemical analysis of Group I wastes beyond headspace gas analysis is not required, although reporting of tentatively identified compounds detected during headspace gas analyses is dictated within draft permit conditions. The combination of process knowledge, visual examination, RTR, and headspace gas analysis provides sufficient information to ensure that Group I wastes are characterized and can be managed appropriately in accordance with RCRA requirements.

Although DOE requested that they be able to manage Group II and III wastes, acceptance of these waste Groups--which include solidified organic and inorganic sludges and pyrochemical salts, and combinations of sludges and Group I wastes--shall not be allowed because the application did not contain sufficient sampling and analysis information to ensure adequate waste characterization.

Characterization of on-site generated waste may also be of concern to the public. Wastes would be generated on-site, for example, if a small spill was cleaned up with an absorbent. On-site generated (derived) waste and retrieved waste shall be characterized via process knowledge, but if NMED questions waste contents, additional sampling and analysis may be required by NMED. Because characterization of Group I wastes prior to acceptance at WIPP is satisfactorily stringent, chemical characterization of a spill is not immediately required. DOE and WID are required to perform detailed waste shipment screening and verification and to follow prescribed quality assurance methodologies presented in Attachment II-2 of the permit. In response to public concerns regarding accuracy of generator-site bin loading and waste characterization, the draft permit requires DOE and WID to perform generator-site audits to verify that waste characterization as required under the permit are being satisfactorily performed, and to report all nonconformances and reject bins which have not met audit requirements unless the generators can demonstrate compliance with waste characterization requirements. Management of simulated (non-hazardous) wastes within the WIPP is allowed, but cannot interfere with the safe management of TRU-mixed waste management activities. If the

simulated waste at some point generates a hazardous waste, management of this waste must be in accordance with all conditions of the permit.

Quarterly reports are also required within the draft permit to transmit information to NMED that is not included in annual reports, and to keep NMED informed throughout the waste characterization process. These reports shall include waste profile forms and bin case reports, visual and RTR examination reports, results of headspace gas analysis (for both drums prior to loading, and bins after loading, including TICs), results of generator site audits, an assessment of how visual, headspace gas, and RTR results compare with those anticipated via process knowledge, copies of manifests, and any additional information as acquired.

Module III

Module III provides permit conditions for the design and operation of the Waste Handling Building (WHB) hazardous waste container storage area. Several of the permit conditions may be of particular interest to the public. First, the Permittees will be limited to the use of only Type 1 dry and Type 1 humid test bins for managing experimental TRU-mixed waste. A permit modification request must be submitted and approved before the Permittees would be allowed to manage experimental TRU-mixed waste in Type 1 inundated test bins or Type 2 (pressurized) test bins. Additional public notice and comment opportunity would be required before such a modification could be approved. Second, the Permittees shall not be allowed to accept for storage any containers of TRU-mixed waste which contain greater than 1% free liquid by volume. Secondary containment for containers of TRU-mixed waste stored in the WHB will be provided either by the concrete floor and the fire suppression water trench/sump system, or by a supplementary secondary containment system such as a portable steel tray. Test bins stored in the WHB will be enclosed in standard waste boxes (RCBs) except when the bins are being prepared for Test Phase experiments or for shipping off-site. While test bin containers managing TRU-mixed waste are stored in the WHB, the Permittees will be required to conduct sampling, analysis, and purging of head space gases in the test bins at a frequency which ensures that the mixture of potentially flammable gases within the headspace remains at concentrations no more than one-half of the lower explosive limit.

Module IV

Module IV provides permit conditions for the design and operation of Bin-Scale Test Rooms (BSTRs) 1 and 3 within the subsurface. The use of subsurface mined openings called Alcoves for experiments using TRU-mixed waste is not included in this permit. As discussed under Module III, the draft permit will limit the Permittees to the use of only Type 1 dry and Type 1 humid test bins for conducting

Test Phase experiments with TRU-mixed waste. Test Bin containers will not be accepted for storage if they contain greater than 1% liquid by volume. However, the Permittees will be allowed to adjust the humidity of the atmosphere inside the test bins while they are stored in the BSTRs. Humidification of the atmosphere in a bin will be accomplished by recirculating the air in the bin over a reservoir of salt brine. The volume of liquid evaporated from the reservoir into the test bin atmosphere will be carefully measured to ensure that the total amount of free liquid (including moisture in the test bin at the time of receipt and moisture added during humidification) shall not be allowed to exceed 1% of the volume of the test bin. Secondary containment for containers of TRU-mixed waste stored in the WHB will be provided either by the RCB for test bins, or by a portable secondary containment tray or an SWB for derived waste containers. While test bin containers managing TRU-mixed waste are stored in the BSTRs, the Permittees will be required to conduct sampling, analysis, and purging of head space gases in the test bins at a frequency which ensures that the mixture of potentially flammable gases within the headspace remains at concentrations no more than one-half of the lower explosive limit.

Several of the permit conditions related to the management of TRU-mixed waste in the BSTRs may be of particular interest to the public. The first is the installation, monitoring and maintenance of the existing and proposed roof support systems. The conditions of Module IV require the Permittees to maintain the existing roof support, roof support monitoring, and geotechnical monitoring systems in good operating order. The conditions also require the Permittees to submit designs and plans for NMED approval if any proposed roof support or monitoring systems for BSTR 3 are different from the existing systems in BSTR 1. The Permittees are required to monitor the condition of the BSTRs and the supplementary roof support systems using the monitoring equipment described above. Corrective action, maintenance, and possibly waste retrieval, will be required if the monitoring indicates that deterioration of the roof or support system is occurring.

Another set of permit conditions in Module IV requires the Permittees to manage volatile organic compound (VOC) emissions from test bin containers in storage in the BSTRs to prevent releases to the atmosphere. This will be accomplished by connecting the test bin outlets to a manifold collection system which includes an activated carbon filter capable of removing at least 95% of the test bin VOC emissions. The Permittees will be required to monitor the outlet of the manifold collection system(s) as well as the outlets from the BSTRs themselves on a regular basis to ensure that significant releases of VOCs to the atmosphere are not occurring.

Module V

The permit does not require DOE and WID to perform groundwater monitoring during the term of the permit. This determination was made because the Waste Handling Building (WHB), Bin Scale Test Rooms (BSTRs), and waste container designs are such that release from the units to the uppermost aquifer is not likely. Site hydrogeologic conditions were also evaluated by examining hydrogeologic data included within the permit application and associated references. These site-specific hydrogeologic data, such as depth to groundwater, groundwater flow rates, and rock permeability, indicate that contaminant introduction to, or migration within the uppermost aquifer below the WHB or BSTRs during the permit period is highly unlikely. However, should conditions change within the Waste Handling Building (WHB) or Bin Scale Test Rooms (BSTRs), such that the potential for a release to the uppermost aquifer below the WHB or BSTR could occur, NMED can require groundwater monitoring.

Module VI

The permit proposed by the U.S. Environmental Protection Agency (EPA) is located in Module VI and implements the requirements imposed by the Hazardous and Solid Waste Amendments of 1984 (HSWA) to the federal Solid Waste Act. Conditions include requirements for hazardous waste minimization, hazardous waste land disposal restrictions, air emission standards for hazardous waste process vents, and corrective action to investigate possible releases from Solid Waste Management Units (SWMUs).

SWMUs are waste units that contain hazardous waste constituents, such as lead, benzene, xylene, etc. The facility must find the full extent of contamination for each SWMU identified in the permit. Some SWMUs may require cleanup/remediation. In addition, the permit requires the Permittees to notify EPA of newly identified SWMUs and newly identified releases from SWMUs at the WIPP.

Availability of the Draft Permits:

The draft permits are available for public review at the New Mexico Environment Department's Hazardous and Radioactive Materials Bureau, 525 Camino de Los Marquez, Suite 4 in Santa Fe, New Mexico 87502, Monday through Friday from 8:00 A.M. until 5:00 P.M., and at the library of the U.S. Environmental Protection Agency, (U.S. EPA), Region 6, 1445 Ross Avenue in Dallas, Texas 75202. Copies are also available for public review at the following locations:

Santa Fe

Ms. Norma McCallum
New Mexico State Library
325 Don Gaspar
Santa Fe, New Mexico 87503
(505) 827-3800

Albuquerque

Ms. Diana Zepeda
WIPP Reading Room
National Atomic Museum
USDOE - Albuquerque Operations Office
P.O. Box 5400
Albuquerque, New Mexico 87115
(505) 845-6670

Mrs. Glenda Sweatt
SNL Waste Management and Transportation Library
Organization 6332
P.O. Box 5800
Albuquerque, New Mexico 87185
(505)844-2416

Ms. Kathleen Keating
Zimmerman Library
Government Publications Department
University of New Mexico
Albuquerque, New Mexico 87138
(505) 277-2003

Albuquerque Public Library
501 Copper Avenue NW
Albuquerque, New Mexico 87138
(505) 768-5140

Socorro

Reference Librarian
Martin Speare Memorial Library
New Mexico Institute of Mining and Technology
Campus Station
Socorro, New Mexico 87801
(505) 835-5614

Las Cruces

Reference Librarian
Thomas Branigan Memorial Library
200 E. Picacho
Las Cruces, New Mexico 88005
(505) 526-1045

Carlsbad

Ms. Mary Elms
Carlsbad Public Library
101 S. Halaguero Street
Carlsbad, New Mexico 88220
(505) 885-6776

Hobbs

Ms. Ruth Hill or Ms.Gale Robinson
Pannell Library
New Mexico Junior College
3317 Lovington Highway
Hobbs, New Mexico 88240
505) 392-5473

Roswell

Reference Librarian
Roswell Publc Library
301 N. Pennsylvania
Roswell, New Mexico 88201
505) 622-71 1

Raton

Mr. Richard Azar
Raton Public Library
244 Cook Avenue
Raton, New Mexico 87740
(505) 445-9711

Out of State

Document Control
Office of Science and Technical Information
Technical Information Center
P.O. Box 62
Oak Ridge, Tennessee 37830

Ms. Joan Ogbazghi
DOE/Forrestal Building
Public Library Reading Room
AD-234.1, FOI-USDOE
1000 Independence Avenue SW
Washington, D.C. 20585

Mr. John T. Conway, Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue NW, Suite 700
Washington, D.C. 20004

Ms. Christine Shaver
Environmental Defense Fund
1405 Arapahoe Avenue
Boulder, Colorado 80302
(303) 440-4901

Mr. Rich Mayer
EPA Region 6 Library
1445 Ross Avenue
Dallas, Texas 87502
(214) 655-7442

Please contact the location of your choice listed above for open hours that the draft permits are available for public review.

Comment Period and Regulatory Contacts:

For the RCRA hazardous waste permit:

Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, New Mexico 87502
Attention: Ms. Barbara Hoditschek
(505) 827-4308

For the HSWA hazardous waste permit:

Mr. Bill Honker, Chief
Hazardous Waste (RCRA) Permits Branch
1445 Ross Avenue
Dallas, Texas 75202
(214) 655-6770

Comments on either draft permit must be received by November 1, 1993, in order to be considered.

Permit Decision:

All comments submitted concerning the NMED hazardous waste draft permit will be considered in formulating the NMED permit decision. The Secretary of the NMED may propose a modified draft permit based on comments received during this comment period. After public hearings the Secretary of the NMED may either approve the permit as written, modify the permit, or deny the permit in whole or in part. Public hearings will be held before any NMED permit decision is made.

In order to store TRU-mixed wastes at the WIPP, the Permittees must obtain permits from both the NMED and the U.S. EPA. All comments submitted concerning the EPA draft permit will be considered in formulating the EPA permit decision. The Regional Administrator of the U.S. EPA, Region 6 may either issue the permit as proposed or modify the permit based on the comments received. EPA may participate in the public hearings that will be scheduled by the NMED.

If the permits are issued, they will become the facility operating conditions, in conjunction with all applicable regulations promulgated in the New Mexico or federal Hazardous Waste Regulations for hazardous waste management at the facility. The NMED and the U.S. EPA will notify DOE and Westinghouse of the final permit decision and each person who submits written comments during the public comment period and who provides a forwarding address.

DRAFT RCRA/HSWA

HAZARDOUS WASTE FACILITY PERMIT

PERMITTEES: WASTE ISOLATION PILOT PLANT (WIPP) ; U.S. DEPARTMENT OF ENERGY (D0E); AND WESTINGHOUSE ELECTRIC CORPORATION, WASTE ISOLATION DIVISION (WID)

LOCATION: North of Jal Highway (State Highway 128) in Eddy County, New Mexico. The facility includes 16 sections of federal land in Township 22 South, Range 31 East. Approximately 20 miles east of Loving, and 26 miles east of Carlsbad.

I.D. NUMBER: NM4890139088 PERMIT NUMBER: NM4890139088-01

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6901, et seq.), and the New Mexico Hazardous Waste Act (Section 74-4-1 et seq., NMSA 1978), Permit is issued to the owner and operator of the U.S. DOE, WIPP site (hereafter called the Permittee(s)) to operate a hazardous waste storage facility consisting of a container storage unit (Waste Handling Building) and two Subpart X miscellaneous below-ground storage units (Bin Scale Test Rooms 1 and 3), all are located at the above location.

The Permittee must comply with all terms and conditions of this Permit. This Permit consists of the conditions contained herein, including the attachments. Applicable regulations cited are the New Mexico Hazardous Waste Management Regulations, as amended 1992 (HWMR-7), the regulations that are in effect on the date of permit issuance. This Permit shall become effective upon issuance by the Secretary of the New Mexico Environment Department and shall be in effect for a period of ten (10) years from issuance.

This Permit is also based on the assumption that all information contained in the Permit application and the administrative record is accurate and that the activity will be conducted as specified in the application and the administrative record. The Permit application consists of Revision 3, as well as associated attachments and clarifying information submitted on January 25, 1993, and May 17, 1993.

Any inaccuracies found in the information submitted in the Permit application may be grounds for the termination or modification of this Permit and/or potential enforcement action.

Signed this _____ *day of* _____, *1993.*

by _____

Judith M. Espinosa, Secretary
New Mexico Environment Department

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None

MODULE I - GENERAL PERMIT CONDITIONS

I.A. EFFECT OF PERMIT

The Permittees are allowed to store hazardous waste in accordance with the conditions of this Permit. Any storage and treatment of hazardous waste requiring a permit under the New Mexico Hazardous Waste Management Regulations (HWMR-7), Part V and not specifically authorized in this Permit is prohibited. Subject to HWMR-7, Pt. IX, 40 CFR 270.4, compliance with this Permit constitutes compliance, for purposes of enforcement, with the New Mexico Hazardous Waste Act (Sections 74-4-1 et seq. NMSA 1978) and HWMR-7, Pts. V, VII, and IX, only for those management practices specifically authorized by this Permit. The Permittees are also required to comply with HWMR-7, Pts. I, II, III, and IV to the extent the requirements of those Parts are applicable. The Permittees must also comply with all applicable self-implementing provisions imposed by the Resource Conservation and Recovery Act (RCRA) or HWMR-7, Pt. VIII. A complete (RCRA) permit consists of this Permit and a U.S. EPA Permit issued under the provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA) which addresses the portion of the RCRA program for which the State is not authorized. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), 3008(h), 3013, or 7003 or RCRA; Sections 106(a), 104 or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), or any other law providing for protection of public health or the environment (HWMR-7, Pt. IX, § and 270.4, 270.30(g)).

I.B. PERMIT ACTIONS

I.B.1. Permit Modification, Revocation and Reissuance, and Termination

This Permit may be modified, revoked and reissued, or terminated for cause, as specified in HWMR-7, Pt. IX, § 270.41, 270.42, and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittees,

does not stay the applicability or enforceability of any permit condition (HWMR-7, Pt. IX § 270.4(a) and 270.30(f)).

I.B.1.a. Permit Modifications for Engineering Designs

The permittees must notify the NMED Secretary in accordance with HWMR-7, Pt. IX § 270.42 whenever the design plans or design drawings specified in this permit are changed.

I.B.2. Permit Renewal

This Permit may be renewed as specified in HWMR-7, Pt. IX § 270.30(b) and Permit Condition I.E.2. Review of any application for a Permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations (HWMR-7, Pt. IX, § 270.30(b)).

I.C. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby (HWMR-7, Pt. X, Section 1004).

I.D. DEFINITIONS

For purposes of this Permit, terms used herein are defined for each module. Terms found in Module I shall have the meaning defined in HWMR-7, Pt. IX, § 270.2, unless this Permit specifically provides otherwise. Terms found in Modules II and III shall have the meaning defined in HWMR-7, Pt. I, § 260.10, unless this Permit specifically provides otherwise. Where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term. "Secretary" means the Secretary of the New Mexico Environment Department (NMED), or his designee or authorized representative. "Regional Administrator" means the Regional Administrator of the U.S. Environmental Protection Agency, Region 6, or his designee or authorized representative. "Permittees" means the owner and operator of the Waste Isolation Pilot Plant (WIPP), Carlsbad, New Mexico, EPA I.D. Number NM4890139088. The owner

is the U.S. Department of Energy (DOE) and the operator is the Westinghouse Waste Isolation Division (WID).

I.E. DUTIES AND REQUIREMENTS

I.E.1. Duty to Comply

The Permittees shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency Permit. Any Permit noncompliance, other than noncompliance authorized by an emergency Permit, constitutes a violation of RCRA and the New Mexico Hazardous Waste Act (NMHWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a Permit renewal application (HWMR-7, Pt. IX, § 270.30(a)).

I.E.2. Duty to Reapply

If the Permittees wish to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittees shall submit a complete application for a new Permit at least 180 days prior to Permit expiration (HWMR-7, Pt. IX, § 270.10(h) and 270.30(b)). Unless the Permit reapplication has been submitted and approved, the Permittees will be responsible for ensuring that the closure activities required by Permit Condition II.L will be completed by the end of the effective date of this permit.

I.E.3. Permit Expiration

Pursuant to HWMR-7, Pt. IX, § 270.50, this Permit shall be effective for a fixed term of ten years from its effective date. As long as NMED is the Permit-issuing authority, this Permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittees have submitted a timely, complete application (see HWMR-7, Pt. IX, § 270.10 and 270.13 through 270.29) and, through no fault of the Permittees, the NMED Secretary has not issued, or denied a new Permit, as set forth in HWMR-7, Pt. IX, § 270.51.

I.E.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittees, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit (HWMR-7, Pt. IX, § 270.30(c)).

I.E.5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittees shall take all reasonable steps to minimize releases to the environment and shall carry out such measures, as are reasonable, to prevent significant adverse impacts on human health or the environment (HWMR-7, Pt. IX, § 270.30(d)).

I.E.6. Proper Operation and Maintenance

The Permittees shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittees to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit (HWMR-7, Pt. IX, § 270.30(e)).

I.E.7. Duty to Provide Information

The Permittees shall furnish to the NMED Secretary, within a timeframe designated by NMED, any relevant information which the NMED Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittees shall also furnish to the NMED Secretary, upon request, copies of records required to be kept by this Permit (HWMR-7, Pt. V, § 264.74(a); Pt. IX, § 270.30(h)).

I.E.8. Inspection and Entry

Pursuant to HWMR-7, Pt. IX, § 270.30(i), the Permittees shall allow the NMED Secretary, or an authorized representative, upon the presentation of credentials and other documents, as may be required by law, inspection and entry privileges authorized by Permit Conditions I.E.8.a. through I.E.8.d.

I.E.8.a. Entry

Enter at reasonable times upon the Permittees' premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit.

I.E.8.b. Access to Records

Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit.

I.E.8.c. Inspection

Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit.

I.E.8.d. Sampling or Monitoring

Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by RCRA and New Mexico Hazardous Waste Act (NMHWA), any substances or parameters at any location. The Permittees shall be provided the opportunity to obtain split or duplicate samples.

I.E.9. Monitoring and Records

I.E.9.a. Samples and Measurements

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must follow the methodology described in Permit Attachment II-1, or sampling and analysis required by Permit Conditions I.J.4 or I.J.7, or be approved by the NMED Secretary. Analytical methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Wastewater Analysis, or an equivalent method, as specified in Permit Attachment II-3 or approved by the NMED Secretary (HWMR-7, Pt. IX, § 270.30(j)(1)).

I.E.9.b. Record Retention

The Permittees shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification (concerning waste minimization) required by HWMR-7, Pt. V, § 264.73(b)(9), and records of all data used

to complete the application for this Permit for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application. These periods may be extended by request of the NMED Secretary at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility (HWMR-7, Pt. IX, § 270.30(j)(2)).

I.E.9.c. Monitoring Records

Pursuant to HWMR-7, Pt. IX, § 270.30(j)(3), records of monitoring information shall specify:

I.E.9.c.i.

The dates, exact place, and times of sampling or measurement;

I.E.9.c.ii.

The individuals who performed the sampling or measurements;

I.E.9.c.iii.

The dates analyses or data reduction were performed or evaluated;

I.E.9.c.iv.

The individuals who performed the analyses;

I.E.9.c.v.

The analytical techniques or methods used; and

I.E.9.c.vi.

The results of such analyses.

I.E.10. Reporting Planned Changes

The Permittees shall give notice to the NMED Secretary, as soon as possible, of any planned physical alterations or additions to the permitted facility (HWMR-7, Pt. IX, § 270.30(l)(1)). The NMED Secretary must approve planned changes prior to implementation.

I.E.11. Reporting Anticipated Noncompliance

In accordance with HWMR-7, Pt. IX, § 270.30(l)(2), the Permittees shall give advance notice to the NMED Secretary of any planned changes in the permitted facility or activity which may result in non-compliance with permit requirements. The NMED Secretary must approve the planned changes prior to implementation.

I.E.12. Transfer of Permits

This Permit is not transferable to any person, except after notice to the NMED Secretary. The NMED Secretary may require modification or revocation and reissuance of the Permit pursuant to HWMR-7, Pt. IX, § 270.40 (HWMR-7, Pt. IX, 270.30(l)(3)). The Permittees shall comply with Permit Condition II.B regarding additional notification requirement in the event of a transfer.

I.E.13. Twenty-Four Hour and Subsequent Reporting

I.E.13.a. Imminent Endangerment

The Permittees shall report to the NMED Secretary any noncompliance which may endanger human health or the environment. This report must be made orally within twenty-four hours of the time the Permittees becomes aware of the situation. It must be made even if the Contingency Plan (Permit Attachment II-12) is not implemented. The report must include:

I.E.13.a.i.

Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.

I.E.13.a.ii.

Any information concerning a release or discharge, or a threat of a release or discharge of hazardous waste, or of a fire or explosion at the hazardous waste management facility, which could threaten the environment or human health outside the unit.

I.E.13.b. Oral Report

The report of an imminent endangerment event and its cause shall include:

I.E.13.b.i.

Name, address, and telephone number of the owner or operator;

I.E.13.b.ii.

Name, address, and telephone number of the facility;

I.E.13.b.iii.

Date, time, and type of incident;

I.E.13.b.iv.

Name and quantity of materials(s) involved;

I.E.13.b.v.

The extent of injuries, if any;

I.E.13.b.vi.

An assessment of actual or potential hazards to the environment and human health outside the unit, where this is applicable; and

I.E.13.b.vii.

Estimated quantity and disposition of recovered material that resulted from the incident.

I.E.13.c. Written Report

A written report of an imminent endangerment event shall also be provided to the NMED Secretary within five days of the time the Permittees become aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period(s) of the occurrence including exact dates and times; and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to

reduce, eliminate, and prevent recurrence of the noncompliance. The NMED Secretary may waive the five-day written notice requirement in favor of a written report within 15 days (HWMR-7, Pt. IX, § 270.30(l)(6)).

I.E.13.d. Contingency Plan Implementation Report

If the Contingency Plan is implemented, the Permittees must comply with the reporting requirements listed in Permit Attachment II-12.

I.E.14. Other Noncompliance

The Permittees shall report all other instances of noncompliance, not otherwise required to be reported by Permit Condition I.E.13., at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition I.E.13.b. (HWMR-7, Pt. IX, § 270.30(l)(10)).

I.E.15. Other Information

Whenever the Permittees become aware that they failed to submit any relevant facts in the Permit application, or submitted incorrect information in a Permit application or in any report to the NMED Secretary, the Permittees shall promptly submit such facts or correct information (HWMR-7, Pt. IX, § 270.30(l)(11)).

I.F. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to or requested by the NMED Secretary, his designee, or authorized representative, shall be signed and certified in accordance with HWMR-7, Pt. IX, § 270.11 and 270.30(k).

I.F.1. Professional Engineer (P.E.) Certification

Certain technical data, such as design drawing plans and specifications and engineering studies, must be certified by a registered professional engineer pursuant to § 270.14(a) and NMHWA. This permit condition must be met prior to any hazardous waste being accepted at the WIPP facility.

I.G. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE NMED SECRETARY

All reports, notifications, or other submissions which are required by this Permit to be sent or given to the NMED Secretary should be sent by certified mail or hand-delivered to:

Secretary
Environment Department
Harold Runnels Building, Room #N4050
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502

I.H. CONFIDENTIAL INFORMATION

In accordance with HWMR-7, Pt. IX, § 270.12, the Permittees may claim confidential any information required to be submitted by this Permit.

I.I. PERMIT CONSTRUCTION

I.I.1. Citations

Whenever paragraphs of this Permit or of the Hazardous Waste Management Regulations are cited, such citations include all subordinate sections of the cited paragraph. When subordinate sections are cited, such citations include all subsections of the cited subparagraphs. All such citations shall be considered an inclusion by reference to this Permit in accordance with HWMR-7, Pt. IX.

I.I.2. Gender

Whenever the pronoun "he" is used in reference to the Secretary of the New Mexico Environment Department or the Permittees, it is to be read as "she" in any instance where the person of reference is female.

I.J. DOCUMENTS TO BE SUBMITTED PRIOR TO OPERATION

I.J.1. Final Off-Site Facility

Prior to December 31, 1996, the Permittees shall submit to the NMED Secretary, the name and location of the off-site facility(s) which will receive all of the TRU-mixed waste managed at WIPP at the time of closure.

I.J.2. Interim Off-Site Facility

Within one year of the issuance of this Permit, the Permittees shall provide to the NMED Secretary, the name and location of the off-site facility(s) to which removed waste will be shipped if waste removal from the WIPP facility is required prior to the identification of the final off-site facility(s).

I.J.3. Background Sampling

Prior to acceptance of waste at the facility, the Permittees shall provide to the NMED Secretary, for approval, a detailed sampling and analysis plan for establishing background concentrations of the hazardous constituents listed in Table I-2 of Permit Attachment II-13, in the repository salt formation. The plan shall describe the total number and location of background samples to be collected and the procedures to be used.

I.J.4. Sampling and Analysis Plan

Prior to acceptance of waste at the facility, the Permittees shall provide to the NMED Secretary, for approval, a detailed sampling and analysis plan for the salt samples from the Bin-Scale Test Rooms (BSTRs) which will be used to demonstrate that all hazardous constituents have been removed to background levels. The plan shall describe the total number and location of salt samples which will be collected and the procedures used. In addition to random grid sampling, the plan must provide procedures for collecting at least two salt samples for hazardous constituent analysis from each area where salt was excavated to remove radioactive contamination. The plan must also include procedures for excavating areas of salt where hazardous constituent contamination has occurred and procedures for resampling to determine the effectiveness of the removal.

I.J.5. Closure Plan Modifications

Prior to acceptance of waste at the facility, the Permittees shall submit to the NMED Secretary, for approval, a revision of the procedures provided in Permit Attachment II-14 for confirming that all hazardous waste and hazardous waste constituents have been removed from the BSTRs. The revision must:

- provide a statement that the proposed statistical comparison will be conducted for each individual hazardous constituent analyzed;

- provide a proposed value which will be assigned during statistical comparisons to a sample result which is below the method detection limit.

I.J.6. Decontamination of Equipment and Structure at Closing

Within one year of the issuance of this permit, the Permittees shall submit to the NMED Secretary, for approval, a sampling and analysis plan which provides detailed sample numbers, locations and procedures as well as the criteria used for demonstrating that all hazardous waste and hazardous constituents have been removed from equipment and structures used to manage TRU-mixed waste. The equipment and structures include but are not limited to: the floor of the Waste Handling Building (WHB) where hazardous waste was managed; secondary containment trenches and sumps; loading and unloading areas; structures used to manage hazardous waste and any other areas where spills or releases of hazardous constituents are known or likely to have occurred.

I.J.7. Clean-Up of TRU-Mixed Waste

Prior to acceptance of hazardous waste at the facility, the Permittees shall submit to the NMED Secretary, for approval, a sampling and analysis plan which provides detailed sampling procedures for sampling required under Permit Conditions II.D.4.c.i and II.D.4.d.ii, clean-up of unknown constituent spills. The plan must also include criteria which will be used to demonstrate that the cleanup of any TRU-mixed waste spills or releases is adequate.

I.J.8. Radiation Survey

Within one year of the issuance of this permit, the Permittees shall submit to the NMED Secretary, for approval, a document which provides a detailed description of the methods and equipment used to conduct the radiation survey of equipment and structures. A positive indication of radioactive contamination on equipment and structures will also be an indication that decontamination for RCRA hazardous constituents will also be required. Describe the

number of survey points which are taken per unit area, the sensitivity of the equipment, and the decision criteria used to determine if contamination exists.

I.J.9. Bin Scale Test Room #3 Roof Support System

The proposed roof support system and roof support system monitoring equipment for BSTR 3 must achieve the same degree of safety as the existing system in BSTR 1. The Permittees shall submit all plans, drawings and documentation for the planned BSTR 3 system to the NMED Secretary for approval. The NMED Secretary shall approve the proposed system prior to managing waste in BSTR 3. Include all monitoring, inspection or maintenance plans for this room which are different from those for Room 1. Any modifications or changes to either roof support system shall require a permit modification in accordance with HWMR-7, Pt. IX § 270.42.

I.J.10. Practice Incident

In accordance with Permit Condition II.J.3.a, at least sixty days (60) prior to acceptance of TRU-mixed waste, the facility shall conduct a "mock" incident involving non-hazardous material or waste. The "mock" incident shall require implementation of the Contingency Plan. The incident scenario shall be realistic, and NMED shall be involved in the development of the incident scenario. The "mock" incident plan shall be approved by NMED prior to the implementation of the incident. Results of the "mock" incident shall be utilized to revise the Contingency Plan as appropriate.

I.J.11. Inspection Schedule

The Permittees shall modify the inspection schedule and the inspection log forms and submit them to the NMED Secretary at least ninety days (90) prior to acceptance of TRU-mixed waste to include the inspection of and the inspection schedule for all items specified in Permit Conditions II.F.2.a through II.F.2.c, and II.F.3. NMED shall approve the modified inspection log forms prior to use.

I.J.12. Design of Steel Overpack Containers

At least one hundred eighty days (180) prior to using the proposed carbon steel overpack container to contain contaminated Standard Waste Box/Radiological Control Boundary (SWB/RCB) or SWB/RCB lids, the overpack container design must be submitted to and approved by the NMED Secretary. The overpack container shall meet all of the requirements for Type A shipping containers set forth in Title 49 of the Code of Federal Regulations.

MODULE II - GENERAL FACILITY PERMIT CONDITIONS

II.A. DESIGN AND OPERATION OF FACILITY

The Permittees shall construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, as required by HWMR-7, Pt. V, § 264.31. The Permittees shall maintain the structures and equipment and operate the facility in compliance with the conditions of this Permit.

II.B. REQUIRED NOTICES

Before transferring ownership or operation of the facility during its operating life, the Permittees shall notify the new owner or operator in writing of the requirements of HWMR-7, Pt. V and IX (HWMR-7, Pt. V, § 264.12(c)).

II.B.1. Required Notice for Modification to Waste Acceptance Criteria

NMED shall receive and approve any proposed written modifications to the Waste Acceptance Criteria (Permit Condition II.D.1). NMED will determine the class of the modification based on HWMR-7, Pt. IX and § 270.42 (Class 1, 2, or 3). All modifications must be approved prior to implementation.

II.B.2. Required Notice for Modification to the Audit Program

NMED shall receive and approve any proposed modification to the Audit Program (Permit Condition II.D.7). NMED will determine the class of the modification based on HWMR-7 Pt. IX, § 270.42 (Class 1, 2, or 3). All modifications must be approved prior to implementation.

II.B.3. Required Notice for Modification to the Sampling and Analysis Guidance Manual and Quality Assurance Program Plan

NMED shall receive and approve any proposed modification to the Sampling and Analysis Guidance Manual (Attachment II-3) and Quality Assurance Program Plan (Attachment II-2). NMED will determine the class of the modification based on HWMR-7 Pt. IX, § 270.42 (Class 1, 2, or 3). All modifications must be approved by NMED prior to implementation.

II.C. OFF-SITE WASTES

II.C.1. Waste Sources

The Permittees are allowed to receive hazardous waste from two sites for the duration of this permit. Only those wastes generated at the two sites or in storage at the sites as of May, 1993 shall be allowed. The two sites are the Rocky Flats Plant (RFP), Golden, Colorado, EPA I.D. No. CO7890010526, and the Idaho National Engineering Laboratory (INEL), Idaho Falls, Idaho, EPA I.D. No. ID4890008952.

II.C.2. Hazardous Waste from Off-Site Generators

When the Permittees are to receive hazardous waste from an off-site source, they must inform the generator in writing that they have the appropriate permits, and will accept the waste the generator is shipping. Additionally, the Permittees will specify the date the shipment will be accepted at the WIPP. The Permittees must keep a copy of this written notice as part of the operating record, as required by HWMR-7, Pt. IX, § 264.12(b).

II.D GENERAL WASTE ANALYSIS

II.D.1. Waste Acceptance Criteria

The Permittees shall not accept wastes which do not meet the Waste Acceptance Criteria (WAC) as presented in Permit Conditions II.D.1.a. through u. of this permit. The Permittees shall not accept wastes which do not meet the Permit Conditions pertaining to the WAC that are presented in Section C-3 of Permit Attachment II-1. Modification of any of the Waste Acceptance Criteria stated herein requires notification by the Permittees and approval by NMED in accordance with Permit Condition II.B.1.

II.D.1.a. Liquid Wastes

No free liquids greater than 1% by volume shall be permitted in any containers of Group I TRU-mixed wastes (as defined in Permit Condition II.D.3.).

II.D.1.b. Pyrophorics

The Permittees are not permitted to accept or manage non-radionuclide pyrophoric wastes. Radionuclides in pyrophoric form are limited to <1% by weight in each waste package.

II.D.1.c. Explosives

The Permittees are not permitted to accept or manage explosive wastes.

II.D.1.d. Compressed Gases

The Permittees are not permitted to accept or manage waste compressed gases.

II.D.1.e. TRU-Wastes Which Contain Hazardous Wastes

The Permittees are not permitted to accept or manage hazardous wastes in the permitted areas unless they exist as co-contaminants with transuranics.

II.D.1.f. Remote Handled TRU-Mixed Waste

The Permittees are not permitted to accept or manage remote handled (RH) TRU-mixed waste.

II.D.1.g. Sampling and Analyses and Quality Assurance

The Permittees shall not accept waste which has not been characterized according to the procedures for sampling, analytical protocols, Quality Assurance/ Quality Control (QA/QC) guidelines, Sampling and Analysis Plan and other information as noted in Permit Conditions II.D.4 and II.D.6 and included in Permit Attachments II-2 and II-3 of this permit.

II.D.1.h. Characteristic Wastes

Characteristic ignitable (D001), corrosive (D002), and reactive (D003) wastes shall not be accepted in the permitted units, nor shall these characteristics be allowed to develop within bins during the Test Phase or closure period.

II.D.1.i. Nonflammable Volatile Organic Compounds

The Permittees shall not accept waste in test bins that do not meet the two times (2X) maximum comparability requirement for the five nonflammable VOCs as specified in Sections IV.B.7 and VI of Permit Attachment II-4. Any waste within a bin must have a mean headspace concentration less than 10X the mean concentration as specified in Permit Attachment II-4, Sections IV.B.7 and VI.

II.D.1.j. Confinement Layer Closures

The Permittees shall not accept waste in containers unless all confinement layers, such as bags, have been closed only by a twist-and-tape or fold-and-tape method, as discussed in Attachment II-4.

II.D.1.k. Inner Containers

The Permittees shall not accept any waste bins which include packaged containers with a capacity greater than one gallon.

II.D.1.l. Confinement Layers

The Permittees are not permitted to accept or manage waste in bins unless the total number of waste confinement layers within the bin, such as bags and containers, are known.

II.D.1.m. Explosive Gases

Waste packages emplaced in WIPP during the test phase shall not exceed 50% of the lower explosive limit within any confinement layer, following provisions set forth in Sections IV.B.7 and VI of Permit Attachment II-4. Every waste container and layer must be tested for hydrogen, methane, and volatile organic compounds (VOCs), as a class, to support this determination. The Permittees must demonstrate that headspace gas mixtures within waste packages are below 50% of the LEL during acceptance in the Waste Handling Building, and must follow bin preparation methods described in Section D-9a(2)(b) of Permit Attachment III-1 to ensure that flammable mixtures are not placed in the subsurface.

II.D.1.n. Flame Test

If total VOCs are greater than 500 ppm in headspace, a flame test must be performed in accordance with requirements set forth in Sections IV.B.7 and VI of Permit Attachment II-4 to assess flammability and determine whether the LEL limitation set forth in Permit Condition II.D.1.m has been met (see Permit Attachment II-4) prior to acceptance at WIPP.

II.D.1.o. Le Chatelier Calculation

If total flammable VOCs are less than 500 ppm in headspace, a Le Chatelier calculation must be performed using the LEL of methane and hydrogen to determine whether the LEL limitation set forth in Permit Condition II.D.1.m has been met (see Permit Attachment II-4) prior to acceptance at WIPP.

II.D.1.p. Compatibility Assessment

The Permittees shall not accept waste unless all material greater than 1% of the total bin contents by weight has been evaluated for compatibility within the waste category (form) and with the bin.

II.D.1.q. Trace Chemicals

The Permittees shall not accept waste unless trace chemicals (less than 1% each by weight) total less than 5% of the total weight of the waste in any package.

II.D.1.r. Allowable Chemicals

The Permittees shall not accept waste unless the chemicals and materials present in concentrations greater than one weight percent conform to the allowable chemicals and waste types within each waste category, as specified in Permit Conditions II.D.2 and II.D.3.

II.D.1.s. Real-Time Radiography

The Permittees shall not accept test bins whose contents have not undergone real-time radiography.

II.D.1.t. Visual Examination

The Permittees shall not accept test bins whose contents have not undergone visual examination of all waste emplaced in the bins. Visual examination must include identification of waste category and general identification of the nature of the waste within that category, as specified in Permit Condition II.D.4.a.ii. The results of the visual examination shall be documented in accordance with Permit Condition II.D.4.

II.D.2. Acceptable Hazardous Waste

The Permittees shall not accept any test bin which contains any hazardous waste or constituent other than those wastes or associated constituents listed in Permit Attachment II-5 which includes Toxicity Characteristic metals, halogenated organic compounds, and nonhalogenated organic compounds, as described in Section C-2a of Permit Attachment II-1.

II.D.3. Acceptable Waste Groups and Waste Categories

The Permittees may only accept those Group I wastes from off-site which are defined in Section C-4 of Permit Attachment II-1. The facility is allowed to accept the ten (10) waste categories described in Section C-2b of Permit Attachment II-1, and as listed below. The Permittees may include mixtures of waste categories within individual bins, provided that compatibility is demonstrated as required in Section C-3a of Permit Attachment II-1 are performed. Allowable waste categories are:

- Combustibles and Noncombustibles
- Combustibles
- Benelex and Plexiglass
- Firebrick and Ceramic Crucibles
- Graphite
- Filters
- Glass
- Supercompacted Waste (consisting of Group I)
- Leaded Rubber
- Metal

II.D.4. Sampling and Analysis Requirements and Verification

The Permittees shall not accept any waste from INEL or RFP if that generator does not follow the RCRA waste analysis and documentation procedures required by HWMR-7, Pt. V, § 264.13, as described in the attached Waste Analysis Plan, Permit Attachment II-1, and Permit Attachments II-3, II-2, and II-6. Documentation must be provided to the Permittees by INEL and RFP which demonstrates that Permit Conditions II.D.4.a, b, e, f and g have been met.

II.D.4.a. Waste Characterization Prior to Bin Loading

The Permittees shall not accept waste in a test bin if the waste characterization information supplied

for that bin does not document that each drum of Group I waste, prior to emplacement within bins, was examined according to the waste characterization activities described in Permit Conditions II.D.4.a.i through II.D.4.a.vii.

II.D.4.a.i.

Documentation must show that visual examination of waste, as discussed in Permit Attachment II-1 has been performed in accordance with methodologies and procedures presented in Permit Attachment II-3, and includes requirements set forth in Permit Condition II.D.4.a.ii within this permit.

II.D.4.a.ii.

Documentation must show that visual examination performed at the sites from which waste will be shipped has included a qualitative description of all material within the bin (including weight of individual items). The documentation provided by the generator to the Permittees must describe the three most abundant physical materials within each drum prior to bin packaging. The description of these materials must provide the same level of detail as included in Section C-2b, of Permit Attachment II-1. The description must also identify any items that are not within the description presented in Section C-2b, Permit Attachment II-1 for the specific waste category. Should these items be identified, bin packaging will not proceed unless the item is within the acceptable waste categories listed in Permit Condition II.D.3 within this permit.

II.D.4.a.iii.

If transparent bags are present within a drum and items are clearly identifiable within the bag, then opening of the bag is not required. However, if the bag is not transparent, documentation must show that the bag has been opened and contents examined and weighed.

II.D.4.a.iv.

Documentation must verify that real-time radiography has been performed, in accordance with methodologies and procedures presented in Permit Attachment II-3.

II.D.4.a.v.

Documentation must verify that headspace gas sampling and analyses have been performed in accordance with requirements, procedures, and methodologies presented in Permit Attachments II-4 and II-3.

II.D.4.a.vi.

Documentation must verify that the headspace gas sampling methodology has not allowed headspace gas loss prior to and during drum sampling to ensure sample integrity, and documentation to this effect has been provided to the NMED Secretary for review and approval prior to acceptance of waste at WIPP.

II.D.4.a.vii.

When the relative abundance of a Tentatively Identified Compound (TIC) represents either greater than five percent of the total area or is the single largest peak by area on an ion chromatograph, then the TIC must be specifically identified using standards. Further, when TICs are identified, these must be reported as required in Permit Condition II.D.9 of this permit. If 3 consecutive drums of a given waste category exhibit the same TIC(s), NMED must be notified as per Permit Conditions II.D.9 of this permit, and subsequent modifications will be requested to the permit.

II.D.4.b. Waste Characterization After Bin Loading

The Permittees shall not accept a waste in a test bin if the documentation for that bin does not verify that the bin, after loading but prior to

shipment to WIPP, has undergone headspace gas analyses in accordance with Permit Attachments II-4 and II-3. The determination of acceptability relative to Lower Explosive Limit Criteria (Permit Attachment II-4) for the bin headspace gas shall occur no more than 14 days prior to acceptance at WIPP.

II.D.4.b.i.

In addition to those parameters listed in Table C-9, Permit Attachment II-1, documentation must show that bin headspace gas has been analyzed for diethyl ether and formaldehyde prior to shipment to WIPP, and use these values, as appropriate, in LEL calculations.

II.D.4.b.ii.

When the relative abundance of a Tentatively Identified Compound (TIC) in bin headspace gas represents greater than five percent of the peak area, or is the peak of greatest area, then documentation must show that the TIC compound has been specifically identified. Further, when TICs are identified, these must be reported as required in Permit Conditions II.D.9 of this permit. The Permittees must ensure that if 3 bins of any waste category mixture exhibit the same TIC(s), NMED will be notified as per Permit Conditions II.D.9 of this permit, and subsequent modifications will be requested to the permit.

II.D.4.c. On-Site Generated (Derived) Waste Characterization.

The Permittees shall characterize on-site generated (derived) waste by process knowledge and in accordance with the sampling and analysis procedures and methodologies presented in Section C-5 of Permit Attachment II-1 and Sections 1, 3, 4 and 5 of Permit Attachment II-3 and in accordance with Permit Conditions II.D.4.c.i and ii, of this permit. The sampling and analysis as described in Permit Attachment II-1, applies to on-site generated waste created as a result of a Group I waste release only.

II.D.4.c.i.

When the constituents of on-site generated (derived) waste are unknown due to such situations or combination of situations such as misplacement of containers, missing labels, unreadable labels, or for other reasons, then the contents of these containers shall be sampled and analyzed in accordance with procedures developed under Permit Condition I.J.7.

II.D.4.c.ii.

The NMED Secretary shall be notified orally within 24 hours when any bin release/spill occurs, and NMED may, as necessary, require additional sampling and analysis of the released material.

II.D.4.d. Retrieved Waste Characterization.

The Permittees shall follow the Sampling and Analysis Procedures and methodologies as presented in Permit Attachment II-1 for retrieved wastes, and as required in Permit Conditions II.D.4.d.i-ii, of this permit.

II.D.4.d.i.

The Permittees shall conduct any waste characterization as directed by the receiving facility, should waste require shipment from WIPP. Receiving facilities shall be those identified in Permit Conditions I.J.1. or I.J.2.

II.D.4.d.ii.

When the constituents of retrieved waste are unknown due to misplacement of containers, missing labels, unreadable labels, or other reasons, then the contents of these containers shall be sampled and analyzed in accordance with Permit Condition I.J.7, and as approved by the NMED Secretary.

II.D.4.e. Sampling and Analysis Plan

The Permittees shall not accept wastes which have not been characterized in accordance with applicable portions of the WIPP Sampling and Analysis Guidance Manual (Permit Attachment II-3).

II.D.4.f. Verification of Bin Contents

The Permittees shall verify that only those wastes allowed under Permit Conditions II.D.1, II.D.2 and II.D.3 are emplaced within the bins at the generator site, and that no additional hazardous waste or hazardous waste constituents, not originally contained within the waste drums, are added at the generator site.

II.D.4.g. Additional Methods

Any sampling, testing, or analytical methods not specifically described in Permit Attachment II-3 of the Permit must be in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, or equivalent methods, and must be reviewed and approved by the NMED Secretary prior to the use of the method. At a minimum, the Permittees shall provide documentation to demonstrate that the generator will maintain functional and calibrated instruments, use approved sampling an analytical methods (including those presented in Permit Attachment II-3), verify the validity of sampling and analytical methods and procedures, and perform appropriate and correct calculations. If the Permittees use a contract laboratory to perform analyses, then the Permittees shall inform the laboratory in writing that it must operate under the waste analysis Permit Conditions set forth in this Permit.

II.D.4.h. Modifications

Any modifications to the Sampling and Analysis Guidance Manual (Permit Attachment II-3) shall require NMED notification and approval in accordance with Permit Condition II.B.3.

II.D.5. Waste Shipment Screening and Verification

Prior to accepting waste at the WIPP, the Permittees are required to perform waste shipment screening and verification as described in Section C-6 of Permit

Attachment II-1, to include Phase I Shipment Screening and Verification and Phase II Waste Screening and Verification. The Permittees shall verify the analysis of each waste stream according to the verification processes presented in Section C-6 of Permit Attachment II-1.

II.D.6. Quality Assurance Requirements

The Permittees shall not accept waste from RFP and INEL if the characterization information does not confirm that the sites followed Quality Assurance methodologies as described in the Quality Assurance Program Plan, or QAPP (Permit Attachment II-2).

Any modifications to the QAPP (Permit Attachment II-2) shall require NMED notification and approval prior to implementation as specified in Permit Condition II.B.3.

II.D.7. Audit Program

To verify that generator sites have performed waste characterization in accordance with provisions described in Permit Attachments II-1, II-2, II-3, and II-4, the Permittees will implement and perform a generator site Audit Program as described in Permit Attachment II-7. The Permittees shall implement the Audit Program as modified below in Permit Condition II-D.7.a-e, of this permit.

II.D.7.a. Standard Operating Procedures

The detailed Audit Program Standard Operating Procedures developed for each site shall be submitted to the NMED Secretary for approval prior to any shipment of waste to WIPP.

II.D.7.b. Management Systems

The audit shall include, but is not limited to, an evaluation of the management systems which are designed to ensure proper identification, notification, packaging, and shipment of any waste to the WIPP. These management systems include any policies, procedures, organizational resources or plans to ensure the above elements are met.

II.D.7.c. Audit Frequency

The audit frequency will be as noted in Permit Attachment II-7, except that an initial audit shall be conducted prior to the first waste shipment. If

there are no discrepancies, then the audit program will return to the frequency noted in Permit Attachment II-7. If there is any discrepancy, then audits will be performed for every fifth bin of waste, whichever is more frequent, until the discrepancies are resolved.

II.D.7.d. Conformance Reporting

If no discrepancies are noted, the results of all audits shall be included within the quarterly report, as specified in Permit Condition II.D.9.d.

II.D.7.e. Nonconformance Reporting

If an audit identifies any major discrepancy such as incorrect identification, labeling and notification of waste, or if a bin does not meet Sampling and Analysis (Permit Attachment II-3) data quality objectives, or other waste characterization requirements set forth in this permit, then all shipment of waste will be immediately stopped. The Permittees shall submit a nonconformance report to NMED within five (5) working days from identification of the nonconformance for approval prior to resumption of any waste shipment to or acceptance at WIPP. The nonconformance report shall include a list of the discrepancies found and the required corrective measures needed to resolve the discrepancies.

II.D.7.f. Audit Reports

The formal audit report and any follow-up reports shall be submitted to the NMED Secretary in accordance with permit condition II.D.9.

II.D.8. Characterization and Management of Simulated Waste

Non-hazardous simulated wastes must be managed to ensure adequate access to the TRU-mixed waste test bins. If simulated wastes are hazardous wastes, the Permittees must manage the simulated waste in accordance with all of the conditions specified in this permit. Should simulated waste experiments generate a hazardous waste, then management of that waste (now hazardous) shall be in accordance with all of the conditions of this permit.

II.D.9. Reporting Requirements

The Permittees shall provide the information, required under Permit Conditions II.D.9.a-g in quarterly reports to the NMED Secretary. Quarterly reports shall be generated for each calendar quarter, and must be provided to NMED within 30 days following the end of that quarter. Reports shall be provided to the NMED Secretary for the entire duration of this permit. Acceptable reporting documentation which may be used is included in Permit Attachment II-6.

II.D.9.a. Waste Profile Forms and Bin Case Reports

Waste Profile Forms for that quarter, with Bin Case Report and Addendum Checklists must be included in the quarterly report. If a drum was rejected based upon criteria presented in Permit Attachment II-1, the narrative should identify the bin rejected and explain why rejection occurred. This applies to bin rejection prior to shipment and after the shipment has arrived at the WIPP, but prior to emplacement.

II.D.9.b. Visual and RTR Examination Report

The quarterly report shall contain a summary report of the visual examination and RTR results for that quarter. This report is to include, at a minimum: the specific Waste Category for the drum, Permit Conditions Description Code(s), and Content Code(s); original generator site and date the waste was generated; results of visual examination including Bin Report Sheets; results of the RTR assessment; and comparison results of RTR and visual examination data. (Permit Attachment II-6 includes sample forms which may be used to meet some, or all, of the reporting requirements in this Permit Condition. The report shall also include the information required in Permit Conditions II.D.4.a.i and II.D.4.a.ii.

II.D.9.c. Headspace Gas Analyses

The Permittees shall include, in the quarterly report, headspace gas analyses data for each drum as required under Permit Conditions II.D.4.a.v, II.D.4.a.vii, and II.D.4.b, as well as the headspace gas analyses results and calculations/ results of LEL assessment for each bin prior to shipment, in accordance with Permit Attachments II-3 and II-4. The report shall include a summary of

headspace gas analytical results which will present, at a minimum, the concentration of constituents detected (Table C-9, Permit Attachment II-1), and parameters and estimated concentration of any TIC. Should TIC's be detected, a narrative discussing results and implications of analyses must be provided.

II.D.9.d. Generator Site Audits

The Permittees shall include, in the quarterly report, the results of generator site audits. The report shall include checklists for each bin/drum as presented in Permit Attachment II-7, and discuss specifically (in a narrative) those deficiencies which were noted and how they were remedied. If a bin was ultimately rejected for shipment to WIPP as a result of the audits, reasoning for this rejection should be included within the quarterly report.

II.D.9.e. Process Knowledge

The Permittees shall include, in the quarterly report, an assessment of the adequacy of process knowledge to identify materials, by comparing process knowledge waste characterization with that obtained through visual examination, RTR, and headspace gas analysis.

II.D.9.f. Manifests

The Permittees shall include, in the quarterly report, copies of each Hazardous Waste Manifest acquired during that quarterly period.

II.D.9.g. No New Information

If no new information has been obtained during the quarter relative to Permit Conditions II.D.9.a-f, the quarterly report shall state that no new data pertinent to the permit condition has been acquired during the reporting period.

II.E. SECURITY

In compliance with HWMR-7, Pt. V, § 264.14(a), the Permittees shall prevent the unknowing entry, and minimize the possibility of unauthorized entry onto the active portion of the facility with the security measure described in Permit Conditions II.E.1., II.E.2., II.E.3, and II.E.4.

II.E.1. Warning Signs

Warning signs in English and Spanish shall be posted at approximately 50-foot intervals around the Zone 1 perimeter fence. The signs shall read "U.S. Department of Energy (DOE) No Trespassing." Another warning sign posted in the proximity of the above sign shall read "Danger: Authorized Personnel Only."

II.E.1.a. Waste Handling Building and Bin-Scale Test Room Signs

Warning signs shall also be posted at the entrance to the Waste Handling Building (WHB) and the bin-scale test rooms (BSTR).

II.E.2. Surveillance System

Twenty-four-hour surveillance system in compliance with HWMR-7, Pt. V, § 264.14(b)(1), shall be used to continuously monitor and to control entry into the active portion of the site (Zone 1).

II.E.3. Security Barrier

A permanent chain-link fence shall surround Zone 1. This fence shall be at least 7 feet high and topped with 3 strands of barbed wire. The fence shall meet the requirement of HWMR-7, Pt. V, § 264.14(b)(2)(i) and (ii). The main gate shall be manned by a security guard at all times.

II.E.4. Security Guards

The Permittees shall maintain a facility security guard force, which provides protection 24 hours per day, 365 days per year. At least 3 security guards shall be on duty at all times. All visitors, contractors or vendors shall be logged in before gaining access to Zone 1.

II.E.4.a. Underground Security

Prior to gaining access to underground, all personnel shall receive a numbered brass tag for use as identification and shall sign in on the underground log contained in the Underground Services Office.

II.F. GENERAL INSPECTION REQUIREMENTS

II.F.1. Inspection Schedule and Inspection Log Forms

The Permittees shall inspect the facility in accordance with an Inspection Schedule and log that includes, at a minimum, the information contained in Permit Attachments II-8 and II-9, to detect deterioration, malfunction, operator errors, and discharges in accordance with HWMR-7, Pt. V, § 264.15(a). All inspection logs shall be signed and dated by the individual performing the inspection.

II.F.1.a. Inspection Log

The Permittees shall modify and submit to the NMED Secretary the inspection schedule and the inspection log forms in Permit Attachment II-9 at least 90 days prior to acceptance of TRU-mixed waste to include the inspection of and inspection schedule for the items specified in Permit Conditions II.F.2.a. through II.F.2.c., and II.F.3. NMED shall approve the modified inspection log forms prior to use.

II.F.2. Inspection Frequency

The Permittees shall inspect the facility system/ equipment specified in Permit Attachment II-8 at the frequency specified in that Permit Attachment. The systems/equipment shall be inspected for deterioration, malfunction, operator errors, and discharges as specified in Permit Attachment II-9.

In addition to the list of items to be inspected in Permit Attachments II-8 and II-9, the Permittees shall inspect the following items on the schedule indicated.

II.F.2.a. WHB Floor Inspection Requirements

The structural integrity of the concrete and the epoxy floor coating within the WHB fire water collection floor drains and floor trenches shall be inspected on a weekly basis. Also inspect weekly the condition of the trench cover grates and ensure that no standing liquids are present in the trenches.

II.F.2.b. WHB Hood Inspection Requirements

The condition, operation and flow rate of the WHB Hood Ventilation System (WHB HVS) and the SWB Hood Ventilation System (SWB HVS) shall be inspected prior to opening each TRUPACT II and SWB received at the facility.

II.F.2.c. Heating, Ventilation and Air Conditioning (HVAC) Inspection Requirements

The operation and flow rate (or differential pressure) of the WHB Heating, Ventilation, and Air Conditioning (HVAC) System shall be inspected weekly.

II.F.3. Daily Inspection Requirements

Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use, for the items specified in Permit Attachment II-9. The underground loading and unloading area shall be inspected daily. The Permittees shall modify the inspection log contained in Permit Attachment II-9, to include inspection of the underground loading and unloading area.

II.F.4. Inspection Remediation

The Permittees shall remedy any nonconformance which the inspection reveals in accordance with HWMR-7, Pt. V, § 264.15(c).

II.F.4.a. Non-Imminent Remediations

The Permittees shall correct non-imminent situations which do not endanger human health and the environment within 14 working days. If these non-imminent situations cannot be corrected within 14 days, then the Permittees shall notify the NMED Secretary and provide an alternate schedule in writing. The alternate schedule shall be subjected to approval of the NMED Secretary.

II.F.4.b. Imminent Remediations

Imminent situations which could endanger human health or the environment shall be corrected immediately (within 24 hours).

II.F.5. Recordkeeping Requirements

Records of inspection shall be kept, as required by HWMR-7, Pt. V, § 264.15(d). The records shall be kept for three years in the Operating Record, as required by HWMR-7, Pt. V, § 264.73(b)(5).

II.G. PERSONNEL TRAINING

The Permittees shall conduct personnel training, as required by HWMR-7, Pt. V, § 264.16. This training program shall include, at a minimum, the information presented in the attached outline, Permit Attachment II-10. All persons involved in the handling of mixed waste, even if it is only on an occasional basis, shall be trained in areas appropriate to their function. The Permittees shall maintain the documents and records required by HWMR-7, Pt. V, § 264.16(d) and (e) and Permit Condition II.L.1.c.

II.G.1. RCRA Technical Training Manager (RTTM)

The RCRA training program must be directed and approved by the RCRA Technical Training Manager (RTTM). The responsibility for developing and implementing the RCRA training and certification process have been delegated to the RCRA Technical Training Manager.

II.G.1.a. Qualifications of the RCRA Technical Training Manager

II.G.1.a.i.

The RCRA Technical Training Manager (RTTM) shall possess, at a minimum, a four year science or engineering degree, and five years of safety/chemical or hazardous waste experience. The RTTM shall also have completed the 40-hour health and safety training (OSHA).

II.G.1.a.ii.

The RTTM shall have working knowledge of the New Mexico Hazardous Waste Management Regulations and the specific requirements contained within this permit. This shall be demonstrated by documentation in his personnel file.

II.G.1.a.iii.

The RTTM shall have working knowledge of all applicable DOE orders, guidelines and specific training required at the WIPP site.

II.G.1.a.iv.

The RTTM shall have working knowledge of the purpose and implementation of the facility Contingency Plan and Emergency Procedures contained in Permit Attachment II-12 and the conditions of this permit.

II.G.1.a.v.

The RTTM shall have working knowledge of waste operations procedures.

II.G.1.b. Responsibilities of the RCRA Technical Training Manager

II.G.1.b.i.

The implementation of On-the-Job Training is the responsibility of the line supervisors and foremen most familiar with WIPP operation; however, all training remains the ultimate responsibility of the RTTM as delegated by the appropriate personnel at the director level of management.

II.G.1.b.ii.

The RTTM is responsible for the development and implementation of the RCRA training and in-house certification program.

II.G.1.b.iii.

The RTTM shall establish qualifications policy, approve qualification requirements, course curricula, instructors, and ensure proper implementation of the program.

II.G.1.b.iv.

The RTTM shall maintain a computerized list of all employees requiring RCRA training. This list shall include a personalized training history for each employee which includes his job title, training schedule, course attendance and test results. The master list shall be continually updated to reflect the current employee training status.

The date training is completed shall be entered in the computer system. Job titles, job descriptions, the name of the employee filling the job and records of training given to employees engaged in hazardous waste management shall be kept in the plant training and plant employment offices.

II.G.1.b.v.

It is the responsibility of the RTTM to ensure that all personnel with RCRA responsibilities are trained within six months of their effective date in a position and are annually updated.

II.G.1.b.vi.

The RCRA Training Officer shall conduct an annual review to determine which personnel require mixed waste management training. This annual review shall be documented in the WIPP operating records.

II.G.2. RCRA Training

The RCRA training program shall meet the requirement HWMR-7 Part V, 264.16 and HWMR-7, Part IX, 270.14.2(a).

II.G.2.a. RCRA Training and Certification

RCRA training shall be required for RCRA employee job classifications listed in Permit Attachment II-11. The training course shall follow the training outlines provided in Permit Attachment II-10. Individual training requirements specified in Permit Attachment II-11, (by an "X" in the training column) shall be given.

II.G.2.a.i.

New employees listed in Permit Attachment II-11 shall attend an annual RCRA review course, the content of which is listed in Permit Attachment II-10.

II.G.2.a.ii.

New employees who do not test satisfactorily will be retrained until they are certified. New, reassigned staff or employees who do not test satisfactorily shall not work in unsupervised positions until they have successfully completed the training program.

II.G.2.a.iii.

For employees who successfully complete the formal RCRA training and pass a written examination, a certification card shall be prepared and maintained in the operating record.

II.G.2.b. Emergency Response Training

The Emergency Response training shall ensure that personnel are able to respond appropriately and effectively to emergency situations. Emergency Response training shall include both aboveground and belowground response capabilities. The Emergency Response Team shall have primary responsibility for aboveground emergency response activities, and the First Line Initial Response Team and the Mine Rescue Team shall be responsible for underground emergency response activities. The responsibilities of these units are described in the WIPP RCRA Contingency Plan, Permit Attachment II-12. Members of these teams shall be security personnel and volunteers from the WIPP organization. They shall receive thorough emergency response training before they are called upon to perform in real emergencies. This training includes fire-fighting elements such as fire behavior, ladders, fire hose, and ventilation. First Line Initial Response Team training shall include 40-hour miner training, National Fire Protection Association (NFPA) 1500 Fire Brigade requirements, and additional qualifications pertaining to the team. Mine Rescue Team training shall include 40-hour miner training, at least one

year of underground work, Mine Safety and Health Administration (MSHA) requirements for medical and mine rescue requirements, and additional qualifications pertaining to the team. Emergency Response Team training shall include NFPA 1500 Fire Brigade requirements and additional training pertaining to the team. In addition, all teams shall receive lifesaving elements such as rescue, cardiopulmonary resuscitation and first aid, and other specific elements such as self-contained breathing apparatus and hazardous materials/ training.

II.G.2.b.i.

All RCRA Emergency Response job classifications listed in Table H-2 of Permit Attachment II-11 must receive the training specified in Permit Attachment II-11. The Emergency Response training course must follow the outlines listed in Permit Attachment II-10.

II.G.2.c On-the-Job Training (OJT)

On-the-job training shall instruct employees in the management of the hazardous waste and emergency response aspects that pertain to their specific area of responsibility. OJT is tailored to each employee's actual job responsibilities. All employees who handle mixed waste and their immediate supervisors are required to complete both classroom instruction and OJT. The on-the-job training shall be conducted by an instructor certified by the operator's Human Resources Department.

On-the-job training shall be conducted by Level 1 trainers or higher. An OJT qualification card and/or competency statement shall be used to document this training. Level 1 trainees are those individuals who are technically knowledgeable members of the organization who are qualified on the related equipment and have attended on-the-job training courses.

No employee assigned to the WIPP mixed waste facility shall be allowed to work without direct supervision until he or she has completed the OJT training program. New personnel shall be required

to complete the training program within six months of their assignment to the hazardous waste management areas.

The on-the-job training will be consistent for all employees performing similar duties and with similar responsibilities.

II.G.3. Training Documentation

II.G.3.a. Training Records

The Technical Training Department located at the WIPP facility shall maintain the training records including the course attendee; completed qualification cards; off-site training documentation and completed certification cards. Records shall be maintained for each employee with RCRA and/or Emergency Response duties.

II.G.3.b. Job Descriptions

Summary job descriptions for all personnel with RCRA responsibilities shall be maintained at the WIPP site. A position description list of all facility personnel involved in mixed waste management shall be maintained by the RCRA Technical Training Manager. The position description list shall include job titles and descriptions, and the position description shall include the training requirement for each position. The Permittees shall update the description list whenever new positions or personnel are identified which are involved in mixed waste.

II.H. GENERAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittees shall not manage ignitable, reactive or incompatible waste, as defined in HWMR-7, Pt. V, § 261.21, 261.23 and 264, Appendix V, within the permitted units.

II.I. PREPAREDNESS AND PREVENTION

II.I.1. Required Equipment

At a minimum, the Permittees shall maintain at the facility the communication, spill control, decontamination, and fire control equipment set forth in

Section D-9a(3) of Permit Attachment III-1 and Permit Attachment II-12 as required by HWMR-7, Pt. V, § 264.32.

II.I.2. Testing and Maintenance of Equipment

The Permittees shall test and maintain the equipment specified in Permit Condition II.I.1, as necessary, to assure its proper operation in time of emergency, as required by HWMR-7, Pt. V, § 264.33.

II.I.3. Access to Communications or Alarm System

The Permittees shall maintain access to the communications or alarm system, as required by HWMR-7, Pt. V, § 264.34.

II.I.4. Required Aisle Space

At a minimum, the Permittees shall maintain aisle space to allow the unobstructed movement of personnel and equipment to any area of the facility operation in an emergency (HWMR-7, Pt. V, § 264.35). Aisle space shall be maintained both in the WHB and the BSTRs as specified in Permit Conditions III.B.6 and IV.B.8.

II.I.5. Arrangements with Local Authorities

The Permittees shall maintain preparedness and prevention arrangements with state and local authorities, other mining operations and DOE agencies as specified in Section G-b of Permit Attachment II-12, as required by HWMR-7, Pt. V, § 264.37 and 264.52(c)). If state, local officials, mining operators or other DOE agencies refuse to enter into preparedness and prevention arrangements with the Permittees, the Permittees must document this refusal in the Operating Record.

II.I.5.a. Memoranda of Understanding

As specified in Section G-6 of Permit Attachment II-12, these arrangements must be Memoranda of Understanding (MOU) between the WIPP Project Site Office and the off-site cooperating agencies; copies and a description of these MOU's must be maintained at the WIPP site.

II.I.6. Material and Waste Management Records

Waste management records shall be maintained in the Operating Record in compliance with HWMR-7, Pt. V, § 264.73(b)(2). One copy of the records described by HWMR-7, Pt. V, § 264.73(b)(2) shall be kept in each controlled

document location at the facility, and all emergency response documents must be immediately accessible to emergency response personnel.

II.J. CONTINGENCY PLAN

II.J.1. Implementation of Plan

The Permittees shall immediately carry out the provisions of the Contingency Plan, Permit Attachment II-12, whenever there is a fire, explosion, natural emergency, structural integrity emergency, or release of hazardous waste or constituents which could threaten human health or the environment (HWMR-7, Pt. V, § 264.51(b).

II.J.1.a. Activation of Contingency Plan

The Contingency Plan shall be activated whenever there is an incident or potential incident (fire, explosion, spill, release, etc.) which involves TRU mixed waste.

II.J.1.b. Structural Integrity Emergency

The Contingency Plan shall be activated whenever data from the BSTR geomechanical monitoring specified in Permit Condition IV.I.2.b. indicate that a structural integrity failure of a BSTR is imminent or has occurred.

II.J.2. Copies of Plan

The Permittees shall maintain and distribute copies of the Contingency Plan in accordance with the requirements of HWMR-7, Pt. V, § 264.53. Copies of the Contingency Plan shall be maintained at all document control locations.

II.J.2.a. Distribution of Plan

Copies of the Contingency Plan and any amendments to the plan shall be provided to the State and all agencies that the WIPP Project site office has an emergency response MOU with.

II.J.3. Amendments to Plan

The Permittees shall review and, if necessary, immediately amend the Contingency Plan, as required by HWMR-7, Pt. V, § 264.54.

II.J.3.a. Training Incident

Prior to acceptance of TRU-mixed waste, the facility shall conduct a "mock" incident involving non-hazardous material or waste. The "mock" incident shall require implementation of the Contingency Plan. The incident scenario shall be realistic, and NMED shall be involved in the development of the scenario. The results of the "mock" incident will be evaluated by NMED, the Permittees, including the Emergency Coordinator, the State Department of Public Safety, and local emergency response agencies, (police, fire, mine rescue, etc.). If it is determined through the "mock" incident that the Contingency Plan must be amended, then the Permittees shall amend the Contingency Plan as necessary. Amendments shall be submitted to the NMED Secretary for approval.

II.J.4. Emergency Coordinator

Persons qualified to act as Emergency Coordinator are specified in Table G-1 of Permit Attachment II-12. An Emergency Coordinator shall be available onsite at the WIPP facility, 24 hours per day, seven days per week, as required by HWMR-7, Pt. V, § 264.55. The Emergency Coordinator must be thoroughly familiar with the Contingency Plan and must have the authority to commit the necessary resources to implement this plan. He must implement the requirements of HWMR-7, Pt. V, § 264.56.

II.J.5. Restrictions on Decontamination Materials

The Permittees shall use only solvents containing non-RCRA hazardous constituents or materials in spill remediation. If a liquid waste is generated, this waste must be managed in accordance with Permit Condition III.G.

II.K. RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this Permit, the Permittees shall comply with the requirements specified in Permit Conditions II.K.1 through II.K.3.

II.K.1. Documents to be Maintained at the Facility

The following documents shall be maintained at the facility:

- Waste Analysis Plan, as required by HWMR-7, Pt. V, § 264.13.
- Inspection schedule, and completed inspection log forms as required by HWMR-7, Pt. V, § 264.15(b)(2).
- Personnel training documents and records, as required by HWMR-7, Pt. V, § 264.16(d).
- Contingency Plan, as required by HWMR-7, Pt. V, § 264.53(a).
- Closure Plan as required by HWMR-7, Pt. V, § 264.111
- The Sampling and Analysis Guidance Manual as required by this Permit Condition.
- The Quality Assurance Program Plan (QAPP) as required by this Permit Condition.

II.K.2. Operating Record

An operating record containing the information required by HWMR-7, Pt. V, § 264.73 shall be maintained at the facility.

II.K.3. Biennial Report

The biennial report shall be prepared and submitted, in compliance with HWMR-7, Pt. V, § 264.75.

II.L. GENERAL CLOSURE REQUIREMENTS

II.L.1. Performance Standard

The Permittees shall close the facility, as required by HWMR-7, Pt. V, § 264.111 and in accordance with the Closure Plan, Permit Attachment II-13, and Permit Conditions I.J.3 through I.J.8.

At the time of closure, the Permittees shall remove all experimental waste and derived waste from BSTRs and WHB, and shall ship the waste to an off-site facility designated by Permit Conditions I.J.1 or I.J.2.

The Permittees shall remove all hazardous waste residues from equipment and structures to below levels to be proposed by the Permittees and approved by the NMED Secretary under Permit Condition I.J.6.

The Permittees shall remove all hazardous waste residues from the salt in the BSTRs to background levels.

II.L.2. Amendment to Closure Plan

The Permittees shall amend the Closure Plan, in accordance with HWMR-7, Pt. V, § 264.112(c), whenever necessary.

II.L.3. Notification of Closure

The Permittees shall notify the NMED Secretary in writing at least 60 days prior to the date on which they expect to begin partial or final closure of the facility in accordance with HWMR-7, Pt. V, § 264.112(d).

II.L.4. Schedule for Closure

After completion of test phase activities, the Permittees shall remove from the facility all mixed and derived waste and shall complete closure activities, in accordance with HWMR-7, Pt. V, § 264.113 and the schedules that are specified in the Closure Plan, Permit Attachment II-13, or are amended as required by Permit Condition II.L.2.

Prior to or within 10 years of the issuance of this permit, the Permittees shall remove all TRU-mixed waste residues from the WIPP facility, complete closure activities and provide certification of closure of the BSTRs and the WHB.

The Permittees shall ensure that closure activities are initiated on a date which allows sufficient time to complete closure activities in accordance with the schedule specified in Permit Attachment II-13 (Figure I-1) within the time limit specified in this Permit Condition, unless it is determined that partial closure or emergency closure of one or both of the BSTRs is required. In that case, the Permittees shall complete closure activities in accordance with the schedules specified in Permit Attachment II-13, Figures I-2 and I-3.

II.L.5. Disposal or Decontamination of Equipment, Structures, and Soils

The Permittees shall decontaminate or dispose of all contaminated equipment, structures, and soils, as required by HWMR-7, Pt. V, § 264.114, Permit Attachment II-13 and Permit Conditions II.L.1 through II.L.4.

The Permittees shall use only solvents containing non-RCRA hazardous constituents or materials in spill or closure decontamination. If a liquid hazardous waste is generated, this waste must be managed in accordance with Permit Condition III.G.

MODULE III - CONTAINER STORAGE - WASTE HANDLING BUILDING

III.A. DESCRIPTION OF UNIT

The conditions of this permit regulate transuranic-mixed (TRU-mixed) waste operations conducted throughout the Waste Handling Building (WHB) (Building 411) and authorize storage of containers in specific areas of the WHB.

The WHB is located at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. The WHB has a total enclosed area of approximately 84,000 square feet. The building contains office space, decontamination areas, satellite accumulation areas, restrooms, the waste hoist, and a mechanical equipment room, in addition to the permitted waste storage and handling areas. Remote-handled (RH) waste management areas within the building (labelled on some drawings) may be used for RH wastes in the future, but RH wastes will not be managed at the WIPP during the Test Phase activities.

The total enclosed floor space in the WHB utilized for TRU mixed hazardous waste container management is approximately 36,000 square feet and is divided into three distinct areas. The areas are the Inventory and Preparation Area (IPA) (approximately 27,000 square feet), the Site Generated Waste Room (SGWR) (approximately 5250 square feet), and the Overpack and Repair Room (OPRR) (approximately 3750 square feet). The WHB will be used to store TRU-mixed waste consisting of Test Phase experimental waste and "derived" waste which is generated during the Test Phase or BSTR closure period.

The containers which will be used to store experimental TRU-mixed waste are polyethylene lined, carbon steel test bins with a nominal volume of 330 gallons each (41.12 cubic feet). Each test bin will be completely enclosed within a carbon steel, standard waste box/radiological control boundary (SWB/RCB) with a nominal volume of 410 gallons (54.81 cubic feet) each. Derived wastes (except spent activated carbon) will be stored in closed, standard DOT approved mild steel 55 gallon (7.35 cubic feet) drums or other containers tested to DOT standards. The containers (except spent activated carbon canisters) will be equipped with rigid liners of molded polyethylene (or other compatible material).

Based on aisle space requirements of three feet, the three areas of the WHB are capable of storing a total of 790 test bins within SWB/RCBs and 504 55-gallon (7.35 cubic feet) drums of derived waste. However, during the test phase and Bin-Scale Test Room closure period, the WHB will be permitted to store a maximum of 172 test bins within SWB/RCBs and 500 55-gallon (7.35 cubic feet) drums of derived waste.

The concrete floor throughout the waste handling portions of the WHB is sealed with carboline® phenoline 305 finish, a phenolic epoxy impermeable coating. The interior of the WHB is maintained at a lower pressure than the outside atmosphere, thereby causing air to flow into the building through all open doors or air leakage points. The ventilation system in the WHB filters the building air, including the exhaust from the TRUPACT II hood ventilation system, through high efficiency particulate air (HEPA) filters prior to discharge. The building is also equipped with a sprinkler system in the waste handling area and a fire water collection system (trenches and sump) in the floor to prevent contaminated water from running out of the WHB. The WHB is also equipped with portable fire extinguishers and interior fire hoses which can be operated by the Fire Response Teams.

III.B. WASTE HANDLING BUILDING (WHB) OPERATION REQUIREMENTS

The WHB structure and equipment shall be designed, constructed, maintained, and operated in accordance with the conditions of this permit. The Permittees shall maintain these systems throughout the time period of the permit.

III.B.1. Maximum Volume of Waste

During the test phase and Bin-Scale Test Room closure period this permit authorizes the storage of a maximum of 172 Test Bin containers, each contained in a Radiological Control Boundary (modified Standard Waste Box) (SWB/RCB) in the IPA, SGWR and the OPRR of the Waste Handling Building (WHB). The 172 Test Bins would have a total maximum waste volume of 56,760 gallons (7588.23 cubic feet).

In addition to the Test Bins containing experimental waste, the OPRR of the WHB is permitted to store up to 4-55 gallon drums (220 gallons (29.41 cubic feet) total) of derived wastes during the test phase. The IPA of the WHB is permitted to store up to 500-55 gallon drums (27,500 gallons (3676.47 cubic feet) total) during closure of the BSTRs.

The IPA of the WHB is also permitted to store up to twelve canisters of spent activated carbon, from the BSTR test bin vent system, during closure of the BSTRs.

III.B.2. Stacking Requirement

III.B.2.a. Test Bins

The RCBs containing the test bins shall not be stacked more than two high while stored in the WHB.

III.B.2.b. Drums in SWBs

The SWBs which completely enclose drums of derived waste shall not be stacked more than two high while stored in the WHB.

III.B.2.c. Containers of Derived Waste

Drums containing derived waste shall not be stacked more than two high while stored in the WHB. The stainless steel canisters containing spent activated carbon shall not be stacked while stored in the WHB.

III.B.3. Fire Protective Requirements

The fire protection system in the WHB (sprinkler system, interior fire hose connections, alarms and extinguishers) specified in Section D-9a(3)(b) of Permit Attachment III-1 and Permit Attachment II-12, shall be maintained in good operating condition. The fire and response team equipment stored in the Safety and Emergency Services Building (B-452) shall be maintained in operational readiness and ready for response to an incident.

III.B.4. Emissions Control

The emissions control equipment (HEPA Filters) for test bins and SWB/RCBs, and derived waste drums specified in Section D-9a(2)(a) of Permit Attachment III-1 shall be maintained in good operating condition.

III.B.5. Waste Handling Building Ventilation

The equipment used to provide ventilation for the WHB and maintain a suitable environment for personnel shall be maintained to ensure continuous and fully functional operation, including the general WHB HVAC system, the Hood Ventilation System (HVS), and the SWB HVS, which is a subsystem to the HVS.

III.B.5.a. Ventilation System Shutdown

If the WHB ventilation system is shut down for any reason, the Permittees shall halt any waste

container handling, purging or other activity which could release volatile organic compounds from containers into the WHB. If a ventilation shutdown extends for more than 4 hours, and 5 or more test bins are stored in the WHB, the Permittees shall perform real-time monitoring of volatile organics in ambient air in the immediate vicinity of stored test bins, to determine whether unacceptable exposures to unprotected employees may occur.

In the event of any WHB ventilation system shutdown, the Permittees shall notify the NMED Secretary orally within 24 hours and in writing within 10 days from the initial shutdown, providing a complete description of the cause and duration of the shutdown. If the shutdown was unplanned, the written report must include the measures taken to repair the system and prevent similar events in the future.

III.B.6. Aisle Space Requirements at the Waste Handling Building

Containers shall be stored in the WHB in a manner which ensures adequate personnel and equipment access to all doorways and exits.

III.B.6.a. Standard Waste Box/Radiological Control Boundary Aisle Space

Aisle space for SWB/RCBs containing TRU-mixed waste in the WHB shall be maintained at a minimum of 36 inches between rows of RCBs and any solid object (wall, building column, or fixed equipment).

III.B.6.b. Derived Waste Aisle Space

Aisle space for drums containing derived waste in the WHB shall be maintained with a minimum of 36 inches between each row of SWBs containing drums, each row of portable containment dikes managing stacks of drums. A minimum of 36 inches of space shall be maintained around the SWB containing stainless steel canisters managing spent activated carbon. A minimum of 36 inches will be maintained between each row of derived waste containers and any solid object (wall, building column, or fixed equipment).

III.C. CONTAINER REQUIREMENTS

A container is any portable device in which material is stored, treated, disposed of, or otherwise handled.

III.C.1 Test Bins

TRU-mixed waste for testing purposes shall be managed in Type 1 Dry and Type 1 Humid bins only.

III.C.1.a. Dry Bin Tests With TRU-mixed Waste

TRU-mixed waste used for dry bin tests shall be contained in Type 1 Dry Bins with polyethylene liners as specified in Permit Attachments III-1 and III-2.

III.C.1.b. Humid Bin Tests With TRU-mixed Waste

TRU-mixed waste used for humid bin tests shall be contained in Type 1 Humid Bins with polyethylene liners as specified in Permit Attachments III-1 and III-2.

III.C.2 Derived Waste Containers

III.C.2.a. Standard 55-Gallon (7.35 cubic feet) Drums

Derived waste from test phase operations and retrieval shall be contained in standard 55-gallon drums, or other DOT approved containers, equipped with polyethylene liners as specified in Permit Attachment III-1. The containers must meet all of the requirements set forth in Title 49 of the Code of Federal Regulations. The NMED Secretary shall approve alternative containers prior to use for storage.

III.C.2.b. Standard Waste Box/Radiological Control Boundary Containers

Test bins containing TRU-mixed wastes which are not in good condition, or are leaking, and which cannot be repaired, shall be managed in SWB/RCB containers. The SWB/RCB containers must meet the specifications provided in Permit Attachments III-1 and III-3.

III.C.2.c. Standard Waste Box/Radiological Control Boundary Overpack Containers

Prior to using the proposed carbon steel overpack containers to contain contaminated SWB/RCB or SWB/RCB lids which cannot be decontaminated, the overpack container design must be submitted to and approved by the NMED Secretary. The overpack containers shall meet all of the requirements for a Type A shipping container set forth in Title 49 of the Code of Federal Regulations.

III.C.2.d. Spent Activated Carbon Canisters

Spent activated carbon generated from the VOC monitoring system shall be contained in closed stainless steel canisters as specified in Drawing 412-M-003-W of Permit Attachment IV-3.

III.C.3 DOT Requirements

All containers used to manage TRU-mixed waste shall be labeled in accordance with Title 49 of the Code of Federal Regulations.

III.D. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

The Permittees may manage contact handled (CH) TRU-mixed waste in the WHB. The source and type of waste which may be managed is limited to those described in Permit Conditions II.C and II.D and Attachment II-1, and small quantities of other wastes which may be derived from the permitted waste types.

The Permittees shall not accept for storage any containers of Group 1 TRU-mixed waste from offsite sources which contain more than 1% free liquid by volume.

III.D.1. Inventory and Preparation Area (IPA)

The IPA of the WHB may be used to manage containers of Test Phase experimental waste and only those derived waste containers generated during closure of the BSTRs.

III.D.2. Site Generated Waste Room (SGWR)

The SGWR of the WHB may be used to manage containers of experimental waste generated at the WIPP facility.

III.D.3 Overpack and Repair Room (OPRR) Area

The OPRR of the WHB may be used to manage containers of experimental waste and containers of derived waste generated during the term of this permit.

III.E CONDITION OF CONTAINERS

III.E.1. Test Bin Containers

If a test bin or test bin appurtenance managing TRU-mixed waste in the WHB is not in good condition (e.g., severe rusting, apparent structural defect), or if it begins to leak, the Permittees shall repair the test bin or appurtenance. If a defective or leaking test bin is not repaired, and if the test bin is permanently removed from a BSTR VOC collection header and monitoring system, the Permittees shall place the entire defective or leaking test bin into a closed and overpack (SWB) container. All overpack containers shall be managed in compliance with the conditions of this permit.

III.E.2. Derived Waste Containers

If a derived waste container containing TRU-mixed or hazardous waste is not in good condition (e.g., severe rusting, apparent structural defect), or if it begins to leak, the Permittees shall either transfer the waste to a container which is in good condition, transfer the entire defective or leaking container to an overpack container, or otherwise manage the waste in compliance with the conditions of this permit. [HWMR-7, Pt. V, § 264.171].

III.E.3. Notification Requirements

If a test bin or derived waste container holding TRU-mixed or hazardous waste begins to leak, the Permittees shall provide an oral report to the NMED Secretary within 24 hours and a written report within 10 calendar days after discovery of the leak, detailing the method of discovery of the leak and all completed and proposed responses to the leak. [HWMR-7, Pt. V, § 264.171 and 264.601]

III.F. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittees shall ensure that the ability of the container to contain the waste is not impaired by any incompatibility with its contents, as required by HWMR-7, Pt. V, § 264.172.

III.G. MANAGEMENT OF CONTAINERS

The Permittees shall manage all containers as specified in Permit Attachment III-1 and this condition, and shall not open, handle, or store containers in such a manner which may rupture the containers or cause them to leak, as required by HWMR-7, Pt. V, § 264.173.

The Permittees shall receive for storage only TRU-mixed waste which is contained in Type 1 test bins described in Permit Condition III.C.1.

The Permittees shall not remove the lid of any test bin during the term of this permit, unless under emergency conditions as approved by the NMED Secretary. The Permittees shall equip all open ports on the test bins with HEPA-grade filters.

Each test bin in storage in the WHB must be continuously vented to the atmosphere via a HEPA filtered port to prevent the build-up of internal pressure.

Each SWB/RCB which contains a test bin in storage in the WHB shall be vented to the atmosphere via a HEPA filtered port to prevent the build-up of internal pressure.

During the Test Phase, when four drums of derived waste have been filled in the OPRR of the WHB, the drums shall be overpacked into a HEPA-filter vented Standard Waste Box (SWB) and transported to the BSTR derived waste storage area.

The Permittees shall keep all derived waste containers in the OPRR of the WHB closed during storage, except when it is necessary to add or remove waste, and shall not open, handle or store containers in a manner which may rupture the container or cause it to leak. Each derived waste container, except for the stainless steel spent activated carbon canisters, shall be vented via a HEPA grade filter designed to prevent the build-up of internal pressure. All ports of the spent activated carbon canisters shall be equipped with airtight caps. [HWMR-7, Pt. V, § 264.173 and 264.601]

Derived waste containers shall not be used to manage free liquids. The Permittees shall ensure that any derived waste containing free liquids will be completely solidified prior to or immediately after placement in a derived waste container.

Test bin containers stored in the WHB shall not contain more than 1% free liquids by volume.

III.H. CONTAINMENT SYSTEMS

The Permittees shall provide adequate secondary containment for all containers managed in the WHB and maintain the containment system(s) in fully operational condition.

As specified in Permit Attachment III-4 and in Section D-9a(3)(f) of Permit Attachment III-1, secondary containment for all containers stored in the WHB shall be provided by the floor and the fire suppression water trench/sump system of the WHB. All containers stored in the OPRR and the IPA portions of the WHB shall be stored no further than halfway across the room from the trench system which serves that room unless the container is provided with supplementary secondary containment. Supplementary secondary containment shall be either a carbon steel SWB/RCB which completely encloses the test bin, or a carbon steel, portable secondary containment dike with dimensions of 4.5 feet square and 1.3 feet deep. All SWB/RCBs shall be continuously vented to the atmosphere via a HEPA grade filter while used as secondary containment within the WHB, as specified in Section D-9a(2)(b) of Permit Attachment III-1 (HWMR-7, Pt. V, § 264.175).

III.I. INSPECTION AND MONITORING SCHEDULES AND PROCEDURES

III.I.1 Inspections

The Permittees shall inspect the WHB, containers, and all systems critical to the operation of the WHB container management areas weekly or more frequently, in accordance with HWMR-7, Pt. V, § 264.174 and Permit Condition II.F.

III.I.2 Monitoring

While test bins containing TRU-mixed waste are stored in the WHB, the Permittees shall conduct sampling, analysis and purging of head space gases at a frequency which is adequate to ensure that the mixture of flammable gases within each test bin headspace is maintained at concentrations which are no more than one-half the lower explosive limit. The sampling and analysis shall be conducted in accordance with the requirements of Permit Attachments II-1, II-2 and II-3. Individual test bin headspace gas sampling and purging frequencies during the BSTR closure period shall be based on gas analyses from the Test Phase. The Permittees shall take all actions necessary and in accordance with Permit Attachment III-5 to reduce the concentration of flammable gases within the test bin headspace to below one-half the lower explosive limit.

III.J. RECORDKEEPING

III.J.1. Facility Operating Records

The Permittees shall place the results of all waste analyses, inspections, and other documentation showing compliance with the requirement(s) of permit condition III.I.2 in the facility operating record in accordance with HWMR-7, Pt. V, § 264.73.

III.J.2. Container Identification

In the WHB, waste container assembly identification numbers (bar codes) shall be verified against the uniform hazardous waste manifest. Upon receipt, the waste manifest identification codes will be checked against the identification codes for each container.

The NMED Secretary shall be notified of any discrepancies or inconsistencies between the manifest shipping papers and the waste container assembly identification number within 24 hours. All discrepancies and inconsistencies shall be resolved with the generator prior to placement into a BSTR. The facility's operating record shall document in detail all discrepancies and inconsistencies. The record shall include dates, time, individual's names, the generator name, and a detailed description of the discrepancy and how it was resolved.

III.K. CLOSURE

At closure of the WHB storage unit, the Permittees shall remove all hazardous waste and hazardous waste residues from the Waste Handling Building and the facility, in accordance with the procedures in Permit Attachment II-13 and Permit Condition II.L. [HWMR-7, Pt. V, § 264.111, 264.178 and 264.601]

III.L. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

The Permittees shall not manage ignitable or reactive waste, as defined in HWMR-7, Pt. V, § 264.21, 264.23, within the Waste Handling Building. The Permittees shall follow the procedures to prevent acceptance of ignitable and reactive waste set forth in Permit Conditions II.C and II.D.

III.M. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

The Permittees shall not manage incompatible wastes, as defined in HWMR-7, Pt. V, § 264, Appendix V, within the Waste Handling Building. The Permittees shall follow the procedures to prevent acceptance of incompatible wastes set forth in Permit Conditions II.C and II.D.

MODULE IV - CONTAINER STORAGE IN UNDERGROUND BIN-SCALE TEST ROOMS

IV.A. DESCRIPTION OF UNITS

This permit authorizes storage of waste in Bin Scale Test Rooms (BSTRs) 1 and in BSTR 3 once the roof support has been approved by the NMED Secretary and is in place. Both BSTRs are located in Panel 1 within the subsurface structures of the WIPP repository. The location of the BSTRs within the subsurface are shown in Figures D-23 and D-24 of Permit Attachment III-1. The BSTRs consist of mined openings within the bedded salt of the Salado Formation approximately 2150 feet below the surface. The rooms were excavated during the period from 1986 through 1988. The BSTRs have nominal dimensions of 13 feet high, 33 feet wide and 300 feet long with approximately 9900 square feet of floor space.

The two BSTRs will be used to store transuranic-mixed (TRU-mixed) waste consisting of Test Phase experimental waste and "derived" waste which is generated during the Test Phase. The containers which will be used to store the experimental TRU-mixed waste are polyethylene lined, carbon steel test bins with a nominal volume of 330 gallons (41.12 cubic feet) each. Each test bin will be completely enclosed in a dedicated carbon steel standard waste box/radiological control boundary (SWB/RCB) with a nominal volume of 410 gallons (54.81 cubic feet) each. The SWB/RCB will also act as secondary containment for the test bins. The test bin/RCB combination will be stacked two high on a steel platform.

Derived waste will be stored in closed, standard, mild steel, 55-gallon (7.35 cubic feet) drums (or other containers tested to DOT standards) which are lined with rigid, molded, polyethylene (or other compatible material) liners. Secondary containment is provided either by overpacking four drums within an SWB, or placing the drums on a steel support grid within a 4.5 ft square, 1.3 ft. deep steel portable containmert tray.

The capacity of BSTR 1 is 68 test bins within SWB/RCBs which manage TRU-mixed waste, eight empty baseline bins, 16 drums of derived waste within 4 SWBs, and 2 drums of derived waste on a portable containment tray. The BSTR 1 may also store 12 stainless steel canisters containing spent carbon from the VOC monitoring system. The capacity of BSTR 3 is 104 test bins within RCBs and 2 drums of derived waste on a portable containment tray.

The BSTRs contain several unique support systems which are not typically found in container storage areas. The systems are described below.

To enhance the stability of the mined openings, the roof (back) of each BSTR has been rock bolted using 10-foot long mechanical rock bolts. In addition, BSTR 1 has been supplied with a supplementary roof support system consisting of roof bolts, steel channel sets, and a wire rope/wire mesh lacing system. The type of supplemental roof support system to be used in BSTR 3 has not yet been decided. Any proposed supplemental roof support system will be thoroughly evaluated, demonstrated to achieve the same degree of safety as the BSTR 1 system, and installed prior to managing and storing waste in BSTR 3, as specified in Permit Condition I.J.9.

A geomechanical monitoring system is in place in each BSTR. The monitoring system allows measurements to be taken to assess the deformation and movement of the walls, floor and ceiling of each BSTR. DOE estimates that the system will provide a minimum of 120 days advance warning of a potential roof fall. DOE shall take corrective actions to prevent a roof fall from occurring. If the roof stability problems cannot be corrected, the waste containers in the BSTR shall be removed to a stable location within 14 days of the advanced warning. The supplementary roof support system in BSTR 1 is equipped with load sensors to allow adjustments to prevent overloading of individual components of the system.

Each test bin in storage in the BSTRs will be equipped with emissions controls to prevent emissions of radioactive and volatile organic contamination. Every test bin will have HEPA filters installed in each vent, sample and purge line. A manifold system containing flow valves and pressure relief valves will collect gas discharges from the bins and route them through particulate and activated carbon filter systems.

The BSTRS will also be equipped with continuous air monitors in work areas and exhaust streams to detect airborne radioactivity (alpha and beta) which are potential hazards to human health and the environment. A detection of a release of airborne radioactivity is also an indication that a release of hazardous constituents may have occurred.

IV.B. BSTR OPERATION

The Permittees shall design, operate, inspect, monitor and maintain the BSTRs in accordance with the conditions of this permit.

IV.B.1. Maximum Volume of Waste

The maximum number of Test Bin containers containing Test Phase experimental waste to be managed in BSTR 1 shall not exceed a total of 68 bins, or an equivalent volume of 22,440 gallons. The BSTR 1 may also manage eighteen 55-gallon (7.35 cubic feet) drums (990 gallons (132.35 cubic feet)) of derived waste and 12 spent carbon canisters.

The maximum number of Test Bin containers containing Test Phase experimental waste to be managed in BSTR 3 shall not exceed a total of 104 bins or an equivalent volume of 34,320 gallons (4588.24 cubic feet). The BSTR 3 may also manage two 55-gallon (7.35 cubic feet) drums of derived waste.

IV.B.2. Stacking Requirement

Each test bin managed in the BSTRs shall be completely enclosed in an SWB/RCB. The SWBs/RCBs containing the test bins shall not be stacked more than two high while stored in a BSTR. Each SWB/RCB stack stored in a BSTR shall be placed on a steel platform with approximately 6-inch long, adjustable length legs. The adjustable legs will be used to level the SWB/RCB stack.

The drums containing derived waste from the WHB which are managed in BSTR 1 shall be completely enclosed in SWBs. The SWBs shall not be stacked more than two high.

The drums containing derived waste from the BSTRs which are managed in BSTR 1 and 3 (not contained in SWBs) shall not be stacked. The drums shall be managed on a steel support grid above a steel, portable secondary containment system.

The stainless steel canisters containing spent activated carbon shall not be stacked.

IV.B.3. Fire Protection Requirements

The fire protection system in the underground area (portable extinguishers, alarms and ventilation reversal equipment) specified in Section D-9a(3)(e) of Permit Attachment III-1 and Permit Attachment II-12 shall be maintained in good operating condition. The fire and response team equipment stored underground shall be maintained in operational readiness and ready for response to an incident in the BSTRs.

IV.B.4. Emission Controls and VOC Monitoring Equipment

IV.B.4.a. Test Bins

While test bins are stored in the BSTRs, the test bin emissions control equipment and VOC monitoring equipment specified in Permit Attachments IV-1, IV-2 and IV-3, and in Section D-9 of Permit Attachment III-1, shall be maintained in good operating condition.

IV.B.4.b. Derived Waste Containers

While derived waste containers are stored in the BSTRs, the emissions control equipment (HEPA Filters) specified in Section D-9a(2)(a) of Permit Attachment III-1 shall be maintained in good operating condition.

IV.B.5 Bin Scale Test Room Ventilation

The equipment specified in Permit Attachment IV-3 and IV-4, and Section D-9a(3)(e) of Permit Attachment III-1 which is used to provide ventilation for the BSTRs and maintain a suitable environment for personnel shall be maintained to ensure continuous and fully functional operation.

IV.B.6 Ground Control Systems

IV.B.6.a. Roof Support System

The existing roof support system and roof support system monitoring equipment specified in Permit Attachments III-1, IV-5 and Permit Attachment IV-6 for BSTR 1 shall be maintained in good operating order to ensure retrievability of test phase waste. All plans, drawings and documentation for the proposed BSTR 3 supplemental roof support system and BSTR 3 roof support system monitoring equipment shall be submitted to the NMED secretary for approval prior to managing waste in accordance with Permit Condition I.J.9.

IV.B.6.b. Geotechnical Monitoring System

The instrumentation specified in Permit Attachments III-1, IV-5 and IV-6 used to conduct geotechnical monitoring of the ground condition within the BSTRs shall be maintained in good operating order to provide early warning of deteriorating ground conditions in the BSTR.

If the proposed geotechnical monitoring system for BSTR 3 is different than the system in BSTR 1, then all plans, drawings and documentation for the planned BSTR 3 system must be submitted to the NMED Secretary in accordance with Permit Condition I.J.9.

IV.B.7 Air Monitoring

The monitoring equipment used to continuously monitor the atmosphere within the BSTRs for airborne radiation will be maintained to ensure continuous and fully functional operation to ensure the timely detection of potential hazardous constituent releases.

IV.B.8 Aisle Space Requirements in the BSTRs

IV.B.8.a Test Bin Aisle Space

The SWB/RCBs managing test bins which contain TRU-mixed waste shall be stored in a maximum of two rows in each BSTR. Each SWB/RCB in a row shall be maintained with a minimum of 36- inch clearance between the rib (wall) of the BSTR and the adjacent SWB/RCBs. The two rows of SWB/RCBs in each BSTR shall be separated by a central aisle space which will be maintained with a minimum of 16 feet of clearance between rows.

IV.B.8.b Derived Waste Aisle Space

Aisle space for containers managing derived waste shall be maintained with a minimum of 36 inches surrounding each stack of SWBs containing drums and each portable dike managing drums. Aisle space for stainless steel cylinders managing spent activated carbon shall be a minimum of 36 inches surrounding each SWB containing the cylinders.

IV.C CONTAINER REQUIREMENTS

A container is any portable device in which material is stored, treated, disposed of, or otherwise handled.

IV.C.1 Test Bins

TRU-mixed waste for testing purposes shall be managed in Type 1 Dry and Type 1 Humid bins only.

IV.C.1.a. Dry Bin Tests With TRU-mixed Waste

TRU-mixed waste used for dry bin tests shall be managed in Type 1 Dry Bins with polyethylene liners as specified in Permit Attachments III-1 and III-2.

IV.C.1.b. Humid Bin Tests With TRU-mixed Waste

TRU-mixed waste used for humid bin tests shall be managed in Type 1 Humid Bins with polyethylene liners as specified in Permit Attachments III-1 and III-2.

IV.C.2 Derived Waste Containers

IV.C.2.a. Standard 55-Gallon (7.35 cubic feet) Drums

Derived waste from test phase operations and retrieval shall be managed in standard 55-gallon (7.35 cubic feet) drums, (or other containers tested to DOT standards), equipped with polyethylene liners as specified in Permit Attachment III-1.

The containers must meet all of the requirements set forth in Title 49 of the Code of Federal Regulations.

IV.C.2.b. SWB/RCB Containers

Test bins containing TRU-mixed wastes which are not in good condition, or are leaking, and which cannot be repaired, shall be managed in SWB/RCB containers. The SWB/RCB containers must meet the specifications provided in Permit Attachments III-1 and III-3.

IV.C.2.c. RCB/SWB Overpack Containers

Prior to using the proposed carbon steel overpack containers to contain contaminated RCB/SWBs or RCB/SWB lids which cannot be decontaminated, the overpack container design must be submitted to and approved by the NMED Secretary. The overpack containers shall meet all of the requirements for a Type A shipping container set forth in Title 49 of the Code of Federal Regulations.

IV.C.2.d. Spent Activated Carbon Canisters

Spent activated carbon generated from the VOC monitoring system shall be managed in closed stainless steel canisters as specified in Drawing 412-M-003-W of Permit Attachment IV-3.

IV.C.3 DOT Requirements

All containers used to manage TRU-mixed waste shall be labeled in accordance with Title 49 of the Code of Federal Regulations.

IV.D. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

The Permittees may manage contact handled (CH) TRU-mixed waste in the BSTRs. The source and type of waste which may be managed in the BSTRs is limited to those described in Permit Conditions II.C. and II.D. and Permit Attachment III-1, and small quantities of other wastes which may be derived from the permitted waste types.

IV.E. CONDITION OF CONTAINERS

IV.E.1. Test Bin Containers

If a test bin or test bin appurtenance managing TRU-mixed waste in a BSTR is not in good condition (e.g., severe rusting, apparent structural defect), or if it begins to leak, the Permittees shall repair the test bin or appurtenance or place the entire defective test bin into an overpack container. If the defect which requires repair has not resulted in a release of hazardous waste or hazardous constituents to the secondary containment system, the Permittees may repair the item in place, if possible. If a release of hazardous waste or hazardous constituents to the secondary containment system has occurred, then the Permittees must transfer the defective bin from the BSTR to the WHB for repair and decontamination or overpacking.

IV.E.2. Derived Waste Containers

If a derived waste container containing TRU-mixed waste is not in good condition (e.g., severe rusting, apparent structural defect), or if it begins to leak, the permittee shall either transfer the waste to a container which is in good condition, transfer the entire defective or leaking container to an overpack container, or

otherwise manage the waste in compliance with the conditions of this permit.

IV.E.3. Notification Requirements

If a test bin container or derived waste container holding TRU-mixed waste begins to leak, the Permittees shall provide an oral report within 24 hours and a written report within 10 calendar days to the NMED Secretary after discovery of the leak, detailing the method of discovery of the leak and all completed and proposed responses to the leak. [HWMR-7, Pt. V, 40 CFR 264.171 and 264.601]

IV.F. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittees shall ensure that the ability of the container to contain the waste is not impaired by any incompatibility with its contents, as required by HWMR-7, Pt. V, § 264.172.

IV.G. MANAGEMENT OF CONTAINERS

The Permittees shall manage all containers as specified in Permit Attachment III-1 and this condition and shall not open, handle, or store containers in such a manner which may rupture the container or cause it to leak, as required by HWMR-7, Pt. V, § 264.173.

The Permittees shall keep all test bins closed during storage in the BSTRs, except for venting and purging through HEPA grade filtered ports, and the VOC monitoring system, as described in Permit Attachments IV-2 and IV-3. No test bin lid shall be removed at the WIPP during the term of this permit.

The test bins managed in the BSTRs shall be equipped with pressure relief valves and mechanical rupture disks which are set to open at a pressure which is low enough to prevent rupture of the bin due to build-up of internal pressure.

The Permittees shall keep all derived waste containers managed in the BSTRs closed during storage, except when it is necessary to add or remove waste, and shall not open, handle or store containers in a manner which may rupture the container or cause it to leak. Each derived waste container, except the stainless steel spent activated carbon canisters, shall be vented to the atmosphere via a HEPA grade filter designed to prevent the build-up of internal pressure. All

ports of the spent activated carbon canisters shall be equipped with airtight caps. [HWMR-7, Pt. V, 40 CFR 264.173 and 264.601]

Derived waste containers shall not manage free liquids. The Permittees shall ensure that any derived waste containing free liquids be completely solidified prior to or immediately after placement in a derived waste container.

The amount of free liquid present in the Type 1 dry test bins managed in the BSTRs shall not exceed 1% of the total volume of the test bin.

The Type 1 humid test bins in storage in the BSTRs shall not be allowed to accumulate more than 1% liquid by volume. The Permittees shall use the procedures described in Section D-9a(3)(f) of Permit Attachment III-1 to determine the volume of liquid introduced into the test bin during the humidification process. If a container is found to contain more than 1% by volume of free liquid, the Permittees shall take all action necessary to reduce the volume of liquid to below the required level.

The Permittees shall not add any material containing hazardous waste or hazardous constituents to a test bin managed in a BSTR during the term of this permit.

IV.H. CONTAINMENT SYSTEMS

The Permittees shall provide adequate secondary containment for all containers managed in the BSTRs and maintain the containment system(s) in fully operational condition.

As specified in Section D-9a(3)(f) of Permit Attachment III-1 and in Permit Attachment III-3 secondary containment for test bin containers stored in the BSTRs shall be provided by a carbon steel SWB/RCB which completely encloses the test bin. The SWB/RCB shall be continuously vented to the atmosphere via a HEPA grade filter while used as secondary containment within the BSTRs.

Secondary containment for derived waste containers stored in the BSTRs, except for spent activated carbon canisters which do not contain free liquid, shall be provided by a either a carbon steel SWB continuously vented to the atmosphere via a HEPA-grade filter, or a carbon steel, portable secondary containment dike with dimensions of 4.5 feet square and 1.3 feet deep. [HWMR-7, Pt. V, 40 CFR 264.175 and 264.601]

IV.I. INSPECTION AND MONITORING SCHEDULES AND PROCEDURES

IV.I.1. Inspections

The Permittees shall inspect the BSTRs, containers, and all systems critical to the operation of the BSTRs weekly or more frequently, in accordance with Permit Condition II.F. [HWMR-7, Pt. V, 40 CFR 264.174, 264.601 and 264.602]

IV.I.2. Monitoring

IV.I.2.a. Flammable Gas Monitoring

While test bins are managed in the BSTRs, the permittee shall conduct sampling and analysis of test bin head space gases at a frequency which is adequate to ensure that the mixture of flammable gases within the test bin headspace are maintained at concentrations which are no more than one-half of their lower explosive limit. The sampling and analysis shall be conducted in accordance with the requirements of Permit Attachments II-1, II-2, and II-3. The Permittees shall take all actions necessary and in accordance with Permit Attachment III-5, to reduce the concentration of flammable gases within the test bin headspace to below one-half the lower explosive limit.

IV.I.2.b. Geomechanical Monitoring

The Permittees shall conduct geotechnical and roof support system monitoring in the BSTRs during the term of this permit as specified in Permit Attachments III-1, IV-5, and IV-6. Based on the results of the monitoring, the Permittees shall either take all remedial measures required to ensure retrievability of waste during the test phase, or begin retrieval of the test phase waste. The Permittees shall notify the NMED Secretary orally within 24 hours and in writing within five working days when the monitoring set points specified in Permit Attachments III-1, IV-5 and IV-6 for the geomechanical monitoring system have been exceeded or, no later than 120 days prior to the predicted date of a roof fall (if no corrective action is taken) based on the data from the geomechanical monitoring system, whichever comes first.

IV.I.2.c. VOC Monitoring

The Permittees shall conduct a VOC monitoring program in the BSTRs during the term of this permit as specified in Permit Attachments IV-1, IV-2 and IV-3 and Section D-9e of Permit Attachment III-1.

The Permittees shall collect air samples for volatile organic analysis from the discharge point of the carbon sorption unit of the VOC monitoring system at least once per week during the term of this permit.

Until documentation is provided to demonstrate that it is no longer required, the Permittees shall analyze the samples from the discharge of the carbon sorption unit of the VOC monitoring system and provide quantitative data for all of the constituents listed in Table C-9 of Permit Attachment II-1.

The Permittees shall replace the carbon sorption canister on the VOC monitoring system prior to or immediately after the data from the volatile organic analysis of the discharge of the carbon sorption unit indicates that breakthrough of VOCs has occurred. Breakthrough will be defined as VOC detections at twice the detection limit.

IV.I.2.d. Air Monitoring

The Permittees shall conduct continuous radiological air monitoring of the atmosphere within the BSTRs during the term of this permit. The Permittees shall determine the source of any release of airborne radiation. The Permittees shall conduct sampling and analyses as required by Permit Condition I.J.7. and II.D.4.c.ii., and shall determine whether a related release of hazardous constituents has occurred. The Permittees shall take all actions necessary and in accordance with Permit Attachment II-12 to mitigate a release of hazardous waste constituents. Clean-up of hazardous waste constituents shall be continued until the Permittees can document that the criteria required under Permit Condition I.J.7. have been met.

IV.J. RECORDKEEPING AND REPORTING

IV.J.1. Facility Operating Records

The Permittees shall maintain for the life of this permit (including the closure period) all records of the wastes received and stored in the BSTRs. The Permittees shall maintain records of inspections and corrective measures for at least 3 years after an inspection is completed. [HWMR-7, Pt. V, 40 CFR 264.73 and 264.601]

The Permittees shall maintain for the life of this permit (including the closure period) all records of the data collected from the geotechnical and roof support system monitoring in the BSTRs in the facility operating record. The Permittees shall submit an annual report to the NMED Secretary. The report shall describe the geomechanical monitoring program conducted in the BSTRs, summarize the results of the monitoring and the room performance, and describe any corrective actions or support system adjustments which were required in the previous year. The report shall be submitted to the NMED Secretary by end of each calendar year.

Complete records of bin atmosphere sampling, analyses and purging shall be maintained for the term of this permit. [HWMR-7, Pt. V, 40 CFR 264.15, 264.17, 264.601 and 264.602]

The Permittees shall maintain the following data from the VOC Monitoring System in each BSTR in the facility operating record for the life of this permit (including the closure period): documentation for samples collected to monitor the operation and effectiveness of the monitoring system; all results and laboratory documentation for the samples collected; laboratory and field quality assurance/quality control documentation and results; the date and time a carbon filter in the system(s) is replaced; and documentation on the disposition of the spent carbon in a filter.

IV.K. CLOSURE

At closure of the BSTR storage units, the Permittees shall remove all hazardous waste and hazardous waste residues from the BSTR 1 and 3 and the facility, in accordance with the procedures in the Permit Attachment II-13 and Permit Condition II-L. [HWMR-7, Pt. V, 40 CFR 264.111, 264.178 and 264.601]

IV.L. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

The Permittees shall not manage ignitable or reactive waste, as defined in HWMR-7, Pt. V, 40 CFR 264.21, 264.23, within BSTRs 1 and 3. The Permittees shall follow the procedures to prevent acceptance of ignitable, and reactive waste set forth in Permit Conditions II.C and II.D.

IV.M. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

The permittee shall not manage incompatible wastes, as defined in HWMR-7, Pt. V, 40 CFR 264, Appendix V, within BSTRs 1 and 3. The Permittees shall follow the procedures to prevent acceptance of incompatible wastes set forth in Permit Conditions II.C and II.D.

MODULE V - PROTECTION OF GROUNDWATER

V.A. GENERAL GROUNDWATER MONITORING HIGHLIGHTS

The NMED Secretary has determined that the Permittee will not be required to conduct a groundwater monitoring program under HWMR-7, Pt. V 40 CFR 264.91 for the Waste Handling Building (WHB) or the Bin Scale Test Rooms (BSTRs). After an evaluation of the design of the containers and the storage units and the plans for operating the units, as well as site hydrogeologic conditions, the NMED Secretary has found that there is no potential for migration of liquid from the regulated units to the uppermost aquifer below the WHB or BSTRs during the permit timeframe.

V.A.1. Monitoring Program

The NMED Secretary may require the initiation of a groundwater monitoring program by the Permittee for one or both of the units. If unit conditions for the WHB change such that there is a potential for contaminant migration to the uppermost water-bearing unit, ground-water monitoring may be required. Also, if unit conditions for BSTR 1 or 2 change such that there is a potential for contaminant migration to Marker Bed 139, ground-water monitoring may be required, at the discretion of the NMED Secretary.

MODULE VI., SPECIAL CONDITIONS PURSUANT TO THE 1984 HAZARDOUS AND SOLID WASTE AMENDMENTS (HSWA) TO RCRA FOR THE WASTE ISOLATION PILOT PLANT, EPA I.D. NUMBER NM4890139088

A. DEFINITIONS

For purposes of these special conditions pursuant to the 1984 Hazardous and Solid Waste Amendments to RCRA, the following definitions shall apply:

"Administrative Authority" means the New Mexico Environment Department, or his/her designee, or, in the case of HSWA provisions for which the State is not authorized, the United States Environmental Protection Agency (EPA).

"CMS" means Corrective Measures Study.

"EPA" means the United States Environmental Protection Agency.

"Facility" means all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA.

"HSWA" means the 1984 Hazardous and Solid Waste Amendments to RCRA.

"Hazardous constituent" means any constituent identified in Appendix VIII of 40 CFR Part 261, or any constituent identified in Appendix IX of 40 CFR Part 264.

"Hazardous waste" means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. The term hazardous waste includes hazardous constituent.

"NMED" means the New Mexico Environment Department.

"Permit" means the conditions embodied in these special conditions pursuant to the 1984 Hazardous and Solid Waste Amendments to RCRA.

"Permittee" means the U.S. Department of Energy and Westinghouse Electric Corporation.

"RCRA" means the Resource Conservation and Recovery Act of 1980, as amended by HSWA in 1984.

"RCRA Permit" means the full permit, with RCRA and HSWA portions.

"RFA" means RCRA Facility Assessment.

"**RFI**" means RCRA Facility Investigation.

"**Release**" means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents).

"**Solid Waste Management Unit**" (**SWMU**) means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

If, subsequent to the issuance of this permit, regulations are promulgated which redefine any of the above terms, the Administrative Authority may, at its discretion, apply the new definition to this permit.

B. STANDARD CONDITIONS

1. Waste Minimization

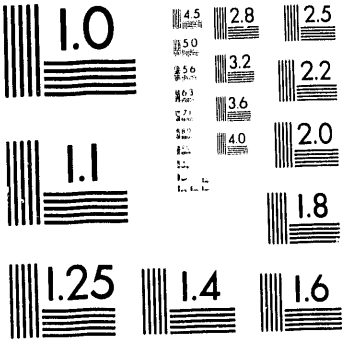
The Permittee shall submit a certified plan according to 40 CFR 270.11 in writing annually, by December 1, for the previous year ending September 30, specifying that:

a. the Permittee has a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the facility's operation to the degree determined to be economically practicable; and that the proposed method of treatment, storage, or disposal is the practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment. This certified plan must address the items below:

1) Any written policy or statement that outlines goals, objectives, and/or methods for source reduction and recycling of hazardous waste at the facility;

2) Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities;

3) Any source reduction and/or recycling measures implemented in the last five years or planned for the near future;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4) An itemized list of the dollar amounts of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste;

5) Factors that have prevented implementation of source reduction and/or recycling;

6) Sources of information on source reduction and/or recycling received at the facility (e.g., local government, trade associations, suppliers, etc.);

7) An investigation of additional waste minimization efforts which could be implemented at the facility. This investigation shall analyze the potential for reducing the quantity and toxicity of each waste stream through production reformulation, recycling, and all other appropriate means. The analysis shall include an assessment of the technical feasibility, cost, and potential waste reduction for each option;

8) The Permittee shall submit a flow chart or matrix detailing all hazardous wastes it produces by quantity, type, and building/area;

9) The Permittee shall demonstrate the need to use those processes which produce a particular hazardous waste due to a lack of alternative processes or available technology that would produce less hazardous waste.

The Permittee shall include this certified plan in the operating record. This section applies to the RCRA Permit.

2. Dust Suppression

Pursuant to 40 CFR 266.23(b), the Permittee shall not use waste or used oil or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment. This section applies to the RCRA Permit.

3. Permit Modification

a. If at any time for any of the reasons specified in 40 CFR 270.41, the Administrative Authority determines that modification of this Permit is necessary, the Administrative Authority may require the Permittee to request a permit modification per Module VI.B.3.b or may

initiate a modification according 40 CFR 124.5, as follows:

1) Notify the Permittee in writing of the proposed modification and the date by which comments on the proposed modification must be received.

2) Publish a notice of the proposed modification in a locally distributed newspaper, broadcast the notice over a local radio station, mail a notice to all persons on the facility mailing list maintained according to 40 CFR 124.10(c)(1)(ix), and place a notice in the facility's information repository (a central source of all pertinent documents concerning the remedial action, usually maintained at the facility or some other public place in the vicinity of the permitted facility, such as a public library).

3) If the Administrative Authority receives no written comment on the proposed modification, the modification will become effective five (5) calendar days after the close of the comment period. The Administrative Authority will:

a) Notify the Permittee in writing of the final decision.

b) Notify individuals on the facility mailing list in writing that the modification has become effective and shall place a copy of the modified permit in the information repository, if a repository is required for the facility.

4) If the Administrative Authority receives written comment on the proposed modification, the Administrative Authority will make a final determination concerning the modification after the end of the comment period. The Administrative Authority will:

a) Notify the Permittee in writing of the final decision.

b) Provide notice of the final modification decision in a locally distributed newspaper and place a copy of the modified permit in the information repository, if a repository is required for the facility.

b. The Permittee may initiate permit modifications proceeding under 40 CFR 270.42. All applicable requirements and procedures as specified in 40 CFR 270.42 shall be followed.

c. Modifications of the Permit do not constitute a reissuance of the Permit.

4. Permit Review

This Permit may be reviewed by the Administrative Authority five years after the date of permit issuance and may be modified as necessary as provided for in Module VI.B.3. Nothing in this section shall preclude the Administrative Authority from reviewing and modifying the Permit at any time during its term. This section applies to the RCRA Permit.

5. Compliance with Permit

Compliance with this Permit during its term constitutes compliance, for the purposes of enforcement, with 40 CFR Parts 264 and 266 only for those management practices specifically authorized by this Permit. The Permittee is also required to comply with Parts 260, 261, 262, and 263 as applicable.

6. Specific Waste Ban

a. The Permittee shall not place in any land disposal unit (such as a new hazardous waste landfill, surface impoundment, etc.) the wastes specified in 40 CFR 268 after the effective date of the prohibition unless the Administrator has established disposal or treatment standards for the hazardous waste and the Permittee meets such standards and other applicable conditions of this Permit. **Note: The WIPP has been granted a conditional variance from the Land Disposal Restrictions to place mixed hazardous wastes into the WIPP for the Test Phase.**

b. The Permittee may store wastes restricted under 40 CFR 268 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal provided that it meets the requirements of 40 CFR 268.50(a)(2) including, but not limited to, clearly marking each tank or container.

c. The Permittee is required to comply with all requirements of 40 CFR 268.7 as amended. Changes to the waste analysis plan will be considered permit modifications at the request of the Permittee, pursuant to 40 CFR 270.42.

d. The Permittee shall perform a waste analysis at least annually or when a process changes, to determine whether the waste meets applicable treatment standards. Results shall be maintained in the operating record.

e. The Permittee must comply with requirements restricting placement of hazardous wastes in or on land which become effective by statute or promulgated under Part 268, regardless of requirements in the Permit. Failure to comply with the regulations may subject the Permittee to enforcement action under Section 3008 of RCRA.

This section applies to the RCRA Permit.

7. Information Submittal

Failure to comply with any condition of the Permit, including information submittal, constitutes a violation of the Permit and is grounds for enforcement action, permit amendment, termination, revocation, suspension, or denial of permit renewal application. Falsification of any submitted information is grounds for termination of this Permit (40 CFR 270.43).

The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Administrative Authority required in this Permit are signed and certified in accordance with 40 CFR 270.11. A summary of the planned reporting requirements pursuant to this Permit is found in Table 1. Two (2) copies and one (1) 3.5" IBM compatible disk copy each of these plans, reports, notifications or other submissions shall be submitted to the Administrative Authority by Certified Mail or hand delivered to:

U.S. EPA, Region 6
Hazardous Waste Management Division
1445 Ross Avenue
Dallas, Texas 75202-2733

and

New Mexico Environment Department
Hazardous and Radioactive Materials Bureau
525 Camino De Los Marquez
Santa Fe, New Mexico 87502

8. Plans and Schedules Incorporation Into Permit

All plans and schedules required by this Permit are, upon approval by the Administrative Authority, incorporated into this Permit by reference and become an enforceable part of this Permit. Since required items are essential elements of this Permit, failure to submit any of the required items or submission of inadequate or insufficient information may subject the Permittee to

enforcement action under Section 3008 of RCRA which may include fines, suspension, or revocation of the Permit.

Any noncompliance with approved plans and schedules shall be termed noncompliance with this Permit. Written requests for extensions of due dates for submittals may be granted by the Administrative Authority in accordance with Module VI.B.3.

If the Administrative Authority determines that actions beyond those provided for, or changes to what is stated herein, are warranted, the Administrative Authority may modify this Permit according to procedures in Module VI.B.3.

9. Data Retention

All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to this Permit shall be maintained at the facility during the term of this Permit, including any reissued Permits.

C. SPECIFIC CONDITION - SURFACE IMPOUNDMENTS AND LANDFILLS

1. Operation/Construction of Surface Impoundments and Landfills

The Permittee shall not place hazardous waste in any surface impoundment or landfill unless the unit meets the Minimum Technological Requirements outlined in 40 CFR 264.221(a) and 40 CFR 264.301(a). The Administrative Authority must approve plans and specifications for retrofitting or construction prior to commencement of construction by the Permittee.

2. Surface Impoundment and Landfill Specific Waste Ban

The Permittee shall not place hazardous waste prohibited by 40 CFR 268 in any surface impoundment or landfill unless:

a. The waste meets treatment standards specified in 40 CFR 268.40, .41, .42, and .43;

b. A variance from the treatment standards has been granted pursuant to 40 CFR 268.44;

c. A petition has been granted on a case-by-case extension to the effective date, pursuant to 40 CFR 268.5;

d. A "no-migration" petition has been granted pursuant to 40 CFR 268.6; or

e. A surface impoundment is exempt under 40 CFR 268.4.

D. AA-BB AIR REGULATIONS

The Permittee must comply with the requirements of 40 CFR 264 Subparts AA and BB, as applicable. Within 90 days of the effective date of this Permit, the Permittee shall submit to the Administrative Authority a report which must contain, at minimum, the following information:

1. An equipment list which includes all the information required under 264.1064(b)(1) for equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight, and a list of all process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous waste with organic concentrations of at least 10 percent by weight.

2. For the process vents listed above, the amount of vent emissions in lb/hr or kg/hr, and in lb/yr or kg/yr.

3. If the emissions in paragraph 2 of this section exceed the emission limits cited in 264.1032(a)(1), the report must detail the manner in which compliance will be obtained, i.e., by the reduction of total organic emissions to the limits in 264.1032(a)(1), or reduction by means of a control device per 264.1032(a)(2).

4. If a closed-vent system and control device is installed to comply with the requirements in 264.1032(a)(2), provide the following information:

   a. An implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation per 40 CFR 264.1033(a)(2).

   b. The type of control device under 264.1033 to be installed (e.g. vapor recovery, flare, etc.).

5. If the Permittee feels any of the requirements of this Module VI.D, or of 40 CFR 264 Subparts AA and BB, are not applicable to this facility, the Permittee must provide justification for this decision as part of the report.

E. CORRECTIVE ACTION

1. Corrective Action for Releases: Section 3004(u) of RCRA, as amended by HSWA, and 40 CFR 264.101, require that permits issued after November 8, 1984, address corrective action for releases of hazardous waste, including hazardous constituents from any SWMU at the facility, regardless of when the waste was placed in the unit.

2. Releases Beyond Facility Boundary

a. The Permittee shall notify the Administrative Authority verbally, within 24 hours of discovery, of any release of hazardous waste or hazardous constituents that has the potential to migrate off-site.

b. Section 3004(v) of RCRA as amended by HSWA, and Federal regulations promulgated as 40 CFR 264.101(c), require corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where offsite access is denied.

3. Financial Responsibility: Assurances of financial responsibility for corrective action shall be provided as specified in the Permit following major modification for remedy selection.

4. Dispute Resolution

a. The parties shall use their best efforts to informally and in good faith resolve all disputes or differences of opinion. If, however, disputes arise concerning the corrective action which the parties are unable to resolve informally, including but not limited to, disputes over implementation of workplans, approval of documents, scheduling of any work, selection, performance or completion of any corrective action, or any other obligation assumed hereunder, the Permittee shall present a written notice of such dispute and the basis for the objections to EPA within ten business days of the receipt of EPA's disapproval, decision or directive. The notice shall set forth the specific points of the dispute, the position the Permittee maintains should be adopted as consistent with the Permit's requirements, the basis therefore, and any matters which it considers necessary for EPA's proper

determination. EPA shall provide to the Permittee a written statement of its decision on the pending dispute, which shall be incorporated into the final Permit unless the Permittee requests an opportunity for a conference in accordance with Module VI.E.4.b. The existence of a dispute as defined herein, and the consideration of such matters which are placed into dispute shall not excuse, toll, or suspend any compliance obligation or deadline while the dispute resolution process is pending.

b. If the Permittee objects to any EPA determination regarding any requirement by EPA that the Permittee perform work, the Permittee shall, within ten days of its receipt of EPA's decision pursuant to Module VI.E.4.a, notify EPA in writing of its objections, and may request that the Hazardous Waste Management Division Director convene an informal conference. The Director shall state in writing his decision regarding the factual issues in dispute. Such decision shall be the final resolution of the dispute and shall be implemented immediately by the Permittee according to the schedule contained therein.

F. REPORTING REQUIREMENTS

1. The Permittee shall submit, in accordance with Module VI.B.7, signed quarterly progress reports of all activities (i.e., RFI, CMS) conducted pursuant to the provisions of this Permit beginning no later than ninety (90) calendar days from the approval date of the RFI Workplan, or if Interim Measures are specified prior to Workplan approval, approval of the Interim Measures Workplan. These reports shall contain:

a. A description of the work completed and an estimate of the percentage of work completed;

b. Summaries of all findings, including summaries of laboratory data;

c. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;

d. Projected work for the next reporting period;

e. Summaries of contacts pertaining to corrective action or environmental matters with representatives of the local community, public interest groups or State government during the reporting period;

f. Changes in key project personnel during the reporting period; and

g. Summaries of all changes made in implementation during the reporting period.

2. Copies of other reports (e.g., inspection reports), drilling logs and laboratory data shall be made available to the Administrative Authority upon request.

3. In addition to the written reports, at the request of the Administrative Authority, the Permittee shall provide status review through semi-annual briefings with the Administrative Authority.

G. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY-IDENTIFIED SWMUs

1. The Permittee shall notify the Administrative Authority, in writing, of any newly-identified SWMU(s) (i.e., a unit not specifically identified during the RFA), discovered in the course of ground water monitoring, field investigations, environmental audits, or other means, no later than thirty (30) calendar days after discovery. The notification shall include the following items, to the extent available:

a. The location of the newly-identified SWMU in relation to other SWMUs;

b. The type and function of the unit;

c. The general dimensions, capacities, and structural description of the unit (supply any available drawings);

d. The period during which the unit was operated;

e. The specifics, to the extent available, on all wastes that have been or are being managed at the SWMU; and

f. Results of any sampling and analysis required for the purpose of determining whether releases of hazardous waste including hazardous constituents have occurred, are occurring, or are likely to occur from the unit.

2. Based on the results of this Notification, the Administrative Authority will determine the need for further investigations or corrective measures at any newly-identified SWMU(s). If the Administrative Authority determines that such investigations are needed, the Administrative Authority may require the Permittee to prepare a plan for such investigations. This plan will be reviewed for approval as part of the RFI Workplan or a new RFI Workplan under Module VI.J.3. The Permit will be modified according to Module VI.B.3 to incorporate the

investigation requirements for the newly-identified SWMU(s), if required.

H. NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES AT SWMU(s)

The permittee shall notify the Administrative Authority in writing, no later than fifteen (15) calendar days after discovery, of any release(s) of hazardous waste or hazardous constituents discovered during the course of ground water monitoring, field investigation, environmental auditing, or other means. Such newly-discovered releases may be from newly-identified units or from units for which, based on the findings of the RFA, the Administrative Authority had previously determined no further investigation was necessary. The Administrative Authority may require further investigation and/or interim measures for the newly-identified release(s), and may require the Permittee to prepare a plan for the investigation and/or interim measure. The plan will be reviewed for approval as part of the RFI Workplan or a new RFI Workplan under Module VI.J.3. The Permit will be modified according to Module VI.B.3 to incorporate the investigation, if required.

I. INTERIM MEASURES

1. If during the course of any activity initiated under this Permit, the Administrative Authority determines that a release or potential release of hazardous constituents from a SWMU poses a threat to human health and the environment, the Administrative Authority may require interim measures. The Administrative Authority shall determine the specific measure(s) or require the Permittee to propose a measure(s). The interim measure(s) may include a permit modification, a schedule for implementation, and a written plan. The Administrative Authority shall notify the Permittee in writing of the requirement to perform interim measures. The Administrative Authority shall modify this Permit according to Module VI.B.3, to incorporate interim measures into the Permit.

2. The following factors will be considered by the Administrative Authority in determining the need for interim measures:

a. Time required to develop and implement a final remedy;

b. Actual and potential exposure to human and environmental receptors;

c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;

d. The potential for further degradation of the medium in the absence of interim measures;

e. Presence of hazardous wastes in containers that may pose a threat of release;

f. Presence and concentration of hazardous waste including hazardous constituents in soil that have the potential to migrate to ground water or surface water;

g. Weather conditions that may affect the current levels of contamination;

h. Risks of fire, explosion, or accident; and

i. Other situations that may pose threats to human health and the environment.

J. RFI WORKPLAN

1. The RFI Workplan as specified in Module VI.R.3 shall be submitted to the Administrative Authority within 180 days of the effective date of this Permit. The RFI Workplan must address releases of hazardous waste or hazardous constituents to all media for those SWMUs listed in Table 2. The SWMU numbers are from the document titled "Assessment of Solid Waste Management Units at WIPP: Supporting Documentation for a RFA:NMED/WIPP 93001, State of New Mexico/DOE Agreement in Principle".

a. The Workplan shall describe the objectives of the investigation and the overall technical and analytical approach to completing all actions necessary to characterize the direction, rate, movement, and concentration of releases of hazardous waste or hazardous constituents from specific units or groups of units, and their actual or potential receptors. The RFI Workplan shall detail all proposed activities and procedures to be conducted at the facility, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI. The Scope of Work for a RCRA Facility Investigation (RFI) is in Module VI.R.

b. The RFI Workplan shall describe sampling, data collection quality assurance, and data management procedures, including formats for documenting and

tracking data and other results of investigations, and health and safety procedures.

c. Development of the RFI Workplan and reporting of data shall be consistent with the following EPA guidance documents or the equivalent thereof:

1) RCRA Facility Investigation Guidance Document (EPA 530/SW-89-031);

2) RCRA Groundwater Monitoring Technical Enforcement Guidance Document (OSWER 9950.1) September 1986; and

3) Test Methods for Evaluating Solid Waste (SW 846, 2nd ed.) 1982.

2. After the Permittee submits the Workplan, the Administrative Authority will either approve, disapprove, or modify the Workplan in writing.

If the Administrative Authority approves the workplan, the Permittee shall implement the plan within two weeks (14 days) of receipt of approval, according to the schedule contained in the plan. All approved workplans become incorporated into this Permit as per Module VI.B.8.

In the event of disapproval (in whole or in part) of the workplan, the Administrative Authority shall specify deficiencies in writing. The Permittee shall modify the plan to correct these within the time frame specified in the notification of disapproval by the Administrative Authority. The modified workplan shall be submitted in writing to the Administrative Authority for review. Should the permittee take exception to all or part of the disapproval, the Permittee shall submit a written statement of the grounds for the exception within 10 days of receipt of the disapproval per Module VI.E.4.

3. The Administrative Authority shall review for approval as part of the RFI Workplan or as a new workplan any plans developed pursuant to Module VI.G, addressing further investigations of newly-identified SWMUs, or Module VI.H, addressing new releases from previously-identified SWMUs.

K. RFI IMPLEMENTATION

Upon receipt of written approval from the Administrative Authority for the RFI Workplan, the Permittee shall implement the RFI according to the schedules and in accordance with the approved RFI Workplan and the following:

1. The Permittee shall notify EPA and the New Mexico Environment Department at least 10 days prior to any sampling, testing, or monitoring activity required by this Permit to give Agency personnel the opportunity to observe investigation procedures and/or split samples.

2. Deviations from the approved RFI Workplan which are necessary during implementation of the investigations must be approved by the Administrative Authority and fully documented and described in the progress reports and in the RFI Final Report.

L. RFI FINAL REPORT AND SUMMARY

1. The RFI Final Report shall describe the procedures, methods, and results of all investigations as described in Module VI.R.5. This includes SWMUs and their releases, the type and extent of contamination at the facility, sources and migration pathways, and actual or potential receptors. The RFI Final Report shall present all information gathered under the approved RFI Workplan. The RFI Final Report must contain adequate information to support further corrective action decisions at the facility. The Summary shall summarize the RFI Final Report.

2. After the Permittee submits the RFI Final Report and Summary, the Administrative Authority shall either approve or disapprove them in writing.

   If the Administrative Authority approves the RFI Final Report and Summary, the Permittee shall mail the approved Summary to all individuals on the facility mailing list established pursuant to 40 CFR 124.10(c)(1)(ix), within fifteen (15) calendar days of receipt of approval.

   If the Administrative Authority determines the RFI Final Report and Summary do not fully meet the objectives stated in Module VI.R, the Administrative Authority may disapprove the RFI Final Report and Summary. If the Administrative Authority disapproves the Report, the Administrative Authority shall notify the Permittee in writing of the Report's deficiencies and specify a due date for submittal of a revised Final Report and Summary. Once approved, the Summary shall be mailed to all individuals on the facility mailing list as specified above.

M. DETERMINATION OF NO FURTHER ACTION

1. Based on the results of the RFI and other relevant information, the Permittee may submit an application to the Administrative Authority for a Class III permit modification under 40 CFR 270.42(c) to terminate the RFI/CMS process for a specific unit. This permit modification application must contain information demonstrating that there are no releases of hazardous waste including hazardous constituents from a particular SWMU at the facility that pose threats to human health and/or the environment, as well as additional information required in 40 CFR 270.42(c).

   If, based upon review of the Permittee's request for a permit modification, the results of the RFI, and other information, including comments received during the sixty (60) day public comment period required for Class III permit modifications, the Administrative Authority determines that releases or suspected releases which were investigated either are non-existent or do not pose a threat to human health and/or the environment, the Administrative Authority will grant the requested modification.

2. If necessary to protect human health or the environment, a determination of no further action shall not preclude the Administrative Authority from requiring continued or periodic monitoring of air, soil, ground water, or surface water, when site-specific circumstances indicate that releases of hazardous waste or hazardous constituents are likely to occur.

3. A determination of no further action shall not preclude the Administrative Authority from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates a release or likelihood of a release from a SWMU at the facility that is likely to pose a threat to human health or the environment. In such a case, the Administrative Authority shall initiate a modification to the Permit according to Module VI.B.3.

N. CMS PLAN

1. If the Administrative Authority has reason to believe that a SWMU has released concentrations of hazardous constituents, or if the Administrative Authority determines that contaminants present a threat to human health or the environment given site-specific exposure conditions, the Administrative Authority may require a CMS and shall notify the Permittee in writing. The

notification may also specify remedial alternatives to be evaluated by the Permittee during the CMS.

2. The Permittee shall submit a CMS Plan to the Administrative Authority within forty five (45) calendar days from notification of the requirement to conduct a CMS. The Scope of Work for a CMS Plan is in Module VI.S.3.

   The CMS Plan shall provide the following information:

   a. A description of the general approach to the investigation, and potential remedies;

   b. A definition of the overall objectives of the study;

   c. Specific plans for evaluating remedies to ensure compliance with remedy standards;

   d. Schedules for conducting the study; and

   e. The proposed format for the presentation of information.

3. After the Permittee submits the CMS Plan, the Administrative Authority will either approve, disapprove, or modify the plan in writing.

   If the Administrative Authority approves the CMS Plan, the Permittee shall implement the plan per Module VI.O.

   In the event of disapproval (in whole or in part) of the CMS Plan, the Administrative Authority shall specify deficiencies in writing. The Permittee shall modify the plan to correct these within the time frame specified in the notice of deficiency. The modified CMS Plan shall be submitted in writing to the Administrative Authority for review. Should the permittee take exception to all or part of the disapproval, the Permittee shall submit a written statement of the grounds for the exception within 10 days of receipt of the disapproval per Module VI.E.4.

O. CMS IMPLEMENTATION

No later than fourteen (14) calendar days after the Permittee has received written approval from the Administrative Authority for the CMS Plan, the Permittee shall implement the Corrective Measures Study according to the schedules specified and in accordance with the approved CMS Plan. All approved plans become incorporated into this Permit as per Module VI.B.8.

P. CMS FINAL REPORT AND SUMMARY

1. Within sixty (60) calendar days after the completion of the CMS, the Permittee shall submit a CMS Final Report and Summary. The Summary shall summarize the Final Report. The CMS Final Report shall discuss the results of investigations of each remedy studied and of any bench-scale or pilot tests conducted. It must include an evaluation of each remedial alternative. The CMS Final Report shall present all information gathered during the CMS, and must contain adequate information to support the remedy selection process. In the CMS Final Report, the Permittee shall propose a corrective action program that shall:

   a. attain compliance with corrective action objectives for hazardous constituents in each medium, as established in Module VI.S;

   b. control sources of releases;

   c. meet acceptable waste management requirements; and

   d. protect human health and the environment.

2. After the Permittee submits the CMS Final Report and Summary, the Administrative Authority will either approve or disapprove them in writing.

   If the Administrative Authority approves the CMS Final Report and Summary, the Permittee shall mail the approved Summary to all individuals on the facility mailing list established pursuant to 40 CFR 124.10(c)(1)(ix), within fifteen (15) calendar days of receipt of approval.

   If the Administrative Authority determines the CMS Final Report and Summary do not fully meet the objectives stated in Module VI.S, the Administrative Authority may disapprove the CMS Final Report and Summary. If the Administrative Authority disapproves the Report, the Administrative Authority shall notify the Permittee in writing of the Report's deficiencies and specify a due date for submittal of a revised Final Report and Summary. Once approved, the Summary shall be mailed to all individuals on the facility mailing list as specified above.

3. Based on preliminary results and the CMS Final Report, the Administrative Authority may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

Q. CORRECTIVE MEASURE (REMEDY) SELECTION AND IMPLEMENTATION

Within fifteen (15) calendar days from receipt of approval of CMS Final Report and Summary, the Permittee shall submit a Permit Modification request according to Module VI.B.3, for corrective measure (remedy) selection, based on the approved CMS Final Report. The resultant modified permit will include schedules for remedy implementation.

R. RFI SCOPE OF WORK

1. Purpose

The purpose of the RFI is to determine the nature and extent of releases of hazardous wastes or hazardous constituents from solid waste management units. The required information shall include each item specified under Tasks I-III. The Permittee shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RFI.

If the Permittee believes that certain requirements of the Scope of Work are not applicable, the specific requirements shall be identified and a detailed rationale for inapplicability shall be provided.

2. Scope

The RFI consists of three tasks:

Task I: RFI Workplan

a. Introduction
b. Environmental Setting
c. Source Characterization
d. Contamination Characterization
e. Potential Receptor Identification
f. Data Collection Quality Assurance Plan
g. Data Management Plan
h. Health and Safety Plan
i. Community Relations Plan
j. Project Management Plan

Task II: RCRA Facility Investigation

Task III: RFI Final Report and Summary

3. Task I: RFI Workplan

The Permittee shall prepare a RFI Workplan as specified in Module VI.J and the following. The RFI Workplan shall provide for and address the following information needs:

a. Introduction

1) Facility Description

The introduction shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage, or disposal of solid and hazardous waste. Information from existing reports and studies is acceptable, as long as the source of this information is documented, pertinent, and reflective of current conditions. This section shall include:

a) Map(s) depicting the information specified below. All maps shall be consistent with requirements set forth in 40 CFR 270.14 and shall be of sufficient detail and accuracy to locate all current and future work performed at the site.

(1) general geographic location;

(2) property lines, with the owners of all adjacent property clearly indicated, and all land previously owned and/or used by the Permittee around the facility;

(3) topography, waterways, wetlands, floodplains, water features, and drainage patterns;

(4) all tanks, buildings, utilities, paved areas, rights-of-way, and other features;

(5) all solid waste management units;

(6) all known past solid or hazardous waste treatment, storage and disposal areas or units regardless of whether they were active on November 19, 1980;

(7) surrounding land uses (residential, commercial, agricultural, recreational); and

(8) the location of all production and ground water monitoring wells. These wells shall be clearly labeled and ground and top of casing elevations included (these elevations may be included as an attachment).

b) A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the facility.

c) A summary of approximate dates or periods of past waste releases, identification of the materials released,

the amount released, the location released, and a description of the response actions conducted (local, state, or Federal response units, or private parties), including any inspection reports or technical reports generated as a result of the response.

d) A reference to all environmental, geologic, and hydrogeologic studies performed by all parties, at or near the facility, with a short summary of the purpose, scope, and significant findings thereof.

e) A reference to all environmental permits, applied for and/or received, the purpose thereof, and a short summary of requirements.

2) Nature and Extent of Contamination

a) The introduction shall summarize all possible source areas of contamination. This, at a minimum, should include all SWMUs. For each area, the Permittee shall identify the following:

(1) location of unit/area on a facility map;

(2) quantities of solid, hazardous,and radiochemical wastes;

(3) quantities of radiochemical and hazardous constituents, to the extent known; and

(4) identification of areas where additional information is necessary.

b) The Permittee shall prepare an assessment and description of the existing degree and extent of contamination. This should include:

(1) available monitoring data and qualitative information on locations and levels of contamination at the facility;

(2) all potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and

(3) the potential impact(s) on human health or the environment, including demography, ground water and surface water use, and land use.

b. Implementation of Interim Measures

The Permittee shall document and report on all interim measures which were or are being undertaken at the facility, including under state or Federal compliance orders, other than those specified in the Permit. This shall include:

a) Objectives of the interim measures: how the measure is mitigating a potential threat to human health or the environment and/or is consistent with and integrated into requirements for a long term solution;

b) Schedules for design, construction and monitoring; and

c) Schedule for progress reports.

c. Environmental Setting

The Workplan shall provide for collection of information to supplement and verify existing information on the environmental setting at the facility. The Workplan shall provide for characterization of the following:

1) Hydrogeology

The Workplan shall describe in detail a program to evaluate hydrogeologic conditions at the facility. This program shall provide for least the following information needs:

a) A description of the regional, local, facility-wide, and SWMU-specific geologic and hydrogeologic characteristics affecting ground water flow beneath the facility.

b) An analysis of any topographic features including surface water bodies that might influence the ground water flow system.

c) A representative and accurate classification and description of the hydrogeologic units which may be part of migration pathways at the facility (i.e., the aquifers and any intervening saturated and unsaturated units) based on field data, tests (e.g., gamma and neutron logging of existing and new wells, piezometers and borings), and cores.

d) The extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of migration

pathways based on field studies and cores, structural geology, and hydrogeologic cross sections, including:

(1) unconsolidated sand and gravel deposits;

(2) zones of fracturing or channeling in consolidated or unconsolidated deposits; and

(3) zones of high permeability or low permeability that might direct and restrict the flow of contaminants.

e) A description of representative water level or fluid pressure based on data obtained from ground water monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source. Information needs include: potentiometric surface maps; hydrologic cross sections showing vertical gradients; vertical and horizontal components of flow; temporal changes in hydraulic gradients; and flow nets.

f) A description of man-made influences that may affect site hydrogeology such as active and inactive local water-supply and production wells, pipelines, french drains, and ditches.

2) Soils

The Permittee shall describe in detail a program designed to characterize soil and rock units above the water table. Such characterization shall include, but is not limited to, the following information: surface soil distribution; soil profile, including ASTM and USCS classifications of soils; transects of soil stratigraphy; saturated hydraulic conductivity; porosity; cation exchange capacity (CEC); soil Ph; particle size distribution; depth to water table; moisture content; effect of stratification on unsaturated flow; infiltration; evapotranspiration; residual concentration of contaminants in soil; total natural organic carbon content; and mineral and metal content.

d. Source Characterization

The Permittee shall describe in detail a program designed to completely characterize the wastes and the areas where wastes have been placed, including: type, quantity, physical form, composition, disposition (containment and nature of wastes), and the facility characteristics affecting releases (e.g., facility security, engineered barriers). This shall include quantification of the following specific characteristics, at each source area:

1) Unit/disposal area characteristics, including but not limited to: location of unit/disposal area; type of unit/disposal area; design features; operating practices (past and present); period of operation; age of unit/disposal area; general physical conditions; and method used to close the unit/disposal area.

2) Waste characteristics, including but not limited to: type of waste placed in unit (hazardous classification, quantity, chemical composition); physical and chemical characteristics (physical form, physical description, temperature, Ph, general chemical class, molecular weight, density, boiling point, viscosity, solubility in water, solubility in solvents, cohesiveness, vapor pressure); and migration and dispersal characteristics of the waste (sorption coefficients, biodegradability, photodegradation rates, hydrolysis rates, chemical transformations).

e. Contamination Characteristics

The Permittee shall describe in detail a program to collect analytical data on ground water, soils, surface water, sediment, and subsurface gas contamination when necessary to characterize contamination from a SWMU. The data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data required shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individual(s) performing the sampling and analysis. Each medium (ground water, surface water and sediments, soil, air, and gas) must be investigated. If the permittee believes certain media could not be affected by a release from a specific unit, a detailed justification for not investigating those media must be provided. The Permittee shall address the following types of contamination at the facility:

1) Ground Water Contamination

The Workplan shall describe in detail a program of ground water investigation to characterize any plumes of contamination at the facility. The program shall at a minimum provide for the following information needs:

a) a description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the facility;

b) the horizontal and vertical direction of contamination movement;

c) the velocity of contaminant movement;

d) the horizontal and vertical concentrations of any 40 CFR 264 Appendix IX constituents;

e) an evaluation of factors influencing the plume movement; and

f) an extrapolation of future contaminant movement.

2) Soil Contamination

The Permittee shall describe in detail a program to characterize contamination of soil and rock units above the water table in the vicinity of the contaminant release. The program shall provide for the following information needs:

a) a description of the vertical and horizontal extent of contamination;

b) a description of contaminant and soil chemical properties within the contaminant source area. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation, natural total organic carbon content, and other factors that might affect contaminant migration and transformation.

c) plume migration and transformation; specific contaminant concentrations; the velocity and direction of contaminant movement; and an extrapolation to future contaminant movement.

3) Surface Water and Sediment Contamination

The Permittee shall describe in detail a program to characterize contamination in surface water bodies and sediment resulting from contaminant releases at the facility. The investigation shall at minimum include the following:

a) a description of the surface water body including location, elevation, flow, velocity, depth, width, seasonal fluctuations, flooding tendencies, drainage patterns, and evapotranspiration rates.

b) a description of sediment characteristics including depositional area, thickness, mineralogy, grain size, density, ion exchange capacity, and total natural organic carbon content.

c) maps for all areas included in surface water and sediment investigations which meet requirements in 40 CFR 270.14 and which are sufficiently detailed and accurate to depict all the information required.

d) a description of the horizontal and vertical extent of any immiscible or dissolved plumes originating from the facility, and the extent of contamination in the underlying sediments;

e) the horizontal and vertical direction and velocity of contaminant movement;

f) an evaluation of the physical, biological, chemical, and radiochemical factors influencing contaminant movement;

g) an extrapolation to future contaminant movement;

h) a description of the chemistry of the contaminated surface waters and sediments. This includes Ph, temperature, total dissolved solids, total suspended solids, biochemical oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients, chemical oxygen demand, total organic carbon, and specific contaminant concentrations.

4) Air Contamination

The Permittee shall describe in detail a program to characterize particulate and gaseous contaminants released into the atmosphere. This investigation shall provide the following information: a description of the horizontal and vertical direction and velocity of contaminant movement; the rate and amount of the release; and the chemical, radiochemical, and physical composition of the contaminants released, including horizontal and vertical concentration profiles.

5) Subsurface Gas

The Permittee shall describe in detail a program to characterize the nature, rate and extent of releases of reactive gases from the units. Such a program shall include, but is not limited to: provisions for monitoring subsurface gases released from the unit, and an assessment of the potential for threat to human health and/or the environment.

f. Potential Receptors

The Permittee shall describe in detail a program to collect data to describe human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical and radiochemical analysis of biological samples may be needed. Data on observable effects in ecosystems may also be required. The following characteristics shall be identified:

1) Local uses and possible future uses of ground water, including:

a) type of use (i.e., potable, domestic, agricultural, residential, industrial, municipal)

b) location of all ground water wells, names of owners or tenants at those locations, USGS/DODT well designations, and current use of those wells within a 1.5 mile radius of facility.

2) Local uses and possible future uses of surface waters within a 1.5 mile radius of the WIPP facility boundary, including domestic and municipal, recreational, agricultural, industrial, and environmental.

3) Human use of or access to the facility and adjacent lands, including but not limited to recreation, hunting, residential, commercial, and industrial.

4) A demographic profile of people who use or have access to the facility and adjacent land, including, but not limited to age, gender, and sensitive subgroups.

5) A description of the local ecology, including biota in surface water bodies on, adjacent to, or affected by the facility, and a description of any endangered or threatened species near the facility.

g. Data Collection Quality Assurance Plan

The Permittee shall prepare a plan to document all monitoring procedures: sampling, field measurements, and sample analysis performed at the facility during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented.

1) The strategy section of the Data Collection Quality Assurance Plan shall include but not be limited to the following:

a) description of the intended uses for the data, and the necessary level of precision and accuracy for those intended uses;

b) description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data; and

c) schedule and information to be provided in quality assurance reports, including at least:

(1) periodic assessment of measurement data accuracy, precision, and completeness;

(2) results of performance audits;

(3) results of systems audits; and

(4) significant quality assurance problems and resolutions.

2) The Sampling and Field Measurements Section of the Data Collection Quality Assurance Plan shall at least discuss:

a) selecting appropriate sampling and field measurements locations, depths, etc.;

b) providing a statistically sufficient number of sampling and field measurement sites;

c) determining conditions under which sampling or field measurements shall be conducted;

d) determining which parameters are to be measured and where;

e) selecting the frequency of sampling and length of sampling period;

f) selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;

g) delineating procedures designed to prevent contamination of sampling or field measurements equipment and cross contamination between sampling points;

h) documenting field sampling operations and procedures;

i) selecting appropriate sample containers;

j) preserving samples;

k) controlling chain-of-custody; and

l) disposing of all contaminated materials generated by activities in a manner compliant with all state and Federal regulations.

3) The Sample Analysis shall include:

a) chain-of-custody procedures;

b) sample storage procedures and holding times;

c) sample preparation methods;

d) analytical procedures;

e) calibration procedures and frequency;

f) data reduction, validation and reporting; and

g) frequency of internal quality control checks and laboratory performance audits.

h. Data Management Plan

The Permittee shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures (data record), project file requirements, and project-related progress reporting procedures and documents.

1) The data record shall include at least the following for all sample and field measurements: unique measurement code; measurement location; measurement type; laboratory ID number; property or component analyzed; and results of analysis.

2) The Data Management Plan shall provide the format to be used to present the data and conclusions of the investigation, etc.

a) The following shall be presented in tables: raw data; data sorted by significant features such as

location, media, constituent; data reduction for statistical analysis; and summary data.

b) The following shall be presented in graphical formats (e.g., bar graphs, line graphs, plan maps, isopleth plots, cross-sections, three-dimensional displays, etc.): sampling location and grid; levels of contamination at each sampling location; geographical extent of contamination; and changes in concentration relative to source, time, depth, and other parameters.

i. Health and Safety Plan

1) The Permittee shall prepare a facility Health and Safety Plan, which shall include:

a) a description of the facility including availability of resources such as roads, water supply, electricity and telephone service;

b) a description of the known hazards and evaluation of the risks associated with each activity conducted, including but not limited to on and off-site exposure to contaminants during implementation of interim measures;

c) a list of key personnel and alternatives responsible for site safety, response operations, and for protection of public health;

d) a delineation of the work area;

e) a description of levels of protection to be worn by personnel in the work area;

f) procedures established to control site access;

g) decontamination procedures for personnel and equipment;

h) site emergency procedures;

i) emergency medical care procedures for injuries and toxicological problems;

j) requirements for an environmental field monitoring program;

k) routine and special training requirements for responders; and

l) procedures for protecting workers from weather-related problems.

2) The Facility Health and Safety Plan shall be consistent with:

a) NIOSH Occupation Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);

b) EPA Order 1440.1 - Respiratory Protection;

c) EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;

d) approved Facility Contingency Plan;

e) EPA Operating Safety Guide (1984);

f) OSHA regulations, particularly 29 CFR 1910 and 1926;

g) State and local regulations; and

h) other EPA guidance as provided.

j. Community Relations Plan

The Permittee shall prepare a plan for dissemination of information to the public regarding investigation activities and results.

k. Project Management Plan

The Permittee shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and key project personnel. The project management plan will also include a description of qualifications of key project personnel performing or directing the RFI, including contractor personnel. This plan shall also document the overall management approach to the RFI.

4. Task II: RCRA Facility Investigation

The facility investigation activities shall follow the RFI Workplan. All sampling and analyses shall be conducted in accordance with the Data Collection Quality Assurance Plan. All sampling locations shall be documented in a log and identified on a detailed site map. During the RFI, it may be necessary to revise the RFI Workplan to increase or decrease the detail of information collected to accommodate the facility specific situation.

The Permittee shall conduct investigations of SWMUs previously identified with known or suspected releases of contamination to characterize the facility (Environmental Setting), define the source (Source Characterization), define the degree and extent of contamination (Contamination Characterization), and identify actual or potential receptors.

The investigations should result in data of adequate technical quality to develop and evaluate corrective measures alternatives during the Corrective Measures Study, when necessary.

5. Task III: RFI Final Report and Summary

The Permittee shall analyze all facility investigation data collected during the RFI process and prepare a detailed report on the type and extent of contamination at the facility including sources and migration pathways. All information generated during the investigation shall be presented and analyzed. All evidence and procedures used for making any determinations (e.g., velocity of groundwater, extent of contamination) shall be fully documented. The report shall describe extent of contamination (qualitative/quantitative) in relation to background levels indicative for the area. The report shall contain the results of all tests, calculations, inspections, record searches, and observations. It shall contain soil and ground water contamination profiles, statistical comparisons, and the results of all sampling events conducted as part of the investigation. It shall display results in tables, graphs, maps, and cross sections as discussed in the Data Management Plan and Module VI.R.3.h.2).

The Permittee shall identify all relevant and applicable standards for the protection of human health or the environment (e.g., National Ambient Air Quality Standards, Federally-approved State water quality standards, ground water protection standards, etc.)

Data shall be evaluated to ensure it is sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, to evaluate the potential threat to human health or the environment, and to support a CMS, if required. The report shall present all data in an Appendix.

6. General RFI Reporting Requirements

a. Two hard copies and one IBM compatible disk copy of all reports and data shall be submitted by the Permittee to the Administrative Authority as specified in Module VI.B.7.

b. The RFI Workplan shall be submitted by the Permittee to the Administrative Authority as described in Module VI.J.

c. The RFI Final Report and Summary shall be submit by the Permittee to the Administrative Authority as described in Module VI.L.

d. The Permittee shall provide the Administrative Authority with signed, quarterly progress reports as specified in Module VI.F.1.

S. CMS SCOPE OF WORK

1. Purpose

The purpose of the CMS is to develop and evaluate corrective measures alternatives and to recommend the corrective measure or measures to be taken. The required information shall include each item specified under CMS Tasks IV-VI. The Permittee will furnish the personnel, materials, and services necessary to prepare the CMS, except as otherwise specified.

If the Permittee believes that certain requirements of the Scope of Work are not applicable, the specific requirements shall be identified and the rationale for inapplicability shall be provided.

2. Scope

The Corrective Measure Study consists of three tasks:

Task IV: CMS Plan

a. Description of Current Situation
b. Establishment of Corrective Action Objectives
c. Description of Approach to CMS
d. Schedule for CMS

Task V: Corrective Measures Study

a. Identification of Corrective Measures Alternatives(s)
b. Screening of Corrective Measures Alternatives(s)

c. Development of Corrective Measures Alternative(s)
d. Evaluation of Corrective Measures Alternative(s)
e. Selection of Corrective Measures Alternative(s)

Task VI: CMS Final Report and Summary

3. Task IV: CMS Plan

a. Description of Current Conditions

The Permittee shall briefly describe current conditions at the facility to update information provided in the RFI Final Report and Summary. This shall include previous and/or ongoing remedial activity or interim measures.

b. Establishment of Corrective Action Objectives

The Permittee shall propose to the Administrative Authority for review and approval, facility specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA guidance, and the requirements of any applicable Federal statutes and regulations.

c. Description of Approach to CMS

The Permittee shall describe the general approach to the corrective measures study. The approach shall include identification, development, screening, and evaluation of the corrective measures alternatives, as discussed in detail in Module VI.S.4. The Permittee shall describe specific plans for laboratory and bench-scale studies, or field studies, if needed. Specific plans for evaluating remedy effectiveness shall also be developed. The approach shall specify formats to be used for data presentation, including raw data, maps, charts, graphs, engineering schematics, construction design, etc.

d. Schedule

The Permittee shall develop a schedule for implementing the corrective measures study, and a schedule for submitting quarterly progress reports on the study implementation.

4. Task V: Corrective Measures Study

The CMS consists of five parts: identification, screening, development, evaluation, and selection of the corrective measures alternative(s).

a. Identification of Preliminary Corrective Measures Alternative(s)

Based on the results of the RFI and the CMS Plan objectives, the Permittee shall identify all possible alternatives for removal, containment, treatment and/or other remediation of the contamination.

b. Screening of Preliminary Corrective Measures Alternatives

The Permittee shall screen the identified preliminary corrective measures alternatives to eliminate those that may not prove feasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective action objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technological limitations.

Site, waste, and technological characteristics which are used to screen inapplicable technologies are described in more detail below:

1) Site Characteristics. Site data should be reviewed to identify conditions which may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

2) Waste Characteristics. Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by waste characteristics should be eliminated from consideration.

3) Technological Limitations. The level of technology development, performance record, and operation and maintenance problems shall be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process.

c. Development of Corrective Measures Alternatives

The Permittee shall develop corrective measures alternatives based on corrective measures objectives, and identification and screening of preliminary alternatives. The Permittee shall rely on engineering practice to

determine which of the previously identified and screened technologies appear most suitable for the site. Technologies can be combined to form the overall corrective measures alternatives. The alternatives developed should represent a workable number of options that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Permittee shall document the reasons for excluding technologies.

When a new technology is proposed or similar waste streams have not routinely been treated or disposed of using the technology, the Permittee shall conduct laboratory and/or bench-scale studies to determine the applicability to facility conditions. The Permittee shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.

1) The Permittee shall develop a testing plan identifying the type(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.

2) Upon completion of testing, the Permittee shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.

3) The Permittee shall prepare a report summarizing the testing program and its results, both positive and negative.

d. Evaluation of Corrective Measures Alternative(s)

The Permittee shall evaluate each corrective measures alternative developed in Module VI.S.4.c. The evaluation shall be based on technical, environmental, human health and institutional concerns. The Permittee shall also develop cost estimates for each corrective measure.

1) Technical, Environmental, Human Health, and Institutional Concerns

The Permittee shall provide a description of each corrective measures alternative which includes but is not limited to the following: preliminary process flow sheets; preliminary sizing and type of construction for buildings and structures; and rough quantities of utilities required. The Permittee shall evaluate each alternative in the four following areas:

a) Technical

The Permittee shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

(1) The Permittee shall evaluate performance based on the effectiveness and useful life of the corrective measure:

(a) Effectiveness shall be evaluated in terms of the ability to perform intended functions such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies.

(b) Useful life is defined as the length of time the level of effectiveness can be maintained. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.

(2) The Permittee shall provide information on the reliability of each corrective measure including operation and maintenance requirements and demonstrated reliability:

(a) Operation and maintenance requirements include the frequency and complexity of operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered.

(b) Demonstrated and expected reliability is a way of measuring risk and effect of failure. The Permittee should evaluate whether technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective

measure has the flexibility to deal with uncontrollable changes at the site.

(3) The Permittee shall describe the implementability of each corrective measure including relative ease of installation (constructibility) and total time required to achieve a given level of response:

(a) Constructibility is determined by conditions both internal and external to facility conditions and includes such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of facility (i.e., remote location vs. congested urban area). The Permittee shall evaluate what measures can be taken to facilitate construction under site specific conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities.

(b) Time has two components to be addressed: the time it takes to implement a corrective measure and the time it takes to see beneficial results. Beneficial results are defined as the reduction of contaminants to acceptable levels as established in the corrective measures objectives.

(4) The Permittee shall evaluate each corrective measures alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider include fire, explosion, and exposure to hazardous substances.

b) Environmental

The Permittee shall perform an Environmental Assessment for each alternative. The assessment shall focus on facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include at a minimum, an evaluation of the short- and long-term beneficial and adverse effects of the response alternative, evaluation of any adverse effects on environmentally sensitive areas, and an analysis of measures to mitigate adverse impacts.

c) Human Health

The Permittee shall assess each alternative in terms of the extent to which it mitigates short- and

long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants on-site, potential exposure routes, and potentially affected populations. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or regulations acceptable to the Administrative Authority.

d) Institutional

The Permittee shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, State, and Local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative shall be considered.

2) Cost Estimate

The Permittee shall develop an estimate of the cost of each corrective measures alternative and for each phase or segment of the alternative. The cost estimate shall include capital, and operation and maintenance costs.

a) Capital costs consist of direct and indirect costs.

(1) Direct capital costs include:

(a) Construction costs: Cost of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measures alternative;

(b) Equipment costs: Costs of treatment, containment, disposal and/or servicing of equipment used to implement the action;

(c) Land and site development costs: Expenses associated with purchase of land and development of existing property; and

(d) Building and services costs: Costs of process and non-process buildings, utility connections, purchased services, and disposal costs.

(2) Indirect capital costs include:

(a) Engineering expenses: Costs of administration, design, construction, supervision, drafting, and testing of corrective measures alternatives;

(b) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;

(c) Start-up and shakedown costs: Costs incurred during corrective measure start-up; and

(d) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances such as adverse weather conditions, strikes, and inadequate facility characterization.

b) Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Permittee shall consider the following operation and maintenance cost components:

(1) Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operation;

(2) Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;

(3) Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;

(4) Purchased services: Sampling costs, laboratory fees, and professional fees which can be predicted;

(5) Disposal and treatment: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operation;

(6) Administrative costs: Costs associated with administration of corrective measures operation and maintenance not included under other categories;

(7) Insurance, taxes, and licensing costs: Costs of such items as liability and accident insurance; real estate taxes on purchased land or rights-of-way;

licensing fees for certain technologies; and permit renewal and reporting costs;

(8) Maintenance reserve and contingency funds: Annual payments into escrow funds to cover costs of anticipated replacement or rebuilding of equipment, and any large unanticipated operation and maintenance costs; and

(9) Other costs: Items that do not fit any of the above categories.

e. Selection of Corrective Measures Alternative(s)

The Permittee shall select a corrective measures alternative using technical, human health, and environmental criteria. At a minimum, the following criteria shall be used to select the final corrective measure or measures.

1) Technical

a) Performance. Corrective measure or measures which are most effective at performing their intended functions and maintaining performance over extended periods of time will be given preference;

b) Reliability. Corrective measure or measures which do not require frequent or complex operation and maintenance activities and have proven effective under conditions similar to those anticipated will be given preference;

c) Implementability. Corrective measure or measures which can be constructed and operated to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and

d) Safety. Corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

2) Human Health

The corrective measure or measures must comply with existing EPA criteria, standards, or regulations for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and

the maximum reduction in exposure with time are preferred.

3) Environmental

The corrective measure or measures imposing the least adverse impact or greatest improvement on the environment over the shortest period of time will be preferred.

5. Task VI: CMS Final Report and Summary

The Permittee shall prepare a CMS Final Report and Summary presenting the results of the CMS and recommending a corrective action program. The Report shall at a minimum include:

a. A summary of all the corrective measures alternatives originally identified, and the screening rationale employed. The results of development of each alternative shall be described, and the evaluation of those developed shall be presented in detail. The report will describe the rationale for selection of a corrective measures alternative, including performance expectations, preliminary design criteria and rationale, general operation and maintenance requirements, and long-term monitoring requirements. The report shall include summary tables which allow the alternative or alternatives to be easily understood. Trade-offs among health risks, environmental effects, and other pertinent factors shall be highlighted.

b. A proposed corrective action program that will attain compliance with concentration level objectives, control sources of releases, meet acceptable waste management requirements, and protect human health and the environment.

c. Design and implementation precautions, including special technical problems, additional engineering data required, permits and regulatory requirements, access, easements, and right-of-way, health and safety requirements, and community relations activities.

d. Cost estimates and schedules including capital cost estimate, operation and maintenance cost estimate, and project schedule (design, construction, operation).

e. A schedule for corrective measure (remedy) implementation.

6. General CMS Reporting Requirements

a. Two hard copies and one IBM compatible disk copy of all reports shall be submitted by the Permittee to the Administrative Authority as specified in Module VI.B.7.

b. The CMS Plan shall be submitted by the Permittee to the Administrative Authority as described in Module VI.N.

c. The CMS Final Report and Summary shall be submitted by the Permittee to the Administrative Authority as described in Module VI.P.

d. Within 90 days of the date the Permittee is notified to begin a CMS, the Permittee shall provide the Administrative Authority with signed, quarterly progress reports as specified in Module VI.F.1.

Table 1: RFI/CMS SUBMISSION SUMMARY

Below is a summary of the planned reporting requirements pursuant to this Permit:

Actions	Due Date (examples)
Progress reports on all RFI permit activities	quarterly; no later than ninety (90) calendar days after approval of the RFI Workplan (refer to VI.F.1)
RFI Workplan	180 calendar days after the effective date of the Permit
Revised RFI Workplan	as determined by Administrative Authority, usually within thirty (30) calendar days of receipt of NOD
RFI Report and Summary	as scheduled in the approved RFI Workplan
Revised RFI Report and Summary	as determined by Administrative Authority, usually within thirty (30) calendar days of receipt of NOD
Notification of newly-identified SWMUs	thirty (30) calendar days after discovery
Notification of newly-discovered releases	fifteen (15) calendar days after discovery
Interim Measures Plan	as determined by Administrative Authority
Revised Interim Measure Plan	as determined by Administrative Authority
CMS Plan	forty five (45) calendar days after notification of requirement to perform CMS

Revised CMS Plan	as determined by Administrative Authority, usually within thirty (30) calendar days of receipt of NOD
CMS Final Report and Summary	sixty (60) calendar days after completion of CMS
Revised CMS Final Report	as determined by the Administrative Authority, usually thirty (30) calendar days after receipt of NOD
Demonstration of Financial Assurance at Facility	one hundred and twenty (120) calendar days after permit modification to implement corrective measures

Table 2: SWMUs REQUIRING AN RFI

Below is a list of the SWMUs requiring an RFI. SWMU numbers are from the document titled "Assessment of Solid Waste Management Units at WIPP: Supporting Documentation for a RFA: NMED/WIPP 93001, State of New Mexico/DOE Agreement in Principle.

SWMU 001-Mudpits located at well drilling pads (13 SWMU's)

SWMU 001g (Drill Pad H-14, P-1)
SWMU 001h (Drill Pad H-15 and P-2)
SWMU 001j (P-3 mud pit)
SWMU 001k (Drill Pad P-4)
SWMU 001L (Drill Pad WIPP-12/P-5)
SWMU 001m (Drill Pad P-6)
SWMU 001n (Drill Pad P-15)
SWMU 001o (Drill Pad Badger Unit)
SWMU 001p (Drill Pad Cotton Baby)
SWMU 001q (Drill Pad DOE 1)
SWMU 001s (Drill Pad ERDA 9)
SWMU 001t (Drill Pad IMC 374)
SWMU 001x (Drill Pad WIPP-13)

SWMU 003-Landfills (2 SWMU's)

SWMU 003a (Brinderson Landfill
SWMU 003b (New Landfill/Inactive)

SWMU 004- Storage Yards (1 SWMU)

SWMU 004a Portcamp Storage Yard (two units)

Total of 16 SWMU's for an RFI

DATE
FILMED
12/7/93
END