DOCKET NO: A-98-49
Item: II-B3-112

Emplacement Inspection Report

EPA INSPECTION No. EPA-WIPP-6.10-29c
OF THE
WASTE ISOLATION PILOT PLANT
June 29 to July 1, 2010

U. S. ENVIRONMENTAL PROTECTION AGENCY
Office of Radiation and Indoor Air
Center for Waste Management and Regulation
1200 Pennsylvania Avenue, NW
Washington, DC 20460

July 2010

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1.0 EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency (EPA or the Agency) conducted an inspection of the U.S. Department of Energy's (DOE) Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico, from June 29 to July 1, 2010, in accordance with 40 CFR 194.21. The WIPP is a disposal system for defense-related transuranic (TRU) waste as defined by the WIPP Land Withdrawal Act.[1] EPA certified that WIPP complies with the Agency's radioactive waste disposal regulations (Subparts B and C of 40 CFR Part 191) on May 18, 1998.

The purpose of this annual inspection is to determine that waste sent to WIPP during the past year has been emplaced in the underground facility in the manner specified in DOE's Compliance Certification Application and other approvals. The inspection reviews the site's ability to receive, process, and emplace contact-handled and remote-handled TRU wastes within the repository, the emplacement of magnesium oxide (MgO) backfill in appropriate amounts to fulfill DOE commitments and requirements, and the maintenance of records pertaining to waste shipping, packaging, and emplacement, including the electronic Waste Data System (WDS). EPA examined selected activities, such as remote-handled and contact-handled waste processing, waste emplacement activities, and record keeping. During this year's inspection EPA placed specific emphasis on the tracking of emplaced waste and magnesium oxide (MgO) engineered barrier using the WDS, due to the fact that DOE implemented the new WDS to replace the WIPP Waste Information System (WWIS) in the interim since EPA's most recent (July 2009) emplacement inspection.

EPA concluded that DOE's emplacement activities are adequate, that CPR is appropriately tracked and recorded, that MgO balances are calculated properly, and that MgO is emplaced properly. EPA observed the use of the proper waste emplacement procedures in the underground, and successful implementation of the WDS waste container bar code reader. EPA did not identify any findings or concerns during this inspection.

[1] WIPP Land Withdrawal Act, Public Law 102-579, Section 2(18), as amended by the 1996 WIPP LWA Amendments, Public Law 104-201.

2.0 INSPECTION PURPOSE AND SCOPE

The purpose of this annual inspection is to verify that contact-handled (CH) and remote-handled (RH) transuranic (TRU) waste sent to WIPP during the past year has been emplaced in the underground facility in the manner specified in DOE's Compliance Certification Application and other approvals. EPA performed this inspection under authority of 40 CFR 194.21, which authorizes the Agency to inspect WIPP during its operational period to verify continued compliance with EPA's WIPP Compliance Criteria and the certification decision of May 18, 1998. Emplacement of waste and backfill, in particular, is relevant to compliance because the emplacement method supports the models that DOE uses in the WIPP performance assessment.

Activities within the scope of this inspection included: demonstration of the WIPP site's ability to receive, process, and emplace remote-handled (RH) and contact-handled (CH) TRU wastes within the repository, the use of magnesium oxide (MgO) backfill in amounts to fulfill certification requirements and other approvals, maintenance of relevant waste packaging records, including the electronic Waste Data System (WDS) and the verification of appropriately implemented quality assurance practices. The review and examination of documents related to these activities is an important part of the inspection process. The WIPP site is operated by Washington TRU-Solutions (WTS) under contract to DOE, and the majority of waste related activities onsite are described by or controlled through WTS procedures. A list of WTS procedures examined during this inspection is provided in Attachment G.

3.0 INSPECTION TEAM, OBSERVERS, AND PARTICIPANTS

The inspection team consisted of three EPA staff. Thomas Kesterson and Steve Holmes of the New Mexico Environment Department and Claude Magnuson from DOE headquarters observed the inspection activities. A partial list of inspection participants is provided in Table A.

Table A
Inspection Participants

INSPECTION TEAM MEMBER	POSITION	AFFILIATION
Chuck Byrum	Inspector	EPA ORIA
Nick Stone	Inspector	EPA Region 6
Jonathan Walsh	Inspector	EPA ORIA
CBFO / WTS PERSONNEL		
Rey Carrasco		CBFO
Art Chavez		WRES
Dan Ferguson		CBFO
Chris Luona		WTS
Dave Speed		WTS
David Squires		WTS
Gene Valett		WTS
Mike Strum		WTS

4.0 PERFORMANCE OF THE INSPECTION

The inspection took place from June 29 to July 1, 2010, at DOE's Carlsbad Field Office (CBFO) and at the Waste Isolation Pilot Plant (WIPP) facility, which is located approximately 26 miles south east of Carlsbad, New Mexico. The opening meeting with CBFO and WTS personnel was held on the morning of June 29. Several DOE and WTS staff presented information addressing program status, updates and changes since the last EPA emplacement inspection in July 2009.

EPA inspectors accompanied CBFO and WTS personnel into the underground repository on the morning of June 30, in order to examine waste packages and MgO that had been emplaced in Panel 5. Inspectors reviewed paper records documenting that waste emplacement and MgO tracking were conducted in accordance with procedures. Inspectors selected several containers and recorded their numbers (see Figure 5 for container locations); the records for these containers were examined both in the repository, and later using the WDS computer database, to verify correct waste information is recorded by DOE. WTS personnel answered EPA questions about how waste is handled and emplaced.

During the afternoon of June 30, EPA inspectors visited the CH and RH waste handling areas aboveground. Also on June 30, inspectors remotely accessed the WDS, and were able to generate Container and Canister Data Reports for the RH boreholes and CH waste containers observed in the underground that morning. On July 1, inspectors discussed record-keeping procedures with WDS data administrators at the Carlsbad Field Office, and WTS personnel generated additional reports and queries for the inspectors, EPA presented its preliminary observations at a close-out meeting on the afternoon of July 16.

5.0 WASTE EMPLACEMENT/WDS

Wastes received at the repository include contact-handled (CH) transuranic wastes from Argonne National Laboratory-East (ANL-E) in Illinois, Los Alamos National Laboratory (LANL) in New Mexico, Idaho National Laboratory (INL), Hanford Site in Washington, Rocky Flats Environmental Technology Site (RFETS) in Colorado, Savannah River Site (SRS) in South Carolina, the Nevada Test Site (NTS) in Nevada, and the Oak Ridge National Laboratory (ORNL) in Tennessee. These wastes are received and emplaced in several configurations: Standard Waste Boxes (SWBs), 55-gallon drums assembled in groups of seven called a Seven Pack, 100 gallon drums for supercompacted waste, and Ten Drum Overpacks (TDOP). RH wastes from INL, ORNL, and SRS have been emplaced in the WIPP, using the 72-B canister.

The repository is subdivided into panels, each panel consisting of seven rooms. At the time of the inspection, CH waste was being emplaced in Panel 5, Room 4 and RH waste in the walls of Panel 5, Room 3. CH waste containers are stacked in columns (waste stacks) combining SWBs, drum packs, and TDOPs (see Figures 2 and 3). TDOPs are always placed on the floor of the room, occupying the bottom and middle position of a waste column. SWBs and drums may be emplaced in any order, with most wastes emplaced as received. The waste columns are in a series of staggered rows, with a row consisting of three columns that span the distance of a

disposal room from left to right (Figure 2). RH waste is placed in the walls on eight foot centers (Figures 1, 4, and 5).

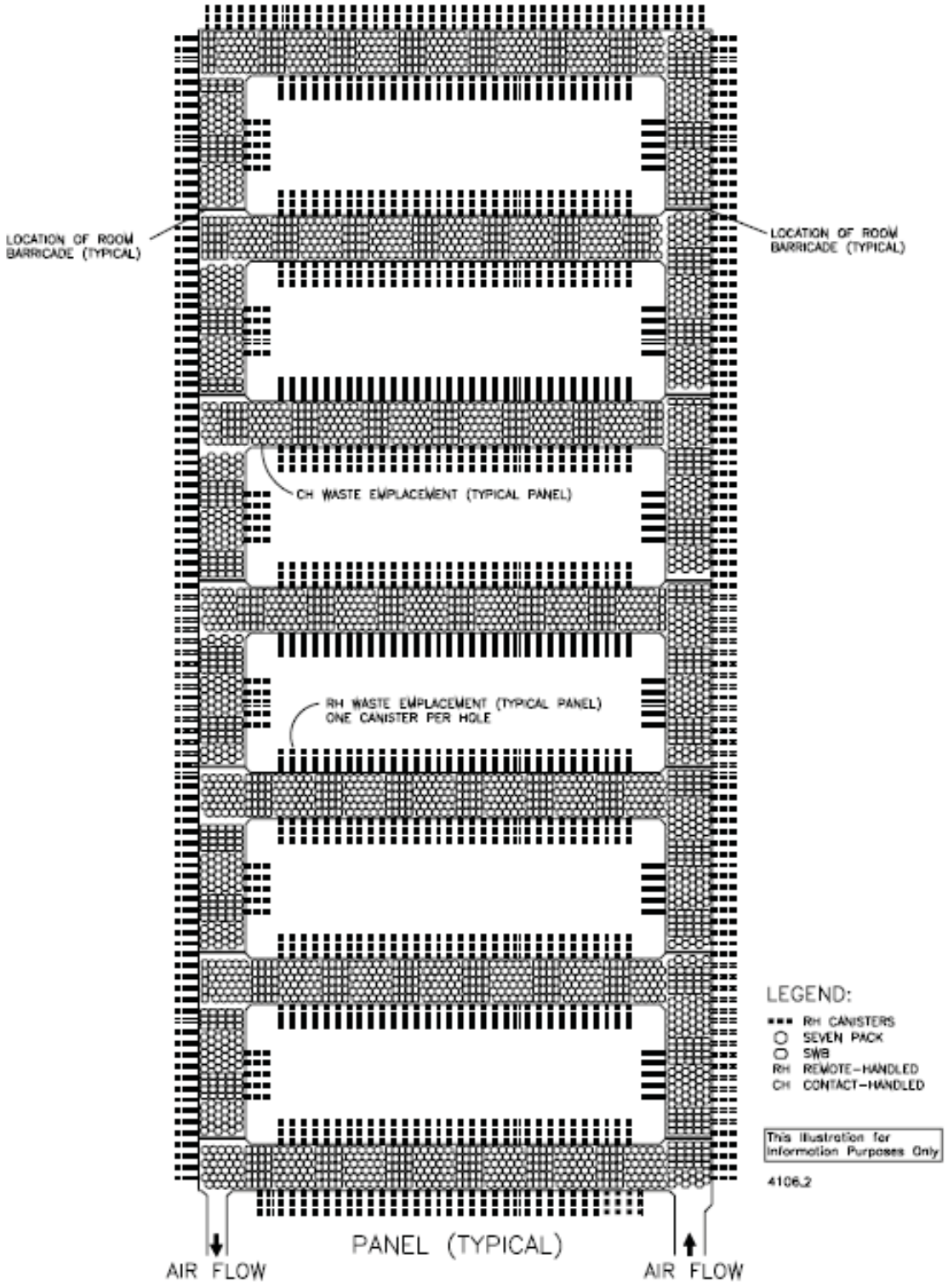


Figure 1

Typical RH and CH TRU Mixed Waste Disposal Configuration

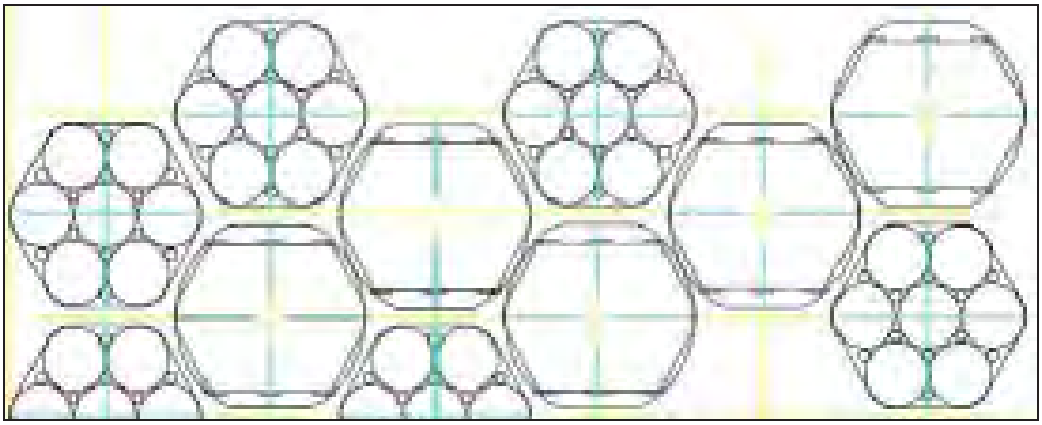


Figure 2

Figure 2 Illustrates the arrangement of disposed contact-handled waste in underground. Represented are stacks of seven-packs of drums and standard waste boxes.

In Panel 5, Room 3 inspectors observed boreholes drilled to emplace RH containers, and observed the Horizontal Emplacement/Retrieval Equipment set up to emplace a RH canister in BH 31(Figure 4).

While underground in Panel 5, Room 4, EPA inspectors selected recently emplaced CH waste packages for review. The inspector read the shipment identification numbers directly off the emplaced containers (See Figure 3 for CH locations). The containers selected are identified in Table B below.

Table B

Waste Containers Reviewed During Inspection (Panel 5, Room 4)
CH Waste (Field verified)

Site of Origin	Waste Container Identifier	Container Type
INL	BN10363651	Ten Drum Overpack (TDOP)
RF	BN10218018	Standard Waste Box
INL	BN10368262	100-gallon drum
LA	LAS892993	55-gallon drum

RH Waste (Panel 5, Room 3) Waste Emplacement Report and Container Data Report

Site of Origin	Waste Container Identifier	Borehole Number
ANL	AE0036	046
ANL	ID0209	099

In the interim since the July 2009 inspection, WDS/WWIS staff implemented the change from the WIPP Waste Information System (WWIS) to the Waste Data System, or WDS. The basic structure, an Oracle database, did not change. The WDS replaces the WWIS Oracle Forms application with a Java-based web interface, so that the database may be accessed remotely without additional software installation. The modules of the WWIS have been replaced by "dashboards" which deliver functions and information targeted at a specific user. The underlying data was preserved, and the WWIS is considered to be a subset of the WDS.

On the evening of June 30, EPA inspectors independently accessed the WDS and generated reports available through the EPA Dashboard, including the Container Data Reports and Canister Data Reports, for containers observed in the underground. EPA staff additionally duplicated reports that had been examined during the 2009 inspection, and compared them with WWIS results, to verify that the WDS successfully performs the same functions. On the morning of July 1 at CBFO, inspectors met with WTS personnel, who answered questions and generated the Nuclide Report, Waste Emplacement Report and the MgO safety factor calculations. All electronic records were found to contain required waste stream, container, and emplacement information.

6.0 MAGNESIUM OXIDE BACKFILL

Magnesium oxide (MgO) is the engineered barrier used in the repository as backfill, as specified in DOE's Compliance Certification Application (CCA). EPA requires DOE to maintain an MgO safety factor (excess factor) to ensure that adequate MgO is chemically available to control the chemistry of each room after closure. EPA approved lowering the required safety factor to 1.2 from 1.67 in a letter dated February 11, 2008, requiring the emplacement of sufficient MgO to react with 1.2 times the amount of carbon present in the repository. Conditions of EPA's agreement stipulate that DOE must ensure a minimum reactivity of 96% for the MgO emplaced, and maintain the safety factor on a room-by-room basis. DOE instituted this change in March 2009, and it was a focus of EPA's 2009 inspection.

During the opening meeting, Gene Valett gave a presentation updating DOE's MgO management. Process steps guiding MgO placement and documentation in the underground continue to be found in WP 05-WH1025, *CH Waste Downloading and Emplacement*, and WP-05-WH.02, *WIPP Waste Handling Operations WDS User's Manual*. Waste Handling Engineers (WHE) may record the quantity and placement of MgO electronically using a WWIS/WDS bar code reader, or manually via paper forms if a bar code reader is unavailable. The appropriate forms (CH Waste Downloading and Emplacement Data Sheet and Supersack/BRT Emplacement Data Sheet) are included as Attachments 1 and 3 of WP 05-WH1025. While in the underground

repository, EPA inspectors verified that the proper procedures were used to track MgO emplacement in Panel 5, Room 4 and that MgO was emplaced on top of the CH waste stacks as stipulated. 3,000 pound sacks are now being emplaced in the underground, and were seen in Panel 5, Room 4 at the time of the inspection.

At the conclusion of each shift, the WHE must electronically verify the safety factor of 1.2 using the WDS. During the inspection of the underground, a WHE was asked to demonstrate the use of the WWIS/WDS bar code reader to track the emplacement of waste and MgO, allowing inspectors to determine that current procedures are being followed correctly, and that a MgO safety factor in excess of 1.2 is being maintained in Panel 5, Room 4 [Attachment D].

Checklist items 12-17 and 24 specifically relate to MgO management and demonstrate that DOE has appropriate processes in place to ensure that MgO is properly emplaced.

Figure 3. Photo of disposed waste in Panel 5, Room 7.

DOE is emplacing waste stacked 2-3 containers high topped with MgO Supersacks. Figure 3 shows all container types being shipped to date. Large drums are Ten Drum Overpacks (TDOPs), black barrels are 100-gallon drums with supercompacted waste, standard waste boxes, and standard 55-gallon drum 7-packs. 3000 lb supersacks are visible on top of the stack in Figure 3.

Figure 4
Equipment prepared for RH waste emplacement in Room 3 of Panel 5

Figure 5
Emplaced RH waste location selected for review

7.0 COMPARISON WITH INVENTORY LIMITS

In the Summary of Waste Emplacement Inventory Report, available through the EPA dashboard, EPA was provided data for emplaced waste, including total activities of the ten EPA-tracked radionuclides, total weights of ferrous and non-ferrous metals, and the CPR/MgO balance by room, as of 7/1/2010. More detailed data on the total amounts of specific materials emplaced was provided by WDS staff, using a script to run a custom WDS query.

EPA establishes limits for certain waste components at WIPP by approving performance assessment inventory estimates. Some limits, such as for iron and other metals, are minimum limits. The amount of iron and steel are now at 2.02×10^7kg. The minimum limit of 2×10^7 kg iron has now been met for the repository.

Other waste component limits are maximum limits. Of special concern is the maximum limit on the total amount of cellulosic, plastic and rubber (CPR) materials. In the original CCA, DOE estimated the limit for CPR was 2.2×10^7 kg, establishing the limit EPA required DOE to meet. In the subsequent performance assessment baseline calculations, DOE added packaging materials to the calculations, and now the CPR limit for WIPP is 2.4×10^7 kg (see Table C).

CPR values are tracked on a per container basis and the current CPR values as of July 1, 2010 are listed in Table C.

As of this inspection the WIPP contained almost 5.2 x 10^6 kg of CPR in waste and 1.5 x 10^6 kg of CPR in packaging material. In addition, emplacement CPR, such as the slip sheets used to aid the emplacement of the containers, accounts for another 4.3 x 10^5 kg of CPR. This is a total of 6.4 x 10^6 kg of cellulosic, plastic and rubber material. The mass of rubber materials currently accounts for 4.3% of the total mass of CPR, compared to 3.4% in 2009, 5% in 2008, 4.7% in 2007, and 7% in 2006. The WIPP currently contains approximately 30% of its maximum limit for CPR. The repository held 29% of its limit for CPR in 2009, 24% in 2008, and 21% in 2007.

Table C
Emplaced CPR Quantities as of July 1, 2010

Waste CPR:

Type	Weight (kg)
Cellulosic	2,011,586
Plastic	2,870,157
Rubber	316,667
Total	5,198,410 (kg)

Emplacement CPR:

Type	Weight (kg)
Cellulosic	51,631
Plastic	376,203
	427,834 (kg)

Packaging CPR:

Type	Weight (kg)
Cellulosic	846,973
Plastic	633,707
Total	1,480,680 (kg)

MgO CPR:

Type	Weight (kg)
Cellulosic	49,922
Plastic	55,569
	105,491(kg)

Grand Totals:

Cellulosic + Plastic = 6,895,748
Rubber = 316,667
Total CPR = 7,212,415 (kg)

8.0 SUMMARY OF RESULTS

The inspectors reviewed emplacement operations, WTS procedures, and records associated with selected containers. The surface processing of CH and RH waste as well as underground operations were reviewed and found to be adequate, according to specified plans documented in the CCA. EPA concludes that DOE's emplacement activities and records are adequate, that CPR and MgO are appropriately tracked. EPA identified no findings or concerns.

Attachment A

WIPP Emplacement Inspection Plan for the Year 2010

Purpose:

The purpose of this inspection is to determine if waste sent to WIPP during the past year has been emplaced in the underground facility in the manner specified in DOE's Compliance Certification Application and other approvals. The objective evidence is the documentation that EPA can use to verify that DOE is conducting its operation appropriately.

EPA is performing this inspection under the authority of 40 CFR 194.21, which authorizes the Agency to inspect the WIPP during its operational period to verify continued compliance with EPA's WIPP Compliance Criteria and the certification decision of May 18, 1998.

- Is DOE emplacing waste in the underground at WIPP in a manner specified in DOE's Compliance Certification Application (EPA Air Docket A-93-02, Item II-G-01, and associated documents)?

- Is DOE emplacing waste in the underground at WIPP in a manner to assure that the 1.2 safety factor is maintained.

Scope:

The scope of this inspection includes: demonstration of the site's ability to receive, process, and emplace contact-handled and remote-handled TRU wastes within the repository, the use of magnesium oxide (MgO) backfill in appropriate amounts to fulfill DOE commitments and requirements, maintenance of relevant waste packaging records, including the electronic WIPP Waste Information system (WWIS) and the verification of appropriately implemented quality assurance practices. The availability of documentation of these processes and activities will be a major source of review.

Focal Areas for this Year's Inspection:

- What changes have taken place to emplacement activities and documentation since last year's inspection?
- What changes have taken place to MgO emplacement since EPA's approval of decreased MgO?

Location:

The inspection will be held at DOE's WIPP facility located twenty-six miles southeast of Carlsbad, New Mexico and the Carlsbad Field Office (CBFO) in Carlsbad. Inspection activities will include examination of the underground facilities, review of records related to waste emplacement, and other information as needed.

Duration:

The EPA expects to complete its inspection in about two days plus an initial meeting. Each full day will begin with an opening meeting at 8:00 a.m. and end no later than 5:00 p.m. with a closeout session.

Expected Date: Week of June 28, 2010

Documents For Review:

Electronically provide for this inspection the latest version of pertinent documentation and/or procedures related to CH and RH waste emplacement, MgO, WWIS, training, etc.

Attachment B

Summary of Waste Emplacement Inventory Report
July 1, 2010

Attachment C

Materials Emplaced in WIPP as of June 30, 2010

CH WASTE:

MP	Material Type	Material Description	Material Weight (kg)
1	Waste	Iron Based Metal/Alloys	7,405,386.80
2	Waste	Aluminum Based Metal/Alloys	47,112.46
3	Waste	Other Metal/ Alloys	294,508.50
4	Waste	Other Inorganic Materials	1,378,937.75
6	Waste	Cellulosics	2,011,515.06
7	Waste	Rubber	316,659.66
8	Waste	Plastics	2,825,398.78
9	Waste	Solidified Inorganic Material	6,459,683.31
10	Waste	Solidified Organic Material	1,680,227.60
12	Waste	Soils	376,384.27
13	Steel - Packaging	Steel Container Materials	12,560,985.89
14	Plastic - Packaging	Plastic /Liners Container Materials	633,311.90
15	Cellulosic - Packaging	Cellulosic Packaging Materials	846,968.88
18	Emplacement	Cellulosic Emplacement Material	51,630.66
20	Emplacement	Plastic Emplacement Material	376,203.05

RH Waste

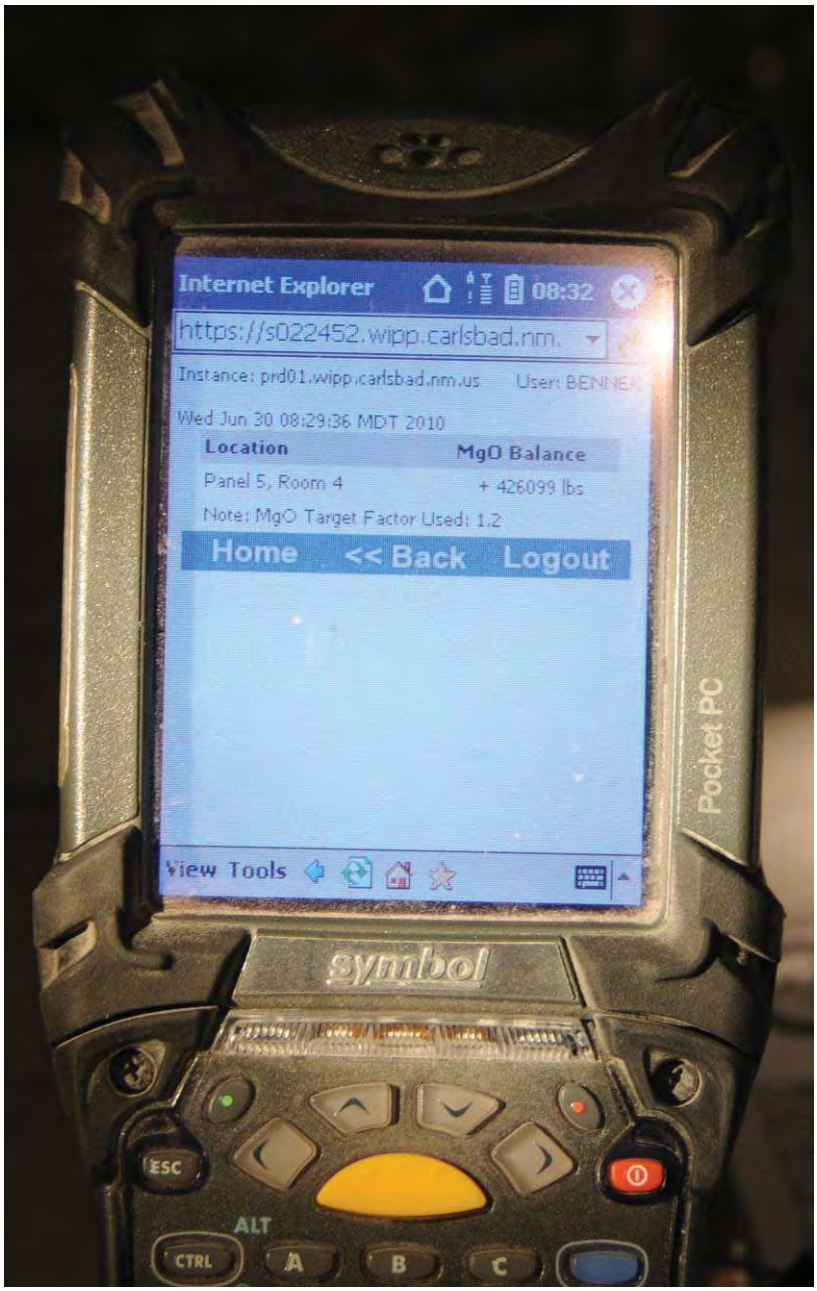
1	Waste	Iron Base Metal/Alloys	37,522.63
2	Waste	Aluminum Base Metal/Alloys	29.20
3	Waste	Other Metal/Alloys	6.62
4	Waste	Other Inorganic Materials	13.00
6	Waste	Cellulosics	71.05
7	Waste	Rubber	7.30
8	Waste	Plastics	44,748.15
9	Waste	Solidified Inorganic Material	18.55
10	Waste	Solidified Organic Material	15.00
13	Steel Packaging	Steel Container Materials	202,489.57
14	Plastic Packaging	Plastic/ Liners Container Materials	395.34
15	Cellulosic Packaging	Cellulosics Packaging Materials	4.26

MgO

16	Emplacement	Magnesium Oxide	27,288,465.89
18	Emplacement	Cellulosic Emplacement Mat'l	49,921.50
20	Emplacement	Plastic Emplacement Mat'l	55,569.00

Attachment D

WDS bar code reader displaying MgO Balance for Panel 5, Room 4



Attachment E
Procedures Examined

Attachment F
EPA Emplacement Inspection Checklist – July 14-16, 2009

#	Questions:	Comments and Objective Evidence	Results
	Waste Emplacement		
1	Is waste being emplaced in the underground facility in the manner specified in DOE's Compliance Certification/ Re-Certification or other relevant documentation?	Yes. Procedure WP 05-WH1025, CH Waste Downloading and Emplacement, Section 2, describes the CH emplacement procedures. Visual verification of the emplaced waste in Rows 146 through 148 of Panel 5, Room 4 confirmed waste emplacement in accordance with facility procedure and CCA documentation . RH processing procedures for 72-B (WP 05-WH1710, WP 05-WH1725) and 10-160-B (WP 05-WH1722) containers are consistent with the approach discussed in the CCA documentation. Emplacement in the repository walls with borehole plugs was verified during inspection of the underground.	Satisfactory
2	Are CH waste containers stacked in columns appropriately given the type of container?	Yes. In WP 05-WH1025, CH Downloading and Emplacement, a note at step 2.25 specifies appropriate stacking of CH container types. Attachment 2 of the same procedure specifies payload assembly positioning. Visual verification confirmed adherence to procedure (e.g. TDOPs placed in bottom position of waste columns.)	Satisfactory

3	Are records adequate? Randomly select 3-4 CH and 2-3 RH waste containers to verify records for waste approval, shipment, and receipt.	Yes. TRU Waste Receipt WP 08-NT3020, Rev.18 describes the process. Records produced are Uniform Hazardous Waste Manifest, TRU Waste Receipt Checklist, Shipment Summary Report, RH waste Processing Data Sheet, Radiological Survey Report, and Waste Emplacement Report. CH waste produces comparable records. EPA reviewed records and found the records to be adequate and traceable. Selected Containers: **CH Waste** (Panel 5, Room 4, Rows 146-148) - Ten Drum Overpack (TDOP), BN10363651 - Standard Waste Box, BN10218018 - 100-gallon drum, BN10368262 - 55-gallon drum, LAS892993 **RH Waste** (Panel 5, Room 3) - Borehole 046, AE0036 - Borehole 099, ID0209	Satisfactory
4	Is DOE properly emplacing backfill material (magnesium oxide [MgO]) with the waste packages? Are supersacks placed on top of waste stacks according to procedure?	Yes. 3000-pound supersacks were observed to be emplaced on top of each waste assembly at the active waste face in Panel 5 Room 4. WP 05-WH1025, CH Waste Downloading and Emplacement, Section 3.0, establishes procedure for emplacement of MgO.	Satisfactory
5	Verify documentation for the containers listed in item 3 - waste generator site transmittal of waste to WIPP, WIPP approval, shipment certification for transport to WIPP, shipment initiation documentation, shipment received at WIPP records, waste emplaced in the underground, and placement of engineered barrier [MgO].	Inspectors examined paper records maintained underground and electronic records kept aboveground for the selected containers. Site operators demonstrated the use of the WDS bar code reader to track emplacement of waste and MgO. Documentation was determined to be adequate.	Satisfactory
	RH Waste Emplacement Questions		
6	Are RH containers approved for receipt, received, processed, and emplaced properly?	Yes. Inspection of the underground and RH handling area showed procedures to be in agreement with WP 05-WH1710, 72-B RH Processing, and WP 05-WH1725, RH Waste Downloading and Emplacement.	Satisfactory.

7	Are RH containers appropriately tracked? Where is the information? --In the WDS, what report --During the receipt/transfer process where is it recorded? --In the underground?	Yes. Appropriate information is found in the WDS Canister Data Report, and on the underground facility map maintained by the Waste Handling Engineers in the underground.	Satisfactory.
8	Content of RH canisters --pick 1 to 3 canisters	See Item 3 above. The Canister Data Report was generated and reviewed for each canister.	Satisfactory
9	Volume and mass and/or concentration of important waste components and radionuclides (RH and CH)? Are they within statutory and regulatory limits?	Detailed description of nuclide information is included in the Waste Container Data Reports and Canister Data Reports generated. Yes.	Satisfactory
10	Are RH boreholes closed properly? (Note: also see #9 for tracking of RH in the U/G)	Recently emplaced borehole plugs, and plugs prepared for emplacement, were observed by inspectors in the underground to be in accordance with WP 05-WH1725, Rev. 3, RH Waste Downloading and Emplacement.	Satisfactory
11	Is a photographic record made of the RH canister number during emplacement and retained in the permanent record?	No. The canister ID number is verified by two operators during cask transfer, via closed-circuit television in accordance with procedure 05-WH1710, 72-B RH Processing, Section 8.24. WTS personnel provided EPA inspectors with screen shots from this process. Tapes are maintained for one year, and WP 05-WH1710 Att. 1, RH Waste Processing Data Sheet, then becomes the permanent record. EPA finds this to be adequate.	Satisfactory
	Question: Procedure		
12	Do DOE procedures reflect an MgO safety factor to 1.2?	Partially. WP 05-WH1025, CH Waste Downloading and Emplacement, Rev. 1, Section 3.0, Backfill, establishes procedures to maintain a safety factor of 1.2 or greater per room on a daily basis. Procedures in the WDS User's Manual, WP-05-WH.02, Rev. 0, Sections 6.2.5, 9.5.3, and Attachment 1 reflect the 1.2 safety factor and the use of 3,000-lb. supersacks as necessary. WHEs were observed to be using current procedures and the WDS bar code reader to record MgO emplacement in the underground.	Satisfactory
13	Are both CPR and MgO calculated and tracked on a room-by-room basis?	Yes. Calculations are performed by the Waste Handling Engineer at the conclusion of each shift, through the WDS, using the MgO Balance Report or Daily Report, as required by WP 05-WH1025, CH Waste Downloading and Emplacement, Rev. 1, Section 3.0, Backfill.	Satisfactory

14	Are sampling and analytical procedures in place to ascertain that emplaced MgO maintains a minimum of 96% reactivity?	Yes. Specification D-0101, Prepackaged MgO Backfill, Rev. 8 and WP 05-WH1105, MgO Sample Records Management, Rev. 0, set forth analytical and document management procedures to verifying that each shipment of MgO maintains a 96 +/- 2% reactivity.	Satisfactory
15	Is the acceptance of the MgO backfill material from the supplier documented?	Yes. WP 05-WH1105, MgO Sample Records Management, Rev. 0, Sec. 2.0 requires each shipment to be numbered, and the MgO supplier to provide an Analysis of Shipment and a sample under Chain of Custody for each shipment. Supersacks in the underground were observed by inspectors to be marked with unique ID numbers, traceable to their original shipments.	Satisfactory
16	For the MgO needed for high CPR, are there procedures or documentation for the WHE or WHM (or other appropriate personnel) identifying **when** and **where** additional MgO is needed?	Yes. General procedures are found in the WIPP Waste Handling Operation WDS User's Manual, WP 05–WH.02, Attachment 1, Special Requirements for Additional MgO. Section 3 of WP 05-WH1025 calls for notification of the WHM if daily reports show the MgO safety factor of a room to be less than 1.2.	Satisfactory
17	Is there documentation that identifies **how** MgO should be placed with high CPR waste?	Yes. WP 05-WH1025, CH Waste Downloading and Emplacement, Attachment 3, Supersack/BRT Emplacement Data Sheet; and WP 05-WH1058, CH Waste Handling Abnormal Operations, Sec. 4.0, BRT Emplacement	Satisfactory

18	Verify documentation of procedures for abnormal operating conditions, and documentation of training for contingencies.	Abnormal operating and emergency procedures were reviewed, including but not limited to those listed below. WP 04-CO, Conduct of Operations, Rev. 11, identifies notification policies, supervision and training procedures, and required reading (Management Policy 1.30). WP 02-EC3506, Environmental Incident Reporting, is the Management Control Procedure for reporting releases, and includes statutory requirement charts for notifications and decision flowcharts. WP 05-WH1058, CH Waste Handling Abnormal Operations, includes instructions for recovering from a torn slip sheet, moving emplaced waste, returning waste to surface, and emplacing BRTs. Specifies that "Abnormal operations of a large scope (e.g. overpack and retrieval) will have specific plans developed." WP 05-WH1758, RH Waste Handling Abnormal Operations, includes instructions for operating the Hot Cell Crane in response to a hoist, trolley, bridge or grapple failure, installing and removing the Waste Transfer Machine Assembly (WTMA) wheels, retrieving a loaded RH –TRU 72-B Cask from the Transfer Cell, returning a loaded 10-160B Cask to a generator site and resetting the Transfer Cell Light Curtain. WP 12-9, WIPP Emergency Management Program, is the top-level document outlining emergency response procedures and responsibilities, includes training requirements for response roles. WP 05-WH4401, Waste Handler Operator Event Response, includes alarm, alert, and exit procedures. WP 12-ER3906, Categorization and Classification of Operational Emergencies includes tables of procedures for emergency notifications and classification of events. WP 12-HP4000, Emergency Radiological Control Responses, provides guidance for responding to an actual or suspected breach of a TRU container, contamination found outside controlled areas, radiation levels exceeding the limits set in WP 12-5.	Satisfactory
#	**Question**: **Records/WDS**		
	Do the characterization module, certification module, shipping module, and inventory module adequately record required information?	WWIS modules have been replaced by WDS Dashboards. Reports available through the EPA Dashboard contain the container number, shipment number, emplacement data and underground location. EPA staff queried the WDS to verify that this information is recorded correctly.	Satisfactory

19	Does the WDS adequately document waste shipment and emplacements information for waste containers selected? (Item 3 above) CH, RH	Yes. Canister, Overpack, and Container Data Reports were retrieved, all of which correctly reflected container number, shipment number, and emplacement information in the underground.	Satisfactory
20	Do records verify that contact handled waste container surface doses fall within statutory requirements? Where are CH surface dose records maintained?	Yes. CH surface dose measurements are recorded in the Container Data Report. Dose limits for each of the containers examined by EPA inspectors (listed in Item 3) were below statutory limits.	Satisfactory
21	Review a Waste Container Data Report. Does this report adequately record the Waste Stream Profile Form information?	Yes. For all containers inspected, inspectors found Container and Canister Data Reports to contain Waste Stream IDs, as well as all necessary radiological and chemical profile information.	Satisfactory
22	Review the Shipment Summary Report. Does the report correctly record the containers shipped? CH, RH	By querying the Shipment number, the Shipment Data report may be generated. Inspectors verified that the report reflects the containers shipped.	Satisfactory
23	Review the Waste Emplacement Report. Does this report adequately record the date of receipt, and disposal locations of containers? CH, RH	Yes. See Item 21.	Satisfactory
24	Is DOE assuring that the 1.2 safety factor being maintained on a room basis? Does the WDS accurately calculate the safety factor and recommend the proper amount of MgO to emplace?	Yes. See questions 12-17. EPA inspectors reviewed InSEI Matrix Requirements WWIS2-REQ-2126 and -2127 to verify that the WDS software calculates MgO excess appropriately.	

Waste Isolation Pilot Plant
Summary of Waste Emplacement Inventory Report

Report Statistics

Report Version:	**1.1**
WDS Instance:	**prd01.wipp.carlsbad.nm.us**
Generated on:	**July 01, 2010 00.08 PM**
Generated by:	**STRUMM**
Total Pages:	**4**

Selection Criteria

End Date:	**07/01/2010**
Panel Number:	**All**
Room Number:	**All**

TRU Waste Inventory as of 07/01/2010
Panel: All Room: All

Emplaced CH Containers	68,526.83 (m^3)
Emplaced RH Containers	190.81 (m^3)
Total	68,717.64 (m^3)

Emplaced Container Counts as of 07/01/2010
Panel: All Room: All

Description	# of Containers
Contact Handled (CH) Container Types	
100-GALLON DRUM	24,142
12-INCH PIPE OVERPACK	23,805
55-GALLON DRUM	71,577
85-GALLON DRUM - TALL - OVERPACK	5
S100 PIPE OVERPACK	319
S300 PIPE OVERPACK	10
STANDARD WASTE BOX	4,856
STANDARD WASTE BOX - OVERPACK	3,911
TEN DRUM OVERPACK - OVERPACK	5,060
Remote Handled (RH) Container Types	
FIXED-LID 72-B CANISTER	18
REMOVABLE-LID 72-B CANISTER	1
REMOVABLE-LID 72-B CANISTER - OVERPACK	358
Total:	134,062

Material Parameter Inventory

Panel: All Room: All

Material Type	Weight (kg)
CELLULOSIC, PLASTIC, RUBBER (CPR)	7,100,273
FERROUS METAL	20,210,004
NON-FERROUS METAL	341,657
OTHER MATERIAL	9,895,279
Total:	37,547,213

EPA-Tracked Radiological Activity Inventory
as of 07/01/2010
Panel: All Room: All

Radionuclide	Repository CH Activity (Ci)	Repository RH Activity (Ci)	Total Repository Activity (Ci)
AM-241	2.021E5	1.495E2	2.023E5
CS-137	5.3E0	1.753E3	1.759E3
PU-238	2.725E5	6.571E1	2.725E5
PU-239	2.913E5	9.739E1	2.914E5
PU-240	7.105E4	6.61E1	7.112E4
PU-242	1.44E1	9.375E-2	1.45E1
SR-90	1.086E1	1.362E3	1.373E3
U-233	4.703E0	1.354E-1	4.839E0
U-234	4.61E1	2.778E-1	4.638E1
U-238	1.19E1	6.035E-3	1.191E1
Total	8.371E5	3.495E3	8.406E5

MgO-Related Information as of 07/01/2010
Panel: All Room: All

Panel	Room	MgO (kg)	Waste (kg)	CPR (kg)	Excess Factor
1	7	1,127,526	508,254	267,771	2.01
1	6	222,885	101,210	85,308	1.44
1	5	222,885	160,047	78,406	1.56
1	4	228,600	128,597	84,697	1.51
1	3	1,034,415	749,764	338,322	1.67
1	2	1,028,825	948,002	225,711	2.17
1	1	617,220	311,843	136,095	2.14
2	7	1,028,700	571,001	233,104	2.09
2	6	982,980	461,528	205,745	2.20
2	5	988,820	498,970	194,393	2.28
2	4	977,265	518,555	217,372	2.17
2	3	1,028,700	667,662	208,115	2.27
2	2	965,835	733,025	161,914	2.62
2	1	691,515	416,679	183,964	1.71
3	7	960,120	711,188	106,207	3.83
3	6	954,405	876,558	226,189	1.93
3	5	1,022,985	808,693	280,945	1.70
3	4	960,120	899,470	251,694	1.79
3	3	931,545	1,000,561	240,486	1.89
3	2	944,880	1,004,479	224,651	2.03
3	1	662,940	722,043	180,687	1.76
4	7	942,975	1,051,062	245,488	1.90
4	6	925,830	945,599	264,141	1.71
4	5	946,785	890,039	261,866	1.71
4	4	1,013,460	830,990	286,937	1.70
4	3	1,015,365	745,955	282,077	1.70
4	2	931,545	933,179	372,843	1.22
4	1	668,655	554,822	265,884	1.23
5	7	939,165	982,045	353,269	1.29
5	6	875,477	1,085,549	140,009	2.85
5	5	782,346	1,121,745	298,808	1.24
5	4	663,698	929,185	200,361	1.67
5	3	0	8,494	3,349	0.00
5	2	0	1,452	801	0.00

Documents Received and Reviewed During Inspection	
Document Title	**Subject Matter**
WP12-HP1500, Rev. 11, Radiological Posting and Access Control, 12/14/06	Technical Procedure for posting areas according to levels of radiation/contamination and access.
WP 12-HP4000, Rev. 5, Emergency Radiological Control Responses, 8/8/05	Emergency and Alarm Personnel Response Procedure
WP 12-HP3500, Rev. 16, Airborne Radioactivity, 12/04/08	Technical Procedure for analyzing and reporting results of particualte air samples
WP 12-HP3400, Rev. 8, Contamination Control, 2/20/09	Management Control Procedure for control containment, and decontamination.
WP 12-HP2001, Rev. 3, Abnormal Radiological Conditions, 8/23/06	Abnormal Operating Procedure for out of calibration survey instruments, lost TLD, loss of control of radioactive material, low energy gamma monitor alarms, or excedance of permitted dose limit.
WP 12-HP1100, Rev.12, Radiological Surveys, 7/31/08	Technical Procedure for meter/swipe use, including example survey reports as attachments.
WP 12-ER4903 Rev. 13, Radiological Event Response, 2/27/09	Emergency Response Procedure for CAM radiation alarm, waste handling accident, structural failure in active emplacement area, removable contamination 100 times set limit.
WP 12-ER4902, Rev. 12, Hazardous Material Spill and Release Respon , 2/02/09	Emergency Response Procedure for RCRA event.
WP 12-ER3906, Rev. 1, Categorization and Classification of Operational Emergencies, 12/5/08	Mangement Control Procedure for classifying emergency and beginning notification within fiteen minutes.
WP 12-9, Rev. 29, WIPP Emergency Management Program, 7/31/08	Comprehensive overview of emergency response, notifications, and reentry.
WP 08-NT3020, Rev. 18, TRU Waste Receipt, 6/9/09, 36 pp.	Management Control Procedure for reciept of TRU and mixed wastes, performed by Transportation Engineer. Sets storage and time limits for initial processing. Uses 'WDS/WWIS.'
WP 08-NT.07, Rev. 6, Waste Data System Software Design Description*, 12/14/09, 17pp.	Top level summary of software design and components. Heavily rewritten to reflect WDS changeover.

Documents Received and Reviewed During Inspection	
Document Title	**Subject Matter**
WP 08-NT.06, Rev. 6, Waste Data System Software Requirements Specification*, 12/14/09, 30pp.	Summarizes requirements, functions, user roles, constraints, and assumptions of the WWIS. Sec 5.1 clearly defines WWIS/WDS relationship.
WP 08-NT.05, Rev. 7, Waste Data System Software Verification and Validation Plan*, 5/25/10, 16pp.	Verification and Validation activities through all life phases of the WDS. Title updated. No other major changes from 2009.
WP 08-NT.04, Rev. 15, Waste Data System Configuration Management and Software QA Program*, 12/17/09, 26pp.	Delineates QC/Data management responsibilities for all WDS users, accounting and documentaiton procedures.
WP 08-NT.03, Rev. 11, Waste Stream Profile Form Review and Approval Program, 12/10/2009, 17pp.	Review procedures for assuring compliance with Hazardous Waste Facilities Permit Waste Analysis Plan, and WIPP Waste Acceptance Criteria, enumerating minimum reviews for each approval. Explains that WWIS is a subset of WDS.
WP 08-NT.01, Rev. 21 Waste Data System Program and Data Management Plan, 4/14/10	Operational overview of WWIS, including regulatory requirements, process, and user responsibilities. Ties WDS functions to regulatory requirements.
WP 05-WH4401, Rev. 3, Waste Handling Operator Event Response, 3/21/01	Emergency Procedure for CAM alarms, fire, smoke, toxic gas, structural issues, or spill/release.
WP 05-WH1810, Rev. 12 Underground Transuranic Mixed Waste Disposal Area Inspections, 6/24/09, 10pp.	Technical Procedure for Preoperational Underground TRU Mixed Waste Dispsoal Area Inspections. Inspection checklists included in two attachments. Minor updates to reflect consolidated DSA/TSR.
WP 05-WH1758, Rev. 7, RH Waste Handling Abnormal Operations, 12/17/09, 50pp	Technical Procedure for operation of the Hot Cell Crane in respose to a hoist, trolley, bridge or grapple failure, installing and removing the the Waste transfer Machine Assembly (WTMA) wheels, retrieving a loaded RH –TRU 72-B Cask from the Transfer Cell, returning a loaded 10-160B Cask to a generator site, or resetting the Transfer Cell Light Curtain. Minor updates reflect WDS reference LCOs
WP 05-WH1752, Rev. 4, 10-160B Shielded Insert Installation and Removal, 2/05/09	Technical Procedure. CNS 10-160B cask not yet in use at time of inspection. CCTV use stipulated.

Documents Received and Reviewed During Inspection	
Document Title	**Subject Matter**
WP 05-WH1744, Rev. 11, Surface RH Transuranic Mixed Waste Handling Area Inspections, 12/17/2009, 20pp.	Technical Procedure for RH WHT/WHE to inspect aboveground RH operations. Preoperational Inspection, Daily Door Check, Trailer Parlking Area and RH Container Storage Area Weekly Inspection, RH Waste Handling Preoperational Inspection checklists included as attachments. No major changes in 2010
WP 05-WH1729, Rev 9, RH-TRU 72-B Cask Uprighting Trailer Unloading, 5/20/10, 22pp.	See above.
WP 05-WH1727, Rev. 8, RH-TRU 72-B Cask Uprighting Trailer Loading, 5/20/10, 20pp.	Distinct trailer from the mechanically-operated trailer which requires the bridge crane.
WP 05-WH1726, Rev. 0, RH Waste Downloading/Emplacement Using Distributed Controls, 1/19/10, 25pp.	Distinction from WH1725 is unclear
WP 05-WH1725, Rev. 5, RH waste Downloading and Emplacement, 3/11/10, 25pp.	Technical Procedure for RH operations in the underground. Includes paper RH Waste Processing Data Sheet. LCOs referenced by number.
WP 05-WH1722, Rev 11, 10-160B RH Processing, 12/17/09, 35pp.	Technical procedure for unloading the CNS 10-160Band canisterizing drums into the facility canister. CCTV "if necessary" - 13.0, 14.0Reviewed 6/9/10 JPW
WP 05-WH1718, Rev. 6, CNS 10-160B Trailer Unloading, 2/19/09	Technical procedure. CNS 10-160B cask not yet in use at time of inspection.
WP 05-WH1717, Rev. 8, Cask Unloading Room Shield Door Operation, 6/24/09, 7pp.	Continuous Use Procedure for operating the CUR shield door. Minor updates reflect consolidated DSA/TSR.
WP 05-WH1716, Rev. 4, CNS 10-160B Cask Operation, 6/24/09, 10pp.	Technical Procedure for opening 10-160B cask. Includes cask data sheet. CNS 10-160B cask not yet in use at time of inspection.
WP 05-WH1714, Rev. 3, RH Cask Preparation Station 41-Z-076, 3/18/10, 6pp.	Technical Procedure for preoperational checks of the RH CPS. Pertinent to 10-160B.
WP 05-WH1713, Rev. 9, Facility Cask and Facility Cask Rotating Device, 6/24/09, 13pp.	Technical Procedure for inspection and preoperational checksof RH Facility Cask, FC Rotating Device, and Hydraulic Power Unit. Minor updates reflect consilidated DSA/TSR.

Documents Received and Reviewed During Inspection	
Document Title	**Subject Matter**
WP 05-WH1712, Rev.3, RH-TRU 72-B Cask Operation, 5/20/10, 10 pp.	Technical procedure for opening 72-B Cask. No major changes in 2010.
WP 05-WH1710, Rev. 20, 72-B RH Processing, 6/2/10, 38pp.	Technical Procedure for unloading the 72-B Shipping container and preparing for dowloading to the underground. Fully revised, WHE Review added. Also see Section 3.3: CCTV recording
WP 05-WH1709, Rev. 13, Rh-TRU 72-B Trailer Unloading, 5/20/10	Technical Procedure for unloading RH-TRU 72-B from incoming trailer to Cask Transfer Car or storage rack. Npo major changes in 2010.
WP 05-WH1707, Rev. 9, RH-TRU 72-B Trailer Loading, 6/24/09, 14pp.	Technical Procedure for loading RH-TRU 72-B for transport.
WP 05-WH1705, Rev. 8, RH Canister Transfer System, 6/24/09, 12pp.	Technical Procedure detailing preoperational equipment checks prior to RH waste-handling. 72-B or 10-160B. CCTV for canister transfer system (sectoion 2.0)
WP 05-WH1705, Rev. 7, RH Canister Transfer System,2/17/09	Technical Procedure for inspection and preoperational checks of RH handling equipment. Minimal changes to reflect consolidated references (RH/CH DSAs and TSRs) Reviewed 6/18/10 JPW
WP 05-WH1704, Rev. 7, Facility Cask Transfer Car (41-H-003) Operation, 4/17/09	Technical Procedure for Facility Cask Transfer Car inspection and RH waste handling - no change in 2010.
WP 05-WH1701, Rev. 10, Road Cask Transfer Car Operation, 2/20/09	Technical Procedure for inspection and properational check of The 72-B Road Cask Transfer Car - no change in 2010.
WP 05-WH1700, Rev. 7, Horizontal Emplacement and Retrieval Equipment Assembly, 6/24/10, 17pp.	Technical Procedure for setting up the HERE in preparation for RH canister emplacement. Rewritten to highlight TSRs, LCOs, and SACs by LCO/SAC number.
WP 05-WH1105, Rev. 3, Magnesium Oxide Sample Records Management, 4/19/10, 10 pp.	Management Control Procedure for the laboratry verification of MgO reactivity. Example MgO Tracking Spreadsheet and Request for Analysis included as attachments 1 and 2. No major changes in 2010.

Documents Received and Reviewed During Inspection	
Document Title	**Subject Matter**
WP 05-WH1058, Rev. 5, CH Waste Handling Abnormal Operations, 6/2/10, 14pp.	Technical Procedure including instructions for recovering form a torn slip sheet, movement of emplaced waste, returing weaste to surface, and emplacement of BRTs. Added noncompliant container response, covering filters on assemblies contining high VOCs, and section on WHE review.
WP 05-WH1025, Rev. 2 CH Downloading and Emplacement, 12/17/01, 19 pp.	Technical Procedure including paper forms for recording CH Downloading and MgO/BRT placment as attachments. Updated to reflect both WWIS/WDS.
WP 05-WH1011, Rev. 37, CH Waste Processing, 3/02/10, 32pp.	Continous Use proceedure for unloading TRUPACT-II or HalfPACT. Contains forms and sign-offs. Edited to reference WDS, and add LCOs. Section 2.5.31 deals with VOCs.
WP 05-WH1010, Rev. 6, Container Overpacking, 12/17/09, 24pp.	Technical Procedure for the overpacking of contaminated or damaged containers in 85-gallon drum, SWB, or TDOP. Contains documentation for procedure. Updated to reference ed WP 05-1025 CH Waste Downloading and Emplacement, DSA/TSR, and WDS
WP 05-WH.02, Rev. 0, WIPP Waste Handling Operations WDS User's Manual, 12/17/09, 39pp.	Replaces WP 05-WH.01, Rev. 4, WIPP Waste Handling Operations WWIS Users Manual. For use by Waste Handling Technicians and Waste Handling Engineers. Updated to reflect WDS changeover.
WP 04-CO, Rev. 11, Conduct of Operations, 10/01/08	Facility operating practices, including shift routines, communications, inspections, training. Minimal changes to reflect consolidated references (RH/CH DSAs and TSRs) Also document revision control.
WP 02-EC3506, Rev. 5, Environmental Incident Reporting, 2/26/07	Management Control Procedure for reporting releases, including statutory requirement charts and decision flowcharts.
WP 02-EC1001, Rev. 8, Characterization Sampling, Shipping, and Documentation, 6/30/08	Technical procedure for waste characterization field sampling.

Documents Received and Reviewed During Inspection	
Document Title	**Subject Matter**
Specification D-0101, Rev. 8, Prepackaged MgO Backfill, 2/11/09	Includes analytical methods to ensure reactivity, and Analysis Request/Chain of custody forms.
DOE/WIPP-09-3427, Waste Data System User's Manual, U.S. DOE, Rev. 0, 12/2009, 202pp.	Replaces DOE/CBFO-97-2273, Rev. 15, WIPP Waste Information System User's Manual, WWIS Software Version 6.2, 5/2008. Comprehensive guide for all WWIS users, including automated parameters to verify compliance of containers and shipments with transportaion and emplacement requirements.
* denotes title updated to reflect WDS changeover	
Documents Received/Generated During Inspection	
LA04 Canister Report, Generated 6/30/2010	
LA013 Canister Report, Generated 6/30/2010	
LA03 Canister Report, Generated 6/30/2010	
BN10287121, Container Report, Generated 6/30/2010	
NT070679R Container Report, Generated 6/30/2010	
BN10278350 Container Report, Generated 6/30/2010	
BN10267854 Container Report, Generated 6/30/2010	
InSEI Matrix RequirementWWIS2-REQ-2126 - MgO balance calculation	
InSEI Matrix Requirement WWIS2-REQ-2127 - MgO balance calculation	
BN10363651 Container Report, Generated 6/30/2010	
BN10218018 Container Report, Generated 6/30/2010	
BN10368262 Container Report, Generated 6/30/2010	
LAS892993 Container Report, Generated 6/30/2010	
AE006 Canister Report, Generated 6/30/2010	
ID0209 Canister Report Generated 6/30/2010	
Panel 5 Room 4 Daily Report Generated 7/1/2010	
Summary of Waste Emplacement Inventory Report, Generated 7/1/2010	

Documents Received and Reviewed During Inspection	
Document Title	**Subject Matter**
Materials Emplaced in WIPP as of June 30, 2010. Ad Hoc query performed by WDS staff, 7/2/2010	

Emplacement Inspection	June 2010	DOE Documents
Reviewed		**Source**
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
		DOE/WIPP
Reviewed 6/18/10 JPW		
		DOE/WIPP
Reviewed 6/18/10 JPW		

Emplacement Inspection	June 2010	DOE Documents
Reviewed		**Source**
		DOE/WIPP
Reviewed 6/18/10 JPW		
		DOE/WIPP
Reviewed 6/18/10 JPW		
Reviewed 6/18/10 JPW		DOE/WIPP
Reviewed 6/18/2010 JPW		DOE/WIPP
		DOE/WIPP
Reviewed 6/17/10.		
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP

Emplacement Inspection	June 2010	DOE Documents
Reviewed		**Source**
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		
Reviewed 6/9/10 JPW		
Reviewed 6/9/10 JPW		
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP

Emplacement Inspection	June 2010	DOE Documents
Reviewed		**Source**
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		
Reviewed 6/9/10 JPW		
		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP

Emplacement Inspection	June 2010	DOE Documents
Reviewed		**Source**
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/9/10 JPW		DOE/WIPP
Reviewed 6/17/10JPW		DOE/WIPP
		DOE/WIPP
Reviewed 6/9/10 JPW		
Reviewed 7/2009 JPW		DOE/WIPP
Reviewed 7/2009 JPW		DOE/WIPP

Emplacement Inspection	June 2010	DOE Documents
Reviewed		**Source**
Reviewed 6/17/10 JPW		DOE/WIPP
Reviewed 6/18/10 JPW		DOE/WIPP
		DOE/WIPP
		DOE/WIPP
		DOE/WIPP
		DOE/WIPP
		DOE/WIPP
		DOE/WIPP
		DOE/WIPP
		DOE/WIPP
		DOE/WIPP

Emplacement Inspection	June 2010	DOE Documents
Reviewed		**Source**