2. PART 2 - GENERAL FACILITY CONDITIONS

2.1. DESIGN AND OPERATION OF FACILITY

The Permittees shall design, construct, maintain, and operate WIPP to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of transuranic (**TRU**) mixed waste or mixed waste constituents to air, soil, groundwater, or surface water which could threaten human health or the environment, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.31).

2.2. WASTE SOURCES

2.2.1. Off-site Wastes

The Permittees may receive off-site TRU mixed waste in compliance with the requirements and conditions specified in this Permit. The Permittees may only receive TRU mixed waste from those sites which comply with the applicable requirements of the Waste Analysis Plan (**WAP**) specified in Permit ~~Condition~~ Section 2.3.1 and Permit Attachment ~~B~~ C, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.13(a)) and as verified through ~~the Permittees' DOE~~ the Audit and Surveillance Program specified in Permit ~~Condition~~ Section 2.3.2.

2.2.2. Required Notification to Off-Site Sources

Before the Permittees receive TRU mixed waste from an off-site source for the first time, ~~they DOE~~ they shall inform the generator/storage site in writing that they have the appropriate Permits for, and will accept, the waste the generator/storage site is shipping. The Permittees shall keep a copy of this written notice as part of the operating record, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.12(b)).

2.3. GENERAL WASTE ANALYSIS

2.3.1. Waste Analysis Plan

The Permittees shall not manage, store, or dispose TRU mixed waste at WIPP which fails to meet the characterization requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.13), as specified by this Permit.

The Permittees' WAP, as specified in Permit Attachment ~~B~~ C, is approved subject to the following conditions:

2.3.1.1. Implementation of Requirements

i. ~~The Permittees DOE~~ the Permittees shall require that generator/storage sites implement applicable waste characterization requirements of the WAP, specified in Permit

Attachment ~~B~~ C, prior to the Permittees' receipt of TRU mixed waste at WIPP.

ii. ~~The Permittees~~ The Permittees or the co-Permittee DOE shall implement applicable waste confirmation requirements of the WAP, ~~specified in~~ pursuant to Permit Attachment ~~B~~ C7 (TRU Waste Confirmation), prior to shipment of TRU mixed waste from generator/storage sites to WIPP.

2.3.1.2. Waste Characterization Sampling and Analytical Methods

~~The Permittees DOE~~ The Permittees shall require that generator/storage sites and ~~Permittee~~ DOE approved laboratories comply with the applicable method requirements, quality control, equipment testing, inspection, maintenance, and equipment calibration and frequency standards for the procedures specified in Permit Attachment ~~B~~ C1 (Waste Characterization Sampling Methods). For all analytical methods for waste analysis not otherwise specified in Permit Attachment ~~B~~ C1, ~~the Permittees DOE~~ the Permittees shall require the generator/storage sites and ~~Permittee~~ DOE approved laboratories to use "*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*", EPA Publication SW-846. Updates to EPA Publication SW-846 shall be incorporated into this permit by reference. Sites may use these new or revised methods once they have demonstrated that the results from the new methods will be at least equivalent to the results from the currently used methods.

2.3.1.3. Statistical Methods used in Sampling and Analysis

~~The Permittees DOE~~ the Permittees shall require that generator/storage sites use the methods for statistically selecting retrievably stored and newly-generated TRU mixed waste containers for volatile organic compounds (**VOCs**), semivolatile organic compounds (**SVOCs**), and total metals analysis, and establishing upper confidence limits, as specified in Permit Attachment ~~B~~ C2 (Statistical Methods Used in Sampling and Analysis).

2.3.1.4. Quality Assurance Objectives

~~The Permittees DOE~~ the Permittees shall require that all waste characterization activities used by generator/storage sites and ~~Permittee~~ DOE approved laboratories comply with the appropriate quality assurance objectives (**QAOs**) specified in Permit Attachment ~~B~~ C3 (Quality Assurance Objectives and Data Validation Techniques for Waste Characterization Sampling and Analytical Methods). ~~The Permittees DOE~~ the Permittees shall require generator/storage sites to review, validate, and verify all analytical data; reconcile analytical results with

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data quality objectives (**DQOs**); satisfy data reporting requirements; and identify, document, and report all nonconformances and operational variances in compliance with Permit Attachment ~~B~~ C3.

2.3.1.5. Acceptable Knowledge

~~The Permittees DOE~~ the Permittees shall require generator/storage sites to assemble acceptable knowledge documentation and re-evaluate acceptable knowledge determinations, and shall audit (as specified in Permit ~~Condition~~ Section 2.3.2) all aspects of the acceptable knowledge waste characterization process as specified in Permit Attachment ~~B~~ C4 (TRU Mixed Waste Characterization Using Acceptable Knowledge).

2.3.1.6. Quality Assurance

~~The Permittees DOE~~ the Permittees shall require each generator/storage site and ~~Permittee~~ DOE approved laboratory to develop and implement a quality assurance project plan (**QAPjP**) which demonstrates compliance with, and implementation of, applicable requirements of the WAP, Permit Attachment ~~B~~ C, as specified in Permit Attachment ~~B~~ C5 (Quality Assurance Project Plan Requirements).

2.3.1.7. WIPP Waste Information System (**WWIS**) Database

The Permittees shall provide the Secretary access to the WWIS database as necessary to determine compliance with the WAP. The WWIS shall meet all requirements presented in Section ~~B~~ C-5a(1) of the WAP, Permit Attachment ~~B~~ C, prior to acceptance of TRU mixed waste. The Secretary's access to the WWIS shall be direct, read-only (via modem or Internet) to all query and reporting functions of the Characterization, Certification, Shipping, and Inventory modules of the WWIS database.

Beginning on December 31, 2005, the Permittees instituted a public database containing certain information from the WWIS. The Permittees shall continue to provide such public access through the WIPP Home Page at <http://www.wipp.energy.gov>.

2.3.2. Audit and Surveillance Program

The Permittees shall not manage, store, or dispose TRU mixed waste at WIPP from a generator/storage site until the following conditions have been met as necessary for the Secretary to determine that the applicable characterization requirements of Permit ~~Condition~~ Section 2.3.1 have been implemented:

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2.3.2.1. Requirement to Audit

~~The Permittees~~ DOE shall demonstrate to the Secretary that the generator/storage sites and ~~Permittee~~ DOE approved laboratories have implemented and comply with applicable requirements of the WAP by conducting audits as specified in Permit Attachment ~~B~~ C, Section ~~B~~ C-5a(3), and Permit Attachment ~~B~~ C6 (~~Waste Isolation Pilot Plant Permittees' DOE~~ Audit and Surveillance Program), and as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.13).

2.3.2.2. Observation of Audit

The Secretary may observe such audits as necessary to validate the implementation of and compliance with applicable WAP requirements at each generator/storage site and ~~Permittee~~ DOE approved laboratory. ~~The Permittees~~ DOE shall provide the Secretary with a current audit schedule on a monthly basis and notify the Secretary no later than ~~thirty (~~30~~)~~ calendar days prior to each audit.

2.3.2.3. Final Audit Report

~~The Permittees~~ DOE shall provide the Secretary a final audit report as specified in Permit Attachment ~~B~~ C6, and ~~within five (5) calendar days of submittal,~~ post a link to the final audit report transmittal letter on the WIPP Home Page and inform those on the e-mail notification list as specified in Permit Section 1.11. The final audit report shall include all information specified in Permit Attachment ~~B~~ C6, Section ~~B~~ C6-4, and:

i. A detailed description of all corrective actions and the resolution of any corrective action applicable to WAP requirements, including re-audits if required;

ii. All documentation necessary for the Secretary to determine if the corrective action was resolved.

2.3.2.4. Secretary Notification of Approval

The Secretary shall approve ~~the Permittees'~~ DOE's final audit report by written notification to ~~the Permittees~~ DOE that the applicable characterization requirements of the WAP at a generator/storage site and or ~~Permittee~~ DOE approved laboratory have been implemented.

2.3.3. Treatment, Storage, and Disposal Facility Waste Acceptance Criteria (**TSDF-WAC**)

The Permittees shall not accept TRU mixed wastes at WIPP for storage, management, or disposal which fail to meet the treatment, storage, and disposal facility waste acceptance criteria as presented in Permit ~~Conditions~~ Sections 2.3.3.1 through 2.3.3.10 of this Permit.

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2.3.3.1. Liquid

Liquid waste is not acceptable at WIPP. Liquid in the quantities delineated below is acceptable.

- Observable liquid shall be no more than 1 percent by volume of the outermost container at the time of radiography or visual examination.
- Internal containers with more than 60 milliliters or 3 percent by volume observable liquid, whichever is greater, are prohibited.
- Containers with Hazardous Waste Number U134 (hydrofluoric acid) assigned shall have no observable liquid.
- Overpacking the outermost container that was examined during radiography or visual examination or redistributing untreated liquid within the container shall not be used to meet the liquid volume limits.

2.3.3.2. Pyrophoric Materials

Non-radionuclide pyrophoric materials, such as elemental potassium, are not acceptable at WIPP.

2.3.3.3. Non-mixed Hazardous Wastes

Hazardous wastes not occurring as co-contaminants with TRU wastes (non-mixed hazardous wastes) are not acceptable at WIPP.

2.3.3.4. Chemical Incompatibility

Wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes are not acceptable at WIPP.

2.3.3.5. Explosives and Compressed Gases

Wastes containing explosives or compressed gases are not acceptable at WIPP.

2.3.3.6. PCB Waste

Wastes with polychlorinated biphenyls (**PCBs**) not authorized under an EPA PCB waste disposal authorization are not acceptable at WIPP.

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2.3.3.7. Ignitable, Corrosive, and Reactive Wastes

Wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003) are not acceptable at WIPP.

2.3.3.8. Excluded Waste

TRU mixed waste that has ever been managed as high-level waste and waste from tanks specified in Permit Attachment ~~B~~ C are not acceptable at WIPP unless specifically approved through a Class 3 permit modification. Such wastes are listed in Table 2.3.3.8 below.

Table 2.3.3.8 - Additional Approved Waste Streams	
Date Class 3 Permit Modification Request Approved	**Description of Waste Stream**

2.3.3.9. Unconfirmed Waste

Any waste container that has not been subject to confirmation ~~as specified in~~ pursuant to Permit Attachment ~~B~~ C7 is not acceptable at WIPP. This prohibition shall not apply to waste containers accepted before confirmation activities were required by this Permit.

2.3.3.10. Waste Stream Profiles

Any waste container from a waste stream which has not been preceded by an appropriate, certified Waste Stream Profile Form (Attachment ~~B~~ C, Figure ~~B~~ C-1) is not acceptable at WIPP.

2.3.4. Permitted TRU Mixed Wastes

The Permittees shall accept containers which contain only those TRU mixed wastes listed in ~~the Hazardous Waste Permit Application Part A,~~ Permit Attachment ~~O~~ B (Hazardous Waste Permit Application Part A). Allowable TRU mixed wastes are specified in Table 2.3.4 below. Some of the waste may also be identified by unique state hazardous waste codes. These wastes are acceptable at WIPP as long as the TSDF-WAC are met:

Table 2.3.4 – Permitted TRU Mixed Wastes		
EPA Hazardous Waste ~~Code~~ Number	**Hazardous Waste[1]**	**Chemical Abstracts Service (CAS) Registry Number**
F001	Spent halogenated solvents:	
	Tetrachloroethylene	127-18-4
	Trichloroethylene	79-01-6
	Methylene chloride	75-09-2
	1,1,1-Trichloroethane	71-55-6
	Carbon tetrachloride	56-23-5
	Chlorinated fluorocarbons	NA
F002	Spent halogenated solvents:	
	Tetrachloroethylene	127-18-4
	Methylene chloride	75-09-2
	Trichloroethylene	79-01-6
	1,1,1-Trichloroethane	71-55-6
	Chlorobenzene	108-90-7
	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1
	Ortho-dichlorobenzene	95-50-1
	Trichlorofluoromethane	75-69-4
	1,1,2-Trichloroethane	79-00-5
F003	Spent non-halogenated solvents:	
	Xylene	1330-20-7
	Acetone	67-64-1
	Ethyl acetate	141-78-6
	Ethyl benzene	100-41-4
	Ethyl ether	60-29-7
	Methyl isobutyl ketone	108-10-1
	n-Butyl alcohol	71-36-3
	Cyclohexanone	108-94-1
	Methanol	67-56-1
F004	Spent non-halogenated solvents:	
	Cresols and cresylic acid	1319-77-3
	Nitrobenzene	98-95-3

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Table 2.3.4 – Permitted TRU Mixed Wastes		
EPA Hazardous Waste ~~Code~~ Number	**Hazardous Waste[1]**	**Chemical Abstracts Service (CAS) Registry Number**
F005	Spent non-halogenated solvents:	
	Toluene	108-88-3
	Methyl ethyl ketone	78-93-3
	Carbon disulfide	75-15-0
	Isobutanol	78-83-1
	Pyridine	110-86-1
	Benzene	71-43-2
	2-Ethoxyethanol	110-80-5
	2-Nitropropane	79-46-9
F006	Wastewater treatment sludges from electroplating operations:	
	Cadmium	7440-43-9
	Chromium	7440-47-3
	Cyanide	57-12-5
	Lead	7439-92-1
	Nickel	7440-02-0
	Silver	7440-22-4
F007	Spent cyanide plating bath solutions from electroplating operations:	
	See F006	
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process:	
	See F006	
D004	Arsenic	7440-38-2
D005	Barium	7440-39-3
D006	Cadmium	7440-43-9
D007	Chromium	7440-47-3
D008	Lead	7439-92-1
D009	Mercury	7439-97-6
D010	Selenium	7782-49-2
D011	Silver	7440-22-4

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Table 2.3.4 – Permitted TRU Mixed Wastes		
EPA Hazardous Waste ~~Code~~ Number	**Hazardous Waste[1]**	**Chemical Abstracts Service (CAS) Registry Number**
D018	Benzene	71-43-2
D019	Carbon Tetrachloride	56-23-5
D021	Chlorobenzene	108-90-7
D022	Chloroform	67-66-3
D026	Cresol	1319-77-3
D027	1,4-Dichlorobenzene	106-46-7
D028	1,2-Dichloroethane	107-06-2
D029	1,1-Dichloroethylene	75-35-4
D030	2,4-Dinitrotoluene	121-14-2
D032	Hexachlorobenzene	118-74-1
D033	Hexachlorobutadiene	87-68-3
D034	Hexachloroethane	67-72-1
D035	Methyl ethyl ketone	78-93-3
D036	Nitrobenzene	98-95-3
D037	Pentachlorophenol	87-86-5
D038	Pyridine	110-86-1
D039	Tetrachloroethylene	127-18-4
D040	Trichloroethylene	79-01-6
D043	Vinyl chloride	75-01-4
P015	Beryllium powder (H)	7440-41-7
P030	Cyanides (soluble cyanide salts), not otherwise specified (H)	N/A
P098	Potassium Cyanide (H)	151-50-8
P099	Potassium Silver Cyanide (H)	506-61-6
P106	Sodium Cyanide (H)	143-33-9
P120	Vanadium Pentoxide (H)	1314-62-1
U002	Acetone (I)	67-64-1

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Table 2.3.4 – Permitted TRU Mixed Wastes		
EPA Hazardous Waste ~~Code~~ Number	**Hazardous Waste[1]**	**Chemical Abstracts Service (CAS) Registry Number**
U003	Acetonitrile (I,T)	75-05-8
U019	Benzene (I,T)	71-43-2
U037	Chlorobenzene (T)	108-90-7
U043	Vinyl Chloride (T)	75-01-4
U044	Chloroform (T)	67-66-3
U052	Cresol (T)	1319-77-3
U070	1,2-Dichlorobenzene (T)	95-50-1
U072	1,4-Dichlorobenzene (T)	106-46-7
U078	1,1-Dichloroethylene (T)	75-35-4
U079	1,2-Dichloroethylene (T)	156-60-5
U103	Dimethyl Sulfate (T)	77-78-1
U105	2,4-Dinitrotoluene (T)	121-14-2
U108	1,4-Dioxane (T)	123-91-1
U122	Formaldehyde (T)	50-00-0
U133	Hydrazine (R,T)	302-01-2
U134	Hydrofluoric Acid (C,T)	7664-39-3
U151	Mercury (T)	7439-97-6
U154	Methanol (I)	67-56-1
U159	Methyl Ethyl Ketone (I,T)	78-93-3
U196	Pyridine (T)	110-86-1
U209	1,1,2,2-Tetrachloroethane (T)	79-34-5
U210	Tetrachloroethylene (T)	127-18-4
U220	Toluene (T)	108-88-3
U226	1,1,1-Trichloroethane (T)	71-55-6
U228	Trichloroethylene (T)	79-01-6
U239	Xylene (I,T)	1330-20-7

[1] Designations in parentheses for P- and U-coded wastes reflect the basis for the listing and are as follows:

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H - acute toxicity

T - toxicity

R - reactivity

I - ignitability

C - corrosivity

Acceptance of U-coded wastes listed for reactivity, ignitability, or corrosivity characteristics is contingent upon a demonstration that the wastes meet the requirements specified in Permit ~~Condition~~ Section 2.3.3.7.

2.3.5. Derived Waste

Any WIPP-generated waste derived from adequately characterized, WIPP-accepted TRU mixed waste generated at an off-site facility (*derived waste*) does not need to be additionally characterized for hazardous waste components if the Permittees use the generator's characterization data and knowledge of the processes at the WIPP facility to identify and characterize derived waste. Derived waste containers shall be managed according to Permit Attachment ~~M~~ A1 (Container Storage), Section ~~M~~ A1-1d(1), and meet all TSDF waste acceptance criteria in Permit ~~Condition~~ Section 2.3.3 prior to disposal at WIPP.

2.4. WASTE MINIMIZATION PROGRAM

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

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

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

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

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

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

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

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

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

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

2.5. DUST SUPPRESSION

The Permittees shall not use waste, 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, as specified in 20.4.1.700 NMAC (incorporating 40 CFR §266.23(b)).

2.6. SECURITY

In order to prevent the unknowing entry, and minimize the possibility of unauthorized entry, of persons or livestock onto the active portion of the facility, the Permittees shall comply with the following security provisions ~~specified in Permit Attachment C (Security)~~, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.14).

2.6.1. 24-Hour Surveillance System

The Permittees shall maintain a 24-hour surveillance system comprised of security officers that provide protection 24 hours per day, every day. Security officers shall continuously monitor and control personnel, vehicle, and material access/egress to the active portion of the facility, known as the Property Protection Area (**PPA**), in compliance with 20.4.1.500 NMAC (incorporating 40 CFR §264.14(b)(1)).

During non-operational hours, security officers shall conduct documented security patrols outside of the PPA, at a minimum rate of two per 12-hour shift. Whenever scheduled security patrols cannot be made, the reason for missing the patrol shall be documented in the security logbook.

2.6.2. Barrier

The PPA shall be enclosed by a permanent seven ft high chain-link fence topped by three strands of barbed wire, for a total height of eight ft. The fence shall completely surround all major surface structures on the active portion of the facility and shall also be inspected as specified in Permit Attachment E to ensure it remains in good repair, in compliance with 20.4.1.500 NMAC (incorporating 40 CFR §264.14(b)(2)(i)).

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2.6.3. Means to Control Entry

The Permittees shall control entry to the active portion of the facility at all times, in compliance with 20.4.1.500 NMAC (incorporating 40 CFR §264.14(b)(2)(ii)). Entry into the PPA, whether by personnel or vehicles, shall be through controlled gates and doors. Only properly identified and authorized persons, ~~livestock,~~ vehicles, and property shall be allowed entrance to and exit from the active portion of the facility. Security shall require employees to identify themselves with an identification badge when entering or leaving the premises, and shall require visitors to show proper authorization prior to allowing them to enter the active portion of the facility. Visitors shall be required to wear an ~~temporary~~ approved badge and may require an authorized escort.

For the purposes of entry control to areas where wastes are managed, stored, or disposed, these areas shall be posted as Controlled Areas, and access shall be limited to trained and qualified individuals and visitors escorted by trained and qualified individuals.

2.6.4. Warning Signs

The Permittees shall post "No Trespassing" signs and "Danger: Authorized Personnel Only" signs in English and Spanish at approximately 50 ft intervals on the permanent chain-link fence surrounding the PPA. The signs shall be legible from a distance of 25 ft and shall be visible from any approach to the facility. These same signs, plus security and traffic signs, shall also be located on the controlled gates, in compliance with 20.4.1.500 NMAC (incorporating 40 CFR §264.14(c)).

2.7. GENERAL INSPECTION REQUIREMENTS

2.7.1. Inspection Schedule

The Permittees shall implement the inspection schedule specified in Permit Attachment ~~D~~ E (Inspection Schedule, Process and Forms) to detect any malfunctions and deteriorations, operator errors, and discharges, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.15(b)).

2.7.2. Inspection Log Forms

The Permittees shall use the inspection logbooks and forms as specified in Permit Attachment ~~D~~ E ~~(Inspection Schedule/Procedures)~~. Original copies of these completed forms are maintained in the Operating Record. The Permittees shall record the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.15(d)).

2.7.3. Inspection Frequency

The Permittees shall inspect monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment at the frequency specified in Tables

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~~D~~ E-1 and ~~D~~ E-2 of Permit Attachment ~~D~~ E, and as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.15(b)).

2.7.4. Inspection Remediation

The Permittees shall remedy any deterioration or malfunction of equipment or structures which an inspection reveals, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.15(c)).

2.7.5. Inspection Records

~~The~~ Beginning ~~March 1, 2009~~ with the effective date of this Permit, the Permittees shall maintain inspection logbooks and forms in the operating record ~~for at least three (3) years from the date of inspection~~ until closure, as required by 20.4.1.500 NMAC (incorporating 40 CFR §§264.15(d) and 264.73(b)(5)).

2.8. PERSONNEL TRAINING

The Permittees shall conduct personnel training, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.16).

2.8.1. Personnel Training Content

The personnel training program shall include the requirements specified in Permit Attachment ~~H~~ F (Personnel Training) and Permit Attachment ~~H~~ F2 (Training Course and Qualification~~/Certification~~ Card Outlines), as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.16).

2.8.2. Personnel Training Requirements

The Permittees shall train all persons involved in the management of mixed and hazardous waste in procedures relevant to the positions in which they are employed, as specified in Permit Attachment ~~H~~ F1 (RCRA Hazardous Waste Management Job Titles and Descriptions), and as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.16).

2.8.3. Personnel Training Records

The Permittees shall maintain training documents and records, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.16(d) and (e)).

2.9. GENERAL REQUIREMENTS FOR HANDLING IGNITABLE, CORROSIVE, REACTIVE, OR INCOMPATIBLE WASTES

The Permittees shall not manage, store or dispose of ignitable, corrosive, reactive, or incompatible wastes, as defined in 20.4.1.200 NMAC (incorporating 40 CFR §§261.21, 261.22, and 261.23) and 20.4.1.500 NMAC (incorporating 40 CFR §264 Appendix V) within the permitted units. The

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Permittees shall comply with the procedures to prevent acceptance of ignitable, corrosive, reactive, and incompatible waste specified in Permit ~~Conditions~~ Sections 2.3.1 and 2.3.3.

2.10. PREPAREDNESS AND PREVENTION

2.10.1. Required Equipment

The Permittees shall maintain at the facility the equipment specified in the Contingency Plan, Permit Attachment ~~F~~ D (RCRA Contingency Plan), as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.32~~.~~).

2.10.1.1. Internal Communications

The Permittees shall have an internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.32(a)). The internal communication systems shall include two-way communication by the public address (**PA**) system and its intercom phones and paging channels, an internal telephone system, mine phones, pagers and plectrons, and portable two-way radios. The alarm system shall include local and facility-wide alarm systems.

2.10.1.2. External Communications

The Permittees shall have a communications device or system capable of summoning outside agencies for emergency assistance, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.32(b)). The external communication systems shall include the commercial telephone system and two-way radios.

2.10.1.3. Emergency Equipment

The Permittees shall have portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment as described in Permit Attachment D (RCRA Contingency Plan) and as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.32(c)).

2.10.1.4. Water for Fire Control

The Permittees shall have water at adequate volume and pressure to supply water-hose streams, foam-producing equipment, automatic sprinklers, or water-spray systems, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.32(d)). The WIPP facility water system shall consist of water furnished by the ~~Double Eagle Water Company~~ City of Carlsbad capable of providing water at a rate of 6,000 gallons per minute; two water storage tanks, one 180,000-gallon capacity tank for use by the fire-water system and a second tank with a 100,000-gallon reserve;

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dedicated fire-water pumps rated at 1,500 gallons per minute at 125 pounds per square inch; and a wet-pipe sprinkler system connected to surface buildings as described in Permit Attachment D (RCRA Contingency Plan).

2.10.1.5. Electrical Backup

In case of loss of AC power input to the UPS units, the dedicated batteries were designed to supply power to a fully loaded UPS for 30 minutes. It is expected that the AC power input to the UPS will be restored within 30 minutes, either from the off-site electric utility or from the site back-up power generator system.

The RH Complex is included in the WHB. The Central UPS supplies power to the WHB which includes the RH Complex. The RH Bay, Hot Cell and Transfer Cell equipment are serviced by dual 1,300 KW diesel powered generators located between the exhaust shaft and the WHB. The generators provide backup power to both CH and RH waste handling operations. The RH waste handling equipment is designed to stop as a result of loss of power in a fail-safe condition. Power from the back-up generators may be utilized to place RH TRU mixed waste containers in process into a safe configuration. During a total power outage condition selected RH loads can be powered by the Central UPS. Within a short time selected RH loads at 480 volts and below can be powered by the Backup Diesel Generators. The backup central UPS for the WHB would also supply backup power to the RH Complex.

Human health and the environment are protected during a loss of off-site power by a combination of factors:

i. The underground filtration system fails in the “filter” mode so that no releases of contaminated particulates will occur

ii. The UPS maintains all monitoring systems and alarms in waste handling areas so that fires or pressure loss will be detected and an appropriate response initiated

iii. Generators are brought on line within 30 minutes, at which time hoisting can be initiated so that personnel do not have to stay underground for extended lengths of time.

iv. Decisions to evacuate underground personnel will be made in accordance with the requirements of the Mine Safety and Health Administration (MSHA)

v. The waste hoist brakes set automatically so that loads do not fall

vi. Cranes retain their loads so that spills do not occur from dropped containers

vii. Communication systems are maintained

viii. The emergency operations center is powered if it is needed

2.10.2. Testing and Maintenance of Equipment

The Permittees shall test and maintain the equipment specified in Permit ~~Condition~~ Section 2.10.1, as necessary, to assure its proper operation in time of emergency, as specified in Permit Attachment E ~~(Inspection Schedule, Process and Forms)~~ and as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.33).

2.10.3. Access to Communications or Alarm System

The Permittees shall maintain access to the communications ~~or~~ and alarm systems specified in Permit Section 2.10.1, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.34).

2.10.4. Required Aisle Space

The Permittees shall maintain aisle space in the WHB Unit and Parking Area Unit (Part 3) to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.35).

2.10.5. Arrangements with Local Authorities

2.10.5.1. Parties to Arrangements

The Permittees shall maintain preparedness and prevention arrangements with state and local authorities, other mining operations, contractors, and other governmental agencies specified in Permit Attachment ~~F~~ D, Section ~~F~~ D-6, as required by 20.4.1.500 NMAC (incorporating 40 CFR §§264.37(a) and 264.52(c)). If state or local authorities, other mining operations, contractors, or other governmental agencies decline to enter into preparedness and prevention arrangements with the Permittees, the Permittees shall document this refusal in the operating record, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.37(b)).

2.10.5.2. Coordination Agreements

As specified in Section ~~F~~ D-6 of Permit Attachment ~~F~~ D, these arrangements shall be either Memoranda of Understanding (**MOU**) or Mutual Aid Agreements (**MAA**) between the Permittees and the off-site cooperating agencies, and shall include the elements required by 20.4.1.500 NMAC (incorporating 40 CFR §264.37(a)). Copies and

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descriptions of these MOUs and agreements shall be maintained at the facility in the operating record.

2.11. HAZARDS PREVENTION

The Permittees shall operate the WIPP facility to fully meet each of the requirements of 20.4.1.900 NMAC (incorporating 40 CFR §270.14(b)(8)), to prevent hazards associated with unloading operations, prevent runoff from hazardous waste handling areas, prevent contamination of water supplies, mitigate the effects of equipment and power failures, prevent undue exposure of personnel to hazardous waste, and prevent releases to the atmosphere, as specified in Permit Attachments A (General Facility Description and Process Information), A1 (Container Storage), and A2 (Geologic Repository).

2.12. CONTINGENCY PLAN

2.12.1. Implementation of Plan

The Permittees shall immediately implement the Contingency Plan as specified in Permit Attachment ~~F~~ D whenever there is a fire, explosion, or release of mixed or hazardous waste or hazardous waste constituents which could threaten human health or the environment, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.51(b)).

2.12.2. Copies of Plan

The Permittees shall maintain copies of the Contingency Plan and all revisions and amendments to the Contingency Plan as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.53). The Permittees shall provide copies of the current Contingency Plan and all revisions to the Contingency Plan through an electronic controlled document distribution system or in appropriate controlled-document locations at the facility, and to the Secretary and all entities with which the Permittees have emergency MOUs or MAAs, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.53(b)). The Permittees shall maintain at least one current controlled-document paper copy of the Contingency Plan at the facility in a location readily accessible to the Emergency Coordinator specified in Permit ~~Condition~~ Section 2.12.4.

2.12.3. Amendments to Plan

The Permittees shall review and immediately amend, if necessary, the Contingency Plan, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.54).

2.12.4. Emergency Coordinator

An Emergency Coordinator as specified in Table ~~F~~ D-2 of Permit Attachment ~~F~~ D shall be available at all times in case of an emergency. The Emergency Coordinator shall be thoroughly familiar with the Contingency Plan and shall have the authority to commit the

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resources needed to implement the Contingency Plan, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.55). In the event of an imminent or actual emergency, the Emergency Coordinator shall implement the requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.56).

2.13. MANIFEST SYSTEM

The Permittees shall comply with the manifest requirements of 20.4.1.500 NMAC (incorporating 40 CFR §§264.71 and 264.72). The Permittees shall not accept for storage or disposal any mixed waste from an off-site source without an accompanying manifest.

2.14. RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this Permit, the Permittees shall comply with the following conditions:

2.14.1. Operating Record

The Permittees shall maintain a written operating record at the facility, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.73(a)). The written operating record shall include all information required under 20.4.1.500 NMAC (incorporating 40 CFR §264.73(b)) subject to the limitations on the storage of classified information as discussed in Permit Attachment ~~B~~ C ~~1c~~. Unless specifically prohibited by this Permit, an electronic record that cannot be altered by the user and capable of producing a paper copy shall be deemed to be a written record. The Permittees shall maintain the operating record until closure of the facility.

2.14.2. Biennial Report

The Permittees shall submit to the Secretary a biennial report, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.75).

~~2.15.GENERAL CLOSURE REQUIREMENTS~~

~~2.15.1.Performance Standard~~

~~The Permittees shall close the facility as specified in the Closure Plan, Permit Attachment I (Closure Plan), and as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.111).~~

~~2.15.2.Amendment to Closure Plan~~

~~The Permittees shall amend the Closure Plan, Permit Attachment I, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.112(c)), whenever necessary.~~

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~~2.15.3.Notification of Closure~~

~~The Permittees shall notify the Secretary in writing at least sixty (60) calendar days prior to the date on which they expect to begin partial closure, i.e., closure of an Underground Hazardous Waste Disposal Unit (**Underground HWDU**), or final closure of the facility as required by 20.4.1.500 NMAC (incorporating 40 CFR §§264.112(d) and 264.601).~~

~~2.15.4.Time Allowed For Closure~~

~~2.15.4.1.Partial Closure~~

~~Upon completion of disposal operations in an Underground HWDU, the Permittees shall complete partial closure activities as specified in the Closure Plan, Permit Attachment I, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.113).~~

~~2.15.4.2.Final Facility Closure~~

~~After receiving the final volume of TRU mixed waste, the Permittees shall remove from the facility all non-mixed hazardous waste, dispose in the Underground HWDUs all TRU-mixed hazardous waste and derived waste, and shall complete closure activities as specified in the Closure Plan, Permit Attachment I, and as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.113).~~

~~2.15.5.Disposal or Decontamination of Equipment, Structures, and Soils~~

~~The Permittees shall decontaminate or dispose of all contaminated equipment, structures, and soils, as specified in the Closure Plan, Permit Attachment I, and as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.114).~~

~~2.15.6.Certification of Closure~~

~~Within sixty (60) calendar days of completion of closure of each Underground HWDU, and within sixty (60) calendar days of completion of final closure, the Permittees shall certify in writing to the Secretary that the Underground HWDUs and/or facility have been closed as specified in the Closure Plan, Permit Attachment I, and as required by 20.4.1.500 NMAC (incorporating 40 CFR §§264.115 and 264.601).~~

~~2.15.7.Survey Plat~~

~~No later than the submission of the certification of closure of each Underground HWDU, the Permittees shall submit a survey plat detailing the location and dimensions of each Underground HWDU with respect to permanently surveyed benchmarks, as required by 20.4.1.500 NMAC (incorporating 40 CFR §264.116).~~

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~~2.16.GENERAL POST-CLOSURE REQUIREMENTS~~

~~General post-closure care requirements are specified in Permit Part 6, Post-Closure Care Plan.~~

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PERMIT ATTACHMENTS

Permit Attachment A (as modified from WIPP Hazardous Waste Facility Permit Amended Renewal Application, "General Facility Description and Process Information" - Chapter A and "Information for Specific Units - Chapter M)

Permit Attachment A1 (as modified from WIPP Hazardous Waste Facility Permit Amended Renewal Application, "Container Storage - Appendix M1)

Permit Attachment A2 (as modified from WIPP Hazardous Waste Facility Permit Amended Renewal Application, "Geologic Repository - Appendix M2)

Permit Attachment B (as modified from WIPP Hazardous Waste Facility Permit Amended Renewal Application, "Part A Application").

Permit Attachment ~~B~~ C (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "Waste Analysis Plan" - Chapter ~~C~~ B).

Permit Attachment ~~B~~ C1 (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "Waste Characterization Sampling Methods" - Appendix ~~C4~~ B1).

Permit Attachment ~~B~~ C2 (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "Statistical Methods Used in Sampling and Analysis" - Appendix ~~C6~~ B2).

Permit Attachment ~~B~~ C3 (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "Quality Assurance Objectives and Data Validation Techniques for Waste Characterization Sampling and Analytical Methods" - Appendix ~~C8~~ B3).

Permit Attachment ~~B~~ C4 (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "TRU Waste Characterization Using Acceptable Knowledge" - Appendix ~~C9~~ B4).

Permit Attachment ~~B~~ C5 (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "Quality Assurance Project Plan Requirements" - Appendix ~~C10~~ B5).

Permit Attachment ~~B~~ C6 (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "Waste Isolation Pilot Plant ~~Generator/Storage Site Waste Screening and Acceptance~~ DOE Audit and Surveillance Program" - Appendix ~~C11~~ B6).

Permit Attachment ~~B~~ C7 (as modified from ~~the Class 3 permit modification request addressing Section 311 Pub. L. 108-137, Section 310 Pub. L. 108-447, and Remote Handled Waste, June 10, 2005 and September 22, 2005~~ WIPP Hazardous Waste Facility Permit Amended Renewal Application, "Permittee Level TRU Waste Confirmation Processes" - Appendix B7).

Permit Attachment D (as modified from WIPP Hazardous Waste Facility Permit Amended Renewal Application, "RCRA Contingency Plan" - Chapter F).

~~Permit Attachment C (as modified from WIPP RCRA Part B Permit Application, "Procedures to Prevent Hazards" - Chapter F).~~

Permit Attachment ~~D~~ E (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "~~Procedures to Prevent Hazards~~Inspection Schedule, Process and Forms" - Chapter ~~F~~ D).

~~Permit Attachment E (as modified from WIPP RCRA Part B Permit Application, "Procedures to Prevent Hazards" - Chapter F).~~

~~Permit Attachment F (as modified from WIPP RCRA Part B Permit Application, "RCRA Contingency Plan" - Chapter G).~~

Permit Attachment ~~H~~ F (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "Personnel Training" - Chapter H).

Permit Attachment ~~H~~ F1 (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "~~List of~~ RCRA Hazardous Waste Management Job Titles and Descriptions" - Appendix H1~~, and "Waste Isolation Pilot Plant RCRA Hazardous Waste Management Functional Job Descriptions" - Appendix H2~~).

Permit Attachment ~~H~~ F2 (as modified from WIPP ~~RCRA Part B~~ Hazardous Waste Facility Permit Amended Renewal Application, "Training Course and Qualification~~/Certification~~ Card Outlines" - Appendix H~~3~~2).

~~Permit Attachment I (as modified from WIPP RCRA Part B Permit Application, "Closure Plans, Post-Closure Plans, and Financial Requirements" - Chapter I).~~

~~Permit Attachment I1 (as modified from WIPP RCRA Part B Permit Application, "Technical Specifications, Panel Closure System, Waste Isolation Pilot Plant" - Appendix I1).~~

~~Permit Attachment I2 (as modified from WIPP RCRA Part B Permit Application, "Shaft Sealing System Compliance Submittal Design Report" - Appendix 2).~~

~~Permit Attachment J (as modified from WIPP RCRA Part B Permit Application, "Closure Plans, Post-Closure Plans, and Financial Requirements" - Chapter I).~~

~~Permit Attachment J1 (as modified from WIPP RCRA Part B Permit Application, "Active Institutional Controls" - Appendix I4).~~

~~Permit Attachment O (as modified from WIPP RCRA Part B Permit Application, "Hazardous Waste Permit Application Part A" - Chapter A).~~

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