UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 26 2001

OFFICE OF
AIR AND RADIATION

Inés Triay, Manager
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221-3090

Dear Dr. Triay:

As you know, the Environmental Protection Agency (EPA) conducted three inspections at the Waste Isolation Pilot Plant (WIPP) site from June 19 - 21, 2001. These inspections were conducted under the authorities of 40 CFR 194.21 and 40 CFR Part 191, Subpart A, and examined waste emplacement, monitoring, and waste management and storage. I am pleased to provide you with the inspection reports. We will also place these reports in EPA's Air Docket A-98-49.

We have determined that the waste emplacement and waste management and storage activities that we inspected were consistent with the activities and commitments identified in the Department of Energy's (DOE's) Compliance Certification Application (CCA). During the monitoring inspection, we were unable to verify that the Subsidence Monitoring Program has an implemented, effective quality assurance program as committed to in the CCA. DOE must resolve this finding to our satisfaction. Please respond to this finding within 30 days of receipt of this letter.

Please direct your response to this finding and any questions to Chuck Byrum at 214-665- Thank you for your cooperation during the inspections.

Sincerely

Frank Marcinowski, Director
Radiation Protection Division

Enclosure

Cindy Zvonar, DOE
Matthew Silva, EEG

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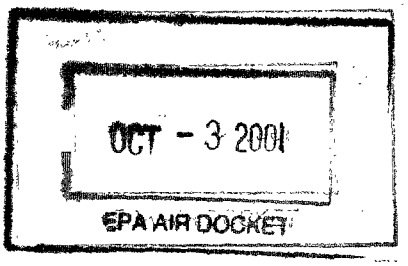
DOCKET NO: A-98-49
Item: II-B3-18
(#2)

Emplacement Inspection Report

INSPECTION No. EPA-WIPP-6.01-21b
OF THE
WASTE ISOLATION PILOT PLANT
June 21, 2001



U. S. ENVIRONMENTAL PROTECTION AGENCY
Office of Radiation and Indoor Air
Center for the Waste Isolation Pilot Plant
401 M. Street, S. W.
Washington, DC 20460

September, 2001

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Tables

Attachments

1.0 EXECUTIVE SUMMARY

In accordance with 40 CFR 194.21, the U.S. Environmental Protection Agency (EPA or the Agency), Office of Radiation and Indoor Air, conducted an inspection of the U.S. Department of Energy's (DOE) Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico, on June 21, 2001. The WIPP is a disposal system for defense-related transuranic (TRU) waste as defined by the WIPP Land Withdrawal Act.[1] EPA certified that the WIPP complies with the Agency's radioactive waste disposal regulations (Subparts B and C of 40 CFR Part 191) on May 18, 1998.

Five DOE transuranic waste sites have shipped waste to the WIPP for disposal. These sites are: Los Alamos National Laboratory (LANL) in New Mexico, Rocky Flats Environmental Technology Site (RFETS) in Colorado, Idaho National Engineering and Environmental Laboratory (INEEL), Hanford Site in Washington, and Savannah River Site (SRS) in Georgia. The first shipment was received by the facility in March 1999.

EPA inspected the WIPP to verify that waste is being emplaced in the underground facility in the manner specified in DOE's Compliance Certification Application (CCA) for the WIPP (EPA Air Docket A-93-02, Item II-G-01, and associated documents). The inspection also verified the proper emplacement of backfill material (magnesium oxide) with the waste packages. EPA found that waste is being emplaced in accordance with commitments made in the CCA. EPA inspectors identified one concern regarding written procedure for documenting off-normal events.

2.0 SCOPE

The purpose of this inspection was to determine whether wastes sent to the WIPP have been emplaced in the underground facility in the manner specified in DOE's Compliance Certification Application for the WIPP. EPA performed the inspection under 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. Emplacement of waste, and backfill in particular, are relevant to compliance because the emplacement method supports models that DOE used in the WIPP performance assessment to understand the potential for transport of radionuclides. The WIPP site is operated by Westinghouse TRU Solutions (WTS) under contract to DOE. The majority of waste related activities onsite are described by or controlled through WTS procedures. A list of all WTS procedures examined for this inspection is provided in Table A.

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

Table A
Listing of WTS Procedures Examined During Inspection

- *WTS Quality Assurance Program Description*, Waste Isolation Pilot Plant Procedure WP 13-1, Revision 20; Effective Date June 14, 2001
- *Specification for Repackaged MgO Backfill*, Waste Isolation Pilot Plant Procedure D-0101, Revision 3, ECO Number 9753; Effective Date April 4, 2000
- *CH Waste Processing*, Technical Procedure WP 05-WH1011, Revision 12; Effective Date April 18, 2001
- *WIPP Waste Information System Program*, Waste Isolation Pilot Plant Procedure WP-08-NT.01, Revision 4; Effective Date January 2, 2001
- *TRU Waste Receipt*, Management Control Procedure WP-08-NT3020, Revision 2; Effective Date May 14, 2001
- *Waste Stream Profile Form Review and Approval Program*, Waste Isolation Pilot Plant Procedure WP-08-NT.03, Revision 1; Effective Date October 20, 2000

The activities within the scope of this inspection included:

- demonstration of the site's ability to receive, process, and emplace TRU wastes within the repository
- the use of magnesium oxide (MgO) backfill in appropriate amounts to fulfill CCA commitments
- maintenance of relevant waste packaging records, including the electronic WIPP Waste Information System (WWIS).

The Inspector observed wastes that had been emplaced in the repository and reviewed records documenting that waste emplacement was conducted in accordance with procedures. To date, the wastes received at the repository are contact-handled (CH) transuranic wastes from LANL, RFETS, INEEL, SRS, and Hanford. These wastes are in one of two configurations: Standard Waste Boxes (SWBs) and 55-gallon (208 liter) drums assembled in groups of seven, called a Seven Pack. Both the SWB and Seven Pack have the same "footprint" —that is, they occupy equivalent floor space—and can be stacked in vertical columns as described in this report. There are other waste configurations allowable at WIPP, but they have not been employed to date and are not addressed in this report. A list of wastes emplaced in the repository as of the date of this inspection is provided in Attachment A.

3.0 PERFORMANCE OF THE INSPECTION

The EPA Inspector was Nick Stone, the WIPP Project Officer for Region 6. Casey Gadbury, the CBFO Waste Operations Program Manager, was the chief DOE contact for the inspection. A list of all inspection participants is provided in Table B.

Table B
Inspection Participants

INSPECTION TEAM MEMBER	POSITION	AFFILIATION
Chuck Byrum	Inspection Team Leader	EPA Headquarters
Nick Stone	Inspector	EPA Region 6
CBFO / WTS PERSONNEL	**POSITION**	**AFFILIATION**
Casey Gadbury	Waste Operations Program Manager	DOE/CBFO
Jody Plum	RCRA Compliance Manager	DOE/CBFO
Kim Jackson	CH Waste Handling Manager	WTS
Dave Speed	WWIS Data Administrator Team Leader	WTS
Ken Mikus	WWIS Data Administrator	WTS

The inspection took place on June 21, 2001, at the WIPP facility, which is located approximately 30 miles south east of Carlsbad, New Mexico. The opening meeting with CBFO and WTS personnel was held at the Carlsbad Field Office building in Carlsbad on June 19, 2001. The EPA Inspector viewed a required safety video at the WIPP site before the inspection activities began. The Inspector interviewed WTS personnel about current shipments and emplacement in the underground.

The EPA Inspector then accompanied CBFO and WTS personnel into the underground repository, in order to view waste packages that had been emplaced. The EPA Inspector selected five containers and noted their numbers; the records for these containers were examined later. The WTS personnel explained how waste packages are handled and emplaced and answered questions from the EPA Inspector. The inspection continued in the afternoon with an examination of records and interviews of WTS personnel in charge of the WIPP Waste Information System (WWIS), which took place at the Carlsbad Field Office in Carlsbad. The CBFO representative was present for most of the day's activities. A closeout meeting was held at the end of the day.

3.1 WASTE EMPLACEMENT/WWIS

The repository is subdivided into panels, each panel consisting of seven (7) rooms. Room 7, where wastes have been emplaced, is shaped like the letter U, and is divided into three (3) disposal cells, S1950, Main Room and S1600. Wastes have been emplaced in Disposal Cell S1600, throughout the Main Room, and into Disposal Cell S1950.[2]

Wastes are stacked in columns (also called waste stacks) three high in any combination of SWBs and Seven Packs, both having the same "footprint." The Inspector did not observe any 85 gallon drum assemblies or Ten Drum Over Packs (TDOPs), both of which have specific requirements regarding their placement in a column.[3] There is no particular order in which SWBs and Seven Packs are stacked; wastes are emplaced as received. A series of three columns (9 SWB or Seven Packs total) spans the distance of the disposal cell from left to right with ample space between columns. Space between the repository wall and the waste column is left open at alternating ends, as represented in Table C below. A second row of three columns is emplaced parallel to the first, but each column is staggered such that it is located between two columns from the previous row; these two left-to-right rows of three columns each (6 columns or 18 SWBs/Seven Packs) are designated a row and numbered, as shown in Table in C below. This results in each waste Seven Pack or SWB having a unique identifier that indicates its location underground according to the row, the column and the position within the column (see Attachment B). MgO is placed above each column in 4,000 pound super sacks.

Table C
Schematic of Waste Emplacement in Columns

Column 1		Column 3		Column 5		Combination of 2 left-right
	Column 2		Column 4		Column 6	columns is a Row

The EPA inspector randomly selected five waste containers emplaced in the repository, and WTS personnel read their identification numbers directly off the drums. The EPA Inspector was unable to read them directly because the area adjacent to the emplaced waste was posted as a Radiation Area and access was restricted. The containers selected are identified in Table D below.

[2] Procedure WP 05-WH1011 identifies the order of waste emplacement in the repository.

[3] Due in part to their different footprint, TDOPs must be placed on the bottom of a column, and 85 gallon drum assemblies must be placed on the top level of each column.

Table D
Randomly Selected Waste Containers Examined During Inspection

Site of Origin	Waste Container Identifier	Container Type
RFETS	RFDA0354	55 gallon drum
RFETS	RFD99993	55 gallon drum
INEEL	IDRF741201113	55 gallon drum
INEEL	IDRF741203212	55 gallon drum
INEEL	IDRF741201431	55 gallon drum

Some records were paper, while others were electronic, such as fields in the WIPP Waste Information System (WWIS) database. The WWIS is an on-line database system used to record, track, and document the range of activities required for shipping TRU wastes to WIPP. The WTS personnel stated that the reliance on electronic approvals instead of paper was deliberate and was designed to minimize the use of paper. The EPA Inspector examined the following modules:

- Characterization Module, linked to the Waste Container Data Report
- Certification Module, linked to the Acceptance Report or Rejection Report
- Shipping Module, linked to the Shipment Summary Report
- Inventory Module, linked to the Nuclide Report and Waste Emplacement Report.

Ken Mikus produced either paper or electronic records of all modules requested, (copies are included in Attachment C). All records were found to contain the required information.

3.2 MAGNESIUM OXIDE BACKFILL

Magnesium oxide (MgO) is used in the repository as backfill, as specified in DOE's Compliance CertificationApplication (CCA). WTS Procedure D-0101, *Specification for Prepackaged MgO Backfill*, contains specifications for the amount and specific placement of prepackaged MgO for four waste configurations: 85 gallon Over Packs, Ten Drum Over Packs, Seven Packs, and Standard Waste Boxes. WTS Technical Procedure WP 05-WH1011, *CH Waste Processing*, details a procedure for MgO placement and the means to document that MgO placement has been accomplished correctly (CH Waste Processing Data Sheet). The EPA Inspector observed that MgO had been placed properly in the three rows that were visible from outside the restricted access area. Completed rows have supersacks stacked on each column. Records examined for the 5 waste shipments discussed earlier in this report indicated that MgO had been placed in compliance with Technical Procedure WP 05-WH1011.

4.0 SUMMARY AND RESULTS

The activities examined during the inspection were found to comply with WTS procedures and with the description of waste and backfill emplacement provided in the CCA. No noncompliance or activities that had the potential to compromise waste isolation were observed.

The EPA inspector identified one concern regarding off-normal events. On April 12, 2001, CBFO was contacted by INEEL and informed that an error had occurred in the shipping documentation. INEEL had shipped drum IDRF003201324 instead of shipping drum number IDRF003101324. Both drums were part of waste streams that were approved for shipment. The EPA Inspector collected three documents that trace how CBFO handled this off-normal event. The first document was a record to the file describing the notification by INEEL to CBFO of the discrepancy. The second document was a synopsis of actions taken to address the event and prevent further documentation errors. The third document was a Corrective Action Report (CAR). The CAR formally described the discrepancy and required the generator site to correct its procedures to prevent similar occurrences. The EPA Inspector did not find any procedure that defines off-normal event documentation. The Inspector did not observe any failures to produce documentation; therefore, this concern does not require a response from CBFO.

Attachment A
Listing of TRU Wastes Emplaced at WIPP As of June 21, 2001

TRU Waste Generator Site:	Los Alamos National Laboratory
Waste Containers Shipped:	Standard Waste Boxes (SWBs)
Number Shipped:	125 SWBs total
TRU Waste Generator Site:	Idaho National Engineering and Environmental Laboratory
Waste Containers Shipped:	55 gallon (208 liter) drums in Seven Pack Configuration
Number Shipped:	2576 total - 2539 drums & 37 dunnage drums
TRU Waste Generator Site:	Rocky Flats Environmental Technology Site
Waste Containers Shipped:	55 gallon (208 liter) drums in Seven Pack Configuration 55 gallon drums with Pipe Overpack Containers (POCs)
Number Shipped:	4740 total - 2696 drums, 2044 POCs, & 27 dunnage drums
TRU Waste Generator Site:	Hanford Site
Waste Containers Shipped:	55 gallon (208 liter) drums in Seven Pack Configuration
Number Shipped:	257 drums total & 2 dunnage drums
TRU Waste Generator Site:	Savannah River Site
Waste Containers Shipped:	55 gallon (208 liter) drums in Seven Pack Configuration
Number Shipped:	42 drums total

Attachment B
Waste Emplacement Report Data For Five (5) TRU Waste Containers

TRUPACT No.	139	139	140	152	136
Container No.	IDRF741201113	IDRF741201431	IDRF741203212	RFD99993	RFDA0354
Row Number	132	132	132	134	133
Height	Top	Top	Middle	Middle	Top
Column	3	1	3	2	4
Disposal Cell	Main Room	Main Room	Main Room	SD1950	Main Room
Disposal Room	7	7	7	7	7
Disposal Panel	1	1	1	1	1
Disposal Date	6-18-01	6-18-01	6-18-01	6-20-01	6-20-01

Attachment C

- Shipment Summary Reports
- Waste Emplacement Report and Nuclide Report
- Waste Container Data Reports
- Attachments 1 and 3 from WP 05-WH1011
- Biennial Report
- Acceptance/Rejection Report
- Off-Normal Event Documents

Shipment Summary Report

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
RF010752	RFD97281 Center	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.501E+00	183.75
			TRUPACT :	AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242	2.082E+01	2199.03

TRUPACT Number : 152 ICV Closure Date : DOT Description : RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918

Dose Rate 1m : Dose Rate 2m : Dose Rate Surf :

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
RF010749	RFD95612 Center	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.580E+00	159.21
	RFD95922 7A	3		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.608E+00	156.94
	RFD95926 7A	4		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.554E+00	157.4
	RFD96430 7A	3		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.345E+00	157.4
	RFD97149 7A	4		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.361E+00	155.58
	RFD99993 7A	3		AM-241,PU-238,PU-238,PU-240,PU-241,PU-242	1.032E+00	154.68
	RFDA0309 7A	3		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.888E+00	154.22
RF010750	RFD94195 Center	2		AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242	6.924E-01	170.1
	RFD94288 7A	4		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.873E+00	159.21
	RFD94292 7A	2		AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242	6.711E-01	168.74
	RFD95397 7A	3		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.693E+00	183.75
	RFD97712 7A	5		AM-241,PU-238,PU-239,PU-	3.011E+00	182.84

Waste Isolation Pilot Plant
WWIS

Report	*RP0390*	*Shipment Summary Report*
Filename		
Run by	*BRYANTM*	
Report Date	*06/14/2001 13:56*	
Total Pages	*4*	

Report Criteria

Module	*RP0390*
Version	*1.1*
Shipment Number:	*RF010075*

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

Shipment/Manifest Number: **RF010075**
Certification Date: **06/14/2001**
Shipment Date:
Receipt Date:
Shipment Status: **Approved**

Shipper Site: **RF - ROCKY FLATS**

TRUPACT Number : **136**
ICV Closure Date :
DOT Description : **RQ, RADIOACTIVE MATERIAL, N.O.S., 7, UN2918**

Dose Rate 1m :
Dose Rate 2m :
Dose Rate Surf :

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
RF010745	RFD98298 KN	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.573E+00	154.22
	RFDA0354 KN	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.742E+00	155.58
	RFDA1571 KN	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.120E+00	153.77
	RFDA1591 Center	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.875E+00	159.21
	RFDA5850 KN	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.391E+00	159.21
	RFDA9703 KN	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.599E+00	159.21
	RFDB0149 KN	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238	9.691E-01	158.76
RF010746	RFD95317 KN	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.182E+00	162.39
	RFD95337 KN	2		AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242	1.100E+00	164.2
	RFD95387 KN	2		AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242	1.091E+00	166.02
	RFD96349 Center	2		AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242	2.157E+00	173.73
	RFD97278 KN	2		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242	1.007E+00	163.75
	RFDA4577 KN	3		AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-	1.231E+00	162.84

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
RF010746	**RFDA6008** KN	**2**		**AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242**	**1.230E+00**	**161.93**
			TRUPACT :	AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238	1.927E+01	2254.82

TRUPACT Number : **145** ICV Closure Date : DOT Description : **RQ, RADIOACTIVE MATERIAL, N.O.S., 7, UN2918**

Dose Rate 1m : Dose Rate 2m : Dose Rate Surf :

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
RF010747	**RFD94636** KN	**4**		**AM-241,PU-238,PU-239,PU-240,PU-241,PU-242**	**8.440E-01**	**155.58**
	RFD95178 KN	**2**		**AM-241,PU-238,PU-239,PU-240,PU-241,PU-242**	**1.165E+00**	**155.58**
	RFD97324 KN	**2**		**AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242**	**1.258E+00**	**153.77**
	RFD97611 center	**2**		**AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242**	**6.916E-01**	**157.4**
	RFD99011 KN	**5**		**AM-241,PU-238,PU-239,PU-240,PU-241,PU-242**	**1.245E+00**	**153.77**
	RFDA1575 KN	**2**		**AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238**	**1.166E+00**	**155.13**
	RFDA3669 KN	**2**		**AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242**	**9.058E-01**	**155.13**
RF010748	**RFD95391** center	**2**		**AM-241,PU-238,PU-239,PU-240,PU-241,PU-242**	**9.278E-01**	**161.03**
	RFD95551 KN	**4**		**AM-241,PU-238,PU-239,PU-240,PU-241,PU-242**	**1.107E+00**	**159.67**
	RFD96305 KN	**5**		**AM-241,PU-238,PU-239,PU-240,PU-241,PU-242**	**1.521E+00**	**158.31**
	RFD96839 KN	**2**		**AM-241,PU-238,PU-239,PU-**	**1.656E+00**	**159.21**

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
RF010748	**RFD99933** KN	**2**		**AM-241,PU-238,PU-239,PU-240,PU-241,PU-242**	**2.601E+00**	**159.21**
	RFDA3756 KN	**2**		**AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242**	**1.084E+00**	**158.31**
	RFDA5421 KN	**4**		**AM-241,PU-238,PU-239,PU-240,PU-241,PU-242**	**1.802E+00**	**159.21**
			TRUPACT :	AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238	1.798E+01	2201.31
WSPFs: **RF003.01, RF005.02, RF008.01**			Shipment :	**AM-241,NP-237,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238**	**3.724E+01**	**4456.13**

Kirk Nance Kirk Nance 6-19-01 KN

Waste Isolation Pilot Plant

WWIS

Report	*RP0390 Shipment Summary Report*
Filename	
Run by	*BRYANTM*
Report Date	*06/14/2001 15:46*
Total Pages	*4*

Report Criteria

Module	*RP0390*
Version	*1.1*
Shipment Number:	*IN010082*

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

Shipment/Manifest Number: **IN010082** Certification Date: **06/14/2001** Shipment Date: Receipt Date: Shipment Status: **Approved**

Shipper Site: **IN - IDAHO NATIONAL ENGINEERING LAB**

TRUPACT Number : **140** ICV Closure Date : DOT Description : **WASTE RADIOACTIVE MATERIAL,FISSILE,N.O.S.,7,UN2918**

Dose Rate 1m : Dose Rate 2m : Dose Rate Surf :

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
IN010499	IDRF741200555	4	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.190E-01	204.57
	IDRF741201935	3	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	3.275E-02	199.13
	IDRF741202648	2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	5.585E-02	195.04
	IDRF741202715	3	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.441E-01	203.66
	IDRF741202716	3	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.613E-01	194.14
	IDRF741203212	4	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	9.480E-02	180.53
	INDUNN101265	0			.000E+00	29
IN010500	IDRF741200336	1	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	2.614E-02	245.85
	IDRF741200463	1	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	2.640E-02	237.23
	IDRF741200466	1	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-	2.976E-02	243.13

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
IN010500	IDRF741200491	1	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.683E-02	219.54
	IDRF741200536	10	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.128E-01	214.55
	IDRF741200538	2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.227E-01	209.56
	IDRF741201241	8	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.054E-01	243.58
			TRUPACT :	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.048E+00	2819.51

TRUPACT Number : 141

ICV Closure Date :

DOT Description : WASTE RADIOACTIVE MATERIAL,FISSILE,N.O.S.,7,UN2918

Dose Rate 1m :

Dose Rate 2m :

Dose Rate Surf :

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
IN010441	IDRF741200441	1	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	3.725E-02	192.78
	IDRF741200537 Middle	2.4	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	8.840E-02	210.92
	IDRF741200614	4	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.062E-01	197.31
	IDRF741201557	2.6	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	4.993E-02	206.84
	IDRF741201899	5	D004,D005,D006,D007,D008,D0	/*AM-241,PU-238,PU-239,PU-	1.356E-01	205.93

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
IN010441	IDRF741202506	1.2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	2.533E-02	190.96
	INDUNN101242	0			.000E+00	29
IN010442	IDRF074112384	6	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235*/	1.189E-01	235.41
	IDRF741200364	1.5	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	2.773E-02	238.59
	IDRF741200461	2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	3.924E-02	231.79
	IDRF741200488	2.2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235*/	6.056E-02	235.87
	IDRF741201653	2.3	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	4.865E-02	226.34
	IDRF741201807	7	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.297E-01	216.82
	IDRF741202520	8	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.010E-01	232.24
			TRUPACT :	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	9.685E-01	2850.8
WSPFs: INW216.001			Shipment :	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	2.016E+00	5670.31

Jack Hollen
Alfie Hinojos

Jack Hollen
Alfie

6-17-01
06/17/01

Waste Isolation Pilot Plant

WWIS

Report	*RP0390 Shipment Summary Report*
Filename	
Run by	*BRYANTM*
Report Date	*06/15/2001 06:58*
Total Pages	*4*

Report Criteria

Module	*RP0390*
Version	*1.1*
Shipment Number:	*IN010083*

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

Shipment/Manifest Number: **IN010083**
Certification Date: **06/14/2001**
Shipment Date:
Receipt Date:
Shipment Status: **Approved**

Shipper Site: **IN - IDAHO NATIONAL ENGINEERING LAB**

TRUPACT Number : **139**
ICV Closure Date :
DOT Description : **Waste Radioactive Material, Fissile, n.o.s., 7, UN2918**

Dose Rate 1m :
Dose Rate 2m :
Dose Rate Surf :

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
IN010445	IDRF741200550	0	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	3.878E-02	214.1
	IDRF741200551	2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	2.080E-02	193.23
	IDRF741201431	3.2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	5.581E-02	206.38
	IDRF741201599	1.2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	3.174E-02	212.28
	IDRF741201706	3	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	6.628E-02	192.32
	IDRF741202290	2.2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	5.110E-02	180.98
	INDUNN101244	0			.000E+00	29
IN010446	IDRF074221408	1	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.629E-02	233.15
	IDRF741200470	1.5	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	4.370E-02	232.69
	IDRF741200605	4.8	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-	1.202E-01	241.76

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
IN010446	IDRF741200752	7	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.066E-01	220.9
	IDRF741201113	12	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.730E-01	228.61
	IDRF741201360	2	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	3.116E-02	232.69
	IDRF741201506	0	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	8.371E-02	230.42
				TRUPACT : /*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	8.391E-01	2848.51

TRUPACT Number : 153 ICV Closure Date : DOT Description : **Waste Radioactive Material, Fissile, n.o.s., 7, UN2918**

Dose Rate 1m : Dose Rate 2m : Dose Rate Surf :

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
IN010507	IDRF741201339	10	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.724E-01	189.15
	IDRF741201379	30	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	5.075E-01	200.94
	IDRF741201690	33	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.788E+00	215
	IDRF741202024	12	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	2.338E-01	193.23
	IDRF741202041	12	D004,D005,D006,D007,D008,D0	/*AM-241,PU-238,PU-239,PU-	2.755E-01	200.94

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

Assembly	Container Number	Total Dose Rate (mrem/hr)	Hazardous Codes	Radionuclides	Total Activity(TBq)	Weight (kg)
IN010507	IDRF741202060 KN	30	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	2.359E-01	183.7
	INDUNN101243 KN	0			.000E+00	29
IN010508	IDRF741200673 KN	9	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	2.680E-01	238.59
	IDRF741200680 KN	10	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	4.143E-01	236.32
	IDRF741200758 KN center	20	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	5.156E-01	246.3
	IDRF741200784 KN	10	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	3.013E-01	223.62
	IDRF741201255 KN	[illegible]	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	1.467E+00	221.35
	IDRF741202516 KN	23	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	4.006E-01	234.51
	IDRF741203847 KN	25	D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009,D004	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	5.530E-01	170.55
			TRUPACT :	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	7.134E+00	2783.2
WSPFs: INW216.001			Shipment :	/*AM-241,PU-238,PU-239,PU-240,PU-241,PU-242,U-234,U-235,U-238*/	7.973E+00	5631.71

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Waste Isolation Pilot Plant
WWIS

Report	*RP0390 Shipment Summary Report*
Filename	
Run by	*SPEEDD*
Report Date	*07/03/2001 07:48*
Total Pages	*5*

Report Criteria

Module	*RP0390*
Version	*1.2*
Shipment Number:	*RF010076*

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

Shipment/Manifest Number: RF010076 | Certification Date: 06/18/2001 | Shipment Date: 06/19/2001 | Receipt Date: 06/20/2001 | Shipment Status: Received

Shipper Site: RF - ROCKY FLATS

TRUPACT Number: 137 | ICV Closure Date: 06/18/2001 | DOT Description: RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918

Dose Rate 1m: 0 | 2m: 0 | Surface: 0

Assembly	Container Number	Total Dose Rate (mR/hr)	Hazardous Codes	Radionuclides	Total Activity (TBq)	PE Curies	Weight (kg)
RF010751	RFD95556	2		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.683E+00	2.863E+01	156.04
	RFD96176	3		AM-241 NP-237 PU-238 PU-239 PU-240 PU-241 PU-242	1.088E+00	1.428E+01	155.58
	RFD97678	2		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.003E+00	1.571E+01	154.22
	RFD97682	3		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.313E+00	2.556E+01	154.22
	RFD97704	4		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.442E+00	2.585E+01	154.22
	RFD97716	6		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	2.385E+00	4.735E+01	156.94
	RFD98134	2		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.601E+00	2.893E+01	154.22
			Assembly:	AM-241 NP-237 PU-238 PU-239 PU-240 PU-241 PU-242	1.052E+01	1.865E+02	1,085.44

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

TRUPACT Number: 137

ICV Closure Date: 06/18/2001

DOT Description: RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918

Assembly	Container Number	Total Dose Rate (mR/hr)	Hazardous Codes	Radionuclides	Total Activity (TBq)	PE Curies	Weight (kg)
RF010752	RFD95550	2		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.441E+00	2.692E+01	157.40
	RFD95694	4		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.524E+00	2.521E+01	157.40
	RFD95812	2		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.831E+00	2.202E+01	158.76
	RFD95850	2		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	7.725E-01	1.156E+01	159.21
	RFD96307	4		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.599E+00	2.886E+01	158.31
	RFD96445	5		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.635E+00	3.088E+01	158.76
	RFD97281	2		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.501E+00	2.257E+01	163.75
			Assembly:	AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.030E+01	1.680E+02	1,113.59
			TRUPACT :	AM-241 NP-237 PU-238 PU-239 PU-240 PU-241 PU-242	2.082E+01	3.545E+02	2199.03

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

TRUPACT Number: 152

ICV Closure Date: 06/18/2001

DOT Description: RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918

Dose Rate 1m: 0

2m: 0

Surface: 0

Assembly	Container Number	Total Dose Rate (mR/hr)	Hazardous Codes	Radionuclides	Total Activity (TBq)	PE Curies	Weight (kg)
RF010749	RFD95612	2		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.580E+00	3.254E+01	159.21
	RFD95922	3		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.609E+00	3.062E+01	156.94
	RFD95926	4		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.554E+00	3.314E+01	157.40
	RFD96430	3		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.345E+00	1.446E+01	157.40
	RFD97149	4		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.361E+00	2.797E+01	155.58
	RFD99893	3		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.032E+00	1.785E+01	154.68
	RFDA0309	3		AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.888E+00	1.684E+01	154.22
			Assembly:	AM-241 PU-238 PU-239 PU-240 PU-241 PU-242	1.037E+01	1.734E+02	1,095.43

Shipment Summary Report

WIPP Waste Information System

Waste Isolation Pilot Plant

TRUPACT Number: **152**

ICV Closure Date: **06/18/2001**

DOT Description: **RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918**

Assembly	Container Number	Total Dose Rate (mR/hr)	Hazardous Codes		Radionuclides	Total Activity (TBq)	PE Curies	Weight (kg)
RF010750	**RFD94195**	**2**			**AM-241 NP-237 PU-238 PU-239 PU-240 PU-241 PU-242**	**6.924E-01**	**1.032E+01**	**170.10**
	RFD94288	**4**			**AM-241 PU-238 PU-239 PU-240 PU-241 PU-242**	**1.873E+00**	**3.336E+01**	**159.21**
	RFD94292	**2**			**AM-241 NP-237 PU-238 PU-239 PU-240 PU-241 PU-242**	**8.711E-01**	**1.196E+01**	**168.74**
	RFD95397	**3**			**AM-241 PU-238 PU-239 PU-240 PU-241 PU-242**	**1.693E+00**	**2.800E+01**	**163.75**
	RFD97712	**5**			**AM-241 PU-238 PU-239 PU-240 PU-241 PU-242**	**3.011E+00**	**6.028E+01**	**162.84**
	RFD97714	**4**			**AM-241 PU-238 PU-239 PU-240 PU-241 PU-242**	**1.722E+00**	**3.125E+01**	**163.29**
	RFDA0157	**2**			**AM-241 NP-237 PU-238 PU-239 PU-240 PU-241 PU-242**	**1.256E+00**	**1.369E+01**	**161.93**
				Assembly:	AM-241 NP-237 PU-238 PU-239 PU-240 PU-241 PU-242	1.112E+01	1.889E+02	1,149.86
				TRUPACT :	AM-241 NP-237 PU-238 PU-239 PU-240 PU-241 PU-242	2.149E+01	3.623E+02	2245.29
WSPFs: **RF005.02**				Shipment :	**AM-241 NP-237 PU-238 PU-239 PU-240 PU-241 PU-242**	**4.231E+01**	**7.168E+02**	**4,444.32**

Waste Isolation Pilot Plant
WWIS

Report	*RP0440*	*Waste Emplacement Report*
Filename		
Run by	*MIKUSK*	
Report Date	*06/21/2001 12:24*	
Total Pages	*11*	

Selection Criteria

Module	*RP0440*
Version	*1.2*
Start Date	*06/17/2001*
End Date	*06/21/2001*
Container Number	*%*
Site Id	*%*
Panel	*%*
Room	*%*
Bore Hole	*%*
Building	*%*
Pad	*%*

* Indicates Dunnage

Waste Emplacement Report

WIPP Waste
Information System

Waste Isolation Pilot Plant

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #	Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
1	IDRF074112384	IN	IN010082	IN010442	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	235.41	131	6	T
2	IDRF074112854	IN	IN010081	IN010438	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	233.15	132	1	B
3	IDRF074112880	IN	IN010081	IN010503	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	215.46	133	2	M
4	IDRF074221408	IN	IN010083	IN010446	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	233.15	132	3	T
5	IDRF741200336	IN	IN010082	IN010500	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	245.85	132	3	B
6	IDRF741200364	IN	IN010082	IN010442	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	238.59	131	6	T
7	IDRF741200441	IN	IN010082	IN010441	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	192.78	131	4	T
8	IDRF741200461	IN	IN010082	IN010442	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	231.79	131	6	T
9	IDRF741200463	IN	IN010082	IN010500	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	237.23	132	3	B
10	IDRF741200466	IN	IN010082	IN010500	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	243.13	132	3	B
11	IDRF741200470	IN	IN010083	IN010446	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	232.69	132	3	T
12	IDRF741200488	IN	IN010082	IN010442	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	235.87	131	6	T
13	IDRF741200489	IN	IN010081	IN010437	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	200.03	132	1	M

Waste Emplacement Report

WIPP Waste Information System

Waste Isolation Pilot Plant

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #	Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
14	IDRF741200491	IN	IN010082	IN010500	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	219.54	132	3	B
15	IDRF741200536	IN	IN010082	IN010500	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	214.55	132	3	B
16	IDRF741200537	IN	IN010082	IN010441	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	210.92	131	4	T
17	IDRF741200538	IN	IN010082	IN010500	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	209.56	132	3	B
18	IDRF741200547	IN	IN010081	IN010438	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	213.64	132	1	B
19	IDRF741200550	IN	IN010083	IN010445	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	214.10	132	1	T
20	IDRF741200551	IN	IN010083	IN010445	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	193.23	132	1	T
21	IDRF741200555	IN	IN010082	IN010499	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	204.57	132	3	M
22	IDRF741200605	IN	IN010083	IN010446	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	241.76	132	3	T
23	IDRF741200614	IN	IN010082	IN010441	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	197.31	131	4	T
24	IDRF741200673	IN	IN010083	IN010508	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	238.59	131	6	B
25	IDRF741200680	IN	IN010083	IN010508	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	236.32	131	6	B
26	IDRF741200695	IN	IN010081	IN010504	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	229.97	133	2	B

Waste Emplacement Report

WIPP Waste
Information System

Waste Isolation Pilot Plant

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #	Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
27	IDRF741200701	IN	IN010081	IN010504	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	224.98	133	2	B
28	IDRF741200752	IN	IN010083	IN010446	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	220.90	132	3	T
29	IDRF741200758	IN	IN010083	IN010508	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	246.30	131	6	B
30	IDRF741200773	IN	IN010081	IN010504	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	239.50	133	2	B
31	IDRF741200784	IN	IN010083	IN010508	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	223.62	131	6	B
32	IDRF741200800	IN	IN010081	IN010504	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	217.72	133	2	B
33	IDRF741200811	IN	IN010081	IN010504	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	244.49	133	2	B
34	IDRF741200824	IN	IN010081	IN010438	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	229.52	132	1	B
35	IDRF741200851	IN	IN010081	IN010438	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	244.49	132	1	B
36	IDRF741200959	IN	IN010081	IN010437	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	199.58	132	1	M
37	IDRF741201113	IN	IN010083	IN010446	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	228.61	132	3	T
38	IDRF741201168	IN	IN010081	IN010437	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	157.85	132	1	M
39	IDRF741201237	IN	IN010081	IN010503	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	188.69	133	2	M

Waste Emplacement Report

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #	Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
40	IDRF741201241	IN	IN010082	IN010500	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	243.58	132	3	B
41	IDRF741201255	IN	IN010083	IN010508	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	221.35	131	6	B
42	IDRF741201339	IN	IN010083	IN010507	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	189.15	131	6	M
43	IDRF741201360	IN	IN010083	IN010446	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	232.69	132	3	T
44	IDRF741201379	IN	IN010083	IN010507	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	200.94	131	6	M
45	IDRF741201431	IN	IN010083	IN010445	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	206.38	132	1	T
46	IDRF741201506	IN	IN010083	IN010446	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	230.42	132	3	T
47	IDRF741201508	IN	IN010081	IN010504	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	221.81	133	2	B
48	IDRF741201557	IN	IN010082	IN010441	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	206.84	131	4	T
49	IDRF741201568	IN	IN010081	IN010438	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	203.21	132	1	B
50	IDRF741201599	IN	IN010083	IN010445	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	212.28	132	1	T
51	IDRF741201653	IN	IN010082	IN010442	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	226.34	131	6	T
52	IDRF741201690	IN	IN010083	IN010507	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	215.00	131	6	M

Waste Emplacement Report

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #	Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
53	IDRF741201701	IN	IN010081	IN010437	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	155.58	132	1	M
54	IDRF741201706	IN	IN010083	IN010445	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	192.32	132	1	T
55	IDRF741201749	IN	IN010081	IN010437	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	198.67	132	1	M
56	IDRF741201807	IN	IN010082	IN010442	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	216.82	131	6	T
57	IDRF741201842	IN	IN010081	IN010504	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	236.78	133	2	B
58	IDRF741201899	IN	IN010082	IN010441	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	205.93	131	4	T
59	IDRF741201917	IN	IN010081	IN010438	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	213.64	132	1	B
60	IDRF741201935	IN	IN010082	IN010499	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	199.13	132	3	M
61	IDRF741201967	IN	IN010081	IN010503	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	213.19	133	2	M
62	IDRF741201969	IN	IN010081	IN010437	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	197.77	132	1	M
63	IDRF741202024	IN	IN010083	IN010507	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	193.23	131	6	M
64	IDRF741202041	IN	IN010083	IN010507	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	200.94	131	6	M
65	IDRF741202060	IN	IN010083	IN010507	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	183.70	131	6	M

Waste Emplacement Report

WIPP Waste
Information System

Waste Isolation Pilot Plant

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #	Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
66	IDRF741202213	IN	IN010081	IN010437	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	171.00	132	1	M
67	IDRF741202290	IN	IN010083	IN010445	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	180.98	132	1	T
68	IDRF741202303	IN	IN010081	IN010438	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	229.06	132	1	B
69	IDRF741202506	IN	IN010082	IN010441	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	190.96	131	4	T
70	IDRF741202516	IN	IN010083	IN010508	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	234.51	131	6	B
71	IDRF741202520	IN	IN010082	IN010442	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	232.24	131	6	T
72	IDRF741202648	IN	IN010082	IN010499	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	195.04	132	3	M
73	IDRF741202715	IN	IN010082	IN010499	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	203.66	132	3	M
74	IDRF741202716	IN	IN010082	IN010499	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	194.14	132	3	M
75	IDRF741202815	IN	IN010081	IN010503	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	215.00	133	2	M
76	IDRF741203212	IN	IN010082	IN010499	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	180.53	132	3	M
77	IDRF741203847	IN	IN010083	IN010508	06/18/2001	D005,D006,D007,D008,D009, D010,D011,D022,F001,F002,F 005,F006,F007,F009,D004	3000	170.55	131	6	B
78	IDRF741206963	IN	IN010081	IN010503	06/18/2001	D004,D005,D006,D007,D008, D009,D010,D011,D022,F001, F002,F005,F006,F007,F009	3000	198.67	133	2	M

Waste Emplacement Report

Waste Isolation Pilot Plant

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #		Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
79	*	INDUNN101240	IN	IN010081	IN010503	06/18/2001			29.00	133	2	M
80	*	INDUNN101242	IN	IN010082	IN010441	06/18/2001			29.00	131	4	T
81	*	INDUNN101243	IN	IN010083	IN010507	06/18/2001			29.00	131	6	M
82	*	INDUNN101244	IN	IN010083	IN010445	06/18/2001			29.00	132	1	T
83	*	INDUNN101265	IN	IN010082	IN010499	06/18/2001			29.00	132	3	M
84	*	INDUNN101267	IN	IN010081	IN010503	06/18/2001			29.00	133	2	M
85		RFD94195	RF	RF010076	RF010750	06/20/2001		3000	170.10	134	2	B
86		RFD94288	RF	RF010076	RF010750	06/20/2001		3000	159.21	134	2	B
87		RFD94292	RF	RF010074	RF010742	06/18/2001		3000	168.74	134	2	B
88		RFD94563	RF	RF010073	RF010739	06/18/2001		3000	155.13	132	5	T
89		RFD94633	RF	RF010075	RF010747	06/20/2001		3000	156.04	133	4	M
90		RFD94636	RF	RF010073	RF010739	06/18/2001		3000	155.58	133	6	M
91		RFD95121	RF	RF010075	RF010747	06/20/2001		3000	155.58	133	4	M
92		RFD95178	RF	RF010075	RF010746	06/20/2001		3000	155.58	133	6	M
93		RFD95317	RF	RF010075	RF010746	06/20/2001		5000	162.39	133	6	T
94		RFD95337	RF	RF010075	RF010746	06/20/2001		5000	164.20	133	6	T
95		RFD95387	RF	RF010075	RF010748	06/20/2001		5000	166.02	133	6	T
96		RFD95391	RF	RF010076	RF010750	06/20/2001		5000	161.03	133	6	B
97		RFD95397	RF	RF010073	RF010740	06/18/2001		3000	163.75	134	2	B
98		RFD95410	RF	RF010076	RF010752	06/20/2001		3000	161.03	133	4	B
99		RFD95550	RF	RF010075	RF010748	06/20/2001		3000	157.40	134	4	B
100		RFD95551	RF	RF010076	RF010751	06/20/2001		3000	159.67	133	6	B
101		RFD95556	RF	RF010074	RF010742	06/18/2001		3000	156.04	134	4	M
102		RFD95560	RF	RF010076	RF010749	06/20/2001		3000	156.94	132	5	T
103		RFD95612	RF	RF010076	RF010752	06/20/2001		3000	159.21	134	2	M
104		RFD95694	RF	RF010073	RF010740	06/18/2001		3000	157.40	134	4	B
105		RFD95702	RF	RF010076	RF010752	06/20/2001		3000	157.40	133	4	B
106		RFD95812	RF	RF010073	RF010740	06/18/2001		3000	158.76	134	4	B
107		RFD95837	RF	RF010076	RF010752	06/20/2001		3000	157.85	133	4	B
108		RFD95850	RF	RF010074	RF010744	06/18/2001		3000	159.21	134	4	B
109		RFD95920	RF	RF010076	RF010749	06/20/2001		3000	157.85	132	5	B
110		RFD95922	RF	RF010076	RF010749	06/20/2001		3000	156.94	134	2	M

Waste Emplacement Report

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #	Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
111	RFD95926	RF	RF010076	RF010749	06/20/2001		3000	157.40	134	2	M
112	RFD96176	RF	RF010076	RF010751	06/20/2001		3000	155.58	134	4	M
113	RFD96182	RF	RF010074	RF010743	06/18/2001		3000	155.13	132	5	M
114	RFD96305	RF	RF010075	RF010748	06/20/2001		3000	158.31	133	6	B
115	RFD96307	RF	RF010076	RF010752	06/20/2001		3000	158.31	134	4	B
116	RFD96349	RF	RF010075	RF010746	06/20/2001		5000	173.73	133	6	T
117	RFD96430	RF	RF010076	RF010749	06/20/2001		3000	157.40	134	2	M
118	RFD96445	RF	RF010076	RF010752	06/20/2001		3000	158.76	134	4	B
119	RFD96502	RF	RF010074	RF010744	06/18/2001		5000	160.12	132	5	B
120	RFD96537	RF	RF010073	RF010739	06/18/2001		3000	156.04	133	4	M
121	RFD96560	RF	RF010074	RF010744	06/18/2001		3000	156.49	132	5	B
122	RFD96839	RF	RF010075	RF010748	06/20/2001		3000	159.21	133	6	B
123	RFD97149	RF	RF010076	RF010749	06/20/2001		3000	155.58	134	2	M
124	RFD97161	RF	RF010074	RF010741	06/18/2001		3000	154.68	133	2	T
125	RFD97278	RF	RF010075	RF010746	06/20/2001		5000	163.75	133	6	T
126	RFD97281	RF	RF010076	RF010752	06/20/2001		3000	163.75	134	4	B
127	RFD97324	RF	RF010075	RF010747	06/20/2001		3000	153.77	133	6	M
128	RFD97611	RF	RF010075	RF010747	06/20/2001		5000	157.40	133	6	M
129	RFD97678	RF	RF010076	RF010751	06/20/2001		3000	154.22	134	4	M
130	RFD97682	RF	RF010076	RF010751	06/20/2001		3000	154.22	134	4	M
131	RFD97704	RF	RF010076	RF010751	06/20/2001		3000	154.22	134	4	M
132	RFD97712	RF	RF010076	RF010750	06/20/2001		3000	162.84	134	2	B
133	RFD97714	RF	RF010076	RF010750	06/20/2001		3000	163.29	134	2	B
134	RFD97716	RF	RF010076	RF010751	06/20/2001		3000	156.94	134	4	M
135	RFD97726	RF	RF010074	RF010744	06/18/2001		3000	157.40	132	5	B
136	RFD97730	RF	RF010073	RF010739	06/18/2001		3000	156.49	133	4	M
137	RFD97917	RF	RF010074	RF010743	06/18/2001		3000	155.13	132	5	M
138	RFD98130	RF	RF010074	RF010743	06/18/2001		5000	154.22	132	5	M
139	RFD98134	RF	RF010076	RF010751	06/20/2001		3000	154.22	134	4	M
140	RFD98147	RF	RF010073	RF010739	06/18/2001		3000	154.68	133	4	M
141	RFD98151	RF	RF010074	RF010741	06/18/2001		3000	153.04	133	2	T
142	RFD98174	RF	RF010074	RF010743	06/18/2001		5000	153.32	132	5	M

Waste Emplacement Report

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #	Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
143	RFD98194	RF	RF010074	RF010741	06/18/2001		5000	152.86	133	2	T
144	RFD98206	RF	RF010074	RF010741	06/18/2001		5000	151.96	133	2	T
145	RFD98208	RF	RF010074	RF010741	06/18/2001		5000	153.32	133	2	T
146	RFD98291	RF	RF010074	RF010743	06/18/2001		3000	152.86	132	5	M
147	RFD98298	RF	RF010075	RF010745	06/20/2001		5000	154.22	133	4	T
148	RFD98315	RF	RF010074	RF010743	06/18/2001		3000	153.50	132	5	M
149	RFD98327	RF	RF010074	RF010744	06/18/2001		3000	156.22	132	5	B
150	RFD98352	RF	RF010074	RF010742	06/18/2001		3000	155.22	132	5	T
151	RFD98963	RF	RF010074	RF010741	06/18/2001		3000	154.22	133	2	T
152	RFD99002	RF	RF010073	RF010739	06/18/2001		3000	155.13	133	4	M
153	RFD99011	RF	RF010075	RF010747	06/20/2001		3000	153.77	133	6	M
154	RFD99099	RF	RF010073	RF010739	06/18/2001		3000	154.50	133	4	M
155	RFD99933	RF	RF010075	RF010748	06/20/2001		3000	159.21	133	6	B
156	RFD99993	RF	RF010076	RF010749	06/20/2001		3000	154.68	134	2	M
157	RFDA0157	RF	RF010076	RF010750	06/20/2001		3000	161.93	134	2	B
158	RFDA0309	RF	RF010076	RF010749	06/20/2001		3000	154.22	134	2	M
159	RFDA0354	RF	RF010075	RF010745	06/20/2001		5000	155.58	133	4	T
160	RFDA0553	RF	RF010074	RF010741	06/18/2001		3000	153.77	133	2	T
161	RFDA1571	RF	RF010075	RF010745	06/20/2001		5000	153.77	133	4	T
162	RFDA1575	RF	RF010075	RF010747	06/20/2001		5000	155.13	133	6	M
163	RFDA1591	RF	RF010075	RF010745	06/20/2001		5000	159.21	133	4	T
164	RFDA2424	RF	RF010074	RF010742	06/18/2001		3000	157.40	132	5	T
165	RFDA2440	RF	RF010073	RF010740	06/18/2001		3000	159.67	133	4	B
166	RFDA2543	RF	RF010073	RF010740	06/18/2001		3000	159.67	133	4	B
167	RFDA2927	RF	RF010074	RF010744	06/18/2001		3000	160.57	132	5	B
168	RFDA3469	RF	RF010074	RF010742	06/18/2001		3000	156.94	132	5	T
169	RFDA3594	RF	RF010074	RF010742	06/18/2001		3000	157.31	132	5	T
170	RFDA3669	RF	RF010075	RF010747	06/20/2001		5000	155.13	133	6	M
171	RFDA3756	RF	RF010075	RF010748	06/20/2001		3000	158.31	133	6	B
172	RFDA4414	RF	RF010073	RF010740	06/18/2001		3000	158.76	133	4	B
173	RFDA4577	RF	RF010075	RF010746	06/20/2001		5000	162.84	133	6	T
174	RFDA4621	RF	RF010074	RF010744	06/18/2001		3000	160.21	132	5	B

Waste Emplacement Report

WIPP Waste
Information System

Waste Isolation Pilot Plant

Panel: 1 **Room: 7** **(Process Code: XO4)**

Report Row #	Container Number	Site ID	Shipment Number	Assembly ID	Emplacement Date	Hazardous Codes	Matrix Code	Container Weight (kg)	Emplacement Row	Col	Ht
175	RFDA5308	RF	RF010073	RF010740	06/18/2001		3000	159.67	133	4	B
176	RFDA5417	RF	RF010074	RF010742	06/18/2001		3000	158.76	132	5	T
177	RFDA5421	RF	RF010075	RF010748	06/20/2001		3000	159.21	133	6	B
178	RFDA5850	RF	RF010075	RF010745	06/20/2001		5000	159.21	133	4	T
179	RFDA6008	RF	RF010075	RF010746	06/20/2001		5000	161.93	133	6	T
180	RFDA8787	RF	RF010074	RF010743	06/18/2001		3000	156.04	132	5	M
181	RFDA9703	RF	RF010075	RF010745	06/20/2001		5000	159.21	133	4	T
182	RFDB0149	RF	RF010075	RF010745	06/20/2001		5000	158.76	133	4	T

Waste Isolation Pilot Plant

WWIS

Report	*RP0380 Nuclide Report*
Filename	
Run by	*STANDID*
Report Date	*07/11/2001 15:53*
Total Pages	*2*

Selection Criteria

Module :	*RP0380*
Version :	*1.0*
Site id :	*%*
Nuclide :	*%*
Panel Number :	*%*
Room Number :	*%*
Handling Code :	*%*
Show Uncertainty :	*NO*
TRU Nuclides Only :	*%*
EPA Tracked Nuclides Only:	*%*

Nuclide Report

Panel
Number : 1

Room
Number : 7

Radionuclide	Activity (Ci)	Mass(G)
AM-241 - AMERICIUM 241	1.3521E+04	3.8974E+03
AM-243 - AMERICIUM 243	1.5355E-03	7.6750E-03
CO-60 - COBALT 60	3.4696E-07	3.0400E-10
CS-137 - CESIUM 137	2.3941E-04	2.7199E-06
K-40 - POTASSIUM-40	1.1134E-05	1.9705E+00
NA-22 - SODIUM 22 (NA-22)	5.3435E-06	8.4500E-10
NP-237 - NEPTUNIUM 237	1.3051E-02	1.8306E+01
PA-231 - PROTACTINIUM 231	6.1146E-06	1.3003E-05
PU-238 - PLUTONIUM 238	1.1962E+03	6.9202E+01
PU-239 - PLUTONIUM 239	1.8844E+04	2.9957E+05
PU-240 - PLUTONIUM 240	4.3100E+03	1.8740E+04
PU-241 - PLUTONIUM 241	6.7596E+04	6.5091E+02
PU-242 - PLUTONIUM 242	5.4075E-01	1.3623E+02
TH-232 - THORIUM 232	2.6073E-06	2.3646E+01
U-233 - URANIUM 233	1.2838E-01	1.3154E+01
U-234 - URANIUM 234	1.2621E-01	1.9989E+01
U-235 - URANIUM 235	9.4925E-03	4.3345E+03
U-238 - URANIUM 238	3.1249E-01	9.1828E+05
Totals:	1.0547E+05	1.2458E+06
Grand Totals:	1.0547E+05	1.2458E+06

Waste Isolation Pilot Plant

WWIS

Report	*RP0360 Waste Container Data Report*
Filename	
Run by	*MIKUSK*
Report Date	*06/21/2001 13:22*
Total Pages	*6*

Selection Criteria

Module	*RP0360*
Version	*1.4*
Container Number	*IDRF741201431*
Site Id	*%*
Waste Stream	*%*
Data Status Code	*%*

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201431**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

WAC Ex. # :
WAC Rev # : **7**
Cert Date : **06/13/2001**
Cert Site : **IN - IDAHO NATIONAL ENGINEER**
Generator Site : **RF - ROCKY FLATS**
IDC Code : **001**
Matrix Code : **S3121**
Trucon Code : **ID211A**
Shipping Category : **1001300190**
Pcb Conc(Ppm) : **0**

Decay Heat (Watts) : **4.209E-02**
Decay Heat Uncert (Watts) : **3.426E-02**
Closure Date : **11/07/1981**
Vent Date : **08/04/1988**
Aspiration Id : **3**
Gas Gen Rate :
Gas Hyd Meth Gen Rate :
Gas Gen Comp Date :
Shipment Num : IN010083
Packaging Num : 139

Assembly Id : IN010445

Overpack Cntr Num :
Overpack Cntr Type :

Handling Code : **CH**
Waste Type Code : **MTRU**
Wst Strm Bir Id : **IN-W216**
Wst Strm Mwir Id : **IN-W216**

Tru Alpha Act (Ci) : **1.266E+00**
Tru Alpha Act Uncert (Ci) : **1.030E+00**
Tru Alpha Act Conc (Ci/g) : **7.363E-06**
Tru Alpha Act Conc Uncert (Ci/g) : **5.994E-06**
Pu239 Eq Act (PE Ci) : **1.265E+00**
Pu239 Fiss Gm Eq (Fge) : **3.620E+00**
Pu239 Fiss Gm Eq Uncert (Fge) : **2.950E+00**

Layers Of Packaging : **2**
Fill Factor (%) : **80**
Liner Type : **2 - RIGID POLYETHYLENE LI**
Liner Punctured : **Y**

Gross Weight (Kg) : **206.38**
Gross Weight Uncert (Kg) : **.91**

Alpha Surf Cont (dpm/100cm2) : **0**
BG Surf Cont (dpm/100cm2) : **0**
Bg Dose Rate (mrem/hr) : **3.2**
Neut Dose Rate (mrem/hr) : **0**
Total Dose Rate (mrem/hr) : **3.2**

Cntr Disposal Date : **06/18/2001**
Cntr Status Code : **XO4**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
AM-241	AMERICIUM 241	1.166E+00	9.492E-01	3.359E-01	2.735E-01	Y
PU-238	PLUTONIUM 238	2.448E-03	2.734E-03	1.415E-04	1.581E-04	Y
PU-239	PLUTONIUM 239	7.973E-02	6.487E-02	1.268E+00	1.031E+00	Y
PU-240	PLUTONIUM 240	1.773E-02	1.472E-02	7.708E-02	6.399E-02	Y

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201431**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
PU-241	PLUTONIUM 241	2.425E-01	2.160E-01	2.331E-03	2.077E-03	Y
PU-242	PLUTONIUM 242	2.300E-06	2.971E-06	5.795E-04	7.483E-04	Y
U-234	URANIUM 234	3.347E-05	3.027E-05	5.295E-03	4.790E-03	Y
U-235	URANIUM 235	5.132E-06	4.175E-06	2.343E+00	1.906E+00	Y
U-238	URANIUM 238	2.843E-04	2.344E-04	8.361E+02	6.895E+02	Y

Material Parameters Information

Waste Matl Parm	Description	Weight(Kg)
13	STEEL CONTAINER MATERIALS - KG	26.76
14	PLASTIC/LINERS CONTAINER MATERIALS- KG	9.53
4	OTHER INORGANIC MATERIALS	.68
9	SOLIDIFIED INORGANIC MATERIAL	169.42

Filter Model Information

Filter	Description	Quantity	Install Date
NF020	NUCFILL CARBON COMPOSITE	1	05/04/2001

Assay Methods Information

Radio Assay Method	Description	Assay Date
P/GS	PAN/GAMMA SYSTEM	03/27/2001

Characterization Methods Information

Method Id	Description	Charz Method Date
RTR	REAL-TIME RADIOGRAPHY	03/17/2001

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201431**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Hazardous Code Information

Haz Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D022	CHLOROFORM
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS
F006	WASTEWATER TREATMENT SLUDGE
F007	SPENT CYANIDE PLATING BATH
F009	SPENT STRIPPING SOLUTION

Sample Information

Sample Id : ID050401EI566
Layer No Sampled : 0
Sample Type : HS
Date Sampled : 05/04/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
100-41-4 - ETHYL BENZENE	9930.4	.460 Ppm	05/10/2001	U
107-06-2 - 1,2-DICHLOROETHANE	9930.4	.300 Ppm	05/10/2001	U
108-10-1 - METHYL ISOBUTYL KETONE	9930.4	.390 Ppm	05/10/2001	U
108-67-8 - 1,3,5-TRIMETHYLBENZENE	9930.4	.260 Ppm	05/10/2001	U
108-88-3 - TOLUENE	9930.4	4.000 Ppm	05/10/2001	J
108-90-7 - CHLOROBENZENE	9930.4	.250 Ppm	05/10/2001	U
108383/106423 - M,P-XYLENE	9930.4	.890 Ppm	05/10/2001	U

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201431**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Sample Information

Sample Id : ID050401EI566
Layer No Sampled : 0
Sample Type : HS
Date Sampled : 05/04/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
110-82-7 - CYCLOHEXANE	9930.4	.380 Ppm	05/10/2001	U
127-18-4 - TETRACHLOROETHYLENE	9930.4	.280 Ppm	05/10/2001	U
1333-74-0 - HYDROGEN	9925.0	.0070 Volume %	05/15/2001	U
156-59-2 - CIS-1,2-DICHLOROETHYLENE	9930.4	.360 Ppm	05/10/2001	U
56-23-5 - CARBON TETRACHLORIDE	9930.4	.550 Ppm	05/10/2001	J
60-29-7 - ETHYL ETHER	9930.4	.380 Ppm	05/10/2001	U
67-56-1 - METHANOL	9910.4	4.900 Ppm	05/10/2001	U
67-64-1 - ACETONE	9930.4	4.700 Ppm	05/10/2001	J
67-66-3 - CHLOROFORM	9930.4	.250 Ppm	05/10/2001	U
71-36-3 - BUTANOL	9930.4	1.200 Ppm	05/10/2001	U
71-43-2 - BENZENE	9930.4	.270 Ppm	05/10/2001	U
71-55-6 - 1,1,1-TRICHLOROETHANE	9930.4	92.000 Ppm	05/10/2001	NA
75-09-2 - METHYLENE CHLORIDE	9930.4	.740 Ppm	05/10/2001	U
75-25-2 - BROMOFORM	9930.4	.240 Ppm	05/10/2001	U
75-34-3 - 1,1-DICHLOROETHANE	9930.4	.220 Ppm	05/10/2001	U
75-35-4 - 1,1-DICHLOROETHYLENE	9930.4	1.500 Ppm	05/10/2001	J
76-13-1 - 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	9930.4	.290 Ppm	05/10/2001	U
78-93-3 - METHYL ETHYL KETONE	9930.4	1.100 Ppm	05/10/2001	U

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201431**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Sample Information

Sample Id : ID050401EI566
Layer No Sampled : 0
Sample Type : HS
Date Sampled : 05/04/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
79-01-6 - TRICHLOROETHYLENE	9930.4	23.000 Ppm	05/10/2001	NA
79-34-5 - 1,1,2,2-TETRACHLOROETHANE	9930.4	.430 Ppm	05/10/2001	U
95-47-6 - O-XYLENE	9930.4	.460 Ppm	05/10/2001	U
95-63-6 - 1,2,4-TRIMETHYLBENZENE	9930.4	.250 Ppm	05/10/2001	U

Location Information

Panel Number	Room Number	Row	Col	Ht
1	7	132	1	T

Waste Isolation Pilot Plant
WWIS

Report	*RP0360 Waste Container Data Report*
Filename	
Run by	*MIKUSK*
Report Date	*06/21/2001 13:15*
Total Pages	*6*

Selection Criteria

Module	*RP0360*
Version	*1.4*
Container Number	*IDRF741203212*
Site Id	*%*
Waste Stream	*%*
Data Status Code	*%*

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741203212**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

WAC Ex. # :
WAC Rev # : **7**
Cert Date : **06/13/2001**
Cert Site : **IN - IDAHO NATIONAL ENGINEER**
Generator Site : **RF - ROCKY FLATS**
IDC Code : **001**
Matrix Code : **S3121**
Trucon Code : **ID211A**
Shipping Category : **1001300190**
Pcb Conc(Ppm) : **0**

Decay Heat (Watts) : **6.896E-02**
Decay Heat Uncert (Watts) : **5.568E-02**
Closure Date : **12/15/1983**
Vent Date : **04/16/1998**
Aspiration Id : **3**
Gas Gen Rate :
Gas Hyd Meth Gen Rate :
Gas Gen Comp Date :
Shipment Num : IN010082
Packaging Num : 140

Assembly Id : IN010499

Overpack Cntr Num :
Overpack Cntr Type :

Handling Code : **CH**
Waste Type Code : **MTRU**
Wst Strm Bir Id : **IN-W216**
Wst Strm Mwir Id : **IN-W216**

Tru Alpha Act (Ci) : **2.076E+00**
Tru Alpha Act Uncert (Ci) : **1.677E+00**
Tru Alpha Act Conc (Ci/g) : **1.421E-05**
Tru Alpha Act Conc Uncert (Ci/g) : **1.148E-05**
Pu239 Eq Act (PE Ci) : **2.076E+00**
Pu239 Fiss Gm Eq (Fge) : **6.820E+00**
Pu239 Fiss Gm Eq Uncert (Fge) : **5.500E+00**

Layers Of Packaging : **2**
Fill Factor (%) : **60**
Liner Type : **3 - POLY LINER**
Liner Punctured : **Y**

Gross Weight (Kg) : **180.53**
Gross Weight Uncert (Kg) : **.91**

Alpha Surf Cont (dpm/100cm2) : **0**
BG Surf Cont (dpm/100cm2) : **0**
Bg Dose Rate (mrem/hr) : **4**
Neut Dose Rate (mrem/hr) : **0**
Total Dose Rate (mrem/hr) : **4**

Cntr Disposal Date : **06/18/2001** late disposal
Cntr Status Code : **XO4**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
AM-241	AMERICIUM 241	1.876E+00	1.515E+00	5.406E-01	4.366E-01	Y
PU-238	PLUTONIUM 238	4.903E-03	5.453E-03	2.834E-04	3.152E-04	Y
PU-239	PLUTONIUM 239	1.597E-01	1.289E-01	2.539E+00	2.049E+00	Y
PU-240	PLUTONIUM 240	3.551E-02	2.925E-02	1.544E-01	1.272E-01	Y

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741203212**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
PU-241	PLUTONIUM 241	4.856E-01	4.296E-01	4.669E-03	4.131E-03	Y
PU-242	PLUTONIUM 242	4.607E-06	5.931E-06	1.161E-03	1.494E-03	Y
U-234	URANIUM 234	5.480E-05	4.932E-05	8.671E-03	7.804E-03	Y
U-235	URANIUM 235	9.315E-06	7.517E-06	4.253E+00	3.432E+00	Y
U-238	URANIUM 238	4.196E-04	3.409E-04	1.234E+03	1.003E+03	Y

Material Parameters Information

Waste Matl Parm	Description	Weight(Kg)
13	STEEL CONTAINER MATERIALS - KG	26.76
14	PLASTIC/LINERS CONTAINER MATERIALS- KG	9.53
9	SOLIDIFIED INORGANIC MATERIAL	144.24

Filter Model Information

Filter	Description	Quantity	Install Date
NF020	NUCFILL CARBON COMPOSITE	1	05/11/2001

Assay Methods Information

Radio Assay Method	Description	Assay Date
P/GS	PAN/GAMMA SYSTEM	03/26/2001

Characterization Methods Information

Method Id	Description	Charz Method Date
RTR	REAL-TIME RADIOGRAPHY	03/25/2001

Hazardous Code Information

Haz Code	Description
D004	ARSENIC

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741203212**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Hazardous Code Information

Haz Code	Description
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D022	CHLOROFORM
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS
F006	WASTEWATER TREATMENT SLUDGE
F007	SPENT CYANIDE PLATING BATH
F009	SPENT STRIPPING SOLUTION

Sample Information

Sample Id : ID051101EI458
Layer No Sampled : 0
Sample Type : HS
Date Sampled : 05/11/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
100-41-4 - ETHYL BENZENE	9930.4	.730 Ppm	05/17/2001	J
107-06-2 - 1,2-DICHLOROETHANE	9930.4	.480 Ppm	05/17/2001	U
108-10-1 - METHYL ISOBUTYL KETONE	9930.4	.550 Ppm	05/17/2001	U
108-67-8 - 1,3,5-TRIMETHYLBENZENE	9930.4	.520 Ppm	05/17/2001	B,U
108-88-3 - TOLUENE	9930.4	2.700 Ppm	05/17/2001	J
108-90-7 - CHLOROBENZENE	9930.4	.490 Ppm	05/17/2001	U
108383/106423 - M,P-XYLENE	9930.4	1.300 Ppm	05/17/2001	J
110-82-7 - CYCLOHEXANE	9930.4	.530	05/17/2001	U

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741203212**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Sample Information

Sample Id : ID051101EI458
Layer No Sampled : 0
Sample Type : HS
Date Sampled : 05/11/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
127-18-4 - TETRACHLOROETHYLENE	9930.4	.350 Ppm	05/17/2001	U
1333-74-0 - HYDROGEN	9925.0	.0055 Volume %	05/17/2001	U
156-59-2 - CIS-1,2-DICHLOROETHYLENE	9930.4	.590 Ppm	05/17/2001	U
56-23-5 - CARBON TETRACHLORIDE	9930.4	.520 Ppm	05/17/2001	U
60-29-7 - ETHYL ETHER	9930.4	1.100 Ppm	05/17/2001	U
67-56-1 - METHANOL	9910.4	18.000 Ppm	05/17/2001	U
67-64-1 - ACETONE	9930.4	5.400 Ppm	05/17/2001	J
67-66-3 - CHLOROFORM	9930.4	.350 Ppm	05/17/2001	U
71-36-3 - BUTANOL	9930.4	4.700 Ppm	05/17/2001	B,J
71-43-2 - BENZENE	9930.4	.480 Ppm	05/17/2001	U
71-55-6 - 1,1,1-TRICHLOROETHANE	9930.4	180.000 Ppm	05/17/2001	NA
75-09-2 - METHYLENE CHLORIDE	9930.4	3.000 Ppm	05/17/2001	J
75-25-2 - BROMOFORM	9930.4	.600 Ppm	05/17/2001	U
75-34-3 - 1,1-DICHLOROETHANE	9930.4	.890 Ppm	05/17/2001	J
75-35-4 - 1,1-DICHLOROETHYLENE	9930.4	3.900 Ppm	05/17/2001	J
76-13-1 - 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	9930.4	12.000 Ppm	05/17/2001	NA
78-93-3 - METHYL ETHYL KETONE	9930.4	.550 Ppm	05/17/2001	U

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741203212**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Sample Information

Sample Id : ID051101EI458
Layer No Sampled : 0
Sample Type : HS
Date Sampled : 05/11/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
79-01-6 - TRICHLOROETHYLENE	9930.4	17.000 Ppm	05/17/2001	NA
79-34-5 - 1,1,2,2-TETRACHLOROETHANE	9930.4	.460 Ppm	05/17/2001	B,U
95-47-6 - O-XYLENE	9930.4	.470 Ppm	05/17/2001	U
95-63-6 - 1,2,4-TRIMETHYLBENZENE	9930.4	.580 Ppm	05/17/2001	B,U

Location Information

Panel Number	Room Number	Row	Col	Ht
1	7	132	3	M

Waste Isolation Pilot Plant
WWIS

Report	*RP0360 Waste Container Data Report*
Filename	
Run by	*MIKUSK*
Report Date	*06/21/2001 13:08*
Total Pages	*6*

Selection Criteria

Module	*RP0360*
Version	*1.4*
Container Number	*IDRF741201113*
Site Id	*%*
Waste Stream	*%*
Data Status Code	*%*

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201113**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

WAC Ex. # :
WAC Rev # : **7**
Cert Date : **06/13/2001**
Cert Site : **IN - IDAHO NATIONAL ENGINEER**
Generator Site : **RF - ROCKY FLATS**
IDC Code : **001**
Matrix Code : **S3121**
Trucon Code : **ID211A**
Shipping Category : **1001300190**
Pcb Conc(Ppm) : **0**

Decay Heat (Watts) : **1.359E-01**
Decay Heat Uncert (Watts) : **1.099E-01**
Closure Date : **07/21/1981**
Vent Date : **07/17/1989**
Aspiration Id : **3**
Gas Gen Rate :
Gas Hyd Meth Gen Rate :
Gas Gen Comp Date :
Shipment Num : IN010083
Packaging Num : 139

Assembly Id : IN010446

Overpack Cntr Num :
Overpack Cntr Type :

Handling Code : **CH**
Waste Type Code : **MTRU**
Wst Strm Bir Id : **IN-W216**
Wst Strm Mwir Id : **IN-W216**

Tru Alpha Act (Ci) : **4.082E+00**
Tru Alpha Act Uncert (Ci) : **3.301E+00**
Tru Alpha Act Conc (Ci/g) : **2.103E-05**
Tru Alpha Act Conc Uncert (Ci/g) : **1.701E-05**
Pu239 Eq Act (PE Ci) : **4.081E+00**
Pu239 Fiss Gm Eq (Fge) : **5.580E+00**
Pu239 Fiss Gm Eq Uncert (Fge) : **4.510E+00**

Layers Of Packaging : **2**
Fill Factor (%) : **90**
Liner Type : **2 - RIGID POLYETHYLENE LI**
Liner Punctured : **Y**

Gross Weight (Kg) : **228.61**
Gross Weight Uncert (Kg) : **.91**

Alpha Surf Cont (dpm/100cm2) : **0**
BG Surf Cont (dpm/100cm2) : **0**
Bg Dose Rate (mrem/hr) : **12**
Neut Dose Rate (mrem/hr) : **0**
Total Dose Rate (mrem/hr) : **12**

Cntr Disposal Date : **06/18/2001**
Cntr Status Code : **XO4**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
AM-241	AMERICIUM 241	3.838E+00	3.104E+00	1.106E+00	8.946E-01	Y
PU-238	PLUTONIUM 238	5.980E-03	6.656E-03	3.456E-04	3.848E-04	Y
PU-239	PLUTONIUM 239	1.948E-01	1.574E-01	3.096E+00	2.503E+00	Y
PU-240	PLUTONIUM 240	4.331E-02	3.573E-02	1.883E-01	1.553E-01	Y

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201113**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
PU-241	PLUTONIUM 241	5.923E-01	5.247E-01	5.695E-03	5.045E-03	Y
PU-242	PLUTONIUM 242	5.619E-06	7.238E-06	1.415E-03	1.823E-03	Y
U-234	URANIUM 234	2.540E-05	2.395E-05	4.020E-03	3.789E-03	Y
U-235	URANIUM 235	5.357E-06	4.339E-06	2.446E+00	1.981E+00	Y
U-238	URANIUM 238	1.423E-04	1.179E-04	4.186E+02	3.469E+02	Y

Material Parameters Information

Waste Matl Parm	Description	Weight(Kg)
13	STEEL CONTAINER MATERIALS - KG	26.76
14	PLASTIC/LINERS CONTAINER MATERIALS- KG	9.53
4	OTHER INORGANIC MATERIALS	1.36
9	SOLIDIFIED INORGANIC MATERIAL	190.96

Filter Model Information

Filter	Description	Quantity	Install Date
NF020	NUCFILL CARBON COMPOSITE	1	05/04/2001

Assay Methods Information

Radio Assay Method	Description	Assay Date
P/GS	PAN/GAMMA SYSTEM	03/27/2001

Characterization Methods Information

Method Id	Description	Charz Method Date
RTR	REAL-TIME RADIOGRAPHY	03/17/2001

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201113**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Hazardous Code Information

Haz Code	Description
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D022	CHLOROFORM
F001	SPENT HALOGENATED SOLVENTS
F002	SPENT HALOGENATED SOLVENTS
F005	SPENT NON-HALOGENATED SOLVENTS
F006	WASTEWATER TREATMENT SLUDGE
F007	SPENT CYANIDE PLATING BATH
F009	SPENT STRIPPING SOLUTION

Sample Information

Sample Id : ID050401EI392
Layer No Sampled : 0
Sample Type : HS
Date Sampled : 05/04/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
100-41-4 - ETHYL BENZENE	9930.4	.710 Ppm	05/10/2001	U
107-06-2 - 1,2-DICHLOROETHANE	9930.4	.450 Ppm	05/10/2001	U
108-10-1 - METHYL ISOBUTYL KETONE	9930.4	.590 Ppm	05/10/2001	U
108-67-8 - 1,3,5-TRIMETHYLBENZENE	9930.4	.400 Ppm	05/10/2001	U
108-88-3 - TOLUENE	9930.4	3.100 Ppm	05/10/2001	J
108-90-7 - CHLOROBENZENE	9930.4	.380 Ppm	05/10/2001	U
108383/106423 - M,P-XYLENE	9930.4	1.400 Ppm	05/10/2001	U

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201113**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Sample Information

Sample Id : ID050401EI392
Layer No Sampled : 0
Sample Type : HS
Date Sampled : 05/04/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
110-82-7 - CYCLOHEXANE	9930.4	.570 Ppm	05/10/2001	U
127-18-4 - TETRACHLOROETHYLENE	9930.4	2.000 Ppm	05/10/2001	J
1333-74-0 - HYDROGEN	9925.0	.0194 Volume %	05/15/2001	J
156-59-2 - CIS-1,2-DICHLOROETHYLENE	9930.4	.550 Ppm	05/10/2001	U
56-23-5 - CARBON TETRACHLORIDE	9930.4	.910 Ppm	05/10/2001	J
60-29-7 - ETHYL ETHER	9930.4	.580 Ppm	05/10/2001	U
67-56-1 - METHANOL	9910.4	12.000 Ppm	05/10/2001	U
67-64-1 - ACETONE	9930.4	.580 Ppm	05/10/2001	U
67-66-3 - CHLOROFORM	9930.4	.390 Ppm	05/10/2001	U
71-36-3 - BUTANOL	9930.4	1.800 Ppm	05/10/2001	U
71-43-2 - BENZENE	9930.4	.410 Ppm	05/10/2001	U
71-55-6 - 1,1,1-TRICHLOROETHANE	9930.4	150.000 Ppm	05/10/2001	NA
75-09-2 - METHYLENE CHLORIDE	9930.4	1.100 Ppm	05/10/2001	U
75-25-2 - BROMOFORM	9930.4	.370 Ppm	05/10/2001	U
75-34-3 - 1,1-DICHLOROETHANE	9930.4	.340 Ppm	05/10/2001	U
75-35-4 - 1,1-DICHLOROETHYLENE	9930.4	2.400 Ppm	05/10/2001	J
76-13-1 - 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	9930.4	.440 Ppm	05/10/2001	U

Waste Container Data Report

Waste Container Information

Cntr Num : **IDRF741201113**
Site Id : **IN - IDAHO NATIONAL ENGINEERING LAB**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **INW216.001**
Type Code : **001 - 55 GAL DRUM**

Sample Information

Sample Id : ID050401EI392
Layer No Sampled : 0
Sample Type : HS
Date Sampled : 05/04/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
78-93-3 - METHYL ETHYL KETONE	9930.4	1.600 Ppm	05/10/2001	U
79-01-6 - TRICHLOROETHYLENE	9930.4	98.000 Ppm	05/10/2001	NA
79-34-5 - 1,1,2,2-TETRACHLOROETHANE	9930.4	.660 Ppm	05/10/2001	U
95-47-6 - O-XYLENE	9930.4	.710 Ppm	05/10/2001	U
95-63-6 - 1,2,4-TRIMETHYLBENZENE	9930.4	.390 Ppm	05/10/2001	U

Location Information

Panel Number	Room Number	Row	Col	Ht
1	7	132	3	T

Waste Isolation Pilot Plant

WWIS

Report	*RP0360 Waste Container Data Report*
Filename	
Run by	*MIKUSK*
Report Date	*06/21/2001 13:02*
Total Pages	*5*

Selection Criteria

Module	*RP0360*
Version	*1.4*
Container Number	*RFDA0354*
Site Id	*%*
Waste Stream	*%*
Data Status Code	*%*

Waste Container Data Report

Waste Container Information

Cntr Num : **RFDA0354**
Site Id : **RF - ROCKY FLATS**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **RF003.01**
Type Code : **5 - 55 GALLON PIPE OVERPACK - 12 INCH PIPE OVERPACK**

WAC Ex. # :
WAC Rev # : **7**
Cert Date : **06/13/2001**
Cert Site : **RF - ROCKY FLATS**
Generator Site : **RF - ROCKY FLATS**
IDC Code : **0310**
Matrix Code : **S5126**
Trucon Code : **RF115**
Shipping Category : **2000000000**
Pcb Conc(Ppm) : **0**

Decay Heat (Watts) : **4.373E-01**
Decay Heat Uncert (Watts) : **9.226E-03**
Closure Date : **07/30/1999**
Vent Date : **07/30/1999**
Aspiration Id : **N**
Gas Gen Rate :
Gas Hyd Meth Gen Rate :
Gas Gen Comp Date :
Shipment Num : RF010075
Packaging Num : 136

Assembly Id : RF010745

Overpack Cntr Num :
Overpack Cntr Type :

Handling Code : **CH**
Waste Type Code : **TRU**
Wst Strm Bir Id : **RFTT0310**
Wst Strm Mwir Id : **RF-W117**

Tru Alpha Act (Ci) : **1.394E+01**
Tru Alpha Act Uncert (Ci) : **2.958E-01**
Tru Alpha Act Conc (Ci/g) : **2.364E-03**
Tru Alpha Act Conc Uncert (Ci/g) : **5.017E-05**
Pu239 Eq Act (PE Ci) : **1.454E+01**
Pu239 Fiss Gm Eq (Fge) : **1.610E+02**
Pu239 Fiss Gm Eq Uncert (Fge) : **3.140E+00**

Layers Of Packaging : **1**
Fill Factor (%) : **33**
Liner Type : **1 - RIGID PLASTIC DRUM LIN**
Liner Punctured : **Y**

Gross Weight (Kg) : **155.58**
Gross Weight Uncert (Kg) : **4.54**

Alpha Surf Cont (dpm/100cm2) : **14**
BG Surf Cont (dpm/100cm2) : **111**
Bg Dose Rate (mrem/hr) : **1**
Neut Dose Rate (mrem/hr) : **1**
Total Dose Rate (mrem/hr) : **2**
Cntr Disposal Date : **06/20/2001**
Cntr Status Code : **XO4**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
AM-241	AMERICIUM 241	1.220E+00	3.748E-02	3.517E-01	1.080E-02	
PU-238	PLUTONIUM 238	3.720E-01	5.709E-02	2.150E-02	3.300E-03	
PU-239	PLUTONIUM 239	1.007E+01	1.973E-01	1.601E+02	3.138E+00	
PU-240	PLUTONIUM 240	2.280E+00	2.095E-01	9.912E+00	9.110E-01	

Waste Container Data Report

Waste Container Information

Cntr Num : **RFDA0354**
Site Id : **RF - ROCKY FLATS**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **RF003.01**
Type Code : **5 - 55 GALLON PIPE OVERPACK - 12 INCH PIPE OVERPACK**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
PU-241	PLUTONIUM 241	3.314E+01	8.840E-01	3.187E-01	8.500E-03	
PU-242	PLUTONIUM 242	1.382E-04	4.605E-05	3.480E-02	1.160E-02	

Material Parameters Information

Waste Matl Parm	Description	Weight(Kg)
1	IRON BASE METAL ALLOYS	1.2
13	STEEL CONTAINER MATERIALS - KG	110
14	PLASTIC/LINERS CONTAINER MATERIALS- KG	5
4	OTHER INORGANIC MATERIALS	4.7
6	CELLULOSICS	35

Filter Model Information

Filter	Description	Quantity	Install Date
NF013	NUCFIL CARBON COMPOSIT	1	07/30/1999

Assay Methods Information

Radio Assay Method	Description	Assay Date
CALG	CALORIMETRY/GAMMA SPECTROSCOPY	07/14/1999

Characterization Methods Information

Method Id	Description	Charz Method Date
RTR	REAL-TIME RADIOGRAPHY	04/16/2001

Sample Information

Sample Id : RFDA0354UCL90
Layer No Sampled : 0
Sample Type : HGVO
Date Sampled : 04/04/2001

Waste Container Data Report

Waste Container Information

Cntr Num : **RFDA0354**
Site Id : **RF - ROCKY FLATS**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **RF003.01**
Type Code : **5 - 55 GALLON PIPE OVERPACK - 12 INCH PIPE OVERPACK**

Sample Information

Sample Id : RFDA0354UCL90
Layer No Sampled : 0
Sample Type : HGVO
Date Sampled : 04/04/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
67-56-1 - METHANOL	UCL90	12.500 Ppm	04/04/2001	NA
67-64-1 - ACETONE	UCL90	7.460 Ppm	04/04/2001	NA
67-66-3 - CHLOROFORM	UCL90	.300 Ppm	04/04/2001	NA
71-36-3 - BUTANOL	UCL90	3.010 Ppm	04/04/2001	NA
71-43-2 - BENZENE	UCL90	1.250 Ppm	04/04/2001	NA
71-55-6 - 1,1,1-TRICHLOROETHANE	UCL90	.300 Ppm	04/04/2001	NA
75-09-2 - METHYLENE CHLORIDE	UCL90	.320 Ppm	04/04/2001	NA
75-15-0 - CARBON DISULFIDE	UCL90	.300 Ppm	04/04/2001	NA
75-25-2 - BROMOFORM	UCL90	.300 Ppm	04/04/2001	NA
75-34-3 - 1,1-DICHLOROETHANE	UCL90	.300 Ppm	04/04/2001	NA
75-35-4 - 1,1-DICHLOROETHYLENE	UCL90	.300 Ppm	04/04/2001	NA
76-13-1 - 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UCL90	.300 Ppm	04/04/2001	NA
78-93-3 - METHYL ETHYL KETONE	UCL90	1.800 Ppm	04/04/2001	NA
79-01-6 - TRICHLOROETHYLENE	UCL90	.300 Ppm	04/04/2001	NA
79-34-5 - 1,1,2,2-TETRACHLOROETHANE	UCL90	.300 Ppm	04/04/2001	NA
95-47-6 - O-XYLENE	UCL90	.300 Ppm	04/04/2001	NA
95-63-6 - 1,2,4-TRIMETHYLBENZENE	UCL90	.300 Ppm	04/04/2001	NA
100-41-4 - ETHYL BENZENE	UCL90	.300 Ppm	04/04/2001	NA

Waste Container Data Report

Waste Container Information

Cntr Num : **RFDA0354**
Site Id : **RF - ROCKY FLATS**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **RF003.01**
Type Code : **5 - 55 GALLON PIPE OVERPACK - 12 INCH PIPE OVERPACK**

Sample Information

Sample Id : RFDA0354UCL90
Layer No Sampled : 0
Sample Type : HGVO
Date Sampled : 04/04/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
107-06-2 - 1,2-DICHLOROETHANE	UCL90	.300 Ppm	04/04/2001	NA
108-10-1 - METHYL ISOBUTYL KETONE	UCL90	2.700 Ppm	04/04/2001	NA
108-67-8 - 1,3,5-TRIMETHYLBENZENE	UCL90	.300 Ppm	04/04/2001	NA
108-88-3 - TOLUENE	UCL90	.700 Ppm	04/04/2001	NA
108-90-7 - CHLOROBENZENE	UCL90	.300 Ppm	04/04/2001	NA
108383/106423 - M,P-XYLENE	UCL90	.300 Ppm	04/04/2001	NA
110-82-7 - CYCLOHEXANE	UCL90	.300 Ppm	04/04/2001	NA
127-18-4 - TETRACHLOROETHYLENE	UCL90	.300 Ppm	04/04/2001	NA
156-59-2 - CIS-1,2-DICHLOROETHYLENE	UCL90	.300 Ppm	04/04/2001	NA
56-23-5 - CARBON TETRACHLORIDE	UCL90	1.880 Ppm	04/04/2001	NA
60-29-7 - ETHYL ETHER	UCL90	.300 Ppm	04/04/2001	NA

Location Information

Panel Number	Room Number	Row	Col	Ht
1	7	133	4	T

Waste Isolation Pilot Plant

WWIS

Report	*RP0360 Waste Container Data Report*
Filename	
Run by	*MIKUSK*
Report Date	*06/21/2001 12:56*
Total Pages	*5*

Selection Criteria

Module	*RP0360*
Version	*1.4*
Container Number	*RFD99993*
Site Id	*%*
Waste Stream	*%*
Data Status Code	*%*

Waste Container Data Report

Waste Container Information

Cntr Num : **RFD99993**
Site Id : **RF - ROCKY FLATS**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **RF005.02**
Type Code : **5 - 55 GALLON PIPE OVERPACK - 12 INCH PIPE OVERPACK**

WAC Ex. # :
WAC Rev # : **7**
Cert Date : **06/15/2001**
Cert Site : **RF - ROCKY FLATS**
Generator Site : **RF - ROCKY FLATS**
IDC Code : **433X**
Matrix Code : **S3141**
Trucon Code : **RF124**
Shipping Category : **2000000000**
Pcb Conc(Ppm) : **0**

Decay Heat (Watts) : **5.733E-01**
Decay Heat Uncert (Watts) : **1.161E-02**
Closure Date : **12/04/1999**
Vent Date : **12/04/1999**
Aspiration Id : **N**
Gas Gen Rate :
Gas Hyd Meth Gen Rate :
Gas Gen Comp Date :
Shipment Num : RF010076
Packaging Num : 152

Assembly Id : RF010749

Overpack Cntr Num :
Overpack Cntr Type :

Handling Code : **CH**
Waste Type Code : **TRU**
Wst Strm Bir Id : **RFTR0433**
Wst Strm Mwir Id : **RF-W103**
Tru Alpha Act (Ci) : **1.767E+01**
Tru Alpha Act Uncert (Ci) : **3.631E-01**
Tru Alpha Act Conc (Ci/g) : **3.541E-03**
Tru Alpha Act Conc Uncert (Ci/g) : **7.277E-05**
Pu239 Eq Act (PE Ci) : **1.785E+01**
Pu239 Fiss Gm Eq (Fge) : **9.367E+01**
Pu239 Fiss Gm Eq Uncert (Fge) : **2.730E+00**

Layers Of Packaging : **0**
Fill Factor (%) : **33**
Liner Type : **1 - RIGID PLASTIC DRUM LIN**
Liner Punctured : **Y**

Gross Weight (Kg) : **154.68**
Gross Weight Uncert (Kg) : **4.54**
Alpha Surf Cont (dpm/100cm2) : **11**
BG Surf Cont (dpm/100cm2) : **95**
Bg Dose Rate (mrem/hr) : **1**
Neut Dose Rate (mrem/hr) : **2**
Total Dose Rate (mrem/hr) : **3**
Cntr Disposal Date : **06/20/2001**
Cntr Status Code : **XO4**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
AM-241	AMERICIUM 241	1.015E+01	2.155E-01	2.926E+00	6.210E-02	
PU-238	PLUTONIUM 238	1.990E-01	6.055E-02	1.150E-02	3.500E-03	
PU-239	PLUTONIUM 239	5.865E+00	1.714E-01	9.325E+01	2.725E+00	
PU-240	PLUTONIUM 240	1.452E+00	2.288E-01	6.311E+00	9.947E-01	

Waste Container Data Report

Waste Container Information

Cntr Num : **RFD99993**
Site Id : **RF - ROCKY FLATS**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **RF005.02**
Type Code : **5 - 55 GALLON PIPE OVERPACK - 12 INCH PIPE OVERPACK**

Nuclide Information

Radionuclide	Description	Activity(Ci)	Activity Uncert(Ci)	Mass(G)	Mass Uncert(G)	List
PU-241	PLUTONIUM 241	1.023E+01	5.512E-01	9.840E-02	5.300E-03	
PU-242	PLUTONIUM 242	1.048E-04	5.320E-05	2.640E-02	1.340E-02	

Material Parameters Information

Waste Matl Parm	Description	Weight(Kg)
1	IRON BASE METAL ALLOYS	2.5
13	STEEL CONTAINER MATERIALS - KG	110
14	PLASTIC/LINERS CONTAINER MATERIALS- KG	5
4	OTHER INORGANIC MATERIALS	2.5
6	CELLULOSICS	35

Filter Model Information

Filter	Description	Quantity	Install Date
NF013	NUCFIL CARBON COMPOSIT	1	12/04/1999

Assay Methods Information

Radio Assay Method	Description	Assay Date
CALG	CALORIMETRY/GAMMA SPECTROSCOPY	06/26/1999

Characterization Methods Information

Method Id	Description	Charz Method Date
RTR	REAL-TIME RADIOGRAPHY	05/18/2001

Sample Information

Sample Id : RFD99993UCL90
Layer No Sampled : 0
Sample Type : HGVO
Date Sampled : 04/18/2001

Waste Container Data Report

Waste Container Information

Cntr Num : **RFD99993**
Site Id : **RF - ROCKY FLATS**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **RF005.02**
Type Code : **5 - 55 GALLON PIPE OVERPACK - 12 INCH PIPE OVERPACK**

Sample Information

Sample Id : RFD99993UCL90
Layer No Sampled : 0
Sample Type : HGVO
Date Sampled : 04/18/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
75-34-3 - 1,1-DICHLOROETHANE	UCL90	.300 Ppm	04/18/2001	NA
75-35-4 - 1,1-DICHLOROETHYLENE	UCL90	.300 Ppm	04/18/2001	NA
76-13-1 - 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UCL90	.300 Ppm	04/18/2001	NA
78-93-3 - METHYL ETHYL KETONE	UCL90	1.800 Ppm	04/18/2001	NA
79-01-6 - TRICHLOROETHYLENE	UCL90	.300 Ppm	04/18/2001	NA
79-34-5 - 1,1,2,2-TETRACHLOROETHANE	UCL90	.300 Ppm	04/18/2001	NA
95-47-6 - O-XYLENE	UCL90	.300 Ppm	04/18/2001	NA
95-63-6 - 1,2,4-TRIMETHYLBENZENE	UCL90	.300 Ppm	04/18/2001	NA
108-90-7 - CHLOROBENZENE	UCL90	.300 Ppm	04/18/2001	NA
100-41-4 - ETHYL BENZENE	UCL90	.300 Ppm	04/18/2001	NA
107-06-2 - 1,2-DICHLOROETHANE	UCL90	.300 Ppm	04/18/2001	NA
108-10-1 - METHYL ISOBUTYL KETONE	UCL90	2.700 Ppm	04/18/2001	NA
108-67-8 - 1,3,5-TRIMETHYLBENZENE	UCL90	.300 Ppm	04/18/2001	NA
108-88-3 - TOLUENE	UCL90	4.460 Ppm	04/18/2001	NA
75-25-2 - BROMOFORM	UCL90	.300 Ppm	04/18/2001	NA
108383/106423 - M,P-XYLENE	UCL90	.300 Ppm	04/18/2001	NA
110-82-7 - CYCLOHEXANE	UCL90	.300 Ppm	04/18/2001	NA
127-18-4 - TETRACHLOROETHYLENE	UCL90	.300 Ppm	04/18/2001	NA

Waste Container Data Report

Waste Container Information

Cntr Num : **RFD99993**
Site Id : **RF - ROCKY FLATS**
Data Status Code : **Container Emplaced at WIPP**
Waste Stream Profile : **RF005.02**
Type Code : **5 - 55 GALLON PIPE OVERPACK - 12 INCH PIPE OVERPACK**

Sample Information

Sample Id : RFD99993UCL90
Layer No Sampled : 0
Sample Type : HGVO
Date Sampled : 04/18/2001

Sample Amounts

Analyte	Method	Concentration	Date Analyzed	Detection Method
156-59-2 - CIS-1,2-DICHLOROETHYLENE	UCL90	.300 Ppm	04/18/2001	NA
56-23-5 - CARBON TETRACHLORIDE	UCL90	.300 Ppm	04/18/2001	NA
60-29-7 - ETHYL ETHER	UCL90	.300 Ppm	04/18/2001	NA
67-56-1 - METHANOL	UCL90	31.580 Ppm	04/18/2001	NA
67-64-1 - ACETONE	UCL90	3.720 Ppm	04/18/2001	NA
67-66-3 - CHLOROFORM	UCL90	.300 Ppm	04/18/2001	NA
71-36-3 - BUTANOL	UCL90	5.100 Ppm	04/18/2001	NA
71-43-2 - BENZENE	UCL90	.300 Ppm	04/18/2001	NA
71-55-6 - 1,1,1-TRICHLOROETHANE	UCL90	.300 Ppm	04/18/2001	NA
75-09-2 - METHYLENE CHLORIDE	UCL90	.300 Ppm	04/18/2001	NA
75-15-0 - CARBON DISULFIDE	UCL90	.710 Ppm	04/18/2001	NA

Location Information

Panel Number	Room Number	Row	Col	Ht
1	7	134	2	M

Working Copy

Attachment 1 - CH Waste Processing Data Sheet

Step No.	DESCRIPTION	INITIAL
	PREREQUISITES	
1.0	TRUPACT-II SERIAL No.: 152	WHE
2.0	Shipping documents validated, TRUPACT-II(s) inspected and released for processing	WHE
	PERFORMANCE	
2.1	Adequate WHO staff available.	WHE
2.2	WHB is configured for Waste Handling Mode.	WHE
2.4.21	Activity on smears of OCA lid interior, top of ICV lid, RAF assembly and RAF is below acceptable limits.	RCT
2.4.30	Activity on smears of ICV lid interior and top of payload is below acceptable limits.	RCT
2.5.9	Activity on smears of guide tubes, SWB or TDOP connection devices are below acceptable limits.	RCT
2.5.13	Payload inspected for damage.	WH FA
2.5.18	Activity on smears of bottom of payload and ICV interior is below acceptable limits.	RCT
2.5.24	Payload container numbers concur/do not concur with WWIS.	WH FA
2.5.27	Activity on smears of upper and lower areas of payload assembly are below acceptable limits.	RCT
2.5.29	Activity on smears of newly exposed area of payload is below acceptable limits.	RCT N/A
3.1	Payload Assemblies inspected for damage (if stored > 1 shift).	WH N/A
3.2	WHB & U/G is configured for Waste Handling Mode.	WHE
4.13	Completed Attachment 3	WH
4.14	Activity on smears of TRUPACT-II pallet is below acceptable limits.	RCT KB.
5.2	Completed columns have necessary backfill emplaced	WHE

Performers, enter printed name, signature, date, and initials:

Printed Name	Signature	Date	Initials
MICHAEL BRYANT	Michael D. Bryant	6-20-01	
Fernando Acosta	Fernando Acosta	6-20-01	FA
Loyd Elliott	Loyd Elliott	6-20-01	
Wesley Terry	Wesley Terry	6-20-01	
Kris Birkenstaff	Kris Birkenstaff	6-20-01	KB
MC Dziewski	MC Dziewski	20 JUN 01	

REMARKS:

REVIEW/VALIDATION: MC Dziewski / MC Dziewski / 20 JUN 01
WHE: (Print Name) / Signature / Date

Working Copy

Attachment 3 - Waste Emplacement Report Data Sheet

TRUPACT-II Number: 152

Container Number	RFD96430	RFD94292
Row Number	134	134
Column (Left to Right)	1 (2) 3 4 5 6	1 (2) 3 4 5 6
Place in the Stack (Circle Location)	Top (Middle) Bottom	Top Middle (Bottom)
Disposal Cell	S1600 Main Room (S1950)	S1600 Main Room (S1950)
Disposal Room	1 2 3 4 5 6 (7)	1 2 3 4 5 6 (7)
Disposal Panel	(1) 2 3 4 5 6 7 8	(1) 2 3 4 5 6 7 8
Disposal Date	06-20-01	06-20-01

Remarks: _____

WHE Review/Validation: mcDziamski (Printed Name) _____ (Signature) 20 Jun 01 (Date)

RFDA #354

Working Copy

Attachment 1 - CH Waste Processing Data Sheet

Step No.	DESCRIPTION	INITIAL
	PREREQUISITES	
1.0	TRUPACT-II SERIAL No.: 136	WHE
2.0	Shipping documents validated, TRUPACT-II(s) inspected and released for processing	WHE
	PERFORMANCE	
2.1	Adequate WHO staff available.	WHE
2.2	WHB is configured for Waste Handling Mode.	WHE
2.4.21	Activity on smears of OCA lid interior, top of ICV lid, RAF assembly and RAF is below acceptable limits.	RCT
2.4.30	Activity on smears of ICV lid interior and top of payload is below acceptable limits.	RCT
2.5.9	Activity on smears of guide tubes, SWB or TDOP connection devices are below acceptable limits.	RCT
2.5.13	Payload inspected for damage.	WH KN/DR
2.5.18	Activity on smears of bottom of payload and ICV interior is below acceptable limits.	RCT
2.5.24	Payload container numbers concur/do not concur with WWIS.	WH KN/DR
2.5.27	Activity on smears of upper and lower areas of payload assembly are below acceptable limits.	RCT
2.5.29	Activity on smears of newly exposed area of payload is below acceptable limits.	RCT N/A
3.1	Payload Assemblies inspected for damage (if stored > 1 shift).	WH
3.2	WHB & U/G is configured for Waste Handling Mode.	WHE
4.13	Completed Attachment 3	WH
4.14	Activity on smears of TRUPACT-II pallet is below acceptable limits.	RCT KB.
5.2	Completed columns have necessary backfill emplaced	WHE

Performers, enter printed name, signature, date, and initials:

Printed Name	Signature	Date	Initials
MICHAEL BRYANT	Michael D. Bryant	06-19-01	
David Ripley	D Ripley	06-19-01	DR
Kirk Nance	Kirk Nance	6-19-01	KN
Loyd Elliott	Loyd Elliott	6-19-01	
HEATHER HINOJOS		06/20/01	
P. ASSEO		6/20/01	
M. Richardson	M. Richardson	6/20/01	KR.

REMARKS: McDziamski 20JUN01

REVIEW/VALIDATION: McDziamski / 20JUN01

WHE: (Print Name) Signature Date

Attachment 3 - Waste Emplacement Report Data Sheet

TRUPACT-II Number: 136

Container Number	RFD98298	RFDA6008
Row Number	133	133
Column (Left to Right)	1 2 3 (4) 5 6	1 2 3 4 5 (6)
Place in the Stack (Circle Location)	(Top) Middle Bottom	(Top) Middle Bottom
Disposal Cell	S1600 (Main Room) S1950	S1600 (Main Room) S1950
Disposal Room	1 2 3 4 5 6 (7)	1 2 3 4 5 6 (7)
Disposal Panel	(1) 2 3 4 5 6 7 8	(1) 2 3 4 5 6 7 8
Disposal Date	6/20/01	6/20/01

Remarks: _____

WHE Review/Validation: MCDZIAMSKI 20JUN01
Printed Name Signature Date

Working Copy

Attachment 1 - CH Waste Processing Data Sheet

Step No.	DESCRIPTION	INITIAL
1.0	TRUPACT-II SERIAL No.: 139	WHE SD
2.0	Shipping documents validated, TRUPACT-II(s) inspected and released for processing	WHE SD
	PERFORMANCE	
2.1	Adequate WHO staff available.	WHE SD
2.2	WHB is configured for Waste Handling Mode.	WHE SD
2.4.21	Activity on smears of OCA lid interior, top of ICV lid, RAF assembly and RAF is below acceptable limits.	RCT BY
2.4.30	Activity on smears of ICV lid interior and top of payload is below acceptable limits.	RCT BY
2.5.9	Activity on smears of guide tubes, SWB or TDOP connection devices are below acceptable limits.	RCT BY
2.5.13	Payload inspected for damage.	WH AH
2.5.18	Activity on smears of bottom of payload and ICV interior is below acceptable limits.	RCT BY
2.5.24	Payload container numbers concur/do not concur with WWIS.	WH AH
2.5.27	Activity on smears of upper and lower areas of payload assembly are below acceptable limits.	RCT BY
2.5.29	Activity on smears of newly exposed area of payload is below acceptable limits.	RCT NA
3.1	Payload Assemblies inspected for damage (if stored > 1 shift).	WH AH
3.2	WHB & U/G is configured for Waste Handling Mode.	WHE MB
4.13	Completed Attachment 3	WH FA
4.14	Activity on smears of TRUPACT-II pallet is below acceptable limits.	RCT LE
5.2	Completed columns have necessary backfill emplaced	WHE MC

Performers, enter printed name, signature, date, and initials:

Printed Name	Signature	Date	Initials
S. DiMarino	[signature]	6-17-01	SD
Alfie Hinojos	[signature]	06/17/01	AH
B Yturralde	[signature]	6-16-01	BY
MICHAEL BRYANT	[signature]	6-18-01	MB
FERNANDO ACOSTA	[signature]	6-18-01	FA
Loyd Elliott	[signature]	6-18-01	LE
MITCH CARTER	[signature]	6-18-01	MC

REMARKS

REVIEW/VALIDATION: MITCH CARTER / [signature] / 6-18-01
WHE: (Print Name) / Signature / Date

Attachment 3 - Waste Emplacement Report Data Sheet

TRUPACT-II Number: 139

Container Number	IDRF741201431	IDRF741200470
Row Number	132	132
Column (Left to Right)	(1) 2 3 4 5 6	1 2 (3) 4 5 6
Place in the Stack (Circle Location)	(Top) Middle Bottom	(Top) Middle Bottom
Disposal Cell	S1600 (Main Room) S1950	S1600 (Main Room) S1950
Disposal Room	1 2 3 4 5 6 (7)	1 2 3 4 5 6 (7)
Disposal Panel	(1) 2 3 4 5 6 7 8	(1) 2 3 4 5 6 7 8
Disposal Date	6-18-01	6-18-01

Remarks: _____

WHE Review/Validation: MITCH CARTER (Printed Name) _____ (Signature) 6-18-01 (Date)

IDRF 741 2032112

Working Copy

Attachment 1 - CH Waste Processing Data Sheet

Step No.	DESCRIPTION	INITIAL
	PREREQUISITES	
1.0	TRUPACT-II SERIAL No.: 140	WHE SD
2.0	Shipping documents validated, TRUPACT-II(s) inspected and released for processing	WHE SD
	PERFORMANCE	
2.1	Adequate WHO staff available.	WHE SD
2.2	WHB is configured for Waste Handling Mode.	WHE SD
2.4.21	Activity on smears of OCA lid interior, top of ICV lid, RAF assembly and RAF is below acceptable limits.	RCT BY
2.4.30	Activity on smears of ICV lid interior and top of payload is below acceptable limits.	RCT BY
2.5.9	Activity on smears of guide tubes, SWB or TDOP connection devices are below acceptable limits.	RCT BY
2.5.13	Payload inspected for damage.	WH AH
2.5.18	Activity on smears of bottom of payload and ICV interior is below acceptable limits.	RCT BY
2.5.24	Payload container numbers concur/do not concur with WWIS.	WH AH
2.5.27	Activity on smears of upper and lower areas of payload assembly are below acceptable limits.	RCT BY
2.5.29	Activity on smears of newly exposed area of payload is below acceptable limits.	RCT N/A
3.1	Payload Assemblies inspected for damage (if stored > 1 shift).	WH AH
3.2	WHB & U/G is configured for Waste Handling Mode.	WHE MB
4.13	Completed Attachment 3	WH DR
4.14	Activity on smears of TRUPACT-II pallet is below acceptable limits.	RCT LE
5.2	Completed columns have necessary backfill emplaced	WHE MC

Performers, enter printed name, signature, date, and initials:

Printed Name	Signature	Date	Initials
S DiMarino	[signature]	6-17-01	SD
B Yturralde	[signature]	6-17-01	BY
Acie Hinojos	[signature]	06/17/01	AH
MICHAEL BRYANT	[signature]	6-18-01	MB
David Bigley	[signature]	6-18-01	DR
Loyd Elliott	[signature]	6-18-01	LE
MITCH CARTER	[signature]	6-18-01	

REMARKS: ______________________

REVIEW/VALIDATION: MITCH CARTER / [signature] / 6-18-01
WHE: (Print Name) Signature

Attachment 3 - Waste Emplacement Report Data Sheet

TRUPACT-II Number: 140

Container Number	IDRF741203212	IDRF741200536
Row Number	132	132
Column (Left to Right)	1 2 (3) 4 5 6	1 2 (3) 4 5 6
Place in the Stack (Circle Location)	Top (Middle) Bottom	Top Middle (Bottom)
Disposal Cell	S1600 (Main Room) S1950	S1600 (Main Room) S1950
Disposal Room	1 2 3 4 5 6 (7)	1 2 3 4 5 6 (7)
Disposal Panel	(1) 2 3 4 5 6 7 8	(1) 2 3 4 5 6 7 8
Disposal Date	6-18-01	6-18-01

Remarks: _____

WHE Review/Validation: MITCH CARTER (Printed Name) _____ (Signature) 6-18-01 (Date)

Waste Isolation Pilot Plant
WWIS

Report	*RP0450*	*Biennial Report*
Filename		
Run by	*SPEEDO*	
Report Date	*07/03/2001 09:38*	
Total Pages	*2*	

Selection Criteria

Module	*RP0450*
Version	*1.0*
Start Date	*01/01/2001*
End Date	*07/03/2001*
Site ID	*%*
Room Number	*%*
Panel Number	*%*

Biennial P ort

WIPP Waste
Information System

Waste Isolation Pilot Plant

Panel Number : 1 **Room Number :** 7

Site ID - EPA ID	Matrix Summary Category	Hazardous Codes	Weight(Kg)
LA - NM0890010515	S5000	D004,D005,D006,D007,D008,D009,D010,D011,D018,D019,D021,D022,D035,D038,D039,D040,F001,F002,F003,F005	12174.7
	Site Totals:	**D004,D005,D006,D007,D008,D009,D010,D011,D018,D019,D021,D022,D035,D038,D039,D040,F001,F002,F003,F005**	**12174.7**

Panel Number : 1 **Room Number :** 7

Site ID - EPA ID	Matrix Summary Category	Hazardous Codes	Weight(Kg)
IN - ID4890008952	S3000	D004,D005,D006,D007,D008,D009,D010,D011,D022,F001,F002,F005,F006,F007,F009	145463.91
	Site Totals:	**D004,D005,D006,D007,D008,D009,D010,D011,D022,D028,D029,D040,F001,F002,F003,F005,F006,F007,F009**	**145463.91**

Panel Number : 1 **Room Number :** 7

Site ID - EPA ID	Matrix Summary Category	Hazardous Codes	Weight(Kg)
IN - ID4890008952	S5000	D005,D006,D007,D008,D009,D011,D022,D028,D029,D040,F001,F002,F003,F005,F006,F007,F009	104437.33
	Site Totals:	**D004,D005,D006,D007,D008,D009,D010,D011,D022,D028,D029,D040,F001,F002,F003,F005,F006,F007,F009**	**104437.33**

Panel Number : 1 **Room Number :** 7

Site ID - EPA ID	Matrix Summary Category	Hazardous Codes	Weight(Kg)
RF - CO7890010526	S3000		39521
RF - CO7890010526	S5000		259965.59
RL - WA7890008967	S5000		5872.75
SR - SC1890008989	S5000		2105.4
	Site Totals:		**307464.74**
	Report Totals:	**D004,D005,D006,D007,D008,D009,D010,D011,D018,D019,D021,D022,D028,D029,D035,D038,D039,D040,F001,F002,F003,F005,F006,F007,F009**	**569540.68**

Waste Isolation Pilot Plant

WWIS

Report	*RP0510 Container Approval/Rejection Report*
Filename	
Run by	*STANDID*
Report Date	*07/11/2001 15:34*
Total Pages	*55*

Selection Criteria

Module	*RP0510*
Version	*1.1*
Start Date	*06/01/2001*
End Date	*06/15/2001*
Site ID	*%*

Container Approval/Rejection Report

Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/15/2001	IDRF741200561	IN010084	STRUMM
		06/15/2001	IDRF741200859	IN010084	INEEL16
		06/15/2001	IDRF741200859	IN010084	INEEL16
		06/15/2001	IDRF741200859	IN010084	INEEL16
		06/15/2001	IDRF741201249	IN010084	INEEL16
		06/15/2001	IDRF741201249	IN010084	INEEL16
		06/15/2001	IDRF741201243	IN010084	INEEL16
		06/15/2001	IDRF741201243	IN010084	INEEL16
		06/15/2001	IDRF741201236	IN010084	INEEL16
		06/15/2001	IDRF741201629	IN010084	INEEL16
		06/15/2001	IDRF741201673	IN010084	STRUMM
		06/15/2001	IDRF741201673	IN010084	INEEL16
		06/15/2001	IDRF741201696	IN010084	STRUMM
		06/15/2001	IDRF741201806	IN010084	STRUMM
		06/15/2001	IDRF741201806	IN010084	INEEL16
		06/15/2001	IDRF741201806	IN010084	INEEL16
		06/15/2001	IDRF741201806	IN010084	INEEL16
		06/15/2001	IDRF741201236	IN010084	INEEL16
		06/15/2001	IDRF741201456	IN010084	INEEL16
		06/15/2001	IDRF741201611	IN010084	STRUMM
		06/15/2001	IDRF741201611	IN010084	INEEL16
		06/15/2001	IDRF741201626	IN010084	STRUMM
		06/15/2001	IDRF741201696	IN010084	INEEL16
		06/15/2001	IDRF741201696	IN010084	INEEL16
		06/15/2001	IDRF741201696	IN010084	INEEL16
		06/15/2001	IDRF741201626	IN010084	INEEL16
		06/15/2001	IDRF741201629	IN010084	STRUMM
		06/15/2001	IDRF741201343	IN010084	STRUMM
		06/15/2001	IDRF741201343	IN010084	INEEL16
		06/15/2001	IDRF741201343	IN010084	INEEL16
		06/15/2001	IDRF741201343	IN010084	INEEL16
		06/15/2001	IDRF741201390	IN010084	STRUMM
		06/15/2001	IDRF741201390	IN010084	INEEL16
		06/15/2001	IDRF741201390	IN010084	INEEL16
		06/15/2001	IDRF741201390	IN010084	INEEL16
		06/15/2001	IDRF741201456	IN010084	STRUMM
		06/15/2001	IDRF741202332	IN010084	STRUMM
		06/15/2001	IDRF741202332	IN010084	INEEL16
		06/15/2001	IDRF741202332	IN010084	INEEL16
		06/15/2001	IDRF741202332	IN010084	INEEL16
		06/15/2001	IDRF741202459	IN010084	STRUMM
		06/15/2001	IDRF741202459	IN010084	INEEL16
		06/15/2001	IDRF741203150	IN010084	STRUMM
		06/15/2001	IDRF741203150	IN010084	INEEL16
		06/15/2001	IDRF741203150	IN010084	INEEL16
		06/15/2001	IDRF741200754	IN010085	STANDID

Container Approval/Rejection Report

Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/15/2001	IDRF741200783	IN010085	STANDID
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		06/15/2001	IDRF741200367	IN010085	STANDID
		06/15/2001	IDRF074112769	IN010085	STANDID
		06/15/2001	IDRF741205183	IN010085	STANDID
		06/15/2001	IDRF741207386	IN010085	STANDID
		06/15/2001	IDRF741205235	IN010085	STANDID
		06/15/2001	IDRF741202704	IN010085	STANDID
		06/15/2001	IDRF741201008	IN010085	STANDID
		06/15/2001	IDRF741201593	IN010085	STANDID
		06/15/2001	IDRF741200957	IN010085	STANDID
		06/15/2001	IDRF741200335	IN010085	STANDID
		06/15/2001	IDRF741200464	IN010085	STANDID
		06/15/2001	IDRF741200468	IN010085	STANDID
		06/15/2001	IDRF741200496	IN010085	STANDID
		06/15/2001	IDRF741200502	IN010085	STANDID
		06/15/2001	IDRF741200490	IN010085	STANDID
		06/15/2001	IDRF741200419	IN010085	STANDID
		06/15/2001	IDRF741200664	IN010085	STANDID
		06/15/2001	IDRF741200747	IN010085	STANDID
		06/15/2001	IDRF741202519	IN010085	STANDID
		06/15/2001	IDRF741202393	IN010085	STANDID
		06/15/2001	IDRF741202211	IN010085	STANDID
		06/15/2001	IDRF741202380	IN010085	STANDID
		06/15/2001	IDRF741202194	IN010085	STANDID
		06/15/2001	IDRF741201989	IN010084	INEEL16
		06/15/2001	IDRF741201989	IN010084	INEEL16
		06/15/2001	IDRF741202238	IN010084	INEEL16
		06/15/2001	IDRF741205034	IN010084	STRUMM
		06/15/2001	IDRF741205034	IN010084	INEEL16
		06/15/2001	IDRF741206571	IN010084	STRUMM
		06/15/2001	IDRF741206571	IN010084	INEEL16
		06/15/2001	IDRF741206571	IN010084	INEEL16
		06/15/2001	IDRF741206571	IN010084	INEEL16
		06/15/2001	IDRF741203150	IN010084	INEEL16
		06/15/2001	IDRF741204106	IN010084	STRUMM
		06/15/2001	IDRF741204106	IN010084	INEEL16
		06/15/2001	IDRF741204106	IN010084	INEEL16
		06/15/2001	IDRF741204106	IN010084	INEEL16
		06/15/2001	IDRF741204169	IN010084	STRUMM
		06/15/2001	IDRF741204169	IN010084	INEEL16
		06/15/2001	IDRF741201989	IN010084	STRUMM
		06/15/2001	IDRF741201989	IN010084	INEEL16
		06/15/2001	IDRF741201116	IN010084	INEEL16
		06/15/2001	IDRF741201116	IN010084	INEEL16
		06/15/2001	IDRF741201116	IN010084	INEEL16

Container Approval/Rejection Report

Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/15/2001	IDRF741201140	IN010084	STRUMM
		06/15/2001	IDRF741201140	IN010084	INEEL16
		06/15/2001	IDRF741201219	IN010084	STRUMM
		06/15/2001	IDRF741201219	IN010084	INEEL16
		06/15/2001	IDRF741201236	IN010084	STRUMM
		06/15/2001	IDRF741201236	IN010084	INEEL16
		06/15/2001	IDRF741201243	IN010084	STRUMM
		06/15/2001	IDRF741201243	IN010084	INEEL16
		06/15/2001	IDRF741201249	IN010084	STRUMM
		06/15/2001	IDRF741201249	IN010084	INEEL16
		06/15/2001	IDRF741201116	IN010084	STRUMM
		06/15/2001	IDRF741200561	IN010084	INEEL16
		06/15/2001	IDRF741200859	IN010084	STRUMM
		06/14/2001	IDRF741200537	IN010082	INEEL11
		06/14/2001	IDRF741202735		STANDID
		06/14/2001	IDRF741200536	IN010082	INEEL11
		06/14/2001	IDRF741200538	IN010082	INEEL11
		06/14/2001	IDRF741200441	IN010082	INEEL11
		06/14/2001	IDRF741200364	IN010082	INEEL11
		06/14/2001	IDRF741201935	IN010082	INEEL11
		06/14/2001	IDRF741201807	IN010082	INEEL11
		06/14/2001	IDRF741201557	IN010082	INEEL11
		06/14/2001	IDRF741201241	IN010082	INEEL11
		06/14/2001	IDRF741202041	IN010083	STANDID
		06/14/2001	IDRF741202024	IN010083	INEEL16
		06/14/2001	IDRF741202024	IN010083	STANDID
		06/14/2001	IDRF741202506	IN010082	INEEL11
		06/14/2001	IDRF741202716	IN010082	INEEL11
		06/14/2001	IDRF741203212	IN010082	INEEL11
		06/14/2001	IDRF741202520	IN010082	INEEL11
		06/14/2001	IDRF741202648	IN010082	INEEL11
		06/14/2001	IDRF741202715	IN010082	INEEL11
		06/14/2001	IDRF741202041	IN010083	INEEL16
		06/14/2001	IDRF741202060	IN010083	STANDID
		06/14/2001	IDRF741202060	IN010083	INEEL16
		06/14/2001	IDRF741202290	IN010083	STANDID
		06/14/2001	IDRF741202290	IN010083	INEEL16
		06/14/2001	IDRF741202516	IN010083	STANDID
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		06/14/2001	IDRF741203847	IN010083	STANDID
		06/14/2001	IDRF741203847	IN010083	INEEL16
		06/14/2001	IDRF741201339	IN010083	STANDID
		06/14/2001	IDRF741201360	IN010083	INEEL16
		06/14/2001	IDRF741201599	IN010083	STANDID
		06/14/2001	IDRF741201599	IN010083	INEEL16
		06/14/2001	IDRF741201690	IN010083	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/14/2001	IDRF741201690	IN010083	INEEL16
		06/14/2001	IDRF741201706	IN010083	STANDID
		06/14/2001	IDRF741201706	IN010083	INEEL16
		06/14/2001	IDRF741201379	IN010083	STANDID
		06/14/2001	IDRF741200550	IN010083	STANDID
		06/14/2001	IDRF741200550	IN010083	INEEL16
		06/14/2001	IDRF741200752	IN010083	STANDID
		06/14/2001	IDRF741200752	IN010083	INEEL16
		06/14/2001	IDRF741200758	IN010083	STANDID
		06/14/2001	IDRF741200758	IN010083	INEEL16
		06/14/2001	IDRF741200784	IN010083	STANDID
		06/14/2001	IDRF741200784	IN010083	INEEL16
		06/14/2001	IDRF741200551	IN010083	STANDID
		06/14/2001	IDRF741200551	IN010083	INEEL16
		06/14/2001	IDRF741200605	IN010083	STANDID
		06/14/2001	IDRF741200605	IN010083	INEEL16
		06/14/2001	IDRF741200673	IN010083	STANDID
		06/14/2001	IDRF741200673	IN010083	INEEL16
		06/14/2001	IDRF741200680	IN010083	STANDID
		06/14/2001	IDRF741200680	IN010083	INEEL16
		06/14/2001	IDRF741200470	IN010083	INEEL16
		06/14/2001	IDRF074221408	IN010083	INEEL16
		06/14/2001	IDRF741200470	IN010083	STANDID
		06/14/2001	IDRF074221408	IN010083	STANDID
		06/14/2001	IDRF741201113	IN010083	INEEL16
		06/14/2001	IDRF741201255	IN010083	STANDID
		06/14/2001	IDRF741201255	IN010083	INEEL16
		06/14/2001	IDRF741201379	IN010083	INEEL16
		06/14/2001	IDRF741201431	IN010083	STANDID
		06/14/2001	IDRF741201431	IN010083	INEEL16
		06/14/2001	IDRF741201506	IN010083	STANDID
		06/14/2001	IDRF741201506	IN010083	INEEL16
		06/14/2001	IDRF741201360	IN010083	STANDID
		06/14/2001	IDRF741201339	IN010083	INEEL16
		06/14/2001	IDRF741201113	IN010083	STANDID
		06/14/2001	IDRF741201557	IN010082	STANDID
		06/14/2001	IDRF741201653	IN010082	INEEL11
		06/14/2001	IDRF741201899	IN010082	INEEL11
		06/14/2001	IDRF741200336	IN010082	INEEL11
		06/14/2001	IDRF741200463	IN010082	INEEL11
		06/14/2001	IDRF741200466	IN010082	INEEL11
		06/14/2001	IDRF741200461	IN010082	INEEL11
		06/14/2001	IDRF741200489	IN010081	INEEL11
		06/14/2001	IDRF741200851	IN010081	INEEL11
		06/14/2001	IDRF741200824	IN010081	INEEL11
		06/14/2001	IDRF741200701	IN010081	INEEL11

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/14/2001	IDRF741200547	IN010081	INEEL11
		06/14/2001	IDRF741200800	IN010081	INEEL11
		06/14/2001	IDRF074112854	IN010081	INEEL11
		06/14/2001	IDRF741201967	IN010081	INEEL11
		06/14/2001	IDRF741206963	IN010081	INEEL11
		06/14/2001	IDRF741201701	IN010081	INEEL11
		06/14/2001	IDRF741201749	IN010081	INEEL11
		06/14/2001	IDRF741201842	IN010081	INEEL11
		06/14/2001	IDRF741202213	IN010081	INEEL11
		06/14/2001	IDRF741202303	IN010081	INEEL11
		06/14/2001	IDRF741202815	IN010081	INEEL11
		06/14/2001	IDRF741201969	IN010081	INEEL11
		06/14/2001	IDRF074112880	IN010081	INEEL11
		06/14/2001	IDRF741200555	IN010082	INEEL11
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		06/14/2001	IDRF741200488	IN010082	INEEL11
		06/14/2001	IDRF741200491	IN010082	INEEL11
		06/14/2001	IDRF074112384	IN010082	INEEL11
		06/14/2001	IDRF741200959	IN010081	INEEL11
		06/14/2001	IDRF741201168	IN010081	INEEL11
		06/14/2001	IDRF741201237	IN010081	INEEL11
		06/14/2001	IDRF741201917	IN010081	INEEL11
		06/14/2001	IDRF741201508	IN010081	INEEL11
		06/14/2001	IDRF741201568	IN010081	INEEL11
		06/14/2001	IDRF741200773	IN010081	INEEL11
		06/14/2001	IDRF741200811	IN010081	INEEL11
		06/14/2001	IDRF741200695	IN010081	INEEL11
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		06/13/2001	IDRF741201701	IN010081	STRUMM
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		06/13/2001	IDRF741200463	IN010082	STANDID
		06/13/2001	IDRF741200491	IN010082	STANDID
		06/13/2001	IDRF741201168	IN010081	STRUMM
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		06/13/2001	IDRF741202520	IN010082	STANDID
		06/13/2001	IDRF741202716	IN010082	STANDID
		06/13/2001	IDRF741203212	IN010082	STANDID
		06/13/2001	IDRF741202648	IN010082	STANDID
		06/13/2001	IDRF741202715	IN010082	STANDID
		06/13/2001	IDRF741202506	IN010082	STANDID
		06/13/2001	IDRF741201653	IN010082	STANDID
		06/13/2001	IDRF741201807	IN010082	STANDID
		06/13/2001	IDRF741201899	IN010082	STANDID
		06/13/2001	IDRF741201935	IN010082	STANDID

Container Approval/Rejection Report

Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/13/2001	IDRF741201241	IN010082	STANDID
		06/13/2001	IDRF741200336	IN010082	STANDID
		06/13/2001	IDRF741200364	IN010082	STANDID
		06/13/2001	IDRF741200466	IN010082	STANDID
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		06/13/2001	IDRF741200537	IN010082	STANDID
		06/13/2001	IDRF741200538	IN010082	STANDID
		06/12/2001	IDRF741202238	IN010084	STRUMM
		06/12/2001	IDRF074112854	IN010081	STRUMM
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		06/12/2001	IDRF741201237	IN010081	STRUMM
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		06/12/2001	IDRF741201508	IN010081	STRUMM
		06/12/2001	IDRF741201568	IN010081	STRUMM
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		06/12/2001	IDRF741202213	IN010081	STRUMM
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		06/12/2001	IDRF741202815	IN010081	STRUMM
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		06/12/2001	IDRF074112880	IN010081	STRUMM
		06/12/2001	IDRF741200489	IN010081	STRUMM
		06/12/2001	IDRF741201749	IN010081	STRUMM
		06/12/2001	IDRF741200773	IN010081	STRUMM
		06/12/2001	IDRF741200800	IN010081	STRUMM
		06/12/2001	IDRF741200811	IN010081	STRUMM
		06/12/2001	IDRF741200547	IN010081	STRUMM
		06/12/2001	IDRF741200701	IN010081	STRUMM
		06/12/2001	IDRF741200851	IN010081	STRUMM
		06/12/2001	IDRF741201963	IN010079	INEEL17
		06/12/2001	IDRF741204041	IN010079	INEEL17
		06/12/2001	IDRF741203754	IN010079	INEEL17
		06/12/2001	IDRF741202075	IN010079	INEEL17
		06/12/2001	IDRF741201416	IN010079	INEEL17
		06/12/2001	IDRF741201930	IN010079	INEEL17
		06/12/2001	IDRF741201597	IN010079	INEEL17
		06/12/2001	IDRF741201310	IN010079	INEEL17
		06/12/2001	IDRF741201108	IN010079	INEEL17
		06/12/2001	IDRF741200467	IN010079	INEEL17
		06/12/2001	IDRF741200518	IN010079	INEEL17
		06/12/2001	IDRF741200526	IN010079	INEEL17
		06/12/2001	IDRF741200546	IN010079	INEEL17

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/12/2001	IDRF741200687	IN010079	INEEL17
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		06/12/2001	IDRF741200862	IN010079	INEEL17
		06/12/2001	IDRF741200894	IN010079	INEEL17
		06/12/2001	IDRF741200921	IN010079	INEEL17
		06/12/2001	IDRF741200686	IN010080	INEEL17
		06/12/2001	IDRF741200507	IN010080	INEEL17
		06/12/2001	IDRF741200532	IN010080	INEEL17
		06/12/2001	IDRF741200556	IN010080	INEEL17
		06/12/2001	IDRF741200626	IN010080	INEEL17
		06/12/2001	IDRF741200638	IN010080	INEEL17
		06/12/2001	IDRF741200685	IN010080	INEEL17
		06/12/2001	IDRF074112838	IN010080	INEEL17
		06/12/2001	IDRF741200374	IN010079	INEEL17
		06/12/2001	IDRF741201587	IN010080	INEEL17
		06/12/2001	IDRF741201697	IN010080	INEEL17
		06/12/2001	IDRF741201850	IN010080	INEEL17
		06/12/2001	IDRF741201245	IN010080	INEEL17
		06/12/2001	IDRF741201257	IN010080	INEEL17
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		06/12/2001	IDRF741202236	IN010080	INEEL17
		06/12/2001	IDRF741202509	IN010080	INEEL17
		06/12/2001	IDRF741202072	IN010080	INEEL17
		06/12/2001	IDRF741201117	IN010080	INEEL17
		06/12/2001	IDRF741201187	IN010080	INEEL17
		06/12/2001	IDRF741201858	IN010080	INEEL17
		06/12/2001	IDRF741201914	IN010080	INEEL17
		06/12/2001	IDRF741200993	IN010079	INEEL17
		06/12/2001	IDRF741201945	IN010079	INEEL17
		06/12/2001	IDRF741201632	IN010079	INEEL17
		06/12/2001	IDRF741201353	IN010079	INEEL17
		06/12/2001	IDRF741201558	IN010079	INEEL17
		06/12/2001	IDRF741201972	IN010079	INEEL17
		06/12/2001	IDRF741202050	IN010079	INEEL17
		06/11/2001	IDRF741206997	IN010077	STANDID
		06/11/2001	IDRF741204447	IN010077	INEEL1
		06/11/2001	IDRF741202613	IN010077	INEEL1
		06/11/2001	IDRF741204447	IN010077	STANDID
		06/11/2001	IDRF741202613	IN010077	STANDID
		06/11/2001	IDRF741202426	IN010077	INEEL1
		06/11/2001	IDRF741202426	IN010077	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/11/2001	IDRF741202417	IN010077	STANDID
		06/11/2001	IDRF741202654	IN010077	INEEL1
		06/11/2001	IDRF741201625	IN010077	STANDID
		06/11/2001	IDRF741201625	IN010077	INEEL1
		06/11/2001	IDRF741201681	IN010077	STANDID
		06/11/2001	IDRF741201681	IN010077	INEEL1
		06/11/2001	IDRF741201687	IN010077	STANDID
		06/11/2001	IDRF741201687	IN010077	INEEL1
		06/11/2001	IDRF741201856	IN010077	STANDID
		06/11/2001	IDRF741201856	IN010077	INEEL1
		06/11/2001	IDRF741201877	IN010077	STANDID
		06/11/2001	IDRF741201103	IN010077	STANDID
		06/11/2001	IDRF741201136	IN010077	STANDID
		06/11/2001	IDRF741201136	IN010077	INEEL1
		06/11/2001	IDRF741201234	IN010077	STANDID
		06/11/2001	IDRF741201234	IN010077	INEEL1
		06/11/2001	IDRF741201426	IN010077	STANDID
		06/11/2001	IDRF741201426	IN010077	INEEL1
		06/11/2001	IDRF741201484	IN010077	STANDID
		06/11/2001	IDRF741201484	IN010077	INEEL1
		06/11/2001	IDRF741201410	IN010078	STANDID
		06/11/2001	IDRF741201410	IN010078	INEEL1
		06/11/2001	IDRF741201459	IN010078	STANDID
		06/11/2001	IDRF741201459	IN010078	INEEL1
		06/11/2001	IDRF741200956	IN010078	STANDID
		06/11/2001	IDRF741201033	IN010077	INEEL1
		06/11/2001	IDRF741201033	IN010077	STANDID
		06/11/2001	IDRF741200961	IN010077	INEEL1
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		06/11/2001	IDRF741202748	IN010078	STANDID
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		06/11/2001	IDRF741202412	IN010078	STANDID
		06/11/2001	IDRF741202181	IN010078	INEEL1
		06/11/2001	IDRF741202108	IN010078	STANDID
		06/11/2001	IDRF741202037	IN010078	STANDID
		06/11/2001	IDRF741200956	IN010078	INEEL1
		06/11/2001	IDRF741201042	IN010078	STANDID
		06/11/2001	IDRF741201042	IN010078	INEEL1
		06/11/2001	IDRF741202471	IN010078	STANDID
		06/11/2001	IDRF741202471	IN010078	INEEL1
		06/11/2001	IDRF741202485	IN010078	STANDID
		06/11/2001	IDRF741202485	IN010078	INEEL1
		06/11/2001	IDRF741205084	IN010078	STANDID
		06/11/2001	IDRF741205084	IN010078	INEEL1
		06/11/2001	IDRF741205330	IN010078	STANDID
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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/11/2001	IDRF741202589	IN010078	STANDID
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		06/11/2001	IDRF741202596	IN010078	STANDID
		06/11/2001	IDRF741202596	IN010078	INEEL1
		06/11/2001	IDRF741200511	IN010078	STANDID
		06/11/2001	IDRF741200511	IN010078	INEEL1
		06/11/2001	IDRF741200563	IN010078	STANDID
		06/11/2001	IDRF741200563	IN010078	INEEL1
		06/11/2001	IDRF741200566	IN010078	STANDID
		06/11/2001	IDRF741200566	IN010078	INEEL1
		06/11/2001	IDRF741200679	IN010078	STANDID
		06/11/2001	IDRF741200679	IN010078	INEEL1
		06/11/2001	IDRF741200799	IN010078	STANDID
		06/11/2001	IDRF741200349	IN010078	INEEL1
		06/11/2001	IDRF741200455	IN010078	STANDID
		06/11/2001	IDRF741200455	IN010078	INEEL1
		06/11/2001	IDRF741200480	IN010078	STANDID
		06/11/2001	IDRF741200480	IN010078	INEEL1
		06/11/2001	IDRF741200675	IN010078	STANDID
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		06/11/2001	IDRF741200868	IN010078	STANDID
		06/11/2001	IDRF741200868	IN010078	INEEL1
		06/11/2001	IDRF741202072	IN010080	STANDID
		06/11/2001	IDRF741202217	IN010080	STANDID
		06/11/2001	IDRF741202236	IN010080	STANDID
		06/11/2001	IDRF741202509	IN010080	STANDID
		06/11/2001	IDRF741202035	IN010080	STANDID
		06/11/2001	IDRF741201117	IN010080	STANDID
		06/11/2001	IDRF741201187	IN010080	STANDID
		06/11/2001	IDRF741201858	IN010080	STANDID
		06/11/2001	IDRF741201914	IN010080	STANDID
		06/11/2001	IDRF741201587	IN010080	STANDID
		06/11/2001	IDRF741201697	IN010080	STANDID
		06/11/2001	IDRF741201850	IN010080	STANDID
		06/11/2001	IDRF741201245	IN010080	STANDID
		06/11/2001	IDRF741201257	IN010080	STANDID
		06/11/2001	IDRF741201446	IN010080	STANDID
		06/11/2001	IDRF741200984	IN010080	STANDID
		06/11/2001	IDRF741200454	IN010080	STANDID
		06/11/2001	IDRF741200485	IN010080	STANDID
		06/11/2001	IDRF741200686	IN010080	STANDID
		06/11/2001	IDRF741200507	IN010080	STANDID
		06/11/2001	IDRF741200532	IN010080	STANDID
		06/11/2001	IDRF741200556	IN010080	STANDID
		06/11/2001	IDRF741200626	IN010080	STANDID
		06/11/2001	IDRF741200638	IN010080	STANDID

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IN	Approved Certification	06/11/2001	IDRF741200685	IN010080	STANDID
		06/11/2001	IDRF074112838	IN010080	STANDID
		06/11/2001	IDRF741200467	IN010079	STANDID
		06/11/2001	IDRF741200518	IN010079	STANDID
		06/11/2001	IDRF741200526	IN010079	STANDID
		06/11/2001	IDRF741200546	IN010079	STANDID
		06/11/2001	IDRF741200687	IN010079	STANDID
		06/11/2001	IDRF741200696	IN010079	STANDID
		06/11/2001	IDRF741200862	IN010079	STANDID
		06/11/2001	IDRF741200894	IN010079	STANDID
		06/11/2001	IDRF741200921	IN010079	STANDID
		06/11/2001	IDRF741200374	IN010079	STANDID
		06/11/2001	IDRF741201108	IN010079	STANDID
		06/11/2001	IDRF741201945	IN010079	STANDID
		06/11/2001	IDRF741201597	IN010079	STANDID
		06/11/2001	IDRF741201632	IN010079	STANDID
		06/11/2001	IDRF741201930	IN010079	STANDID
		06/11/2001	IDRF741201353	IN010079	STANDID
		06/11/2001	IDRF741201416	IN010079	STANDID
		06/11/2001	IDRF741201558	IN010079	STANDID
		06/11/2001	IDRF741201310	IN010079	STANDID
		06/11/2001	IDRF741200993	IN010079	STANDID
		06/11/2001	IDRF741201972	IN010079	STANDID
		06/11/2001	IDRF741202050	IN010079	STANDID
		06/11/2001	IDRF741202075	IN010079	STANDID
		06/11/2001	IDRF741203754	IN010079	STANDID
		06/11/2001	IDRF741204041	IN010079	STANDID
		06/11/2001	IDRF741201963	IN010079	STANDID
		06/11/2001	IDRF741200799	IN010078	INEEL1
		06/11/2001	IDRF741200349	IN010078	STANDID
		06/11/2001	IDRF741202037	IN010078	INEEL1
		06/11/2001	IDRF741202108	IN010078	INEEL1
		06/11/2001	IDRF741202181	IN010078	STANDID
		06/11/2001	IDRF741202412	IN010078	INEEL1
		06/11/2001	IDRF741202420	IN010078	STANDID
		06/11/2001	IDRF741202420	IN010078	INEEL1
		06/11/2001	IDRF741201877	IN010077	INEEL1
		06/11/2001	IDRF741201103	IN010077	INEEL1
		06/11/2001	IDRF741201091	IN010077	STANDID
		06/11/2001	IDRF741200961	IN010077	STANDID
		06/11/2001	IDRF741202654	IN010077	STANDID
		06/11/2001	IDRF741202417	IN010077	INEEL1
		06/11/2001	IDRF074112851	IN010077	INEEL1
		06/11/2001	IDRF741200856	IN010077	INEEL1
		06/11/2001	IDRF741200683	IN010077	INEEL1
		06/11/2001	IDRF741200856	IN010077	STANDID

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		06/11/2001	IDRF741200383	IN010077	STANDID
		06/11/2001	IDRF741201993	IN010077	STANDID
		06/11/2001	IDRF741202038	IN010077	INEEL1
		06/11/2001	IDRF741206997	IN010077	INEEL1
		06/11/2001	IDRF741202038	IN010077	STANDID
		06/11/2001	IDRF741201993	IN010077	INEEL1
		06/11/2001	IDRF741200383	IN010077	STANDID
		06/11/2001	IDRF741200383	IN010077	INEEL1
		06/11/2001	IDRF741200599	IN010077	INEEL1
		06/11/2001	IDRF741200683	IN010077	STANDID
		06/08/2001	IDRF074112851	IN010077	STANDID
		06/07/2001	IDRF074112856	IN010075	STANDID
		06/07/2001	IDRF074112856	IN010075	INEEL16
		06/07/2001	IDRF741200810	IN010075	STANDID
		06/07/2001	IDRF741200810	IN010075	INEEL16
		06/07/2001	IDRF741200621	IN010075	STANDID
		06/07/2001	IDRF741200612	IN010075	STANDID
		06/07/2001	IDRF741200795	IN010075	STANDID
		06/07/2001	IDRF741200682	IN010075	INEEL16
		06/07/2001	IDRF741200852	IN010075	INEEL16
		06/07/2001	IDRF741202026	IN010075	STANDID
		06/07/2001	IDRF741202026	IN010075	INEEL16
		06/07/2001	IDRF741201959	IN010075	INEEL16
		06/07/2001	IDRF741202020	IN010075	STANDID
		06/07/2001	IDRF741202020	IN010075	INEEL16
		06/07/2001	IDRF741200907	IN010075	STANDID
		06/07/2001	IDRF741200907	IN010075	INEEL16
		06/07/2001	IDRF741200700	IN010075	INEEL16
		06/07/2001	IDRF741200852	IN010075	STANDID
		06/07/2001	IDRF741201650	IN010075	INEEL16
		06/07/2001	IDRF741201672	IN010075	STANDID
		06/07/2001	IDRF741201672	IN010075	INEEL16
		06/07/2001	IDRF741201009	IN010075	INEEL16
		06/07/2001	IDRF741201009	IN010075	STANDID
		06/07/2001	IDRF741202372	IN010075	STANDID
		06/07/2001	IDRF741202372	IN010075	INEEL16
		06/07/2001	IDRF741202698	IN010075	STANDID
		06/07/2001	IDRF741202698	IN010075	INEEL16
		06/07/2001	IDRF741201454	IN010075	STANDID
		06/07/2001	IDRF741201454	IN010075	INEEL16
		06/07/2001	IDRF741201198	IN010075	STANDID
		06/07/2001	IDRF741201198	IN010075	INEEL16
		06/07/2001	IDRF741201427	IN010075	STANDID
		06/07/2001	IDRF741201427	IN010075	INEEL16
		06/07/2001	IDRF741201633	IN010075	STANDID

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IN	Approved Certification	06/07/2001	IDRF741201633	IN010075	INEEL16
		06/07/2001	IDRF741201650	IN010075	STANDID
		06/07/2001	IDRF741204039	IN010075	STANDID
		06/07/2001	IDRF741204039	IN010075	INEEL16
		06/07/2001	IDRF741204105	IN010075	INEEL16
		06/07/2001	IDRF741204811	IN010075	STANDID
		06/07/2001	IDRF741204811	IN010075	INEEL16
		06/07/2001	IDRF741207008	IN010075	STANDID
		06/07/2001	IDRF741207008	IN010075	INEEL16
		06/07/2001	IDRF741201959	IN010075	STANDID
		06/07/2001	IDRF741201682	IN010076	INEEL16
		06/07/2001	IDRF741201693	IN010076	STANDID
		06/07/2001	IDRF741201693	IN010076	INEEL16
		06/07/2001	IDRF741201695	IN010076	STANDID
		06/07/2001	IDRF741201695	IN010076	INEEL16
		06/07/2001	IDRF741201161	IN010076	STANDID
		06/07/2001	IDRF741201127	IN010076	INEEL16
		06/07/2001	IDRF741200990	IN010076	INEEL16
		06/07/2001	IDRF741200990	IN010076	STANDID
		06/07/2001	IDRF741202288	IN010076	STANDID
		06/07/2001	IDRF741202288	IN010076	INEEL16
		06/07/2001	IDRF741202308	IN010076	STANDID
		06/07/2001	IDRF741202308	IN010076	INEEL16
		06/07/2001	IDRF741202738	IN010076	STANDID
		06/07/2001	IDRF741202738	IN010076	INEEL16
		06/07/2001	IDRF741202184	IN010076	INEEL16
		06/07/2001	IDRF741202118	IN010076	STANDID
		06/07/2001	IDRF741202112	IN010076	INEEL16
		06/07/2001	IDRF741200439	IN010076	INEEL16
		06/07/2001	IDRF741200589	IN010076	STANDID
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		06/07/2001	IDRF741200593	IN010076	STANDID
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		06/07/2001	IDRF741200331	IN010076	INEEL16
		06/07/2001	IDRF741200331	IN010076	STANDID
		06/07/2001	IDRF074226149	IN010076	INEEL16
		06/07/2001	IDRF074226149	IN010076	STANDID
		06/07/2001	IDRF741200604	IN010076	STANDID
		06/07/2001	IDRF741200604	IN010076	INEEL16
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		06/07/2001	IDRF741200821	IN010076	STANDID
		06/07/2001	IDRF741200821	IN010076	INEEL16
		06/07/2001	IDRF741200840	IN010076	STANDID
		06/07/2001	IDRF741200840	IN010076	INEEL16

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IN	Approved Certification	06/07/2001	IDRF741200439	IN010076	STANDID
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		06/07/2001	IDRF741202184	IN010076	STANDID
		06/07/2001	IDRF741203774	IN010076	STANDID
		06/07/2001	IDRF741203774	IN010076	INEEL16
		06/07/2001	IDRF741205544	IN010076	STANDID
		06/07/2001	IDRF741205544	IN010076	INEEL16
		06/07/2001	IDRF741202240	IN010076	STANDID
		06/07/2001	IDRF741202240	IN010076	INEEL16
		06/07/2001	IDRF741202092	IN010076	INEEL16
		06/07/2001	IDRF741202112	IN010076	STANDID
		06/07/2001	IDRF741202092	IN010076	STANDID
		06/07/2001	IDRF741201127	IN010076	STANDID
		06/07/2001	IDRF741201161	IN010076	INEEL16
		06/07/2001	IDRF741201649	IN010076	STANDID
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		06/07/2001	IDRF741201682	IN010076	STANDID
		06/07/2001	IDRF741200682	IN010075	STANDID
		06/07/2001	IDRF741200700	IN010075	STANDID
		06/07/2001	IDRF741200795	IN010075	INEEL16
		06/07/2001	IDRF741200612	IN010075	INEEL16
		06/07/2001	IDRF741200621	IN010075	INEEL16
		06/07/2001	IDRF741201958		STANDID
		06/06/2001	IDRF741201958		INEEL16
		06/06/2001	IDRF074112856	IN010075	INEEL16
		06/06/2001	IDRF741200810	IN010075	INEEL16
		06/06/2001	IDRF741200621	IN010075	INEEL16
		06/06/2001	IDRF741201427	IN010075	INEEL16
		06/06/2001	IDRF741201633	IN010075	INEEL16
		06/06/2001	IDRF741201650	IN010075	INEEL16
		06/06/2001	IDRF741201672	IN010075	INEEL16
		06/06/2001	IDRF741201009	IN010075	INEEL16
		06/06/2001	IDRF741202372	IN010075	INEEL16
		06/06/2001	IDRF741202698	IN010075	INEEL16
		06/06/2001	IDRF741204039	IN010075	INEEL16
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		06/06/2001	IDRF741201959	IN010075	INEEL16
		06/06/2001	IDRF741202026	IN010075	INEEL16
		06/06/2001	IDRF741202020	IN010075	INEEL16
		06/06/2001	IDRF741201198	IN010075	INEEL16
		06/06/2001	IDRF741201454	IN010075	INEEL16
		06/06/2001	IDRF741200907	IN010075	INEEL16
		06/06/2001	IDRF741200852	IN010075	INEEL16
		06/06/2001	IDRF741200682	IN010075	INEEL16
		06/06/2001	IDRF741200700	IN010075	INEEL16

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IN	Approved Certification	06/06/2001	IDRF741200795	IN010075	INEEL16
		06/06/2001	IDRF741200612	IN010075	INEEL16
		06/06/2001	IDRF074224847	IN010073	INEEL1
		06/06/2001	IDRF074226151	IN010073	INEEL1
		06/06/2001	IDRF741200919	IN010073	INEEL1
		06/06/2001	IDRF741200920	IN010073	INEEL1
		06/06/2001	IDRF741200916	IN010073	INEEL1
		06/06/2001	IDRF741200474	IN010073	INEEL1
		06/06/2001	IDRF741200634	IN010073	INEEL1
		06/06/2001	IDRF741200407	IN010073	INEEL1
		06/06/2001	IDRF741204237	IN010073	INEEL1
		06/06/2001	IDRF741201772	IN010073	INEEL1
		06/06/2001	IDRF741201931	IN010073	INEEL1
		06/06/2001	IDRF741201943	IN010073	INEEL1
		06/06/2001	IDRF741200966	IN010073	INEEL1
		06/06/2001	IDRF741201105	IN010073	INEEL1
		06/06/2001	IDRF741201214	IN010073	INEEL1
		06/06/2001	IDRF741202081	IN010073	INEEL1
		06/06/2001	IDRF741202174	IN010073	INEEL1
		06/06/2001	IDRF741203104	IN010073	INEEL1
		06/06/2001	IDRF741202126	IN010074	INEEL1
		06/06/2001	IDRF741201328	IN010074	INEEL1
		06/06/2001	IDRF741201598	IN010074	INEEL1
		06/06/2001	IDRF741201680	IN010074	INEEL1
		06/06/2001	IDRF741201771	IN010074	INEEL1
		06/06/2001	IDRF741201422	IN010074	INEEL1
		06/06/2001	IDRF741201444	IN010074	INEEL1
		06/06/2001	IDRF741201452	IN010074	INEEL1
		06/06/2001	IDRF741201348	IN010074	INEEL1
		06/06/2001	IDRF741201252	IN010074	INEEL1
		06/06/2001	IDRF741201538	IN010073	INEEL1
		06/06/2001	IDRF741201423	IN010073	INEEL1
		06/06/2001	IDRF741201430	IN010073	INEEL1
		06/06/2001	IDRF741201482	IN010073	INEEL1
		06/06/2001	IDRF741201647	IN010073	INEEL1
		06/06/2001	IDRF741205078	IN010073	INEEL1
		06/06/2001	IDRF741200609	IN010073	INEEL1
		06/06/2001	IDRF741200912	IN010074	INEEL1
		06/06/2001	IDRF074116352	IN010074	INEEL1
		06/06/2001	IDRF741202036	IN010074	INEEL1
		06/06/2001	IDRF741201982	IN010074	INEEL1
		06/06/2001	IDRF741202399	IN010074	INEEL1
		06/06/2001	IDRF741202729	IN010074	INEEL1
		06/06/2001	IDRF741202732	IN010074	INEEL1
		06/06/2001	IDRF741204378	IN010074	INEEL1
		06/06/2001	IDRF741205668	IN010074	INEEL1

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IN	Approved Certification	06/06/2001	IDRF741200503	IN010074	INEEL1
		06/06/2001	IDRF741200678	IN010074	INEEL1
		06/06/2001	IDRF741200761	IN010074	INEEL1
		06/06/2001	IDRF741200771	IN010074	INEEL1
		06/06/2001	IDRF741200782	IN010074	INEEL1
		06/06/2001	IDRF741200801	IN010074	INEEL1
		06/06/2001	IDRF741200880	IN010074	INEEL1
		06/06/2001	IDRF741200412	IN010073	INEEL1
		06/06/2001	IDRF741200484	IN010073	INEEL1
		06/05/2001	IDRF741201252	IN010074	STRUMM
		06/05/2001	IDRF741201328	IN010074	STRUMM
		06/05/2001	IDRF741201598	IN010074	STRUMM
		06/05/2001	IDRF741201444	IN010074	STRUMM
		06/05/2001	IDRF741201680	IN010074	STRUMM
		06/05/2001	IDRF741201982	IN010074	STRUMM
		06/05/2001	IDRF741200912	IN010074	STRUMM
		06/05/2001	IDRF074116352	IN010074	STRUMM
		06/05/2001	IDRF741202036	IN010074	STRUMM
		06/05/2001	IDRF741202126	IN010074	STRUMM
		06/05/2001	IDRF741202399	IN010074	STRUMM
		06/05/2001	IDRF741202729	IN010074	STRUMM
		06/05/2001	IDRF741202732	IN010074	STRUMM
		06/05/2001	IDRF741204378	IN010074	STRUMM
		06/05/2001	IDRF741205668	IN010074	STRUMM
		06/05/2001	IDRF741200503	IN010074	STRUMM
		06/05/2001	IDRF741200678	IN010074	STRUMM
		06/05/2001	IDRF741200761	IN010074	STRUMM
		06/05/2001	IDRF741200771	IN010074	STRUMM
		06/05/2001	IDRF741200782	IN010074	STRUMM
		06/05/2001	IDRF741200801	IN010074	STRUMM
		06/05/2001	IDRF741200880	IN010074	STRUMM
		06/05/2001	IDRF741201348	IN010074	STRUMM
		06/05/2001	IDRF741201771	IN010074	STRUMM
		06/05/2001	IDRF741201452	IN010074	STRUMM
		06/05/2001	IDRF741201422	IN010074	STRUMM
		06/05/2001	IDRF074112856	IN010075	STANDID
		06/05/2001	IDRF741200907	IN010075	STANDID
		06/05/2001	IDRF741201198	IN010075	STANDID
		06/05/2001	IDRF741201454	IN010075	STANDID
		06/05/2001	IDRF741201427	IN010075	STANDID
		06/05/2001	IDRF741201633	IN010075	STANDID
		06/05/2001	IDRF741201650	IN010075	STANDID
		06/05/2001	IDRF741201672	IN010075	STANDID
		06/05/2001	IDRF741202372	IN010075	STANDID
		06/05/2001	IDRF741202698	IN010075	STANDID
		06/05/2001	IDRF741204039	IN010075	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/05/2001	IDRF741204105	IN010075	STANDID
		06/05/2001	IDRF741204811	IN010075	STANDID
		06/05/2001	IDRF741207008	IN010075	STANDID
		06/05/2001	IDRF741202026	IN010075	STANDID
		06/05/2001	IDRF741202020	IN010075	STANDID
		06/05/2001	IDRF741201959	IN010075	STANDID
		06/05/2001	IDRF741201009	IN010075	STANDID
		06/05/2001	IDRF741200852	IN010075	STRUMM
		06/05/2001	IDRF741200682	IN010075	STRUMM
		06/05/2001	IDRF741200700	IN010075	STRUMM
		06/05/2001	IDRF741200795	IN010075	STRUMM
		06/05/2001	IDRF741200612	IN010075	STRUMM
		06/05/2001	IDRF741200621	IN010075	STRUMM
		06/05/2001	IDRF741200810	IN010075	STRUMM
		06/05/2001	IDRF741201958		STANDID
		06/04/2001	IDRF741202395		STANDID
		06/04/2001	IDRF074224847	IN010073	STANDID
		06/04/2001	IDRF074226151	IN010073	STANDID
		06/04/2001	IDRF741200407	IN010073	STANDID
		06/04/2001	IDRF741200919	IN010073	STANDID
		06/04/2001	IDRF741201538	IN010073	STANDID
		06/04/2001	IDRF741201423	IN010073	STANDID
		06/04/2001	IDRF741201430	IN010073	STANDID
		06/04/2001	IDRF741201482	IN010073	STANDID
		06/04/2001	IDRF741201647	IN010073	STANDID
		06/04/2001	IDRF741201772	IN010073	STANDID
		06/04/2001	IDRF741201214	IN010073	STANDID
		06/04/2001	IDRF741200966	IN010073	STANDID
		06/04/2001	IDRF741202174	IN010073	STANDID
		06/04/2001	IDRF741203104	IN010073	STANDID
		06/04/2001	IDRF741204237	IN010073	STANDID
		06/04/2001	IDRF741205078	IN010073	STANDID
		06/04/2001	IDRF741202081	IN010073	STANDID
		06/04/2001	IDRF741200609	IN010073	STANDID
		06/04/2001	IDRF741200634	IN010073	STANDID
		06/04/2001	IDRF741201931	IN010073	STANDID
		06/04/2001	IDRF741201943	IN010073	STANDID
		06/04/2001	IDRF741201105	IN010073	STANDID
		06/04/2001	IDRF741200412	IN010073	STANDID
		06/04/2001	IDRF741200474	IN010073	STANDID
		06/04/2001	IDRF741200484	IN010073	STANDID
		06/04/2001	IDRF741200916	IN010073	STANDID
		06/04/2001	IDRF741200920	IN010073	STANDID
		06/02/2001	IDRF074112304	IN010070	STRUMM
		06/02/2001	IDRF074112344	IN010070	STRUMM
		06/02/2001	IDRF074112796	IN010070	STRUMM

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/02/2001	IDRF741200850	IN010070	STRUMM
		06/02/2001	IDRF741200672	IN010070	STRUMM
		06/02/2001	IDRF741200944	IN010070	STRUMM
		06/02/2001	IDRF741200641	IN010070	STRUMM
		06/02/2001	IDRF741200986	IN010070	STRUMM
		06/02/2001	IDRF741201638	IN010070	STRUMM
		06/02/2001	IDRF741202604	IN010070	STRUMM
		06/02/2001	IDRF741203657	IN010070	STRUMM
		06/02/2001	IDRF741202423	IN010070	STRUMM
		06/02/2001	IDRF741201973	IN010070	STRUMM
		06/02/2001	IDRF741201280	IN010070	STRUMM
		06/02/2001	IDRF741201584	IN010070	STRUMM
		06/02/2001	IDRF741201839	IN010070	STRUMM
		06/02/2001	IDRF741201909	IN010070	STRUMM
		06/02/2001	IDRF741201922	IN010070	STRUMM
		06/02/2001	IDRF741202566	IN010071	INEEL1
		06/02/2001	IDRF741202740	IN010071	INEEL1
		06/02/2001	IDRF741202247	IN010071	INEEL1
		06/02/2001	IDRF741202180	IN010071	INEEL1
		06/02/2001	IDRF741201957	IN010071	INEEL1
		06/02/2001	IDRF741202015	IN010070	STRUMM
		06/02/2001	IDRF741202369	IN010070	STRUMM
		06/02/2001	IDRF741202455	IN010070	STRUMM
		06/02/2001	IDRF741202522	IN010070	STRUMM
		06/02/2001	IDRF741201601	IN010071	INEEL1
		06/02/2001	IDRF741201797	IN010071	INEEL1
		06/02/2001	IDRF741201826	IN010071	INEEL1
		06/02/2001	IDRF741201950	IN010071	INEEL1
		06/02/2001	IDRF741201048	IN010071	INEEL1
		06/02/2001	IDRF741202150	IN010071	INEEL1
		06/02/2001	IDRF741202428	IN010071	INEEL1
		06/02/2001	IDRF741202464	IN010071	INEEL1
		06/02/2001	IDRF741202501	IN010071	INEEL1
		06/02/2001	IDRF074221648	IN010072	STRUMM
		06/02/2001	IDRF074221648	IN010072	INEEL1
		06/02/2001	IDRF074221648	IN010072	INEEL1
		06/02/2001	IDRF741200530	IN010071	INEEL1
		06/02/2001	IDRF741200765	IN010071	INEEL1
		06/02/2001	IDRF741200792	IN010071	INEEL1
		06/02/2001	IDRF741200814	IN010071	INEEL1
		06/02/2001	IDRF741200925	IN010071	INEEL1
		06/02/2001	IDRF074112803	IN010071	INEEL1
		06/02/2001	IDRF741200552	IN010072	INEEL1
		06/02/2001	IDRF741200552	IN010072	STRUMM
		06/02/2001	IDRF741200552	IN010072	STRUMM
		06/02/2001	IDRF741200552	IN010072	INEEL1

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/02/2001	IDRF741200552	IN010072	STRUMM
		06/02/2001	IDRF741200748	IN010072	INEEL1
		06/02/2001	IDRF741200748	IN010072	STRUMM
		06/02/2001	IDRF741200524	IN010072	INEEL1
		06/02/2001	IDRF741200524	IN010072	STRUMM
		06/02/2001	IDRF741200549	IN010072	INEEL1
		06/02/2001	IDRF741200549	IN010072	STRUMM
		06/02/2001	IDRF741200549	IN010072	STRUMM
		06/02/2001	IDRF741200549	IN010072	INEEL1
		06/02/2001	IDRF741200549	IN010072	STRUMM
		06/02/2001	IDRF741200748	IN010072	STRUMM
		06/02/2001	IDRF741200748	IN010072	INEEL1
		06/02/2001	IDRF741200748	IN010072	STRUMM
		06/02/2001	IDRF741200826	IN010072	INEEL1
		06/02/2001	IDRF741201565	IN010072	STRUMM
		06/02/2001	IDRF741201565	IN010072	STRUMM
		06/02/2001	IDRF741201565	IN010072	INEEL1
		06/02/2001	IDRF741201565	IN010072	STRUMM
		06/02/2001	IDRF741201167	IN010072	INEEL1
		06/02/2001	IDRF741201167	IN010072	STRUMM
		06/02/2001	IDRF741201167	IN010072	STRUMM
		06/02/2001	IDRF741201167	IN010072	INEEL1
		06/02/2001	IDRF741201167	IN010072	STRUMM
		06/02/2001	IDRF741201956	IN010072	INEEL1
		06/02/2001	IDRF741202130	IN010072	INEEL1
		06/02/2001	IDRF741202130	IN010072	STRUMM
		06/02/2001	IDRF741202386	IN010072	INEEL1
		06/02/2001	IDRF741202386	IN010072	STRUMM
		06/02/2001	IDRF741202386	IN010072	STRUMM
		06/02/2001	IDRF741202386	IN010072	INEEL1
		06/02/2001	IDRF741202503	IN010072	STRUMM
		06/02/2001	IDRF741202503	IN010072	INEEL1
		06/02/2001	IDRF741202503	IN010072	STRUMM
		06/02/2001	IDRF741202504	IN010072	INEEL1
		06/02/2001	IDRF741202504	IN010072	STRUMM
		06/02/2001	IDRF741202504	IN010072	STRUMM
		06/02/2001	IDRF741202504	IN010072	INEEL1
		06/02/2001	IDRF741202504	IN010072	STRUMM
		06/02/2001	IDRF741202521	IN010072	INEEL1
		06/02/2001	IDRF741202521	IN010072	STRUMM
		06/02/2001	IDRF741202521	IN010072	STRUMM
		06/02/2001	IDRF741202521	IN010072	INEEL1
		06/02/2001	IDRF741202521	IN010072	STRUMM
		06/02/2001	IDRF741205621	IN010072	INEEL1
		06/02/2001	IDRF741205621	IN010072	STRUMM
		06/02/2001	IDRF741205621	IN010072	STRUMM

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Certification	06/02/2001	IDRF741205621	IN010072	INEEL1
		06/02/2001	IDRF741205621	IN010072	STRUMM
		06/02/2001	IDRF741205701	IN010072	INEEL1
		06/02/2001	IDRF741205701	IN010072	STRUMM
		06/02/2001	IDRF741205701	IN010072	STRUMM
		06/02/2001	IDRF741205701	IN010072	INEEL1
		06/02/2001	IDRF741205701	IN010072	STRUMM
		06/02/2001	IDRF741205713	IN010072	INEEL1
		06/02/2001	IDRF741205713	IN010072	STRUMM
		06/02/2001	IDRF741205713	IN010072	STRUMM
		06/02/2001	IDRF741205713	IN010072	INEEL1
		06/02/2001	IDRF741205713	IN010072	STRUMM
		06/02/2001	IDRF741202386	IN010072	STRUMM
		06/02/2001	IDRF741202491	IN010072	INEEL1
		06/02/2001	IDRF741202491	IN010072	STRUMM
		06/02/2001	IDRF741202491	IN010072	STRUMM
		06/02/2001	IDRF741202491	IN010072	INEEL1
		06/02/2001	IDRF741202491	IN010072	STRUMM
		06/02/2001	IDRF741202503	IN010072	INEEL1
		06/02/2001	IDRF741202503	IN010072	STRUMM
		06/02/2001	IDRF741201956	IN010072	STRUMM
		06/02/2001	IDRF741201994	IN010072	INEEL1
		06/02/2001	IDRF741202068	IN010072	INEEL1
		06/02/2001	IDRF741202068	IN010072	STRUMM
		06/02/2001	IDRF741202068	IN010072	STRUMM
		06/02/2001	IDRF741202068	IN010072	INEEL1
		06/02/2001	IDRF741202068	IN010072	STRUMM
		06/02/2001	IDRF741202130	IN010072	STRUMM
		06/02/2001	IDRF741202130	IN010072	INEEL1
		06/02/2001	IDRF741202130	IN010072	STRUMM
		06/02/2001	IDRF741201994	IN010072	STRUMM
		06/02/2001	IDRF741201994	IN010072	INEEL1
		06/02/2001	IDRF741201994	IN010072	STRUMM
		06/02/2001	IDRF741202013	IN010072	INEEL1
		06/02/2001	IDRF741202013	IN010072	STRUMM
		06/02/2001	IDRF741202013	IN010072	STRUMM
		06/02/2001	IDRF741202013	IN010072	INEEL1
		06/02/2001	IDRF741202013	IN010072	STRUMM
		06/02/2001	IDRF741201994	IN010072	STRUMM
		06/02/2001	IDRF741201956	IN010072	STRUMM
		06/02/2001	IDRF741201956	IN010072	STRUMM
		06/02/2001	IDRF741201956	IN010072	INEEL1
		06/02/2001	IDRF741201025	IN010072	STRUMM
		06/02/2001	IDRF741201025	IN010072	INEEL1
		06/02/2001	IDRF741201025	IN010072	STRUMM
		06/02/2001	IDRF741201025	IN010072	INEEL1

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IN	Approved Certification	06/02/2001	IDRF741201025	IN010072	STRUMM
		06/02/2001	IDRF741201600	IN010072	INEEL1
		06/02/2001	IDRF741201600	IN010072	STRUMM
		06/02/2001	IDRF741201600	IN010072	STRUMM
		06/02/2001	IDRF741202419	IN010072	INEEL1
		06/02/2001	IDRF741202419	IN010072	STRUMM
		06/02/2001	IDRF741202419	IN010072	STRUMM
		06/02/2001	IDRF741202419	IN010072	INEEL1
		06/02/2001	IDRF741202419	IN010072	STRUMM
		06/02/2001	IDRF741201600	IN010072	INEEL1
		06/02/2001	IDRF741201600	IN010072	STRUMM
		06/02/2001	IDRF741201519	IN010072	INEEL1
		06/02/2001	IDRF741201519	IN010072	STRUMM
		06/02/2001	IDRF741201519	IN010072	STRUMM
		06/02/2001	IDRF741201519	IN010072	INEEL1
		06/02/2001	IDRF741201519	IN010072	STRUMM
		06/02/2001	IDRF741201565	IN010072	INEEL1
		06/02/2001	IDRF741201330	IN010072	INEEL1
		06/02/2001	IDRF741201330	IN010072	STRUMM
		06/02/2001	IDRF741201330	IN010072	STRUMM
		06/02/2001	IDRF741201330	IN010072	INEEL1
		06/02/2001	IDRF741201330	IN010072	STRUMM
		06/02/2001	IDRF741200953	IN010072	STRUMM
		06/02/2001	IDRF741200544	IN010072	INEEL1
		06/02/2001	IDRF741200544	IN010072	STRUMM
		06/02/2001	IDRF741200826	IN010072	STRUMM
		06/02/2001	IDRF741200826	IN010072	STRUMM
		06/02/2001	IDRF741200826	IN010072	INEEL1
		06/02/2001	IDRF741200826	IN010072	STRUMM
		06/02/2001	IDRF741200953	IN010072	INEEL1
		06/02/2001	IDRF741200953	IN010072	STRUMM
		06/02/2001	IDRF741200953	IN010072	STRUMM
		06/02/2001	IDRF741200953	IN010072	INEEL1
		06/02/2001	IDRF741200524	IN010072	STRUMM
		06/02/2001	IDRF741200524	IN010072	INEEL1
		06/02/2001	IDRF741200524	IN010072	STRUMM
		06/02/2001	IDRF741200544	IN010072	INEEL1
		06/02/2001	IDRF741200544	IN010072	STRUMM
		06/02/2001	IDRF741200544	IN010072	STRUMM
		06/02/2001	IDRF074221648	IN010072	STRUMM
		06/02/2001	IDRF074221648	IN010072	STRUMM
		06/02/2001	IDRF741201133	IN010071	INEEL1
		06/02/2001	IDRF741201132	IN010071	INEEL1
		06/02/2001	IDRF741201155	IN010071	INEEL1
		06/02/2001	IDRF741201628	IN010071	INEEL1
		06/02/2001	IDRF741201295	IN010071	INEEL1

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IN	Approved Certification	06/02/2001	IDRF741201420	IN010071	INEEL1
		06/02/2001	IDRF741201473	IN010071	INEEL1
		06/02/2001	IDRF741201561	IN010071	INEEL1
		06/02/2001	IDRF741201292	IN010070	STRUMM
		06/02/2001	IDRF741200979	IN010070	STRUMM
		06/02/2001	IDRF741200644	IN010070	STRUMM
		06/02/2001	IDRF741200646	IN010070	STRUMM
IN	Rejected Certification	06/05/2001	IDRF741200678	IN010074	INEEL15
		06/05/2001	IDRF741200678	IN010074	INEEL15
		06/04/2001	IDRF741200966	IN010073	STANDID
		06/04/2001	IDRF741200678	IN010074	INEEL15
IN	Approved Shipping	06/15/2001	IDRF741202041	IN010083	STRUMM
		06/15/2001	IDRF741201360	IN010083	STRUMM
		06/15/2001	IDRF741201236	IN010084	STRUMM
		06/15/2001	IDRF741201243	IN010084	STRUMM
		06/15/2001	IDRF741201249	IN010084	STRUMM
		06/15/2001	IDRF741200561	IN010084	STRUMM
		06/15/2001	IDRF741200859	IN010084	STRUMM
		06/15/2001	IDRF741200550	IN010083	STRUMM
		06/15/2001	IDRF741200752	IN010083	STRUMM
		06/15/2001	IDRF741200758	IN010083	STRUMM
		06/15/2001	IDRF074221408	IN010083	STRUMM
		06/15/2001	IDRF741201390	IN010084	STRUMM
		06/15/2001	IDRF741201343	IN010084	STRUMM
		06/15/2001	IDRF741201456	IN010084	STRUMM
		06/15/2001	IDRF741201611	IN010084	STRUMM
		06/15/2001	IDRF741201696	IN010084	STRUMM
		06/15/2001	IDRF741201626	IN010084	STRUMM
		06/15/2001	IDRF741201629	IN010084	STRUMM
		06/15/2001	IDRF741201673	IN010084	STRUMM
		06/15/2001	IDRF741201806	IN010084	STRUMM
		06/15/2001	IDRF741201113	IN010083	STRUMM
		06/15/2001	IDRF741201339	IN010083	STRUMM
		06/15/2001	IDRF741201599	IN010083	STRUMM
		06/15/2001	IDRF741201690	IN010083	STRUMM
		06/15/2001	IDRF741201706	IN010083	STRUMM
		06/15/2001	IDRF741201379	IN010083	STRUMM
		06/15/2001	IDRF741201431	IN010083	STRUMM
		06/15/2001	IDRF741201506	IN010083	STRUMM
		06/15/2001	IDRF741201116	IN010084	STRUMM
		06/15/2001	IDRF741201140	IN010084	STRUMM
		06/15/2001	IDRF741201219	IN010084	STRUMM

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IN	Approved Shipping	06/15/2001	IDRF741200784	IN010083	STRUMM
		06/15/2001	IDRF741200551	IN010083	STRUMM
		06/15/2001	IDRF741200605	IN010083	STRUMM
		06/15/2001	IDRF741200673	IN010083	STRUMM
		06/15/2001	IDRF741200680	IN010083	STRUMM
		06/15/2001	IDRF741200470	IN010083	STRUMM
		06/15/2001	IDRF741201989	IN010084	STRUMM
		06/15/2001	IDRF741202238	IN010084	STRUMM
		06/15/2001	IDRF741203150	IN010084	STRUMM
		06/15/2001	IDRF741202332	IN010084	STRUMM
		06/15/2001	IDRF741202459	IN010084	STRUMM
		06/15/2001	IDRF741205034	IN010084	STRUMM
		06/15/2001	IDRF741206571	IN010084	STRUMM
		06/15/2001	IDRF741204106	IN010084	STRUMM
		06/15/2001	IDRF741204169	IN010084	STRUMM
		06/15/2001	IDRF741201255	IN010083	STRUMM
		06/15/2001	IDRF741203847	IN010083	STRUMM
		06/15/2001	IDRF741202290	IN010083	STRUMM
		06/15/2001	IDRF741202060	IN010083	STRUMM
		06/15/2001	IDRF741202024	IN010083	STRUMM
		06/15/2001	IDRF741202516	IN010083	STRUMM
		06/14/2001	IDRF741200537	IN010082	STRUMM
		06/14/2001	IDRF741200461	IN010082	STANDID
		06/14/2001	IDRF741202506	IN010082	STRUMM
		06/14/2001	IDRF741202506	IN010082	STANDID
		06/14/2001	IDRF741203212	IN010082	STRUMM
		06/14/2001	IDRF741202715	IN010082	STANDID
		06/14/2001	IDRF741202715	IN010082	STRUMM
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		06/14/2001	IDRF741202520	IN010082	STANDID
		06/14/2001	IDRF741202520	IN010082	STRUMM
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		06/14/2001	IDRF741202648	IN010082	STRUMM
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		06/14/2001	IDRF741201899	IN010082	STANDID
		06/14/2001	IDRF741201899	IN010082	STRUMM
		06/14/2001	IDRF741201935	IN010082	STANDID
		06/14/2001	IDRF741201935	IN010082	STRUMM
		06/14/2001	IDRF074112384	IN010082	STRUMM
		06/14/2001	IDRF074112384	IN010082	STANDID
		06/14/2001	IDRF741200336	IN010082	STANDID
		06/14/2001	IDRF741200336	IN010082	STRUMM
		06/14/2001	IDRF741201241	IN010082	STRUMM
		06/14/2001	IDRF741201241	IN010082	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Shipping	06/14/2001	IDRF741201557	IN010082	STANDID
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		06/14/2001	IDRF741201653	IN010082	STANDID
		06/14/2001	IDRF741201653	IN010082	STRUMM
		06/14/2001	IDRF741201807	IN010082	STANDID
		06/14/2001	IDRF741200364	IN010082	STANDID
		06/14/2001	IDRF741200364	IN010082	STRUMM
		06/14/2001	IDRF741200463	IN010082	STANDID
		06/14/2001	IDRF741200463	IN010082	STRUMM
		06/14/2001	IDRF741200466	IN010082	STANDID
		06/14/2001	IDRF741200466	IN010082	STRUMM
		06/14/2001	IDRF741200441	IN010082	STANDID
		06/14/2001	IDRF741200441	IN010082	STRUMM
		06/14/2001	IDRF741200461	IN010082	STRUMM
		06/14/2001	IDRF741200538	IN010082	STANDID
		06/14/2001	IDRF741200536	IN010082	STANDID
		06/14/2001	IDRF741200537	IN010082	STANDID
		06/14/2001	IDRF741200538	IN010082	STRUMM
		06/14/2001	IDRF741200536	IN010082	STRUMM
		06/14/2001	IDRF741200851	IN010081	STRUMM
		06/14/2001	IDRF741200701	IN010081	STRUMM
		06/14/2001	IDRF741200959	IN010081	STRUMM
		06/14/2001	IDRF741201168	IN010081	STRUMM
		06/14/2001	IDRF741201237	IN010081	STRUMM
		06/14/2001	IDRF741201917	IN010081	STRUMM
		06/14/2001	IDRF741201508	IN010081	STRUMM
		06/14/2001	IDRF741201568	IN010081	STRUMM
		06/14/2001	IDRF741201842	IN010081	STRUMM
		06/14/2001	IDRF741201969	IN010081	STRUMM
		06/14/2001	IDRF741202213	IN010081	STRUMM
		06/14/2001	IDRF741202303	IN010081	STRUMM
		06/14/2001	IDRF741202815	IN010081	STRUMM
		06/14/2001	IDRF741206963	IN010081	STRUMM
		06/14/2001	IDRF741201967	IN010081	STRUMM
		06/14/2001	IDRF074112880	IN010081	STRUMM
		06/14/2001	IDRF074112854	IN010081	STRUMM
		06/14/2001	IDRF741201701	IN010081	STRUMM
		06/14/2001	IDRF741201749	IN010081	STRUMM
		06/14/2001	IDRF741200773	IN010081	STRUMM
		06/14/2001	IDRF741200800	IN010081	STRUMM
		06/14/2001	IDRF741200489	IN010081	STRUMM
		06/14/2001	IDRF741200695	IN010081	STRUMM
		06/14/2001	IDRF741200547	IN010081	STRUMM
		06/14/2001	IDRF741200811	IN010081	STRUMM
		06/14/2001	IDRF741200555	IN010082	STANDID
		06/14/2001	IDRF741200555	IN010082	STRUMM

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Shipping	06/14/2001	IDRF741200614	IN010082	STANDID
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		06/14/2001	IDRF741200488	IN010082	STANDID
		06/14/2001	IDRF741200488	IN010082	STRUMM
		06/14/2001	IDRF741200491	IN010082	STANDID
		06/14/2001	IDRF741200491	IN010082	STRUMM
		06/14/2001	IDRF741200824	IN010081	STRUMM
		06/12/2001	IDRF741201963	IN010079	STRUMM
		06/12/2001	IDRF741201558	IN010079	STRUMM
		06/12/2001	IDRF741200686	IN010080	STANDID
		06/12/2001	IDRF741200518	IN010079	STRUMM
		06/12/2001	IDRF741200526	IN010079	STRUMM
		06/12/2001	IDRF741200546	IN010079	STRUMM
		06/12/2001	IDRF741200687	IN010079	STRUMM
		06/12/2001	IDRF741200696	IN010079	STRUMM
		06/12/2001	IDRF741200862	IN010079	STRUMM
		06/12/2001	IDRF741200894	IN010079	STRUMM
		06/12/2001	IDRF741200921	IN010079	STRUMM
		06/12/2001	IDRF741200993	IN010079	STRUMM
		06/12/2001	IDRF741201108	IN010079	STRUMM
		06/12/2001	IDRF741201945	IN010079	STRUMM
		06/12/2001	IDRF741201597	IN010079	STRUMM
		06/12/2001	IDRF741201632	IN010079	STRUMM
		06/12/2001	IDRF741201930	IN010079	STRUMM
		06/12/2001	IDRF741201353	IN010079	STRUMM
		06/12/2001	IDRF741201416	IN010079	STRUMM
		06/12/2001	IDRF741202035	IN010080	STANDID
		06/12/2001	IDRF741202072	IN010080	STANDID
		06/12/2001	IDRF741202217	IN010080	STANDID
		06/12/2001	IDRF741202236	IN010080	STANDID
		06/12/2001	IDRF741202509	IN010080	STANDID
		06/12/2001	IDRF741200984	IN010080	STANDID
		06/12/2001	IDRF741201117	IN010080	STANDID
		06/12/2001	IDRF741201858	IN010080	STANDID
		06/12/2001	IDRF741201914	IN010080	STANDID
		06/12/2001	IDRF741201587	IN010080	STANDID
		06/12/2001	IDRF741201697	IN010080	STANDID
		06/12/2001	IDRF741201850	IN010080	STANDID
		06/12/2001	IDRF741201187	IN010080	STANDID
		06/12/2001	IDRF741201245	IN010080	STANDID
		06/12/2001	IDRF741201257	IN010080	STANDID
		06/12/2001	IDRF741201446	IN010080	STANDID
		06/12/2001	IDRF741200454	IN010080	STANDID
		06/12/2001	IDRF741200485	IN010080	STANDID
		06/12/2001	IDRF741200685	IN010080	STANDID
		06/12/2001	IDRF741200507	IN010080	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Shipping	06/12/2001	IDRF741200532	IN010080	STANDID
		06/12/2001	IDRF741200556	IN010080	STANDID
		06/12/2001	IDRF741200626	IN010080	STANDID
		06/12/2001	IDRF741200638	IN010080	STANDID
		06/12/2001	IDRF074112838	IN010080	STANDID
		06/12/2001	IDRF741200374	IN010079	STRUMM
		06/12/2001	IDRF741200467	IN010079	STRUMM
		06/12/2001	IDRF741201310	IN010079	STRUMM
		06/12/2001	IDRF741204041	IN010079	STRUMM
		06/12/2001	IDRF741202075	IN010079	STRUMM
		06/12/2001	IDRF741202050	IN010079	STRUMM
		06/12/2001	IDRF741201972	IN010079	STRUMM
		06/12/2001	IDRF741203754	IN010079	STRUMM
		06/11/2001	IDRF741204447	IN010077	STANDID
		06/11/2001	IDRF741202613	IN010077	STANDID
		06/11/2001	IDRF741201103	IN010077	STANDID
		06/11/2001	IDRF741201136	IN010077	STANDID
		06/11/2001	IDRF741201234	IN010077	STANDID
		06/11/2001	IDRF741201426	IN010077	STANDID
		06/11/2001	IDRF741201484	IN010077	STANDID
		06/11/2001	IDRF741201625	IN010077	STANDID
		06/11/2001	IDRF741201681	IN010077	STANDID
		06/11/2001	IDRF741201687	IN010077	STANDID
		06/11/2001	IDRF741201856	IN010077	STANDID
		06/11/2001	IDRF741200455	IN010078	STANDID
		06/11/2001	IDRF741200675	IN010078	STANDID
		06/11/2001	IDRF741200868	IN010078	STANDID
		06/11/2001	IDRF741200480	IN010078	STANDID
		06/11/2001	IDRF741200511	IN010078	STANDID
		06/11/2001	IDRF741200563	IN010078	STANDID
		06/11/2001	IDRF741200566	IN010078	STANDID
		06/11/2001	IDRF741200679	IN010078	STANDID
		06/11/2001	IDRF741202420	IN010078	STANDID
		06/11/2001	IDRF741200349	IN010078	STANDID
		06/11/2001	IDRF741202471	IN010078	STANDID
		06/11/2001	IDRF741202748	IN010078	STANDID
		06/11/2001	IDRF741205084	IN010078	STANDID
		06/11/2001	IDRF741205330	IN010078	STANDID
		06/11/2001	IDRF741202485	IN010078	STANDID
		06/11/2001	IDRF741202589	IN010078	STANDID
		06/11/2001	IDRF741202596	IN010078	STANDID
		06/11/2001	IDRF741202412	IN010078	STANDID
		06/11/2001	IDRF741200799	IN010078	STANDID
		06/11/2001	IDRF741202181	IN010078	STANDID
		06/11/2001	IDRF741202108	IN010078	STANDID
		06/11/2001	IDRF741202037	IN010078	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
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		06/11/2001	IDRF741201410	IN010078	STANDID
		06/11/2001	IDRF741201459	IN010078	STANDID
		06/11/2001	IDRF741200961	IN010077	STANDID
		06/11/2001	IDRF741201033	IN010077	STANDID
		06/11/2001	IDRF741201877	IN010077	STANDID
		06/11/2001	IDRF741201091	IN010077	STANDID
		06/11/2001	IDRF741202038	IN010077	STANDID
		06/11/2001	IDRF741202417	IN010077	STANDID
		06/11/2001	IDRF741202654	IN010077	STANDID
		06/11/2001	IDRF741202426	IN010077	STANDID
		06/11/2001	IDRF074112851	IN010077	STANDID
		06/11/2001	IDRF741200383	IN010077	STANDID
		06/11/2001	IDRF741200599	IN010077	STANDID
		06/11/2001	IDRF741206997	IN010077	STANDID
		06/11/2001	IDRF741201993	IN010077	STANDID
		06/11/2001	IDRF741200856	IN010077	STANDID
		06/11/2001	IDRF741200683	IN010077	STANDID
		06/07/2001	IDRF741200621	IN010075	STANDID
		06/07/2001	IDRF741200604	IN010076	STANDID
		06/07/2001	IDRF741200677	IN010076	STANDID
		06/07/2001	IDRF741200821	IN010076	STANDID
		06/07/2001	IDRF741200840	IN010076	STANDID
		06/07/2001	IDRF741200439	IN010076	STANDID
		06/07/2001	IDRF741200589	IN010076	STANDID
		06/07/2001	IDRF741200593	IN010076	STANDID
		06/07/2001	IDRF741200331	IN010076	STANDID
		06/07/2001	IDRF074226149	IN010076	STANDID
		06/07/2001	IDRF741202112	IN010076	STANDID
		06/07/2001	IDRF741202308	IN010076	STANDID
		06/07/2001	IDRF741203774	IN010076	STANDID
		06/07/2001	IDRF741205544	IN010076	STANDID
		06/07/2001	IDRF741202184	IN010076	STANDID
		06/07/2001	IDRF741202240	IN010076	STANDID
		06/07/2001	IDRF741202288	IN010076	STANDID
		06/07/2001	IDRF741202738	IN010076	STANDID
		06/07/2001	IDRF741202118	IN010076	STANDID
		06/07/2001	IDRF741202092	IN010076	STANDID
		06/07/2001	IDRF741201127	IN010076	STANDID
		06/07/2001	IDRF741201161	IN010076	STANDID
		06/07/2001	IDRF741201649	IN010076	STANDID
		06/07/2001	IDRF741201682	IN010076	STANDID
		06/07/2001	IDRF741201693	IN010076	STANDID
		06/07/2001	IDRF741201695	IN010076	STANDID
		06/07/2001	IDRF741200990	IN010076	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Shipping	06/07/2001	IDRF741201427	IN010075	STANDID
		06/07/2001	IDRF741201454	IN010075	STANDID
		06/07/2001	IDRF741201198	IN010075	STANDID
		06/07/2001	IDRF741201633	IN010075	STANDID
		06/07/2001	IDRF741201672	IN010075	STANDID
		06/07/2001	IDRF741201650	IN010075	STANDID
		06/07/2001	IDRF741201009	IN010075	STANDID
		06/07/2001	IDRF741204039	IN010075	STANDID
		06/07/2001	IDRF741204105	IN010075	STANDID
		06/07/2001	IDRF741204811	IN010075	STANDID
		06/07/2001	IDRF741207008	IN010075	STANDID
		06/07/2001	IDRF741202026	IN010075	STANDID
		06/07/2001	IDRF741201959	IN010075	STANDID
		06/07/2001	IDRF741202020	IN010075	STANDID
		06/07/2001	IDRF074112856	IN010075	STANDID
		06/07/2001	IDRF741200852	IN010075	STANDID
		06/07/2001	IDRF741202372	IN010075	STANDID
		06/07/2001	IDRF741202698	IN010075	STANDID
		06/07/2001	IDRF741200907	IN010075	STANDID
		06/07/2001	IDRF741200700	IN010075	STANDID
		06/07/2001	IDRF741200810	IN010075	STANDID
		06/07/2001	IDRF741200682	IN010075	STANDID
		06/07/2001	IDRF741200795	IN010075	STANDID
		06/07/2001	IDRF741200612	IN010075	STANDID
		06/06/2001	IDRF741200810	IN010075	STANDID
		06/06/2001	IDRF741200907	IN010075	STANDID
		06/06/2001	IDRF741201009	IN010075	STANDID
		06/06/2001	IDRF741201454	IN010075	STANDID
		06/06/2001	IDRF741201198	IN010075	STANDID
		06/06/2001	IDRF741201427	IN010075	STANDID
		06/06/2001	IDRF741201633	IN010075	STANDID
		06/06/2001	IDRF741201672	IN010075	STANDID
		06/06/2001	IDRF741201650	IN010075	STANDID
		06/06/2001	IDRF741202372	IN010075	STANDID
		06/06/2001	IDRF741202698	IN010075	STANDID
		06/06/2001	IDRF741204039	IN010075	STANDID
		06/06/2001	IDRF741204811	IN010075	STANDID
		06/06/2001	IDRF741207008	IN010075	STANDID
		06/06/2001	IDRF741202026	IN010075	STANDID
		06/06/2001	IDRF741201959	IN010075	STANDID
		06/06/2001	IDRF741202020	IN010075	STANDID
		06/06/2001	IDRF074112856	IN010075	STANDID
		06/06/2001	IDRF741200700	IN010075	STANDID
		06/06/2001	IDRF741200682	IN010075	STANDID
		06/06/2001	IDRF741200852	IN010075	STANDID
		06/06/2001	IDRF741200621	IN010075	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Shipping	06/06/2001	IDRF741200795	IN010075	STANDID
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		06/06/2001	IDRF074226151	IN010073	STANDID
		06/06/2001	IDRF741200407	IN010073	STANDID
		06/06/2001	IDRF741200634	IN010073	STANDID
		06/06/2001	IDRF741200503	IN010074	STRUMM
		06/06/2001	IDRF074116352	IN010074	STRUMM
		06/06/2001	IDRF741200678	IN010074	STRUMM
		06/06/2001	IDRF741200761	IN010074	STRUMM
		06/06/2001	IDRF741200771	IN010074	STRUMM
		06/06/2001	IDRF741200782	IN010074	STRUMM
		06/06/2001	IDRF741200801	IN010074	STRUMM
		06/06/2001	IDRF741200880	IN010074	STRUMM
		06/06/2001	IDRF741200912	IN010074	STRUMM
		06/06/2001	IDRF741201982	IN010074	STRUMM
		06/06/2001	IDRF741202036	IN010074	STRUMM
		06/06/2001	IDRF741202126	IN010074	STRUMM
		06/06/2001	IDRF741202399	IN010074	STRUMM
		06/06/2001	IDRF741202729	IN010074	STRUMM
		06/06/2001	IDRF741202732	IN010074	STRUMM
		06/06/2001	IDRF741204378	IN010074	STRUMM
		06/06/2001	IDRF741200966	IN010073	STANDID
		06/06/2001	IDRF741201105	IN010073	STANDID
		06/06/2001	IDRF741201214	IN010073	STANDID
		06/06/2001	IDRF741202081	IN010073	STANDID
		06/06/2001	IDRF741202174	IN010073	STANDID
		06/06/2001	IDRF741203104	IN010073	STANDID
		06/06/2001	IDRF741204237	IN010073	STANDID
		06/06/2001	IDRF741205078	IN010073	STANDID
		06/06/2001	IDRF741200609	IN010073	STANDID
		06/06/2001	IDRF741205668	IN010074	STRUMM
		06/06/2001	IDRF741201348	IN010074	STRUMM
		06/06/2001	IDRF741201598	IN010074	STRUMM
		06/06/2001	IDRF741201680	IN010074	STRUMM
		06/06/2001	IDRF741201771	IN010074	STRUMM
		06/06/2001	IDRF741201422	IN010074	STRUMM
		06/06/2001	IDRF741201444	IN010074	STRUMM
		06/06/2001	IDRF741201452	IN010074	STRUMM
		06/06/2001	IDRF741201328	IN010074	STRUMM
		06/06/2001	IDRF741201252	IN010074	STRUMM
		06/06/2001	IDRF741201538	IN010073	STANDID
		06/06/2001	IDRF741201423	IN010073	STANDID
		06/06/2001	IDRF741201430	IN010073	STANDID
		06/06/2001	IDRF741201482	IN010073	STANDID
		06/06/2001	IDRF741201647	IN010073	STANDID
		06/06/2001	IDRF741201772	IN010073	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
IN	Approved Shipping	06/06/2001	IDRF741201931	IN010073	STANDID
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		06/06/2001	IDRF741200412	IN010073	STANDID
		06/06/2001	IDRF741200474	IN010073	STANDID
		06/06/2001	IDRF741200484	IN010073	STANDID
		06/06/2001	IDRF741200919	IN010073	STANDID
		06/06/2001	IDRF741200916	IN010073	STANDID
		06/06/2001	IDRF741200920	IN010073	STANDID
		06/06/2001	IDRF074224847	IN010073	STANDID
		06/06/2001	IDRF741201958		STANDID
		06/02/2001	IDRF074112304	IN010070	STRUMM
		06/02/2001	IDRF074112796	IN010070	STRUMM
		06/02/2001	IDRF741200850	IN010070	STRUMM
		06/02/2001	IDRF741200646	IN010070	STRUMM
		06/02/2001	IDRF741202566	IN010071	STRUMM
		06/02/2001	IDRF741202740	IN010071	STRUMM
		06/02/2001	IDRF741202369	IN010070	STRUMM
		06/02/2001	IDRF741203657	IN010070	STRUMM
		06/02/2001	IDRF741202455	IN010070	STRUMM
		06/02/2001	IDRF741202522	IN010070	STRUMM
		06/02/2001	IDRF741200986	IN010070	STRUMM
		06/02/2001	IDRF741201280	IN010070	STRUMM
		06/02/2001	IDRF741201584	IN010070	STRUMM
		06/02/2001	IDRF741201922	IN010070	STRUMM
		06/02/2001	IDRF741201638	IN010070	STRUMM
		06/02/2001	IDRF741201839	IN010070	STRUMM
		06/02/2001	IDRF741201909	IN010070	STRUMM
		06/02/2001	IDRF741201292	IN010070	STRUMM
		06/02/2001	IDRF741200979	IN010070	STRUMM
		06/02/2001	IDRF741202180	IN010071	STRUMM
		06/02/2001	IDRF741202247	IN010071	STRUMM
		06/02/2001	IDRF741202428	IN010071	STRUMM
		06/02/2001	IDRF741202464	IN010071	STRUMM
		06/02/2001	IDRF741202501	IN010071	STRUMM
		06/02/2001	IDRF741202604	IN010070	STRUMM
		06/02/2001	IDRF741202423	IN010070	STRUMM
		06/02/2001	IDRF741202015	IN010070	STRUMM
		06/02/2001	IDRF741201973	IN010070	STRUMM
		06/02/2001	IDRF741202386	IN010072	STRUMM
		06/02/2001	IDRF741202419	IN010072	STRUMM
		06/02/2001	IDRF741202068	IN010072	STRUMM
		06/02/2001	IDRF741202503	IN010072	STRUMM
		06/02/2001	IDRF741202504	IN010072	STRUMM
		06/02/2001	IDRF741202521	IN010072	STRUMM
		06/02/2001	IDRF741205621	IN010072	STRUMM
		06/02/2001	IDRF741205701	IN010072	STRUMM

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IN	Approved Shipping	06/02/2001	IDRF741205713	IN010072	STRUMM
		06/02/2001	IDRF741202491	IN010072	STRUMM
		06/02/2001	IDRF741201956	IN010072	STRUMM
		06/02/2001	IDRF741202013	IN010072	STRUMM
		06/02/2001	IDRF741202130	IN010072	STRUMM
		06/02/2001	IDRF741201994	IN010072	STRUMM
		06/02/2001	IDRF741200953	IN010072	STRUMM
		06/02/2001	IDRF741201025	IN010072	STRUMM
		06/02/2001	IDRF741201600	IN010072	STRUMM
		06/02/2001	IDRF741201519	IN010072	STRUMM
		06/02/2001	IDRF741201565	IN010072	STRUMM
		06/02/2001	IDRF741201167	IN010072	STRUMM
		06/02/2001	IDRF741201330	IN010072	STRUMM
		06/02/2001	IDRF741200544	IN010072	STRUMM
		06/02/2001	IDRF741200748	IN010072	STRUMM
		06/02/2001	IDRF741200826	IN010072	STRUMM
		06/02/2001	IDRF741200549	IN010072	STRUMM
		06/02/2001	IDRF741200552	IN010072	STRUMM
		06/02/2001	IDRF741200524	IN010072	STRUMM
		06/02/2001	IDRF074221648	IN010072	STRUMM
		06/02/2001	IDRF741200530	IN010071	STRUMM
		06/02/2001	IDRF741200765	IN010071	STRUMM
		06/02/2001	IDRF741200792	IN010071	STRUMM
		06/02/2001	IDRF741200814	IN010071	STRUMM
		06/02/2001	IDRF741200925	IN010071	STRUMM
		06/02/2001	IDRF074112803	IN010071	STRUMM
		06/02/2001	IDRF741201048	IN010071	STRUMM
		06/02/2001	IDRF741201133	IN010071	STRUMM
		06/02/2001	IDRF741201132	IN010071	STRUMM
		06/02/2001	IDRF741201155	IN010071	STRUMM
		06/02/2001	IDRF741201601	IN010071	STRUMM
		06/02/2001	IDRF741201628	IN010071	STRUMM
		06/02/2001	IDRF741201295	IN010071	STRUMM
		06/02/2001	IDRF741201420	IN010071	STRUMM
		06/02/2001	IDRF741201473	IN010071	STRUMM
		06/02/2001	IDRF741201561	IN010071	STRUMM
		06/02/2001	IDRF741201797	IN010071	STRUMM
		06/02/2001	IDRF741201826	IN010071	STRUMM
		06/02/2001	IDRF741201950	IN010071	STRUMM
		06/02/2001	IDRF741201957	IN010071	STRUMM
		06/02/2001	IDRF741202150	IN010071	STRUMM
		06/02/2001	IDRF741200641	IN010070	STRUMM
		06/02/2001	IDRF741200644	IN010070	STRUMM
		06/02/2001	IDRF741200944	IN010070	STRUMM
		06/02/2001	IDRF741200672	IN010070	STRUMM
		06/02/2001	IDRF074112344	IN010070	STRUMM

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IN	Approved Shipping	06/01/2001	IDRF074112304	IN010070	STRUMM
		06/01/2001	IDRF074112796	IN010070	STRUMM
		06/01/2001	IDRF741200979	IN010070	STRUMM
		06/01/2001	IDRF741202423	IN010070	STRUMM
		06/01/2001	IDRF741202522	IN010070	STRUMM
		06/01/2001	IDRF741201973	IN010070	STRUMM
		06/01/2001	IDRF741200986	IN010070	STRUMM
		06/01/2001	IDRF741201292	IN010070	STRUMM
		06/01/2001	IDRF741201922	IN010070	STRUMM
		06/01/2001	IDRF741201638	IN010070	STRUMM
		06/01/2001	IDRF741201839	IN010070	STRUMM
		06/01/2001	IDRF741201909	IN010070	STRUMM
		06/01/2001	IDRF741201584	IN010070	STRUMM
		06/01/2001	IDRF741201280	IN010070	STRUMM
		06/01/2001	IDRF741202604	IN010070	STRUMM
		06/01/2001	IDRF741203657	IN010070	STRUMM
		06/01/2001	IDRF741202455	IN010070	STRUMM
		06/01/2001	IDRF741202369	IN010070	STRUMM
		06/01/2001	IDRF741202015	IN010070	STRUMM
		06/01/2001	IDRF741200641	IN010070	STRUMM
		06/01/2001	IDRF741200644	IN010070	STRUMM
		06/01/2001	IDRF741200944	IN010070	STRUMM
		06/01/2001	IDRF741200646	IN010070	STRUMM
		06/01/2001	IDRF741200672	IN010070	STRUMM
		06/01/2001	IDRF741200850	IN010070	STRUMM
		06/01/2001	IDRF074112344	IN010070	STRUMM
LA	Approved Certification	06/11/2001	LA00000057866	LA01004	LANL17
		06/11/2001	LA00000057868	LA01004	LANL17
		06/11/2001	LA00000057854	LA01004	LANL17
		06/11/2001	LA00000057857	LA01004	LANL17
		06/11/2001	LA00000057867	LA01004	LANL17
		06/11/2001	LA00000057869	LA01004	LANL17
		06/06/2001	LA00000057869	LA01004	STANDID
		06/05/2001	LA00000057854	LA01004	STANDID
		06/05/2001	LA00000057868	LA01004	STANDID
		06/05/2001	LA00000057866	LA01004	STANDID
		06/05/2001	LA00000057857	LA01004	STANDID
		06/05/2001	LA00000057867	LA01004	STANDID
LA	Rejected Certification	06/05/2001	LA00000057869	LA01004	LANL13
		06/05/2001	LA00000057869	LA01004	LANL13

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LA	Approved Shipping	06/11/2001	LA00000057857	LA01004	STANDID
		06/11/2001	LA00000057868	LA01004	STANDID
		06/11/2001	LA00000057866	LA01004	STANDID
		06/11/2001	LA00000057854	LA01004	STANDID
		06/11/2001	LA00000057869	LA01004	STANDID
		06/11/2001	LA00000057867	LA01004	STANDID
RF	Approved Characterization	06/06/2001	RFD93056	RF010070	STRUMM
		06/06/2001	RFD94538	RF010070	STRUMM
		06/06/2001	RFD95735	RF010070	STRUMM
		06/06/2001	RFD95919	RF010070	STRUMM
		06/06/2001	RFD95931	RF010070	STRUMM
		06/06/2001	RFD95909	RF010070	STRUMM
		06/06/2001	RFD95918	RF010070	STRUMM
		06/06/2001	RFD95112	RF010070	STRUMM
		06/06/2001	RFD95706	RF010070	STRUMM
		06/06/2001	RFD94499	RF010070	STRUMM
		06/06/2001	RFDA4436	RF010070	STRUMM
		06/06/2001	RFDA3458	RF010070	STRUMM
		06/06/2001	RFD99927	RF010071	STRUMM
		06/06/2001	RFD98355	RF010070	STRUMM
		06/06/2001	RFD98072	RF010070	STRUMM
RF	Rejected Characterization	06/13/2001	RFD95659	RF010084	RFETS
		06/13/2001	RFDB8295	RF010084	RFETS
		06/13/2001	RFD99004		STANDID
		06/13/2001	RFD98288		MIKUSK
		06/13/2001	RFDA3180	RF010084	STANDID
		06/13/2001	RFDA8151	RF010084	STANDID
		06/13/2001	RFDB8292	RF010084	STANDID
		06/13/2001	RFDB8295	RF010084	STANDID
		06/13/2001	RFDB9977	RF010084	STANDID
		06/13/2001	RFDB9980	RF010084	STANDID
		06/13/2001	RFDB8306	RF010084	STANDID
		06/13/2001	RFDA4349		STANDID
		06/13/2001	RFDA6450		STANDID
		06/13/2001	RFDA7712		STANDID
		06/13/2001	RFDA8910		STANDID
		06/13/2001	RFDB8304		STANDID
		06/13/2001	RFDB8652		STANDID
		06/13/2001	RFDB9975		STANDID
		06/13/2001	RFDB9987		STANDID
		06/13/2001	RFDA5685		STANDID
		06/13/2001	RFD98288		STANDID

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RF	Rejected Characterization	06/13/2001	RFD99004		MIKUSK
		06/13/2001	RFDA1951		STANDID
		06/13/2001	RFDA2998		STANDID
		06/13/2001	RFDA0406		STANDID
		06/13/2001	RFDA9095	RF010084	STANDID
		06/13/2001	RFD95659	RF010084	RFETS
		06/13/2001	RFDA2646	RF010084	STANDID
		06/13/2001	RFDA3180	RF010084	RFETS2
		06/13/2001	RFDA5188	RF010084	STANDID
		06/13/2001	RFD95659	RF010084	STANDID
		06/05/2001	RFD98355	RF010070	STRUMM
		06/05/2001	RFD99927	RF010071	STRUMM
		06/05/2001	RFD98072	RF010070	STRUMM
		06/05/2001	RFD94499	RF010070	STRUMM
		06/05/2001	RFD95112	RF010070	STRUMM
		06/05/2001	RFDA4436	RF010070	STRUMM
		06/05/2001	RFDA3458	RF010070	STRUMM
		06/05/2001	RFD94538	RF010070	STRUMM
		06/05/2001	RFD93056	RF010070	STRUMM
		06/05/2001	RFD95735	RF010070	STRUMM
		06/05/2001	RFD95918	RF010070	STRUMM
		06/05/2001	RFD95919	RF010070	STRUMM
		06/05/2001	RFD95931	RF010070	STRUMM
		06/05/2001	RFD95909	RF010070	STRUMM
		06/05/2001	RFD95706	RF010070	STRUMM
		06/01/2001	RFD93056	RF010070	RFETS2
		06/01/2001	RFD93056	RF010070	RFETS2
		06/01/2001	RFD94538	RF010070	RFETS2
		06/01/2001	RFD93056	RF010070	RFETS2
		06/01/2001	RFD93056	RF010070	RFETS2
RF	Approved Certification	06/15/2001	RFD97704	RF010076	STRUMM
		06/15/2001	RFD97716	RF010076	STRUMM
		06/15/2001	RFD95320	RF010078	STRUMM
		06/15/2001	RFD93039	RF010078	STRUMM
		06/15/2001	RFD98131	RF010077	STRUMM
		06/15/2001	RFD97721	RF010077	STRUMM
		06/15/2001	RFD95484	RF010077	STRUMM
		06/15/2001	RFD95604	RF010077	STRUMM
		06/15/2001	RFD96185	RF010077	STRUMM
		06/15/2001	RFD96187	RF010077	STRUMM
		06/15/2001	RFD95427	RF010077	STRUMM
		06/15/2001	RFD94987	RF010077	STRUMM
		06/15/2001	RFD95550	RF010076	STRUMM
		06/15/2001	RFD95397	RF010076	STRUMM

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RF	Approved Certification	06/15/2001	RFD96430	RF010076	STRUMM
		06/15/2001	RFD96445	RF010076	STRUMM
		06/15/2001	RFD97149	RF010076	STRUMM
		06/15/2001	RFD97281	RF010076	STRUMM
		06/15/2001	RFD97678	RF010076	STRUMM
		06/15/2001	RFD95556	RF010076	STRUMM
		06/15/2001	RFD94288	RF010076	STRUMM
		06/15/2001	RFD94292	RF010076	STRUMM
		06/15/2001	RFD94195	RF010076	STRUMM
		06/15/2001	RFD95612	RF010076	STRUMM
		06/15/2001	RFD95694	RF010076	STRUMM
		06/15/2001	RFD95812	RF010076	STRUMM
		06/15/2001	RFD95850	RF010076	STRUMM
		06/15/2001	RFD97682	RF010076	STRUMM
		06/15/2001	RFD95922	RF010076	STRUMM
		06/15/2001	RFD95926	RF010076	STRUMM
		06/15/2001	RFD96176	RF010076	STRUMM
		06/15/2001	RFD96307	RF010076	STRUMM
		06/15/2001	RFD97714	RF010076	STRUMM
		06/15/2001	RFD99993	RF010076	STRUMM
		06/15/2001	RFDA0157	RF010076	STRUMM
		06/15/2001	RFD98134	RF010076	STRUMM
		06/15/2001	RFD97712	RF010076	STRUMM
		06/15/2001	RFDA0309	RF010076	STRUMM
		06/14/2001	RFD94636	RF010075	RFETS7
		06/14/2001	RFD96839	RF010075	RFETS7
		06/14/2001	RFD97611	RF010075	RFETS7
		06/14/2001	RFD95387	RF010075	RFETS7
		06/14/2001	RFD95317	RF010075	RFETS7
		06/14/2001	RFD96305	RF010075	RFETS7
		06/14/2001	RFD98298	RF010075	RFETS7
		06/14/2001	RFD99011	RF010075	RFETS7
		06/14/2001	RFDA3669	RF010075	RFETS7
		06/14/2001	RFDA3756	RF010075	RFETS7
		06/14/2001	RFDA9703	RF010075	RFETS7
		06/14/2001	RFDB0149	RF010075	RFETS7
		06/14/2001	RFDA4577	RF010075	RFETS7
		06/14/2001	RFDA5421	RF010075	RFETS7
		06/14/2001	RFDA5850	RF010075	RFETS7
		06/14/2001	RFDA6008	RF010075	RFETS7
		06/14/2001	RFD99933	RF010075	RFETS7
		06/14/2001	RFDA0354	RF010075	RFETS7
		06/14/2001	RFDA1571	RF010075	STANDID
		06/14/2001	RFDA1571	RF010075	RFETS7
		06/14/2001	RFDA1575	RF010075	RFETS7
		06/14/2001	RFDA1591	RF010075	RFETS7

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RF	Approved Certification	06/14/2001	RFD95551	RF010075	RFETS7
		06/14/2001	RFD96349	RF010075	RFETS7
		06/14/2001	RFD95337	RF010075	RFETS7
		06/14/2001	RFD97324	RF010075	RFETS7
		06/14/2001	RFD95391	RF010075	RFETS7
		06/14/2001	RFD95178	RF010075	RFETS7
		06/14/2001	RFD97278	RF010075	RFETS7
		06/13/2001	RFD97726	RF010074	RFETS6
		06/13/2001	RFD98327	RF010074	RFETS6
		06/13/2001	RFD98315	RF010074	RFETS6
		06/13/2001	RFD98352	RF010074	RFETS6
		06/13/2001	RFD98194	RF010074	RFETS6
		06/13/2001	RFDA5417	RF010074	RFETS6
		06/13/2001	RFDA3594	RF010074	RFETS6
		06/13/2001	RFDA2927	RF010074	RFETS6
		06/13/2001	RFD98963	RF010074	RFETS6
		06/13/2001	RFDA0354	RF010075	STRUMM
		06/13/2001	RFDA1575	RF010075	STRUMM
		06/13/2001	RFDA3756	RF010075	STRUMM
		06/13/2001	RFDB0149	RF010075	STANDID
		06/13/2001	RFDA5421	RF010075	STRUMM
		06/13/2001	RFD99011	RF010075	STRUMM
		06/13/2001	RFD95551	RF010075	STRUMM
		06/13/2001	RFD96305	RF010075	STRUMM
		06/13/2001	RFD95337	RF010075	STRUMM
		06/13/2001	RFD99933	RF010075	STRUMM
		06/13/2001	RFD95387	RF010075	STRUMM
		06/13/2001	RFD97324	RF010075	STRUMM
		06/13/2001	RFD97611	RF010075	STRUMM
		06/13/2001	RFD95391	RF010075	STRUMM
		06/13/2001	RFD97278	RF010075	STRUMM
		06/13/2001	RFD95178	RF010075	STRUMM
		06/13/2001	RFD94636	RF010075	STRUMM
		06/13/2001	RFD96560	RF010074	RFETS6
		06/13/2001	RFD97161	RF010074	RFETS6
		06/13/2001	RFD95560	RF010074	RFETS6
		06/13/2001	RFD95920	RF010074	RFETS6
		06/13/2001	RFD98151	RF010074	RFETS6
		06/13/2001	RFD98174	RF010074	RFETS6
		06/13/2001	RFDA2424	RF010074	RFETS6
		06/13/2001	RFD97917	RF010074	RFETS6
		06/13/2001	RFD98130	RF010074	RFETS6
		06/13/2001	RFD94563	RF010074	RFETS6
		06/13/2001	RFD96182	RF010074	RFETS6
		06/13/2001	RFD96502	RF010074	RFETS6
		06/13/2001	RFDA0553	RF010074	RFETS6

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RF	Approved Certification	06/13/2001	RFDA3469	RF010074	RFETS6
		06/13/2001	RFDA4621	RF010074	RFETS6
		06/13/2001	RFDA8787	RF010074	RFETS6
		06/13/2001	RFD98206	RF010074	RFETS6
		06/13/2001	RFD98208	RF010074	RFETS6
		06/13/2001	RFD98291	RF010074	RFETS6
		06/12/2001	RFD95513	RF010072	RFETS6
		06/12/2001	RFDA1591	RF010075	STRUMM
		06/12/2001	RFDA4577	RF010075	STRUMM
		06/12/2001	RFDA9703	RF010075	STRUMM
		06/12/2001	RFDA6008	RF010075	STRUMM
		06/12/2001	RFD98298	RF010075	STRUMM
		06/12/2001	RFD95486	RF010072	RFETS6
		06/12/2001	RFD94534	RF010072	RFETS6
		06/12/2001	RFD95837	RF010073	STRUMM
		06/12/2001	RFD95410	RF010073	RFETS3
		06/12/2001	RFD95854	RF010073	RFETS3
		06/12/2001	RFD94633	RF010073	RFETS3
		06/12/2001	RFD97706	RF010073	RFETS3
		06/12/2001	RFD98397	RF010073	RFETS3
		06/12/2001	RFDA2543	RF010073	RFETS3
		06/12/2001	RFDA3548	RF010073	RFETS3
		06/12/2001	RFDA3752	RF010073	RFETS3
		06/12/2001	RFDA3768	RF010073	RFETS3
		06/12/2001	RFDA4414	RF010073	RFETS3
		06/12/2001	RFDA4612	RF010073	RFETS3
		06/12/2001	RFDA5308	RF010073	RFETS3
		06/12/2001	RFD98114	RF010073	RFETS3
		06/12/2001	RFD98147	RF010073	RFETS3
		06/12/2001	RFD98963	RF010074	STRUMM
		06/12/2001	RFDA5417	RF010074	STRUMM
		06/12/2001	RFD98194	RF010074	STRUMM
		06/12/2001	RFD98206	RF010074	STRUMM
		06/12/2001	RFD98208	RF010074	STRUMM
		06/12/2001	RFD97726	RF010074	STRUMM
		06/12/2001	RFD97730	RF010073	RFETS3
		06/12/2001	RFD98233	RF010073	RFETS3
		06/12/2001	RFD98959	RF010073	RFETS3
		06/12/2001	RFD99002	RF010073	RFETS3
		06/12/2001	RFD99096	RF010073	RFETS3
		06/12/2001	RFD99099	RF010073	RFETS3
		06/12/2001	RFDA0550	RF010073	RFETS3
		06/12/2001	RFDA2440	RF010073	RFETS3
		06/12/2001	RFDA2507	RF010073	RFETS3
		06/12/2001	RFD96502	RF010074	STRUMM
		06/12/2001	RFD96560	RF010074	STRUMM

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RF	Approved Certification	06/12/2001	RFD97161	RF010074	STRUMM
		06/12/2001	RFD95560	RF010074	STRUMM
		06/12/2001	RFD98174	RF010074	STRUMM
		06/12/2001	RFD98130	RF010074	STRUMM
		06/12/2001	RFD98548	RF010073	RFETS3
		06/12/2001	RFD95121	RF010073	RFETS3
		06/12/2001	RFD95837	RF010073	RFETS3
		06/12/2001	RFD96537	RF010073	RFETS3
		06/12/2001	RFD95702	RF010073	RFETS3
		06/12/2001	RFD93933	RF010072	RFETS6
		06/12/2001	RFD95446	RF010072	RFETS6
		06/12/2001	RFDA0042	RF010072	RFETS6
		06/12/2001	RFD95520	RF010072	RFETS6
		06/12/2001	RFD95523	RF010072	RFETS6
		06/12/2001	RFD95531	RF010072	RFETS6
		06/12/2001	RFD95547	RF010072	RFETS6
		06/12/2001	RFD95649	RF010072	RFETS6
		06/12/2001	RFD95677	RF010072	RFETS6
		06/12/2001	RFD95703	RF010072	RFETS6
		06/12/2001	RFD95712	RF010072	RFETS6
		06/12/2001	RFD95923	RF010072	RFETS6
		06/12/2001	RFD95927	RF010072	RFETS6
		06/12/2001	RFD95973	RF010072	RFETS6
		06/12/2001	RFD96450	RF010072	RFETS6
		06/12/2001	RFD96840	RF010072	RFETS6
		06/12/2001	RFD97150	RF010072	RFETS6
		06/12/2001	RFD97622	RF010072	RFETS6
		06/12/2001	RFD97703	RF010072	RFETS6
		06/12/2001	RFD97724	RF010072	RFETS6
		06/12/2001	RFDA8764	RF010072	RFETS6
		06/12/2001	RFDA0090	RF010072	RFETS6
		06/12/2001	RFDA4459	RF010072	RFETS6
		06/12/2001	RFDA5404	RF010072	RFETS6
		06/12/2001	RFD98399	RF010072	RFETS6
		06/11/2001	RFD97703	RF010072	MIKUSK
		06/11/2001	RFD95712	RF010072	MIKUSK
		06/11/2001	RFD95923	RF010072	MIKUSK
		06/11/2001	RFD95927	RF010072	MIKUSK
		06/11/2001	RFD95973	RF010072	MIKUSK
		06/11/2001	RFD96450	RF010072	MIKUSK
		06/11/2001	RFD96840	RF010072	MIKUSK
		06/11/2001	RFD97150	RF010072	MIKUSK
		06/11/2001	RFD97622	RF010072	MIKUSK
		06/11/2001	RFD93933	RF010072	MIKUSK
		06/11/2001	RFD95520	RF010072	MIKUSK
		06/11/2001	RFD95523	RF010072	MIKUSK

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RF	Approved Certification	06/11/2001	RFD95531	RF010072	MIKUSK
		06/11/2001	RFD95547	RF010072	MIKUSK
		06/11/2001	RFD95649	RF010072	MIKUSK
		06/11/2001	RFD95677	RF010072	MIKUSK
		06/11/2001	RFD95703	RF010072	MIKUSK
		06/11/2001	RFD97724	RF010072	MIKUSK
		06/11/2001	RFDA8764	RF010072	MIKUSK
		06/11/2001	RFDA4459	RF010072	MIKUSK
		06/11/2001	RFD98399	RF010072	MIKUSK
		06/11/2001	RFDA0042	RF010072	MIKUSK
		06/11/2001	RFDA0090	RF010072	MIKUSK
		06/11/2001	RFDA5404	RF010072	MIKUSK
		06/11/2001	RFD95513	RF010072	MIKUSK
		06/11/2001	RFD95317	RF010075	MIKUSK
		06/11/2001	RFDA0553	RF010074	STANDID
		06/11/2001	RFDA2927	RF010074	STANDID
		06/11/2001	RFDA3469	RF010074	STANDID
		06/11/2001	RFDA3594	RF010074	STANDID
		06/11/2001	RFDA4621	RF010074	STANDID
		06/11/2001	RFDA8787	RF010074	MIKUSK
		06/11/2001	RFD98291	RF010074	STANDID
		06/11/2001	RFD98315	RF010074	STANDID
		06/11/2001	RFDA3669	RF010075	STANDID
		06/11/2001	RFDA5850	RF010075	MIKUSK
		06/11/2001	RFD96349	RF010075	MIKUSK
		06/11/2001	RFD98327	RF010074	STANDID
		06/11/2001	RFD98352	RF010074	STANDID
		06/11/2001	RFD97730	RF010073	MIKUSK
		06/11/2001	RFD98959	RF010073	STANDID
		06/11/2001	RFD99002	RF010073	STANDID
		06/11/2001	RFD99096	RF010073	STANDID
		06/11/2001	RFD99099	RF010073	STANDID
		06/11/2001	RFDA0550	RF010073	STANDID
		06/11/2001	RFDA2440	RF010073	STANDID
		06/11/2001	RFDA2507	RF010073	STANDID
		06/11/2001	RFDA3548	RF010073	STANDID
		06/11/2001	RFDA3752	RF010073	STANDID
		06/11/2001	RFDA4414	RF010073	STANDID
		06/11/2001	RFDA4612	RF010073	STANDID
		06/11/2001	RFDA5308	RF010073	MIKUSK
		06/11/2001	RFD98114	RF010073	STANDID
		06/11/2001	RFD95920	RF010074	MIKUSK
		06/11/2001	RFD96182	RF010074	MIKUSK
		06/11/2001	RFD94563	RF010074	STANDID
		06/11/2001	RFD98151	RF010074	STANDID
		06/11/2001	RFDA2424	RF010074	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Certification	06/11/2001	RFD97917	RF010074	MIKUSK
		06/11/2001	RFD98147	RF010073	MIKUSK
		06/11/2001	RFD98233	RF010073	STANDID
		06/11/2001	RFD98397	RF010073	STANDID
		06/11/2001	RFD98548	RF010073	STANDID
		06/11/2001	RFD97706	RF010073	STANDID
		06/11/2001	RFD95121	RF010073	STANDID
		06/11/2001	RFD95854	RF010073	MIKUSK
		06/11/2001	RFD96537	RF010073	MIKUSK
		06/11/2001	RFD94633	RF010073	MIKUSK
		06/11/2001	RFD94534	RF010072	MIKUSK
		06/11/2001	RFD95446	RF010072	MIKUSK
		06/11/2001	RFD95410	RF010073	MIKUSK
		06/11/2001	RFD95702	RF010073	MIKUSK
		06/11/2001	RFD95486	RF010072	MIKUSK
		06/08/2001	RFDA3581	RF010071	RFETS3
		06/08/2001	RFDA0948	RF010071	RFETS3
		06/08/2001	RFDA0525	RF010071	RFETS3
		06/08/2001	RFDA0111	RF010071	RFETS3
		06/08/2001	RFD96834	RF010071	RFETS3
		06/08/2001	RFD97270	RF010071	RFETS3
		06/08/2001	RFD90690	RF010071	RFETS3
		06/08/2001	RFD97728	RF010071	RFETS3
		06/08/2001	RFD97729	RF010071	RFETS3
		06/08/2001	RFD98081	RF010071	RFETS3
		06/08/2001	RFD98438	RF010071	RFETS3
		06/08/2001	RFD99005	RF010071	RFETS3
		06/08/2001	RFD99927	RF010071	RFETS3
		06/08/2001	RFD94533	RF010071	RFETS3
		06/08/2001	RFD95414	RF010071	RFETS3
		06/08/2001	RFD95480	RF010071	RFETS3
		06/08/2001	RFD95074	RF010071	RFETS3
		06/08/2001	RFD95405	RF010071	RFETS3
		06/08/2001	RFD95668	RF010071	RFETS3
		06/08/2001	RFD95818	RF010071	RFETS3
		06/08/2001	RFD95982	RF010071	RFETS3
		06/08/2001	RFD96000	RF010071	RFETS3
		06/08/2001	RFD97293	RF010071	RFETS3
		06/08/2001	RFD97572	RF010071	RFETS3
		06/08/2001	RFDA0458	RF010071	RFETS3
		06/08/2001	RFDA0946	RF010071	RFETS3
		06/08/2001	RFDA2960	RF010071	RFETS3
		06/08/2001	RFDA3455	RF010071	RFETS3
		06/07/2001	RFDA4436	RF010070	RFETS3
		06/07/2001	RFDA3458	RF010070	RFETS3
		06/07/2001	RFDA0101	RF010070	RFETS3

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Certification	06/07/2001	RFDA0007	RF010070	RFETS3
		06/07/2001	RFD94533	RF010071	STANDID
		06/07/2001	RFD95480	RF010071	STANDID
		06/07/2001	RFD95405	RF010071	STANDID
		06/07/2001	RFD95414	RF010071	STANDID
		06/07/2001	RFD95668	RF010071	STANDID
		06/07/2001	RFD95818	RF010071	STANDID
		06/07/2001	RFD97572	RF010071	STANDID
		06/07/2001	RFD96834	RF010071	STANDID
		06/07/2001	RFD97729	RF010071	STANDID
		06/07/2001	RFD98438	RF010071	STANDID
		06/07/2001	RFD99005	RF010071	STANDID
		06/07/2001	RFDA0458	RF010071	STANDID
		06/07/2001	RFDA0946	RF010071	STANDID
		06/07/2001	RFDA2960	RF010071	STANDID
		06/07/2001	RFDA3455	RF010071	STANDID
		06/07/2001	RFD97728	RF010071	STANDID
		06/07/2001	RFD98072	RF010070	RFETS3
		06/07/2001	RFD95074	RF010071	STANDID
		06/07/2001	RFD97270	RF010071	STANDID
		06/07/2001	RFD90690	RF010071	STANDID
		06/07/2001	RFD98355	RF010070	RFETS3
		06/07/2001	RFD98391	RF010070	RFETS3
		06/07/2001	RFD98505	RF010070	RFETS3
		06/07/2001	RFDA0088	RF010070	RFETS3
		06/07/2001	RFDA2942	RF010070	RFETS3
		06/07/2001	RFD95112	RF010070	RFETS3
		06/07/2001	RFDA3527	RF010070	RFETS3
		06/07/2001	RFDA3611	RF010070	RFETS3
		06/07/2001	RFDA0548	RF010070	RFETS3
		06/07/2001	RFDA1066	RF010070	RFETS3
		06/07/2001	RFDA0086	RF010070	RFETS3
		06/07/2001	RFDA0087	RF010070	RFETS3
		06/07/2001	RFD98297	RF010070	RFETS3
		06/07/2001	RFD94538	RF010070	RFETS3
		06/07/2001	RFD95299	RF010070	RFETS3
		06/07/2001	RFD93056	RF010070	RFETS3
		06/07/2001	RFD95735	RF010070	RFETS3
		06/07/2001	RFD95909	RF010070	RFETS3
		06/07/2001	RFD95919	RF010070	RFETS3
		06/07/2001	RFD95931	RF010070	RFETS3
		06/07/2001	RFD95918	RF010070	RFETS3
		06/07/2001	RFD95706	RF010070	RFETS3
		06/07/2001	RFD94499	RF010070	RFETS3
		06/07/2001	RFD96839	RF010075	STANDID
		06/06/2001	RFDA3768	RF010073	STANDID

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Certification	06/06/2001	RFDA2543	RF010073	STANDID
		06/06/2001	RFD99297		STANDID
		06/06/2001	RFD69941		STANDID
		06/06/2001	RFD98105	RF010069	RFETS2
		06/06/2001	RFD81731	RF010069	RFETS2
		06/06/2001	RFD95097	RF010069	RFETS2
		06/06/2001	RFD95295	RF010069	RFETS2
		06/06/2001	RFD95756	RF010069	RFETS2
		06/06/2001	RFD95766	RF010069	RFETS2
		06/06/2001	RFD95834	RF010069	RFETS2
		06/06/2001	RFD96230	RF010069	RFETS2
		06/06/2001	RFD97072	RF010069	RFETS2
		06/06/2001	RFD97692	RF010069	RFETS2
		06/06/2001	RFDA0086	RF010070	STANDID
		06/06/2001	RFDA0087	RF010070	STANDID
		06/06/2001	RFD98072	RF010070	STANDID
		06/06/2001	RFD94538	RF010070	STANDID
		06/06/2001	RFD95299	RF010070	STANDID
		06/06/2001	RFD95735	RF010070	STANDID
		06/06/2001	RFD95909	RF010070	STANDID
		06/06/2001	RFD95919	RF010070	STANDID
		06/06/2001	RFD95931	RF010070	STANDID
		06/06/2001	RFDA3527	RF010070	STANDID
		06/06/2001	RFDA3611	RF010070	STANDID
		06/06/2001	RFDA0548	RF010070	STANDID
		06/06/2001	RFDA1066	RF010070	STANDID
		06/06/2001	RFD95918	RF010070	STANDID
		06/06/2001	RFD95706	RF010070	STANDID
		06/06/2001	RFD94499	RF010070	STANDID
		06/06/2001	RFD95112	RF010070	STANDID
		06/06/2001	RFD93056	RF010070	STANDID
		06/06/2001	RFD58207	RF010069	RFETS2
		06/06/2001	RFD61848	RF010069	RFETS2
		06/06/2001	RFD81618	RF010069	RFETS2
		06/06/2001	RFD68647	RF010069	RFETS2
		06/06/2001	RFD69083	RF010069	RFETS2
		06/06/2001	RFD94018	RF010069	RFETS2
		06/06/2001	RFD75909	RF010069	RFETS2
		06/06/2001	RFD82413	RF010069	RFETS2
		06/06/2001	RFD90687	RF010069	RFETS2
		06/06/2001	RFD82662	RF010069	RFETS2
		06/06/2001	RFD85121	RF010069	RFETS2
		06/06/2001	RFD88705	RF010069	RFETS2
		06/06/2001	RFD98229	RF010069	RFETS2
		06/06/2001	RFDA5873	RF010069	RFETS2
		06/06/2001	RFDA3530	RF010069	RFETS2

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Certification	06/06/2001	RFDB0921	RF010069	RFETS2
		06/06/2001	RFD98555	RF010069	RFETS2
		06/06/2001	RFDA7760	RF010069	RFETS2
		06/06/2001	RFDA4436	RF010070	STANDID
		06/06/2001	RFDA3458	RF010070	STANDID
		06/06/2001	RFDA2942	RF010070	STANDID
		06/06/2001	RFDA0111	RF010071	STANDID
		06/06/2001	RFDA3581	RF010071	STANDID
		06/06/2001	RFD98297	RF010070	STANDID
		06/06/2001	RFD98355	RF010070	STANDID
		06/06/2001	RFD98391	RF010070	STANDID
		06/06/2001	RFD98505	RF010070	STANDID
		06/06/2001	RFDA0007	RF010070	STANDID
		06/06/2001	RFDA0088	RF010070	STANDID
		06/06/2001	RFDA0101	RF010070	STANDID
		06/06/2001	RFD95982	RF010071	STANDID
		06/06/2001	RFD96000	RF010071	STANDID
		06/06/2001	RFD99927	RF010071	STANDID
		06/06/2001	RFDA0525	RF010071	STANDID
		06/06/2001	RFDA0948	RF010071	STANDID
		06/05/2001	RFD97293	RF010071	STANDID
		06/05/2001	RFDA5873	RF010069	STANDID
		06/05/2001	RFD81618	RF010069	STRUMM
		06/05/2001	RFD81731	RF010069	STRUMM
		06/05/2001	RFD82413	RF010069	STRUMM
		06/05/2001	RFD95097	RF010069	STRUMM
		06/05/2001	RFD96230	RF010069	STRUMM
		06/05/2001	RFD97072	RF010069	STRUMM
		06/05/2001	RFD68647	RF010069	STRUMM
		06/05/2001	RFD94018	RF010069	STRUMM
		06/05/2001	RFD75909	RF010069	STRUMM
		06/05/2001	RFD90687	RF010069	STRUMM
		06/05/2001	RFD85121	RF010069	STRUMM
		06/05/2001	RFDA3530	RF010069	STANDID
		06/05/2001	RFD98229	RF010069	STRUMM
		06/05/2001	RFD58207	RF010069	STRUMM
		06/05/2001	RFD88705	RF010069	STRUMM
		06/05/2001	RFD61848	RF010069	STRUMM
		06/05/2001	RFDA7760	RF010069	STRUMM
		06/05/2001	RFD98555	RF010069	STRUMM
		06/04/2001	RFD72734	RF010068	RFETS3
		06/04/2001	RFD69083	RF010069	STANDID
		06/04/2001	RFD82662	RF010069	STRUMM
		06/04/2001	RFD72734	RF010068	STRUMM
		06/04/2001	RFD96376	RF010068	STRUMM
		06/04/2001	RFD95774	RF010068	STRUMM

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Certification	06/04/2001	RFD95772	RF010068	STRUMM
		06/04/2001	RFD96471	RF010068	RFETS3
		06/04/2001	RFD96376	RF010068	RFETS3
		06/04/2001	RFD95314	RF010068	STRUMM
		06/04/2001	RFD95309	RF010068	STRUMM
		06/04/2001	RFD97692	RF010069	STRUMM
		06/04/2001	RFDB0921	RF010069	STRUMM
		06/04/2001	RFD98105	RF010069	STANDID
		06/04/2001	RFD67548	RF010068	STRUMM
		06/04/2001	RFD68652	RF010068	STRUMM
		06/04/2001	RFD68666	RF010068	STRUMM
		06/04/2001	RFD95309	RF010068	RFETS3
		06/04/2001	RFD95314	RF010068	RFETS3
		06/04/2001	RFD96471	RF010068	STRUMM
		06/04/2001	RFD97322	RF010068	RFETS3
		06/04/2001	RFD95295	RF010069	STRUMM
		06/04/2001	RFD95756	RF010069	STANDID
		06/04/2001	RFD95766	RF010069	STANDID
		06/04/2001	RFD95834	RF010069	STRUMM
		06/04/2001	RFD95772	RF010068	RFETS3
		06/04/2001	RFD95774	RF010068	RFETS3
		06/04/2001	RFD97695	RF010068	RFETS3
		06/04/2001	RFD98143	RF010068	RFETS3
		06/04/2001	RFD98908	RF010068	RFETS3
		06/04/2001	RFD98133	RF010068	STRUMM
		06/04/2001	RFD68666	RF010068	RFETS3
		06/04/2001	RFD68652	RF010068	RFETS3
		06/04/2001	RFD67548	RF010068	RFETS3
		06/04/2001	RFD61478	RF010068	RFETS3
		06/04/2001	RFD61478	RF010068	STRUMM
		06/04/2001	RFD98143	RF010068	STRUMM
		06/04/2001	RFD98908	RF010068	STRUMM
		06/04/2001	RFDA7743	RF010068	RFETS3
		06/04/2001	RFDA7751	RF010068	RFETS3
		06/04/2001	RFD75500	RF010068	STRUMM
		06/04/2001	RFD75500	RF010068	RFETS3
		06/04/2001	RFD85119	RF010068	STRUMM
		06/04/2001	RFD85119	RF010068	RFETS3
		06/04/2001	RFD86634	RF010068	STRUMM
		06/04/2001	RFD86634	RF010068	RFETS3
		06/04/2001	RFD81400	RF010068	STRUMM
		06/04/2001	RFD81400	RF010068	RFETS3
		06/04/2001	RFD81496	RF010068	STRUMM
		06/04/2001	RFD81496	RF010068	RFETS3
		06/04/2001	RFD71784	RF010068	STRUMM
		06/04/2001	RFD71784	RF010068	RFETS3

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RF	Approved Certification	06/04/2001	RFD72502	RF010068	STRUMM
		06/04/2001	RFD72502	RF010068	RFETS3
		06/04/2001	RFDA1180	RF010068	RFETS3
		06/04/2001	RFDA6787	RF010068	STRUMM
		06/04/2001	RFDA6787	RF010068	RFETS3
		06/04/2001	RFDA9101	RF010068	RFETS3
		06/04/2001	RFD98133	RF010068	RFETS3
		06/04/2001	RFD98081	RF010071	STRUMM
RF	Rejected Certification	06/13/2001	RFDA1571	RF010075	RFETS6
		06/06/2001	RFDA0948	RF010071	STRUMM
RF	Approved Shipping	06/15/2001	RFD98327	RF010074	RFETS6
		06/15/2001	RFD98352	RF010074	RFETS6
		06/15/2001	RFD98291	RF010074	RFETS6
		06/15/2001	RFD98206	RF010074	RFETS6
		06/15/2001	RFDA8787	RF010074	RFETS6
		06/15/2001	RFDA4621	RF010074	RFETS6
		06/15/2001	RFDA3469	RF010074	RFETS6
		06/15/2001	RFDA0553	RF010074	RFETS6
		06/15/2001	RFD95920	RF010074	RFETS6
		06/15/2001	RFD94563	RF010074	RFETS6
		06/15/2001	RFD97726	RF010074	RFETS6
		06/15/2001	RFD98151	RF010074	RFETS6
		06/15/2001	RFD98174	RF010074	RFETS6
		06/15/2001	RFDA2424	RF010074	RFETS6
		06/15/2001	RFD97917	RF010074	RFETS6
		06/15/2001	RFD98130	RF010074	RFETS6
		06/15/2001	RFD98963	RF010074	RFETS6
		06/15/2001	RFD96182	RF010074	RFETS6
		06/15/2001	RFD96502	RF010074	RFETS6
		06/15/2001	RFD96560	RF010074	RFETS6
		06/15/2001	RFD97161	RF010074	RFETS6
		06/15/2001	RFD95560	RF010074	RFETS6
		06/15/2001	RFDA2927	RF010074	RFETS6
		06/15/2001	RFDA3594	RF010074	RFETS6
		06/15/2001	RFDA5417	RF010074	RFETS6
		06/15/2001	RFD98194	RF010074	RFETS6
		06/15/2001	RFD98208	RF010074	RFETS6
		06/15/2001	RFD98315	RF010074	RFETS6
		06/14/2001	RFD94636	RF010075	STRUMM
		06/14/2001	RFD97611	RF010075	STRUMM
		06/14/2001	RFD97278	RF010075	STRUMM
		06/14/2001	RFD95317	RF010075	STRUMM

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RF	Approved Shipping	06/14/2001	RFD96349	RF010075	STRUMM
		06/14/2001	RFD99933	RF010075	STRUMM
		06/14/2001	RFDA0354	RF010075	STRUMM
		06/14/2001	RFDA1571	RF010075	STRUMM
		06/14/2001	RFDA1575	RF010075	STRUMM
		06/14/2001	RFDA1591	RF010075	STRUMM
		06/14/2001	RFDA3669	RF010075	STRUMM
		06/14/2001	RFDA3756	RF010075	STRUMM
		06/14/2001	RFDA9703	RF010075	STRUMM
		06/14/2001	RFDB0149	RF010075	STRUMM
		06/14/2001	RFDA4577	RF010075	STRUMM
		06/14/2001	RFDA5421	RF010075	STRUMM
		06/14/2001	RFDA5850	RF010075	STRUMM
		06/14/2001	RFDA6008	RF010075	STRUMM
		06/14/2001	RFD99011	RF010075	STRUMM
		06/14/2001	RFD98298	RF010075	STRUMM
		06/14/2001	RFD95551	RF010075	STRUMM
		06/14/2001	RFD96305	RF010075	STRUMM
		06/14/2001	RFD95178	RF010075	STRUMM
		06/14/2001	RFD95337	RF010075	STRUMM
		06/14/2001	RFD97324	RF010075	STRUMM
		06/14/2001	RFD95387	RF010075	STRUMM
		06/14/2001	RFD96839	RF010075	STRUMM
		06/14/2001	RFD95391	RF010075	STRUMM
		06/13/2001	RFD95513	RF010072	RFETS6
		06/13/2001	RFD94534	RF010072	RFETS6
		06/13/2001	RFD98206	RF010074	STANDID
		06/13/2001	RFD98208	RF010074	STANDID
		06/13/2001	RFD98291	RF010074	STANDID
		06/13/2001	RFD98352	RF010074	STANDID
		06/13/2001	RFD98315	RF010074	STANDID
		06/13/2001	RFD98327	RF010074	STANDID
		06/13/2001	RFD97706	RF010073	RFETS6
		06/13/2001	RFD97730	RF010073	RFETS6
		06/13/2001	RFD98233	RF010073	RFETS6
		06/13/2001	RFD98959	RF010073	RFETS6
		06/13/2001	RFD99002	RF010073	RFETS6
		06/13/2001	RFD99096	RF010073	RFETS6
		06/13/2001	RFD99099	RF010073	RFETS6
		06/13/2001	RFDA0550	RF010073	RFETS6
		06/13/2001	RFDA2440	RF010073	RFETS6
		06/13/2001	RFDA2507	RF010073	RFETS6
		06/13/2001	RFDA2543	RF010073	RFETS6
		06/13/2001	RFDA3548	RF010073	RFETS6
		06/13/2001	RFDA3752	RF010073	RFETS6
		06/13/2001	RFDA3768	RF010073	RFETS6

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Shipping	06/13/2001	RFDA4414	RF010073	RFETS6
		06/13/2001	RFDA4612	RF010073	RFETS6
		06/13/2001	RFDA5308	RF010073	RFETS6
		06/13/2001	RFD98114	RF010073	RFETS6
		06/13/2001	RFD98147	RF010073	RFETS6
		06/13/2001	RFD98397	RF010073	RFETS6
		06/13/2001	RFD98548	RF010073	RFETS6
		06/13/2001	RFD94633	RF010073	RFETS6
		06/13/2001	RFD95837	RF010073	RFETS6
		06/13/2001	RFD95854	RF010073	RFETS6
		06/13/2001	RFD94563	RF010074	STANDID
		06/13/2001	RFD96182	RF010074	STANDID
		06/13/2001	RFD96502	RF010074	STANDID
		06/13/2001	RFD96560	RF010074	STANDID
		06/13/2001	RFD97161	RF010074	STANDID
		06/13/2001	RFD95560	RF010074	STANDID
		06/13/2001	RFD95920	RF010074	STANDID
		06/13/2001	RFD97726	RF010074	STANDID
		06/13/2001	RFD98151	RF010074	STANDID
		06/13/2001	RFD98174	RF010074	STANDID
		06/13/2001	RFDA2424	RF010074	STANDID
		06/13/2001	RFD97917	RF010074	STANDID
		06/13/2001	RFD98130	RF010074	STANDID
		06/13/2001	RFD98963	RF010074	STANDID
		06/13/2001	RFDA0553	RF010074	STANDID
		06/13/2001	RFDA2927	RF010074	STANDID
		06/13/2001	RFDA3469	RF010074	STANDID
		06/13/2001	RFDA3594	RF010074	STANDID
		06/13/2001	RFDA4621	RF010074	STANDID
		06/13/2001	RFDA5417	RF010074	STANDID
		06/13/2001	RFDA8787	RF010074	STANDID
		06/13/2001	RFD98194	RF010074	STANDID
		06/13/2001	RFD96537	RF010073	RFETS6
		06/13/2001	RFD95410	RF010073	RFETS6
		06/13/2001	RFD95702	RF010073	RFETS6
		06/13/2001	RFD95121	RF010073	RFETS6
		06/13/2001	RFD95446	RF010072	RFETS6
		06/13/2001	RFD95486	RF010072	RFETS6
		06/13/2001	RFD97703	RF010072	RFETS6
		06/13/2001	RFD95712	RF010072	RFETS6
		06/13/2001	RFD95923	RF010072	RFETS6
		06/13/2001	RFD95927	RF010072	RFETS6
		06/13/2001	RFD95973	RF010072	RFETS6
		06/13/2001	RFD96450	RF010072	RFETS6
		06/13/2001	RFD96840	RF010072	RFETS6
		06/13/2001	RFD97150	RF010072	RFETS6

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Shipping	06/13/2001	RFD97622	RF010072	RFETS6
		06/13/2001	RFD93933	RF010072	RFETS6
		06/13/2001	RFD95520	RF010072	RFETS6
		06/13/2001	RFD95523	RF010072	RFETS6
		06/13/2001	RFD95531	RF010072	RFETS6
		06/13/2001	RFD95547	RF010072	RFETS6
		06/13/2001	RFD95649	RF010072	RFETS6
		06/13/2001	RFD95677	RF010072	RFETS6
		06/13/2001	RFD95703	RF010072	RFETS6
		06/13/2001	RFD97724	RF010072	RFETS6
		06/13/2001	RFDA5404	RF010072	RFETS6
		06/13/2001	RFDA8764	RF010072	RFETS6
		06/13/2001	RFDA0090	RF010072	RFETS6
		06/13/2001	RFD98399	RF010072	RFETS6
		06/13/2001	RFDA4459	RF010072	RFETS6
		06/13/2001	RFDA0042	RF010072	RFETS6
		06/12/2001	RFDA0042	RF010072	STANDID
		06/12/2001	RFD95520	RF010072	STANDID
		06/12/2001	RFD95523	RF010072	STANDID
		06/12/2001	RFD95531	RF010072	STANDID
		06/12/2001	RFD95547	RF010072	STANDID
		06/12/2001	RFD95649	RF010072	STANDID
		06/12/2001	RFD95677	RF010072	STANDID
		06/12/2001	RFD95703	RF010072	STANDID
		06/12/2001	RFD95712	RF010072	STANDID
		06/12/2001	RFD95923	RF010072	STANDID
		06/12/2001	RFD95927	RF010072	STANDID
		06/12/2001	RFD95973	RF010072	STANDID
		06/12/2001	RFD96450	RF010072	STANDID
		06/12/2001	RFD96840	RF010072	STANDID
		06/12/2001	RFD97150	RF010072	STANDID
		06/12/2001	RFD97622	RF010072	STANDID
		06/12/2001	RFD97703	RF010072	STANDID
		06/12/2001	RFD98399	RF010072	STANDID
		06/12/2001	RFDA4459	RF010072	STANDID
		06/12/2001	RFDA8764	RF010072	STANDID
		06/12/2001	RFD97724	RF010072	STANDID
		06/12/2001	RFDA5404	RF010072	STANDID
		06/12/2001	RFDA0090	RF010072	STANDID
		06/12/2001	RFD96537	RF010073	STRUMM
		06/12/2001	RFD97706	RF010073	STRUMM
		06/12/2001	RFD97730	RF010073	STRUMM
		06/12/2001	RFD98233	RF010073	STRUMM
		06/12/2001	RFD98959	RF010073	STRUMM
		06/12/2001	RFD99002	RF010073	STRUMM
		06/12/2001	RFD99096	RF010073	STRUMM

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Shipping	06/12/2001	RFD99099	RF010073	STRUMM
		06/12/2001	RFDA2440	RF010073	STRUMM
		06/12/2001	RFDA2507	RF010073	STRUMM
		06/12/2001	RFDA2543	RF010073	STRUMM
		06/12/2001	RFDA3548	RF010073	STRUMM
		06/12/2001	RFDA3752	RF010073	STRUMM
		06/12/2001	RFDA3768	RF010073	STRUMM
		06/12/2001	RFDA4414	RF010073	STRUMM
		06/12/2001	RFDA4612	RF010073	STRUMM
		06/12/2001	RFDA5308	RF010073	STRUMM
		06/12/2001	RFDA0550	RF010073	STRUMM
		06/12/2001	RFD98114	RF010073	STRUMM
		06/12/2001	RFD98147	RF010073	STRUMM
		06/12/2001	RFD98397	RF010073	STRUMM
		06/12/2001	RFD98548	RF010073	STRUMM
		06/12/2001	RFD94633	RF010073	STRUMM
		06/12/2001	RFD95121	RF010073	STRUMM
		06/12/2001	RFD95837	RF010073	STRUMM
		06/12/2001	RFD95854	RF010073	STRUMM
		06/12/2001	RFD95410	RF010073	STRUMM
		06/12/2001	RFD95702	RF010073	STRUMM
		06/12/2001	RFD95513	RF010072	STANDID
		06/12/2001	RFD93933	RF010072	STANDID
		06/12/2001	RFD94534	RF010072	STANDID
		06/12/2001	RFD95446	RF010072	STANDID
		06/12/2001	RFD95486	RF010072	STANDID
		06/12/2001	RFD97728	RF010071	RFETS3
		06/12/2001	RFDA3455	RF010071	RFETS3
		06/12/2001	RFDA2960	RF010071	RFETS3
		06/12/2001	RFDA3581	RF010071	RFETS3
		06/12/2001	RFDA0458	RF010071	RFETS3
		06/12/2001	RFD94533	RF010071	RFETS3
		06/12/2001	RFD95480	RF010071	RFETS3
		06/12/2001	RFD96000	RF010071	RFETS3
		06/12/2001	RFD96834	RF010071	RFETS3
		06/12/2001	RFD97270	RF010071	RFETS3
		06/12/2001	RFD97729	RF010071	RFETS3
		06/12/2001	RFD98081	RF010071	RFETS3
		06/12/2001	RFD98438	RF010071	RFETS3
		06/12/2001	RFD99005	RF010071	RFETS3
		06/12/2001	RFD99927	RF010071	RFETS3
		06/12/2001	RFDA0111	RF010071	RFETS3
		06/12/2001	RFD90690	RF010071	RFETS3
		06/12/2001	RFD95414	RF010071	RFETS3
		06/12/2001	RFD95074	RF010071	RFETS3
		06/12/2001	RFD95405	RF010071	RFETS3

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Shipping	06/12/2001	RFD95668	RF010071	RFETS3
		06/12/2001	RFD95818	RF010071	RFETS3
		06/12/2001	RFD95982	RF010071	RFETS3
		06/12/2001	RFD97293	RF010071	RFETS3
		06/12/2001	RFD97572	RF010071	RFETS3
		06/12/2001	RFDA0525	RF010071	RFETS3
		06/12/2001	RFDA0946	RF010071	RFETS3
		06/12/2001	RFDA0948	RF010071	RFETS3
		06/08/2001	RFDA3611	RF010070	RFETS3
		06/08/2001	RFDA0087	RF010070	RFETS3
		06/08/2001	RFDA0088	RF010070	RFETS3
		06/08/2001	RFDA2942	RF010070	RFETS3
		06/08/2001	RFD98505	RF010070	RFETS3
		06/08/2001	RFD90690	RF010071	STANDID
		06/08/2001	RFD95074	RF010071	STANDID
		06/08/2001	RFD95405	RF010071	STANDID
		06/08/2001	RFD95668	RF010071	STANDID
		06/08/2001	RFD95818	RF010071	STANDID
		06/08/2001	RFD95982	RF010071	STANDID
		06/08/2001	RFD96000	RF010071	STANDID
		06/08/2001	RFD97293	RF010071	STANDID
		06/08/2001	RFD97572	RF010071	STANDID
		06/08/2001	RFD98438	RF010071	STANDID
		06/08/2001	RFD94533	RF010071	STANDID
		06/08/2001	RFD95414	RF010071	STANDID
		06/08/2001	RFD95480	RF010071	STANDID
		06/08/2001	RFD99005	RF010071	STANDID
		06/08/2001	RFD99927	RF010071	STANDID
		06/08/2001	RFDA0111	RF010071	STANDID
		06/08/2001	RFDA0458	RF010071	STANDID
		06/08/2001	RFDA0525	RF010071	STANDID
		06/08/2001	RFDA0946	RF010071	STANDID
		06/08/2001	RFDA0948	RF010071	STANDID
		06/08/2001	RFDA2960	RF010071	STANDID
		06/08/2001	RFD96834	RF010071	STANDID
		06/08/2001	RFD97270	RF010071	STANDID
		06/08/2001	RFD97728	RF010071	STANDID
		06/08/2001	RFD97729	RF010071	STANDID
		06/08/2001	RFD98081	RF010071	STANDID
		06/08/2001	RFDA3455	RF010071	STANDID
		06/08/2001	RFDA3581	RF010071	STANDID
		06/08/2001	RFD98072	RF010070	RFETS3
		06/08/2001	RFD98355	RF010070	RFETS3
		06/08/2001	RFD98391	RF010070	RFETS3
		06/08/2001	RFD94499	RF010070	RFETS3
		06/08/2001	RFD95918	RF010070	RFETS3

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Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Shipping	06/08/2001	RFDA0086	RF010070	RFETS3
		06/08/2001	RFD98297	RF010070	RFETS3
		06/08/2001	RFD94538	RF010070	RFETS3
		06/08/2001	RFD95299	RF010070	RFETS3
		06/08/2001	RFD93056	RF010070	RFETS3
		06/08/2001	RFD95735	RF010070	RFETS3
		06/08/2001	RFD95919	RF010070	RFETS3
		06/08/2001	RFD95931	RF010070	RFETS3
		06/08/2001	RFD95909	RF010070	RFETS3
		06/08/2001	RFDA4436	RF010070	RFETS3
		06/08/2001	RFDA3458	RF010070	RFETS3
		06/08/2001	RFDA3527	RF010070	RFETS3
		06/08/2001	RFDA0101	RF010070	RFETS3
		06/08/2001	RFDA0548	RF010070	RFETS3
		06/08/2001	RFDA1066	RF010070	RFETS3
		06/08/2001	RFDA0007	RF010070	RFETS3
		06/08/2001	RFD95112	RF010070	RFETS3
		06/08/2001	RFD95706	RF010070	RFETS3
		06/07/2001	RFD98105	RF010069	RFETS2
		06/07/2001	RFDB0921	RF010069	RFETS2
		06/07/2001	RFDA3530	RF010069	RFETS2
		06/07/2001	RFD98555	RF010069	RFETS2
		06/07/2001	RFDA7760	RF010069	RFETS2
		06/07/2001	RFDA5873	RF010069	RFETS2
		06/07/2001	RFD96230	RF010069	RFETS2
		06/07/2001	RFD97072	RF010069	RFETS2
		06/07/2001	RFD97692	RF010069	RFETS2
		06/07/2001	RFD68647	RF010069	RFETS2
		06/07/2001	RFD69083	RF010069	RFETS2
		06/07/2001	RFD94018	RF010069	RFETS2
		06/07/2001	RFD75909	RF010069	RFETS2
		06/07/2001	RFD82413	RF010069	RFETS2
		06/07/2001	RFD88705	RF010069	RFETS2
		06/07/2001	RFDA3527	RF010070	STANDID
		06/07/2001	RFDA3611	RF010070	STANDID
		06/07/2001	RFDA0548	RF010070	STANDID
		06/07/2001	RFDA1066	RF010070	STANDID
		06/07/2001	RFDA0007	RF010070	STANDID
		06/07/2001	RFDA0086	RF010070	STANDID
		06/07/2001	RFD98072	RF010070	STANDID
		06/07/2001	RFD94538	RF010070	STANDID
		06/07/2001	RFD95299	RF010070	STANDID
		06/07/2001	RFD93056	RF010070	STANDID
		06/07/2001	RFD95735	RF010070	STANDID
		06/07/2001	RFD95919	RF010070	STANDID
		06/07/2001	RFD95931	RF010070	STANDID

Container Approval/Rejection Report

Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Shipping	06/07/2001	RFD95909	RF010070	STANDID
		06/07/2001	RFD58207	RF010069	RFETS2
		06/07/2001	RFDA0087	RF010070	STANDID
		06/07/2001	RFD61848	RF010069	RFETS2
		06/07/2001	RFD81618	RF010069	RFETS2
		06/07/2001	RFD81731	RF010069	RFETS2
		06/07/2001	RFD95097	RF010069	RFETS2
		06/07/2001	RFD95295	RF010069	RFETS2
		06/07/2001	RFD95756	RF010069	RFETS2
		06/07/2001	RFD95766	RF010069	RFETS2
		06/07/2001	RFD95834	RF010069	RFETS2
		06/07/2001	RFD95918	RF010070	STANDID
		06/07/2001	RFD95112	RF010070	STANDID
		06/07/2001	RFD95706	RF010070	STANDID
		06/07/2001	RFD94499	RF010070	STANDID
		06/07/2001	RFD90687	RF010069	RFETS2
		06/07/2001	RFD82662	RF010069	RFETS2
		06/07/2001	RFD85121	RF010069	RFETS2
		06/07/2001	RFD98229	RF010069	RFETS2
		06/07/2001	RFDA4436	RF010070	STANDID
		06/07/2001	RFDA0088	RF010070	STANDID
		06/07/2001	RFDA2942	RF010070	STANDID
		06/07/2001	RFD98355	RF010070	STANDID
		06/07/2001	RFD98297	RF010070	STANDID
		06/07/2001	RFD98391	RF010070	STANDID
		06/07/2001	RFD98505	RF010070	STANDID
		06/07/2001	RFDA0101	RF010070	STANDID
		06/07/2001	RFDA3458	RF010070	STANDID
		06/06/2001	RFD98105	RF010069	STANDID
		06/06/2001	RFDB0921	RF010069	STANDID
		06/06/2001	RFD98555	RF010069	STANDID
		06/06/2001	RFD90687	RF010069	STANDID
		06/06/2001	RFD96230	RF010069	STANDID
		06/06/2001	RFD97072	RF010069	STANDID
		06/06/2001	RFD97692	RF010069	STANDID
		06/06/2001	RFD68647	RF010069	STANDID
		06/06/2001	RFD69083	RF010069	STANDID
		06/06/2001	RFD94018	RF010069	STANDID
		06/06/2001	RFD75909	RF010069	STANDID
		06/06/2001	RFD82413	RF010069	STANDID
		06/06/2001	RFD88705	RF010069	STANDID
		06/06/2001	RFD58207	RF010069	STANDID
		06/06/2001	RFD61848	RF010069	STANDID
		06/06/2001	RFD81618	RF010069	STANDID
		06/06/2001	RFD81731	RF010069	STANDID
		06/06/2001	RFD95097	RF010069	STANDID

Container Approval/Rejection Report

Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Shipping	06/06/2001	RFD95295	RF010069	STANDID
		06/06/2001	RFD95756	RF010069	STANDID
		06/06/2001	RFD95766	RF010069	STANDID
		06/06/2001	RFD95834	RF010069	STANDID
		06/06/2001	RFD82662	RF010069	STANDID
		06/06/2001	RFD85121	RF010069	STANDID
		06/06/2001	RFD98229	RF010069	STANDID
		06/06/2001	RFDA5873	RF010069	STANDID
		06/06/2001	RFDA7760	RF010069	STANDID
		06/06/2001	RFDA3530	RF010069	STANDID
		06/05/2001	RFD72502	RF010068	RFETS3
		06/05/2001	RFD97322	RF010068	RFETS3
		06/05/2001	RFD61478	RF010068	RFETS3
		06/05/2001	RFD95309	RF010068	RFETS3
		06/05/2001	RFD95314	RF010068	RFETS3
		06/05/2001	RFD96376	RF010068	RFETS3
		06/05/2001	RFD96471	RF010068	RFETS3
		06/05/2001	RFD95772	RF010068	RFETS3
		06/05/2001	RFD95774	RF010068	RFETS3
		06/05/2001	RFD97695	RF010068	RFETS3
		06/05/2001	RFD98143	RF010068	RFETS3
		06/05/2001	RFDA1180	RF010068	RFETS3
		06/05/2001	RFD85119	RF010068	RFETS3
		06/05/2001	RFD86634	RF010068	RFETS3
		06/05/2001	RFD75500	RF010068	RFETS3
		06/05/2001	RFD81400	RF010068	RFETS3
		06/05/2001	RFD81496	RF010068	RFETS3
		06/05/2001	RFD68666	RF010068	RFETS3
		06/05/2001	RFD71784	RF010068	RFETS3
		06/05/2001	RFD68652	RF010068	RFETS3
		06/05/2001	RFD67548	RF010068	RFETS3
		06/05/2001	RFD72734	RF010068	RFETS3
		06/05/2001	RFDA7743	RF010068	RFETS3
		06/05/2001	RFDA7751	RF010068	RFETS3
		06/05/2001	RFD98908	RF010068	RFETS3
		06/05/2001	RFDA6787	RF010068	RFETS3
		06/05/2001	RFDA9101	RF010068	RFETS3
		06/05/2001	RFD98133	RF010068	RFETS3
		06/04/2001	RFD97695	RF010068	STRUMM
		06/04/2001	RFD98133	RF010068	STRUMM
		06/04/2001	RFD75500	RF010068	STRUMM
		06/04/2001	RFD85119	RF010068	STRUMM
		06/04/2001	RFD86634	RF010068	STRUMM
		06/04/2001	RFD81400	RF010068	STRUMM
		06/04/2001	RFD81496	RF010068	STRUMM
		06/04/2001	RFD68666	RF010068	STRUMM

Container Approval/Rejection Report

Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Shipping	06/04/2001	RFD71784	RF010068	STRUMM
		06/04/2001	RFD72502	RF010068	STRUMM
		06/04/2001	RFD61478	RF010068	STRUMM
		06/04/2001	RFD98143	RF010068	STRUMM
		06/04/2001	RFDA1180	RF010068	STRUMM
		06/04/2001	RFDA6787	RF010068	STRUMM
		06/04/2001	RFDA7751	RF010068	STRUMM
		06/04/2001	RFDA7743	RF010068	STRUMM
		06/04/2001	RFD98908	RF010068	STRUMM
		06/04/2001	RFDA9101	RF010068	STRUMM
		06/04/2001	RFD72734	RF010068	STRUMM
		06/04/2001	RFD95309	RF010068	STRUMM
		06/04/2001	RFD67548	RF010068	STRUMM
		06/04/2001	RFD68652	RF010068	STRUMM
		06/04/2001	RFD95314	RF010068	STRUMM
		06/04/2001	RFD96376	RF010068	STRUMM
		06/04/2001	RFD96471	RF010068	STRUMM
		06/04/2001	RFD97322	RF010068	STRUMM
		06/04/2001	RFD95772	RF010068	STRUMM
		06/04/2001	RFD95774	RF010068	STRUMM
		06/01/2001	RFD64653	RF010067	RFETS4
		06/01/2001	RFD69082	RF010067	RFETS4
		06/01/2001	RFD71929	RF010067	RFETS4
		06/01/2001	RFD81730	RF010067	RFETS4
		06/01/2001	RFD89071	RF010067	RFETS4
		06/01/2001	RFD88197	RF010067	RFETS4
		06/01/2001	RFD83843	RF010067	RFETS4
		06/01/2001	RFD77073	RF010067	RFETS4
		06/01/2001	RFD91262	RF010067	RFETS4
		06/01/2001	RFD97014	RF010067	RFETS4
		06/01/2001	RFD96227	RF010067	RFETS4
		06/01/2001	RFD95987	RF010067	RFETS4
		06/01/2001	RFD95616	RF010067	RFETS4
		06/01/2001	RFD99765	RF010067	RFETS4
		06/01/2001	RFDA0886	RF010067	RFETS4
		06/01/2001	RFDA1570	RF010067	RFETS4
		06/01/2001	RFDA3984	RF010067	RFETS4
		06/01/2001	RFDA7755	RF010067	RFETS4
		06/01/2001	RFDA9080	RF010067	RFETS4
		06/01/2001	RFDA9091	RF010067	RFETS4
		06/01/2001	RFDA9097	RF010067	RFETS4
		06/01/2001	RFDA9100	RF010067	RFETS4
		06/01/2001	RFDA9093	RF010067	RFETS4
		06/01/2001	RFDA9083	RF010067	RFETS4
		06/01/2001	RFDA7780	RF010067	RFETS4
		06/01/2001	RFDA7699	RF010067	RFETS4

Container Approval/Rejection Report

Site ID	Status	Update Date	Container Number	Shipment Num	Approver ID
RF	Approved Shipping	06/01/2001	RFDA5056	RF010067	RFETS4
		06/01/2001	RFDA4364	RF010067	RFETS4

To: Albuquerque Operations Center
Subject: Daily Operations and Event Report Worksheet

Waste Isolation Pilot Plant (WIPP) input for the Daily Operations and Event Report (DOER):

OPERATIONS:
New: None.

Updates: None.

EVENTS:
New:

CBFO—DIR2001-0028

On 04/12/01, at approximately 1400 hours (MDT), the Idaho National Engineering and Environmental Laboratory (INEEL) notified the Carlsbad Field Office that it had discovered a shipping documentation discrepancy in INEEL's 03/22/01 shipment #IN010053 (#53). INEEL had shipped drum IDRF003201324 instead of shipping drum number IDRF003101324. Both drums are assigned to waste streams that have been approved for disposal at the WIPP. This discrepancy posed no public or environmental threat. Waste shipment #53 arrived at WIPP on 03/24/01 and was disposed in the WIPP underground on 03/29/01. Notifications to the U. S. Nuclear Regulatory Commission (NRC) and the New Mexico Environmental Department (NMED) were made on 04/12/01. Pending the results of INEEL's investigation and root cause analysis, corrective actions to preclude recurrence will be determined in accordance with DOE O 232.1A.

CBFO point of contact is Don Galbraith at 505-234-8365

Updates: None.

Prepared by: Don Galbraith
Date: 04/13/01

OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION (ORPS) OCCURRENCES OF SIGNIFICANCE TO THE OFFICE OF ENVIRONMENTAL MANAGEMENT

TRANSPORTATION REGULATION COMPLIANCE

ID--BBWI-RWMC-2001-0009
Incorrect Waste Drum Shipped
04/13/2001
Off-Normal
Environmental Management
Idaho National Engineering Laboratory, Radioactive Waste Management Complex, TS-Area

It has been determined with relative certainty that one of the transuranic (TRU) waste drums shipped from the INEEL to the Waste Isolation Pilot Plant (WIPP) in TRU waste shipment IN010053 was not the drum identified on the shipping documents. TRU waste shipment IN010053 was shipped to WIPP on March 22, 2001. While gathering the waste drums to assemble the payload for TRU waste shipment IN010059, it was discovered that waste drum IDRF003201324, designated for inclusion in shipment IN010059, was not in its expected storage location. In its place was drum IDRF003101324. A review of shipping and storage records revealed that drum IDRF003101324, which is still in storage, was documented as previously sent to WIPP in TRU waste shipment IN010053. The conclusion is that these two containers were confused for one another during payload assembly, and that an incorrect container was shipped to WIPP on March 22, 2001.

Directed that TRU waste shipment IN010059, currently loaded and scheduled for shipment, be unloaded, and that the identification of all drums in that shipment be reconfirmed per approved procedure. Established a policy, via written Timely Order, to require an additional confirmation by a Senior Supervisory Watch (SSW) to independently verify all the drum identification numbers and proper drum position in the payload for shipment IN010059. The above policy, to require independent verification by the SSW, will remain in effect for all future TRU waste shipments until long-term corrective actions are in place. Submitted Nonconformance Report, NCR 23526. Reviewed the shipping records and documentation for TRU waste shipments IN010053 through IN010058. Verified that the remaining drums in shipment IN010053, and all drums in shipments IN010054 through IN010058 were correct.

The drum was marked with an incorrect shipping category (metal waste form), but the drum contained the graphite waste form. Drums with different shipping categories were included in the same shipment. Waste drum IDRF003201324 contained two hazardous waste codes not contained in drum IDRF0031010324. These two additional hazardous waste codes were not identified on the Hazardous Waste Manifest. The incorrect drum that was shipped is part of an approved waste stream for disposal at WIPP, but this container was not submitted and approved for shipment to WIPP, as required. The weight, fissile gram equivalent, and gas generation rate limits for the shipment were not exceeded.

DOE F 1325.8

United States Government **Department of Energy**

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: April 18, 2001

REPLY TO ATTN OF: CBFO:QA:MLC:VW:01-0689:UFC:2300

SUBJECT: Issuance of Corrective Action Report (CAR) 01-022

TO: Lori Fritz, ID

On April 12, 2001 the Carlsbad Field Office (CBFO) was notified by the Idaho National Engineering and Environmental Laboratory (INEEL) that one of the drums sent to WIPP for disposal in Shipment Number IN010053 was not approved for that shipment. Shipment Number IN010053 was received at WIPP on March 24, 2001 and emplaced in the WIPP underground disposal facility on March 29, 2001.

Please determine and document on the attached CAR continuation sheet, your proposed corrective action plan for the CAR. Please forward the proposed corrective action plan and schedule for completion to me prior to the response due date identified in CAR Block 14.

If you have any questions or comments, please contact me at (505) 234-7423.

Lea Chism

for Samuel A. Vega
Quality Assurance Manager

Attachment

cc: w/attachment
K. Watson, CBFO
L. Chism, CBFO
C. Gadbury, CBFO
J. Wells, DOE-ID
G. Beausoleil, DOE-ID
T. Preston, BBWI
T. Monk, BBWI
M. Eagle, EPA
S. Zappe, NMED
B. Walker, EEG
T. Bowden, CTAC
M. Gerle, WTS
D. Winter, DNFSB

CORRECTIVE ACTION REPORT

1. CAR No.: 01-022	2. Activity Report No.: N/A	3. Page 1 of 2 .
4. Controlling Document: NRC TRUPACT-II Certificate of Compliance No. 9218, TRAMPAC and WIPP HWFP	5. CBFO Assessment Team Leader: Kerry Watson	
6. Responsible Organization: INEEL	7. CAQ Was Discussed With: Don Pound	

8. Requirement that was violated:

a. TRUPACT-II Certificate of Compliance No. 9218 from NRC, item 8 states: "Payload containers within a package shall be selected in accordance with Appendix 1.3.7 of the application, Section 6.0, 'Payload Assembly Requirements.' "

Continued – See Attached

9. Condition Adverse to Quality:

Don Pound of INEEL notified Kerry Watson of CBFO on Thursday, April 12, 2001 that one of the drums sent to WIPP for disposal in shipment number IN010053 was not approved for that shipment. The number of the drum sent was IDRF003201324. The number of the drum that was approved for that shipment was IDRF003101324. Shipment number IN010053 was received at WIPP on March 24, 2001 and emplaced in the WIPP underground disposal facility on March 29, 2001.

Continued – See Attached

10. Suggested Actions (Optional):

11a. Significant CAQ	**(Yes or No): Yes**
11b. Work Suspension Recommended	**(Yes or No): No**
11c. CCA-Related	**(Yes or No): No**
11d. RCRA-Related	**(Yes or No): Yes**

12. Types of Actions: Remedial: X Investigative: X Root Cause: X Actions to Preclude Recurrence: X .

13. CAR Initiator: D. C. Gadbury **Date:** 4-16-01

14. Response Due Date: 05/17/01 **Corrective Action Plan Required: YES**

15. Concurrence:

Michele R. Brown for Kerry Watson — Assessment Team Leader — 4/17/2001 — Date

Michele R. Brown for Kerry Watson — Responsible Assistant Manager — 4/17/2001 — Date

Lea Chism for — Quality Assurance Manager — 4/18/01 — Date

16. Corrective Actions Proposed by the Responsible Organization: Use CAR Continuation Sheet

17. Acceptance of Proposed Corrective Actions:

_____ Assessment Team Leader _____ Date

18. Verification of Corrective Action Completion: (Use CAR Continuation Sheet)

19a. Verified By: _____ _____

19b. Trend Cause Code: _____

20. Closure: _____ Quality Assurance Manager _____ Date

CBFO CORRECTIVE ACTION REPORT

(continuation sheet)

1. CAR No.: 01-022	2. Activity No.: N/A	3. Page 2 of 2

Block # 8 .

b. Section 6.0, third paragraph, second sentence of Appendix 1.3.7 of the TRAMPAC states: "Payload selection shall be made from only those payload containers that have been approved for shipment."

c. Section 6.2.3, second paragraph, third bullet states: "The first two digits (representing the waste type) of ten-digit payload shipping category notation shall be the same for all payload containers making up a payload."

d. Section B-4b(2)(i) of the WIPP Hazardous Waste Facility Permit (HWFP) addresses discrepancies between what the manifest states and the actual waste. The permit requires that the WIPP notify the NMED of any such discrepancy within 15 days of waste receipt if the discrepancy is not resolved. The permit also requires the generators to electronically transmit the waste shipment information to the WWIS before the TRU mixed waste shipment is transported.

Block # 9 .

The shipping category for all the drums in shipment number IN010053, except the one that was improperly sent, was 3003400707. The shipping category for the drum that was improperly sent was 2001700528. Therefore, the first two digits of the ten-digit payload shipping category notation were NOT the same for all payload containers making up the payload.

Since the waste was received on March 24, 2001, the notification should have been made "immediately" after April 8 to satisfy HWFP notification requirements. The notification was made on April 12.

INEEL (the generator) did not electronically transmit the information on drum number IDRF003201324 to the WWIS before the shipment was transported.

Attachment D

•WTS Procedures

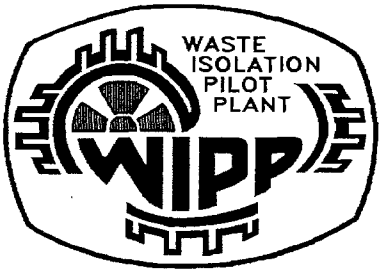
Working Copy

Effective Date: 1/8/01

WP 13-1
Revision 19

WID Quality Assurance Program Description

M. W. Lipscomb	/	11/7/00
Manager, Quality Assurance		Date
J. L. Epstein	/	11/7/00
WID General Manager		Date
S. A. Vega	/	1/8/01
Carlsbad Field Office Quality Assurance Manager		Date



WID Quality Assurance Program Policy Statement

Westinghouse Waste Isolation Division (WID), a division of the Westinghouse Government Services Group, is the United States Department of Energy's (DOE) performance-based management and operating contractor at the Waste Isolation Pilot Plant (WIPP). WID is committed to performing work activities in such a manner as to minimize risk and environmental impacts and to maximize safety, reliability, and performance.

Toward achievement of this goal, the WID Quality Assurance Program Description (QAPD) is intended to provide an effective management system tailored to WIPP operations and activities through the deliberate and graded application of quality assurance (QA) elements. As a management tool, the graded approach determines the degree of application of controls commensurate with importance and relative risk to safety, waste isolation, and regulatory compliance, among other factors.

WID's policy is for all WID managers to participate in establishing, implementing, assessing, and improving the WID QA program. Senior management's task is to provide planning and resources to accomplish WID's objectives. The WID line organization is responsible for achieving the desired level of quality, and reviewing, evaluating, and improving work processes. Each individual is responsible for the quality of his or her own work.

As General Manager of WID, I am committed to implementing the QA program defined in the WID QAPD. I delegate to the manager of the Quality Assurance Department the authority for maintaining the WID QAPD, and for providing assistance and support to the line organization for its effective implementation.

J. L. Epstein
General Manager
Waste Isolation Division
Westinghouse Government Services Group

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASTM	American Society for Testing and Materials
CBFO	Carlsbad Field Office
CFR	*Code of Federal Regulations*
DOE	Department of Energy
DOE-AL	Department of Energy-Albuquerque
DOE-HQ	Department of Energy-Headquarters
DQO	Data Quality Objective
EDO	environmental data operation
EPA	U.S. Environmental Protection Agency
IEEE	Institute of Electrical and Electronics Engineers
ISMS	Integrated Safety Management System
M&DC	Monitoring and Data Collection Equipment
M&TE	Measuring and Test Equipment
NDE	nondestructive examination
NDT	Nondestructive testing
NIST	National Institute of Standards and Technology
NMED	New Mexico Environment Department
NQA	Nuclear Quality Assurance
NUREG	Nuclear Regulatory Commission Report Designation
QAPD	Quality Assurance Program Description
QAPjP	Quality Assurance Project Plan
TRAMPAC	TRUPACT-II Authorized Methods for Payload Control
TRU	transuranic
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WID	Waste Isolation Division
WIPP	Waste Isolation Pilot Plant

INTRODUCTION①

The Waste Isolation Division (WID) Quality Assurance Program Description (QAPD) is the quality management document which identifies federal and industry quality requirements applicable to the WID quality assurance (QA) program. This document establishes the minimum quality requirements for WID personnel and guidance for the development and implementation of QA programs by all WID departments. Requirements and guidance are based on criteria contained in Title 10 *Code of Federal Regulations* (CFR) Part 830.120, DOE Order 414.1A, and the Department of Energy (DOE) Carlsbad Field Office (CBFO) Quality Assurance Program Document (QAPD), and supplemented with additional criteria/guidance from such sources as 10 CFR Part 71, 48 CFR Part 970.5204-2, DOE Policy 450.4, NQA-1 (1989 edition), and EPA QAMS-005/80, EPA Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans. Table 1 lists source documents, which fall into one of three categories:

- Regulatory documents that define the requirements necessary for WIPP to be granted a certificate of compliance by the federal government and permit(s) by state governmental agencies to dispose of mixed transuranic (TRU) wastes in the WIPP repository
- Commitment documents that are imposed by DOE
- Guidance documents that provide additional information useful in developing QA programs

This list of source documents is NOT all inclusive.

The QAPD is organized to provide a description of general, management, performance, and assessment requirements, as well as supplementary quality assurance requirements for specific application areas (i.e., section 4, Sample Control and Quality Assurance Requirements, and section 6, Software Requirements [ASME NQA-2, Part 2.7]).

WID is required to develop a QA program description that describes how we intend to manage our work activities to achieve planned objectives and goals. Quality assurance implementing procedures shall be utilized to control these work activities.

The requirements and guidance contained in this QAPD are based on the principle that work shall be planned, documented, performed under controlled conditions, and periodically assessed to establish work item quality and process effectiveness and promote improvement. The requirements described in this document reflect the responsibilities assigned to management and personnel of all WID departments and their responsibility for planning, achieving, verifying, and assessing quality and promoting continuous improvement. This QAPD further delineates the quality contributions of all personnel and encourages their active participation in accomplishing WID's quality objectives.

TABLE 1 - QA PROGRAM SOURCE DOCUMENTS

REGULATORY DOCUMENTS	TITLE
Title 10 CFR Part 830.120	Nuclear Safety Management, Quality Assurance Requirements
Title 10 CFR Part 71, Subpart H	Quality Assurance (Packaging and Transportation)
Title 40 CFR Part 194	Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations
Title 40 CFR Part 261	Identification and Listing of HazardousWaste
Title 40 CFR Part 268.6	Land Disposal Restrictions
Title 48 CFR Part 970.5204-2	Integration of Environment, Safety, and Health into Work Planning and Execution
ASME NQA-1-1989 and Supplementary Requirements	Quality Assurance Program Requirements for Nuclear Facilities
ASME NQA-2a-1990 addenda, Part 2.7	Quality Assurance Requirements of Computer Software for Nuclear Facility Applications
ASME NQA-3-1989 (excluding section 2.1(b) and (c), and section 17.1)	Quality Assurance Program Requirements for the Collection of Scientific and Technical Information for Site Characterization of High-Level NuclearWaste Repositories
COMMITMENT DOCUMENTS	**TITLE**
DOE Order 414.1A	Quality Assurance
DOE Policy 450.4	**Safety Management** System Policy
CBFO QAPD CAO-94-1012	**Quality Assurance** Program Document
DOE/CAO-2276	**Integrated Safety** Management System Description
ANSI/NCSL Z540-1-1994	**Standards and Calibration** Program
GUIDANCE DOCUMENTS	**TITLE**
DOE G 414.1-2	**Quality Assurance Management System** Guide for use with 10 CFR 830.120 and DOE O 414.1
EPA QAMS-005/80	EPA Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans
NUREG-1297 (2/88)	Peer Review for High-Level NuclearWaste Repositories
NUREG-1298 (2/88)	Staff Position – Qualification of Existing Data for High-Level Nuclear Waste Repositories
NUREG-0167 (1993)	Software Quality Assurance Program and Guidelines

SECTION 1 MANAGEMENT QUALITY ASSURANCE REQUIREMENTS

1.1 Quality Assurance Program and Organization

This section defines the requirements for the development of the WID QA program. It also describes the WID organizational structure, interfaces, functional responsibilities, and levels of authority for performing, managing, and assessing the adequacy of work. WID is required to develop, implement, maintain, and document its QA programs in accordance with 10 CFR Part 830.120; 40 CFR Part 194; 10 CFR Part 71, Subpart H; DOE Order 414.1A, and the DOE CBFO QAPD.

The QA program defines the aspects of the management systems to be employed to ensure that the requirements and guidance described by this QAPD are met. The purpose of specifying requirements and associated guidance for a QA program is to ensure that WID develops and implements an effective management system. The management system shall ensure that items, processes, and services such as the following meet or exceed the requirements of the WID QA program:

- Waste characterization activities and assumptions
- Environmental monitoring, monitoring of the performance of the disposal system, and sampling and analysis activities
- Field measurements of geologic factors, ground water, meteorologic, and topographic characteristics
- Computations, computer codes, models and methods used to demonstrate compliance with the disposal regulations in accordance with the provisions of this program
- Design of the disposal system and actions taken to ensure compliance with design specifications
- Other systems, structures, components, and activities important to the containment of waste in the disposal system

The WID QAPD provides for efficient conduct of work that ensures protection of workers, the public, and the environment, taking into account the work to be performed and the associated hazards. The WID QAPD and other site management systems form the basis for the WIPP Integrated Safety Management System (ISMS), which provides a formal, organized process to plan, perform, assess, and improve the safe conduct of work. The WIPP ISMS is documented in DOE/CAO-2276, Integrated Safety Management System Description. The WID QAPD functions with and supports the WIPP ISMS. The QA program provides processes and tools for ensuring that the ISMS achieves its objectives. Management controls established in the WID QAPD support the following attributes and objectives of the ISMS:

- Expectations for implementation (DEAR 970.5204-2 (c))
- Documentation of the Management System (ISMS Principle 7 Operations Authorization)
- Clear roles and responsibilities (ISMS Principle 2)
- Balanced priorities (resources) (ISMS Principle 4)
- Feedback and improvement (ISMS Core Function 5)
- Line management responsibility (ISMS Principle 1)
- Competence and qualifications (ISMS Principle 3)
- Standards and controls for work (ISMS Principle 5 and Core Function 4)
- Graded and tailored controls (ISMS Principle 6)

Effective implementation of the WID QA program is dependent on the efforts of all levels of the WID organization. The organization is structured such that the individual performing the work is responsible for achieving and maintaining quality; line management is responsible for defining quality, developing appropriate plans to attain quality, supporting the workers in pursuit of quality, verifying the quality, and evaluating quality achievement; and an independent assessor is responsible for independently assessing the quality of the work. The QA Department is responsible for defining, integrating and ensuring effective implementation of QA activities. WID has applied a graded approach to the application of QA requirements to WID activities and items, in accordance with section 1.1.8.2 of this QAPD.

An organization chart is shown in figure 1-1.

1.1.1 WID General Manager

The General Manager has overall responsibility and authority for the development and implementation of the QA program. The General Manager is responsible for approving this document. Authority for execution of the QA function is delegated to the QA manager. The QA manager is authorized to establish QA policy and ensure its effective implementation.

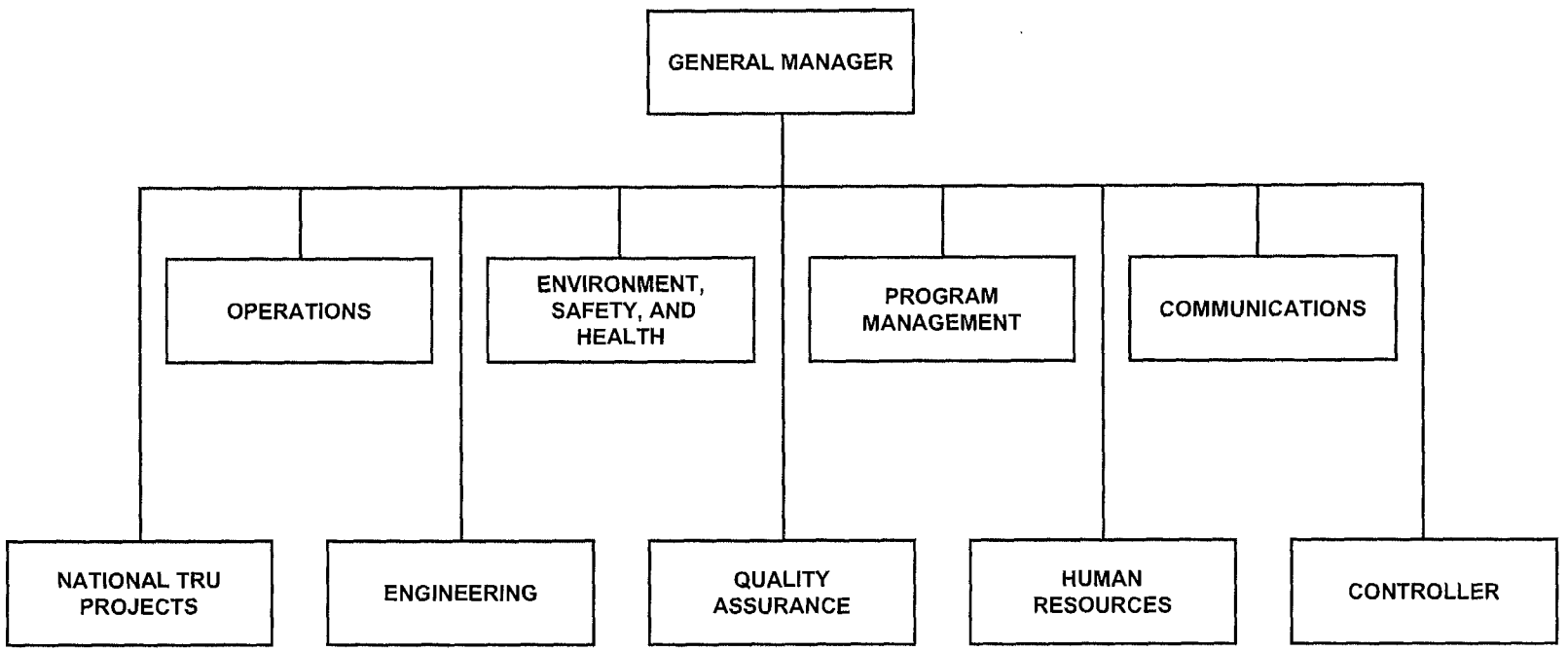


Figure 1-1 - WID Organization Chart

1.1.2 Department Managers

The department managers represent the following functional organizations:

- Operations Department
- Controllers Department
- Engineering Department
- Program Management Department
- Communications Department
- Human Resources Department
- Quality Assurance Department
- Environment, Safety, and Health Department
- National TRU Projects
  - Central Characterization Project
  - National TRU Integration Project
  - Requirements Management Project
  - RH-TRU Project
  - Transportation Project

Department managers are responsible for implementing this QAPD. Department managers provide the necessary planning, organization, direction, control, resources, and support to achieve their defined objectives. Department managers are required, and have the authority, to establish and implement policies and procedures that control the quality of work in accordance with this QAPD. Department managers report directly to the General Manager.

Department managers have various quality related responsibilities which include:

- Planning, performing, assessing, and improving work subject to the controls of this QAPD

- Ensuring that adequate technical and QA training is provided for personnel performing work subject to the controls of this QAPD

- Ensuring compliance with all applicable regulations, DOE Orders, requirements, and local laws

- Ensuring that personnel adhere to procedures for the generation, identification, storage, and disposition of QA records

- Determining and providing the necessary resources and environment to accomplish required activities and maintain the quality of work performed in accordance with this QAPD

- Establishing and controlling schedules to ensure that required activities are completed as planned and in accordance with applicable requirements

- Having the responsibility for halting unsatisfactory evolutions such that cost and schedule do NOT override environmental, health, safety, and quality considerations

- Developing, implementing, and maintaining plans, policies, and procedures that implement applicable portions of the QA program

- Identifying, investigating, reporting, and correcting quality problems

1.1.3 Line Management

Quality achievement is the responsibility of those performing the work. The line management is responsible for the achievement and verification of quality in their area. Management shall identify the responsibilities and authorities of those organizational line management positions responsible for achieving and verifying quality.

Management should empower employees by delegating authority and decision making to the lowest appropriate level in the organization.

Each line organization is responsible for indoctrination and training of personnel, as necessary.

The indoctrination and training, at a minimum, shall include the performance of activities important to safety and waste isolation, the process of receiving, handling, moving, monitoring, and disposal of TRU waste, and for ensuring that suitable proficiency is achieved and maintained.

1.1.4 Employee

Each WID employee is responsible for the quality of his or her work and for promptly reporting all existing, developing, or potential conditions adverse to quality to the responsible management for evaluation and action. The requirements of this QAPD are binding on all personnel through the use of implementing documents.

1.1.5 Quality Assurance Manager

The QA manager has the overall responsibility and authority to perform independent assessments to assure the effective implementation of the QA program. Additional responsibilities of the QA manager include the following:

- Develop, establish, and interpret the overall WID QA policy and ensure effective implementation

- Prepare, maintain, and improve the WID QAPD

- Interface with the CBFO staff, participants, and other stakeholders on QA matters

- Schedule and conduct QA independent oversight
- Maintain liaison with QA organizations from other WIPP participants and other affected organizations
- Review WID procedures:
  - That implement the QAPD
  - For proper application of the QA program to WID items and activities
- Evaluate the adequacy of supplier QA programs
- Review, concur, or approve the disposition of conditions adverse to quality
- Provide for the administrative processing of documentation concerning conditions adverse to quality
- Participate in the disposition of supplier-related nonconformances
- Assist other departments and sections with quality planning, documentation, measurement, problem identification, and the development of problem solutions
- Provide guidance to all applicable subordinate organizations concerning identification, control, and protection of QA records
- Track and perform trend analysis of quality problems, and report quality problem areas
- Ensure QA Department involvement in decisions or commitments which directly affect nuclear safety or waste isolation at the WIPP

The QA manager shall:

- Have direct access to responsible management at a level where appropriate action can be effected.
- Be sufficiently independent from cost and schedule considerations.
- Have the organizational freedom to effectively communicate with other senior management positions.
- Have no assigned responsibilities unrelated to the QA program that would prevent appropriate attention to QA matters.

Management shall grant the QA Department sufficient authority, access to work areas, and organizational freedom to:

- Identify quality problems
- Participate in development of solutions
- Verify implementation of solutions
- Ensure that unsatisfactory conditions are controlled until proper disposition has occurred.

1.1.6 Delegation of Work

Individuals or organizations responsible for the work may delegate that work to other individuals or organizations; however, the individuals or organizations making the delegation shall retain overall responsibility for that work.

1.1.7 Resolution of Disputes

Differences of opinion involving QA program requirements will be brought to the attention of the responsible manager and the QA manager. If NOT resolved, these differences will be elevated progressively to higher levels of management as necessary.

1.1.8 Establishment and Maintenance of Quality Assurance Programs

WID shall incorporate into its QA program documents and implementing procedures the requirements described in the CBFO QAPD, RCRA Permit Waste Analysis Plan (WAP), Quality Assurance Project Plans (QAPjP), Certification QA Plans, Waste Acceptance Criteria (WAC), and TRUPACT-II Certification of Compliance, including TRUPACT II Authorized Methods for Payload Control (TRAMPAC), as applicable.

The WID QAPD, and all changes to the QAPD, shall be reviewed and approved by the CBFO.

The QA manager, with input from the department managers, shall prepare and maintain a procedures matrix which identifies the documents and their specific sections that implement each applicable requirement of the CBFO QAPD. The matrix shall be updated as implementation procedures are revised.

When the CBFO QAPD is revised, the WID QAPD, QAPjPs, implementing procedures, and procedures matrix shall be evaluated and appropriately revised to ensure that the WID QA program meets the applicable requirements of the CBFO QA program.

1.1.8.1 Quality Assurance Project Plans

- Each QAPjP, when required by other regulatory drivers, shall include the information required by the governing regulatory driver.
- The QA manager shall review and approve all WID QAPjPs.
- When a QAPjP is revised, all affected implementing procedures are to be reviewed and changed as appropriate. QAPjP revisions will be approved by the QA manager and the cognizant department manager.
- The TRU waste characterization QAPjP is the implementing document for WAP QAPjP requirements. The TRU waste characterization QAPjP shall be developed and approved in accordance with WAP requirements, in addition to the above requirements.

1.1.8.2 Grading Items and Processes and Applying Quality Assurance Controls

The graded approach is a systematic determination by which items, services, and processes are analyzed to determine the extent to which the QA requirements of this QAPD are applied to each item, service, or process. The grading process provides the flexibility to design controls that best suit the facility or activity. The graded approach process shall determine the appropriate level of effort necessary in the performance of work important to safety and waste isolation at the WIPP facility. The requirements in this QAPD shall be applied to the items, services, and processes which require the greatest level of QA as determined by the grading process. A subset of these requirements may be applied to other items, services, and processes, as determined by the cognizant manager or the graded approach philosophy.

The level of QA controls shall be commensurate with the following criteria:

- Design Class
- The importance of an item or activity with respect to safety, waste isolation, and regulatory compliance
- The importance of the data to be generated
- The need to demonstrate compliance with specific regulatory design and QA requirements
- The impact on the results of performance assessments and engineering analyses
- The magnitude of any hazard or the consequences of failure
- The life-cycle stage of a facility or item

- The programmatic mission of a facility
- The particular characteristics of a facility, item, or activity (e.g., complexity, uniqueness, history, or the necessity for special controls or processes)
- The relative importance of radiological and nonradiological hazards

Grading methods shall provide for:

- The assignment of management and QA control levels
- The definitive criteria used in selecting those levels
- Detailed descriptions of the management and QA control provisions corresponding to those levels

The QA manager shall perform assessments to verify effective implementation of the graded approach process.

Procedures which establish and implement graded approach shall be submitted to the CBFO QA manager for approval.

1.1.9 Interfaces

The CBFO is the approval authority for all external QA interface agreements and subsequent revisions between WIPP participants (Generator Sites, Sandia National Laboratories, DOE, and WID).

Interface agreements between the WID and DOE-HQ, EPA, DOE-AL, DOE-CBFO, and others are considered external interfaces.

Where more than one organization is involved in the execution of activities covered by the WIPP QA program, the responsibility and authority of each organization shall be clearly established and documented. The external interfaces between organizations, the internal interfaces between organizational units, and interface changes shall be documented. Interface responsibilities shall be defined and documented and shall include the requirements for management, performance, and assessment.

1.1.10 Communications

Management at all levels shall establish communication channels that provide timely and wide dissemination of information pertinent to quality performance, such as:

- The status of development and implementation of the QA program
- The status and resolution of significant quality problems
- The lessons learned from significant quality problems and adverse conditions
- Quality management practices and improvements
- Trend analysis results

1.1.11 Planning Work

Planning shall be performed and documented to ensure that work is accomplished under suitably controlled conditions. Appropriate, nationally recognized standards (e.g., DOE Standards, ANSI, ASME, IEEE) shall be used, whenever applicable, to develop and implement methods and processes to control the conduct of work. Standards used to develop the implementing procedures shall be documented in work activity planning.

When no recognized standard exists, the technical procedures shall be reviewed to ensure technical adequacy of the methods and processes to be implemented. As appropriate, planning elements shall include:

- Definition of work scope and objectives, and a listing of the primary tasks involved
- Identification of scientific approach or technical methods used to collect, analyze, or study results of applicable work
- Identification of methods or procedures for field, laboratory, and engineering sampling, testing, and analysis activities
- Provisions for determining the resources and numbers of personnel required
- Provisions for developing, maintaining, and controlling schedules that ensure timely and safe completion of required activities.
- Description of any management reviews, technical reviews, QA reviews, peer reviews, and readiness reviews, as appropriate
- Identification of applicable technical standards and quality criteria
- Identification of applicable implementation documents
- Identification of field and laboratory testing equipment or other equipment
- Identification of, or provisions for the identification of, required records and the recording of objective evidence of the results of the work performed
- Identification of prerequisites, special process controls, specific environmental conditions, processes, or skills
- Identification of computer software

Management shall promote effective achievement of performance objectives by obtaining timely, objective feedback on the effectiveness of planning and work to meet performance measures; and involving all employees to ensure that improvements are identified and implemented to enhance performance.

1.1.12 TRU Waste Characterization and Certification Organizational and Individual Responsibilities

This section provides requirements for characterization and certification performed by WID or its subcontractors of TRU waste for WIPP disposal.

1.1.12.1 TRU Waste Site Organization and Program

WID shall develop and implement a QAPjP that demonstrates compliance with and implementation of WIPP TRU waste characterization requirements and the applicable requirements of the WIPP Hazardous Waste Facility Permit and its associated Waste Analysis Plan. This QAPjP shall:

- Include or reference the appropriate management and technical criteria of the Program, as well as qualitative or quantitative criteria for determining that Program activities are being satisfactorily performed
- Identify the organization(s) and position(s) responsible for their implementation
- Reference site-specific documentation that details how each of the required elements of the program will be performed
- Be reviewed for concurrence by the Site Project Manager, Site Project QA Officer, the cognizant DOE Field Officer, the CBFO NTWP Team Leader and the CBFO QA Manager (including all subsequent revisions).

Prior to the implementation of program activities, implementing documents will be developed for all activities affecting program quality that require written instructions or procedures. Compliance with implementing documents will ensure that tasks are performed in a consistent manner that results in achieving the quality required for the program. The organization, format, content, and designation of implementing documents must be described in the QAPjPs.

1.1.12.2 Site Project Manager

WID shall designate a site project manager to oversee characterization program activities. A description of the site project manager's role in relation to the other organizational functions at the site shall be included in the site's QAPjP. The site project manager (or designee) shall review and recommend approval of the site QAPjP and subsequent revisions before it is submitted to CBFO for review. Specific program responsibilities assigned to the site project manager include the following:

- Waste selection and tracking
- Data validation/verification
- Data reconciliation with DQOs
- Assignment of EPA Hazardous Waste Numbers

- QA/Quality control (QC) reports to DOE field office
- Data transmission to CBFO
- Coordinating the CBFO certification audit of the Central Characterization Project

1.1.12.3 Site Project Quality Assurance Officer

WID shall designate a site project QA officer and provide a detailed description of this position in the site QAPjP. The site project QA officer (or designee) shall review the site QAPjP and subsequent revisions, verify that the QA requirements have been implemented, and provide day-to-day guidance to the project staff on quality-related matters. This individual will have the authority to stop program activities if quality is not assured or controlled. Specific program responsibilities assigned to the site project QA officer include the following:

- Laboratory/testing facility assessment
- Nonconformance tracking
- Corrective action verification
- Data validation/verification
- Data QA documentation verification
- Evaluating trends in compliance with Program objectives
- QA/QC reports to site project manager

The site project QA officer shall summarize all relevant information on the QA/QC activities during the period in a semiannual report. This semiannual report shall be distributed to the DOE field office and the site project manager at the same time. The site project manager shall review the report, comment if appropriate, and then forward a copy of the report with comments to the DOE field office.

1.1.12.4 Site Waste Certification Officer

WID shall designate a waste certification official who will document and certify that all TRU waste payload containers prepared for shipment to WIPP meet all the requirements specified in the Waste Acceptance Criteria for the Waste Isolation Pilot Plant and transmit the waste certification data to WIPP.

1.1.12.5 Site Transportation Certification Officer

WID shall designate a transportation certification official who documents and certifies that payload assemblies for shipment to WIPP meet all the requirements of the TRUPACT-II Authorized Methods for Payload Control (TRAMPAC; NRC 1997).

1.2 Personnel Qualification and Training

Personnel performing work will be qualified to ensure job proficiency. Management shall establish methods for the evaluation, selection, indoctrination, training, and qualification of personnel performing work.

Records generated by qualification and project or work-specific skill training programs are collected and maintained as part of the individual's training records.

1.2.1 Qualification

Qualification requirements for positions or job categories within the WID organizations will be established commensurate with the functions associated with the work performed. Initial experience and educational requirements are assured through the evaluation made for the position by the interviewing supervisor/manager and the WID hiring authority. The evaluation will be documented for positions that are directly related to environmental compliance, nuclear safety, and waste isolation. These positions include but are not limited to managers, designers, scientists, independent assessment personnel, operators, maintenance personnel, technicians, auditors, and inspectors. The department managers shall:

- Establish qualification requirements for positions commensurate with the scope, complexity, and nature of the work, including minimum education, training, and experience requirements.

- Ensure that qualifications commensurate with the minimum requirements specified, including minimum education and experience, are met or, when education and experience can NOT be specifically verified, provide a statement of justification for the personnel assignment.

1.2.2 Training

Training shall emphasize correct performance of work and provide a description of why quality and nuclear safety requirements exist and shall describe the fundamentals of the work and its context. Training shall be subject to ongoing review, using feedback from personnel performance, trainees and supervisors, accidents, and assessments where appropriate, to determine instruction and program effectiveness, and shall be upgraded whenever needed improvements or other enhancements are identified.

Department managers shall:

A. Ensure that personnel are indoctrinated and trained, including on-the-job training as needed, to achieve initial proficiency; maintain proficiency; and adapt to changes in technology, methods, job responsibilities and QA requirements identified in implementing procedures prior to performing assigned tasks.

B. Ensure that personnel are indoctrinated in the following:

   - General criteria, including quality requirements, applicable codes, regulations, and standards

   - Applicable implementing procedures

C. Ensure that records generated during qualification, general indoctrination and training, or specific skill training activities are collected and maintained as QA records

1.3 Quality Improvement

This section defines management's responsibility for building a culture in which continuous improvement is a fundamental and integral part of the organization's mission. WID shall establish and implement processes to detect and prevent adverse quality conditions and to promote quality improvement. Preventive actions shall be taken, through design, procurement, and other process controls and assessment activities as described in this QAPD, to prevent or reduce the probability of occurrence of quality problems. Items and processes that do NOT meet established requirements shall be identified, controlled, and corrected.

Correction shall include identifying the causes of adverse conditions and actions to prevent recurrence. Item reliability, process implementation, and other relevant information shall be reviewed and the data analyzed to identify items and processes needing improvement.

All personnel are responsible for identifying nonconforming items and processes and are encouraged by management to suggest improvements. Management at all levels should encourage the identification of nonconforming items and processes by:

- Endeavoring to "fix the problem, NOT the blame"
- Encouraging candid, frank, and open communications

Nonconformances shall be documented, evaluated, and dispositioned.

1.3.1 Conditions Adverse to Quality

Condition adverse to quality is an all-inclusive term used in reference to deficiencies, failures, malfunctions, defective items, and nonconformances. Conditions adverse to quality shall be documented. Documentation shall clearly identify and describe the characteristics that do not conform to specified criteria. Conditions adverse to quality that are primarily programmatic in nature are addressed on corrective action reports (Corrective Action Report or Corrective Action Request [CAR]); nonconforming items, such as hardware or data, are addressed on nonconformance reports (NCR).

A. Conditions adverse to quality shall be classified in regard to their significance, and corrective actions shall be taken accordingly.

B. Two categories of classification shall be established:

- Conditions adverse to quality
- Significant conditions adverse to quality

Significant conditions adverse to quality are conditions that, if not corrected, could have a serious effect on safety, operability, the ability to isolate waste, TRU waste site certification, regulatory compliance demonstration, or effective implementation of the QA program; or an adverse trend or inclination, as determined by formal performance evaluation and trend analysis.

C. Conditions adverse to quality shall be investigated and documented by responsible management. Corrective action shall be determined, documented, and completed in a timely manner.

D. CBFO shall be notified of corrective action reports generated by WID or its subcontractors affecting waste for WIPP disposal. Copies of all internal corrective action reports that relate to violations of the WIPP Hazardous Waste Permit shall be forwarded to CBFO for tracking (upon initial issue and again upon closure).

E. Line management shall investigate the cause and the extent of the condition and document the results; determine, document, and complete remedial action and take prompt corrective action to prevent recurrence. These may not all apply for conditions adverse to quality. In the case of significant conditions adverse to quality the root cause shall be determined. The QA Department shall evaluate and concur, as appropriate, with the proposed corrective action, including remedial action, the root/probable cause, and actions to prevent recurrence to ensure that QA program requirements are satisfied.

F. Significant conditions adverse to quality will be reported to and evaluated by the QA Department, relevant regulatory compliance functions (e.g., Environment, Safety and Health), and the appropriate management responsible for the condition, to determine if a work suspension order is necessary. If necessary, work shall be suspended in accordance with the following:

- The responsible organization shall issue a work suspension order to the responsible management after a work suspension condition has been identified.
- Any WIPP employee having a concern for employee safety, the safety of the environment, or the quality or regulatory compliance of the activity has the responsibility and authority to suspend the performance of that activity.
- Department management will take action to evaluate and correct the condition(s) that caused the suspension of work. QA shall verify and document the completion of applicable corrective actions prior to any management action releasing the work suspension order.

G. Significant conditions adverse to quality will be documented and reported to line management, department managers, and to the QA Department.

H. Corrective action plans are required for all significant conditions adverse to quality and for any violation of the WIPP Hazardous Waste Permit. Such corrective action plans shall address all provisions of section 1.3.3. Management of the responsible organization shall be notified and provided with the results of the subject evaluations.

1.3.2 Nonconforming Items

Nonconforming items are adverse conditions or the result of adverse conditions requiring the following additional controls:

Nonconforming items shall be identified by marking, tagging, or other methods that do NOT adversely affect their end use. The identification shall be legible and easily recognizable and shall provide traceability to the related adverse condition documentation. If identifying a nonconforming item is not practical, the container, package, or segregated storage area shall be clearly identified. For installed items which cannot be directly identified, the identification shall be placed in an appropriate location, such as the doorway to an equipment room, remote switch, etc.

The nonconforming item shall be moved to a segregated storage area, if practical. The segregated storage area shall be clearly identified and designated. The segregation area shall be access controlled. If segregation is impractical or impossible due to physical conditions, then other administrative controls and precautions shall be employed to preclude inadvertent use. Installed nonconforming items which cannot be segregated shall be identified as nonconforming until disposition and corrective action are completed.

Nonconforming items shall be controlled to prevent any adverse impact on test, installation, or use. Nonconformance documentation shall include recommended dispositions of nonconforming items. The nonconformance shall be reviewed by the organization that originally reviewed and approved the item or by a designated organization that is qualified and knowledgeable. Organizations affected by the nonconformance shall be notified. Responsibility for the control of further processing, delivery, installation, or operation of nonconforming items, systems, or equipment shall be designated in writing.

CBFO shall be notified in writing within five (5) calendar days of identification of any non-administrative nonconformance related to applicable requirements specified in the WIPP Hazardous Waste Permit Waste Analysis Plan (WAP) which are first identified at the Site Project Manager's signature release level (i.e., a failure to meet a Data Quality Objective [DQO]). Notification is also required if the results of the confirmatory analytical techniques specified in the WIPP Hazardous Waste Permit Attachment B are inconsistent with acceptable knowledge documentation. The nonconformance report

shall be submitted to CBFO within thirty (30) calendar days of identification of the deficiency.

The nonconforming characteristics shall be reviewed, and recommended dispositions of nonconforming items shall be proposed and approved in accordance with documented procedures. The responsibility and authority for the evaluation and disposition of nonconforming items shall be defined in applicable QA plans or implementing procedures. Personnel responsible for analyzing and dispositioning nonconformances shall have demonstrated competence in the specific area they are evaluating, have an adequate technical understanding of the item function, and have access to pertinent background information relative to the nonconformance. The disposition of nonconforming items will have the concurrence of the QA Department.

A. The disposition of "use as is," "reject," "repair," "rework," or "scrap" for nonconforming items shall be identified and documented. Further processing, delivery, installation, or use of a nonconforming item shall be controlled, in accordance with approved procedures, pending the evaluation and approval of the disposition.

B. Items that do NOT meet original design requirements that are dispositioned "use as is" or "repair" shall be subject to design control measures commensurate with those applied to the original design. The as-built records, if such records are required, shall reflect the accepted deviation. The technical justification for the acceptability of a nonconforming item that has been dispositioned "repair" or "use as is" shall be documented.

C. The disposition of an item to be reworked or repaired shall contain a requirement to re-examine the item (inspect, test, or conduct nondestructive examination) to verify acceptability. Repaired or reworked items shall be reexamined using the original process and acceptance criteria unless alternative acceptance criteria or methods have been established as part of the nonconforming item disposition.

D. The responsibility and authority for reviewing, evaluating, approving the disposition, and closing nonconformances shall be specified.

1.3.3 Corrective Actions

Corrective actions are required to address the following points, as appropriate:

- Determination of the root or probable cause(s) of the condition
- Action to resolve the initial condition
- Action to preclude recurrence of the condition

- Assessment of the extent and impact of the condition on affected items or activities

- Schedule completion dates for the required actions, and organizations/individuals responsible for follow-up

A follow-up system shall be established to verify:

- Proper implementation of scheduled corrective actions in a timely manner

- The effectiveness of the corrective actions to prevent the condition from reoccurring

The QA Department shall evaluate the adequacy of corrective actions planned, assign responsibility for follow-up verification, and perform and document the corrective action verification.

1.3.4 Improvement Analysis

Quality performance data shall be identified, collected, and analyzed to identify opportunities to improve items, activities, and processes. This analysis should consider information from external sources and not be limited to one type of work or to one organization.

The analysis shall be performed in a manner and at a frequency that provide for prompt identification of trends adverse to quality. Conditions adverse to quality shall be evaluated to identify adverse quality trends and root causes. Results of the evaluation shall be reported to the organization responsible for corrective action.

Trending information shall be reported to responsible management and to QA. Trending information will be provided to the CBFO.

1.3.5 Recurring Conditions Adverse to Quality

For recurring conditions adverse to quality, management shall, as appropriate:

- Determine the events leading to the occurrences

- Develop an understanding of the technical and work activities associated with the conditions adverse to quality

- Ascertain any generic implications

- Determine the extent to which similar quality problems, or precursors to the problem, have been recognized by the responsible organization

- Determine the effectiveness of any corrective actions that were taken

- Identify any generic implications and impacts on completed work
- Consider suspending work associated with the applicable activity
- Suggest actions that can be taken by the responsible organization to preclude recurrence.

1.4 Documents

Documents which prescribe processes, specify requirements, or establish design shall be prepared, approved, issued, and controlled.

1.4.1 Document Preparation, Review and Approval

Documents that specify or prescribe work shall be reviewed for adequacy, correctness, and completeness prior to approval and issuance as controlled documents. Management shall identify the individuals or organizations responsible for the preparation, review, approval, and issuance of controlled documents. This is to ensure that documents are accurate, adequate, and approved.

Documents that specify quality requirements, establish design, or prescribe work activities important to nuclear safety or waste isolation, such as instructions, procedures, and drawings, shall be reviewed according to the requirements listed below. Documents, such as test plans, management plans, technical reports, performance reports, and test result reports, shall also be subject to the same review and approval criteria as presented below:

A. Documents shall be controlled during the review and approval phase in accordance with approved procedures.

B. Review criteria shall be established. These criteria shall consider technical adequacy, accuracy, completeness, and compliance with established requirements.

C. Pertinent background information or data shall be made available to the reviewers by the organization requesting the review if the information is not readily available to the reviewer.

D. The review will be performed by individuals other than the originator.

E. Reviewers will be technically competent in the subject area being reviewed.

F. The organization or technical discipline affected by the document shall review the document according to the established review criteria. Changes to the document shall be reviewed by those organizations or technical disciplines affected by the change.

G. The QA Department shall review documents, including changes, that translate QAPD or WAP requirements into implementing documents.

H. Review comments shall be resolved in accordance with approved procedures. A reviewer's signature for approval or concurrence on a document is considered to be adequate evidence of resolution of review comments. Evidence of review comment resolution shall be maintained.

I. Documents will be approved by the designated approval authority in accordance with the requirements of this QAPD as authorized by the originating organization prior to distribution.

J. Documents shall be issued by designated individuals or organizations in accordance with approved procedures.

1.4.2 Implementing Procedures

A. Implementing procedures shall be reviewed, approved, and controlled.

B. Implementing procedures shall be developed, reviewed, and validated by technically competent personnel and approved by authorized personnel. Administrative process procedures may not require validation.

C. Implementing procedures shall include the following information, as appropriate to the work to be performed:

- Responsibilities of the organizations affected by the document
- Technical, regulatory, or other program requirements
- Sequential description of the work to be performed, including any allowance for out-of-sequence processing
- Quantitative or qualitative acceptance criteria sufficient for determining that activities were satisfactorily accomplished
- Prerequisites, limits, precautions, process parameters, and environmental conditions
- Special qualification and training requirements
- Verification points and hold points
- Methods for demonstrating that the work was performed as required (such as provisions for recording inspection and test results, check-off lists, or sign-off blocks)

- Identification of the records generated

  Records identified in implementing procedures shall be designated as QA records when applicable in the Records Inventory and Disposition Schedule (RIDS). QA records shall be classified according to their retention times in the RIDS.

1.4.3 Document Control and Distribution

The distribution and use of controlled documents and forms that document or prescribe work, including changes and editorial corrections to documents, shall be controlled to meet the following requirements:

A. Documents used to perform work shall be distributed to affected personnel and used at the work location.

B. Effective dates shall be established for and placed on approved documents.

C. The disposition of obsolete or superseded documents and forms shall be controlled to avoid their inadvertent use.

D. Controls shall be established and maintained to identify the current status/revision of controlled documents and forms.

E. Controls shall be established identifying and defining the distribution of controlled documents.

1.4.4 Changes to Documents

Changes to documents, other than those defined below as editorial changes, shall be reviewed and approved by the same organizations that performed the original review and approval, unless other organizations are specifically designated in accordance with approved procedures.

Document changes shall be:

- Reviewed by the organizations or technical disciplines affected
- Clearly indicated in the changed document

Editorial or minor changes may be made without the same level of review and approval as the original or otherwise changed document. The following items are considered editorial or minor changes:

- Correcting grammar or spelling (the meaning has not changed)
- Renumbering sections or attachments

- Updating organizational titles
- Changes to nonquality affecting schedules
- Revised or reformatted forms, providing the original intent of the form has not been altered
- Attachments marked "Example," "Sample," or exhibits that are clearly intended to be representative only
- Clarification changes that do not affect the purpose of the document

A change in an organizational title accompanied by a change in responsibilities is not considered an editorial change.

The organization responsible for preparing the document shall identify and approve editorial changes.

1.5 Records

Records shall be specified, prepared, reviewed, approved, controlled, and maintained to accurately reflect completed work and facility conditions and to comply with statutory or contractual requirements. A "quality record" is a completed document that furnishes evidence of the quality of items and/or activities.

A QA records system shall be established, defined, implemented, and enforced in accordance with written procedures, instructions, or other documentation. QA records may be managed within a general records management system, as long as the requirements of this section are met.

Documents referenced by final reports relating to WIPP site characterization, except readily available references such as encyclopedias, dictionaries, engineering handbooks, national codes and standards, etc. shall be retrievable from a quality records system. Preparers of such reports shall ensure the entry of such documents into a quality records system.

1.5.1 Generating Quality Records

A. Prior to conducting a work activity, the organization shall:

- Identify those records that shall become quality records.
- Identify the organization responsible for submitting the quality records to the records management system.

B. Records shall be designated as quality records if they meet any of the following:

- Records that relate to site characterization samples and data
- Records that relate to data used in the Performance Assessment of the WIPP facility
- Records that relate to the mixed TRU waste form characterization and acceptance of the mixed TRU waste form
- Records that document regulatory compliance
- Records that assist in preventing actions that could impair the long-term isolation of the waste
- Records preserving information that would prevent inadvertent human intrusion, such as the nature and hazard of the waste and the locations of the geologic repository operations area, the underground facility, boreholes, and shafts, and boundaries of the controlled area
- Records providing information relevant to post-closure monitoring and assessment of performance of the repository system
- Records preserving for future generations information regarding the geologic setting relevant to mitigation of releases of radioactive materials
- Records which would be of significant value after decommissioning and closure of a repository

C. Individuals shall create quality records that are legible, accurate, and complete.

D. Individuals handling quality records shall provide reasonable protection for the records from damage or loss until the records are submitted to the records management system (this includes documents generated during field operations).

E. Records shall become quality records when stamped, initialed or signed, and dated as complete by authorized personnel. If the nature of the record (such as magnetic or optical media) precludes stamping or signing, then other means of authentication by authorized personnel are required. This authentication represents a certification as to the content of the record by those individuals with knowledge of the related facts, whether by direct personal knowledge or through the direct reports of others. The authentication should not be confused with any subsequent reviews of the content.

F. Once authenticated, QA records shall be submitted to the records system, as described above, for either permanent or temporary storage. Upon completion of a project or other discrete task or activity, responsible management shall verify that the contents of the applicable QA records package are stored in the records system.

G. Quality records may be originals or copies; however, original documents are preferred.

H. Documents referenced by final reports, except readily available references such as encyclopedias, dictionaries, engineering handbooks, national codes and standards, etc., shall be retrievable from records files. Preparers of such records shall ensure that the documents are entered into the records system.

1.5.2 Classifying Quality Records

Quality records, as described above, shall be classified as either "POST CLOSURE," "LIFETIME" or "NONPERMANENT."

A. Records that fall into one of the following categories shall be classified as "POST CLOSURE" quality records:

- Records that assist in preventing actions that could impair the long-term isolation of the waste
- Records preserving information that would prevent inadvertent human intrusion, such as the nature and hazard of the waste and the locations of the geologic repository operations area, the underground facility, boreholes, shafts, and boundaries of the controlled area
- Records providing information relevant to post-closure monitoring and assessment of performance of the repository system
- Records preserving, for future generations, information regarding the geologic setting relevant to mitigation of releases of radioactive materials
- Records which would be of significant value after decommissioning and closure of the repository.

B. Records that cannot be classified as "POST CLOSURE" records but that fall into one of the following categories shall be classified as "LIFETIME" quality records:

- Records used for repository permitting or certification
- Records used to identify and assess the performance capabilities of those engineered and natural barriers important to waste isolation

- Records of computer programs and mathematical models needed to perform ongoing correlations between performance assessment predictions and actual tests and data analyses
- Records that would be of significant value in demonstrating capability for safe operation
- Records that would be of significant value in maintaining, reworking, repairing, replacing, or modifying WIPP repository systems, components, or structures
- Records that would be of significant value in determining the cause of an accident or malfunction of an item
- Records that would be needed during decommissioning and closure of the repository
- Records relating to site characterization samples and data
- Records relating to data used in performance assessment of the WIPP facility
- Records relating to the mixed TRU waste form characterization and acceptance of the mixed TRU waste form
- Records that provide required baseline data for in-service inspections.

C. Records that provide objective evidence that the QA program has been properly implemented but do **NOT** meet the above criteria shall be classified as "nonpermanent" quality records.

1.5.3 Indexing Quality Records

The records management system shall provide for the indexing of quality records according to the following requirements:

A. An individual or organization shall be assigned the responsibility of indexing and maintaining quality records.

B. The indexing system shall include, at a minimum, record retention times and the location of the record within the records system. These and other features of the record system shall facilitate the disposition of scheduled quality records and ensure the retrievability of any quality records entered.

1.5.4 Receiving Quality Records

WID shall designate the person or organization responsible for receiving QA records. The designee shall be responsible for organizing and implementing a system of controls for the receipt of QA records for permanent and temporary storage. At a minimum, the receipt control system shall include the following:

A. The receipt control system shall contain a current and accurate status of quality records.

B. A method shall be established for identifying the records required to be included in the records system.

C. A method shall be established for identifying the records that have been received.

D. Procedures shall be established for the receipt and inspection of incoming records, including verification that the QA records received are in agreement with the transmittal document and that the records are legible.

E. Quality records shall be controlled and protected from damage, deterioration, or loss during the receiving processes.

F. Quality records shall be submitted to storage without unnecessary delay after the receipt process has been completed.

1.5.5 Storing, Preserving, and Dispositioning Quality Records

A. Quality records shall be stored and preserved in predetermined storage facilities in accordance with approved QA implementing procedures that provide a:

- Description of the storage facility
- Description of the filing and indexing system to be used
- Method for verifying that the quality records received are in agreement with the transmittal document
- Method for ensuring a receipt acknowledgment identifying index number/record location is returned to the sender
- Description of controls governing quality record access, retrieval, and removal

- Method for filing supplemental information and documenting the authorization for corrections

- Method for disposition of superseded quality records

B. The records storage arrangements shall provide adequate protection of records, including special processed records (such as radiographs, photographs, negatives, microfilm, and magnetic media), to preclude damage from moisture, temperature, rodent infestation, excessive light, electromagnetic fields, or stacking as appropriate for the type of record being stored.

C. Records that require special processing and control, such as software and related documentation or information on high density media or optical disks, hardware and software required to maintain and access records, shall be controlled to ensure records are useable.

D. Retention times of quality records depend upon their classification. Lifetime QA records shall be retained and preserved in an acceptable condition for the operating life of the WIPP repository (i.e., until termination of the operating permits), or of the particular item while it is installed in the repository or is being stored for future use. Lifetime records shall be evaluated for the need to be upgraded to post-closure records prior to their destruction.

Waste characterization data and related QA/QC records in the generator/ storage site project files for TRU waste to be shipped to the WIPP facility are designated as either lifetime records or non-permanent records as specified in Attachment B of the WIPP Hazardous Waste Permit. Records that are designated as lifetime records shall be maintained for the life of the waste characterization program at a participating generator/storage site plus six years, then offered to CBFO for permanent archival of information of these records in the appropriate form, or transferred to the appropriate Federal Records Center (FRC). Waste characterization records designated as non-permanent records shall be maintained for ten years from the date of (record) generation and then dispositioned according to their approved records inventory and disposition schedule (RIDS). If a generator/storage site ceases to operate, records shall be transferred before closeout.

Records relevant to an enforcement action under the WIPP Hazardous Waste Permit, regardless of assigned dispositions, shall be maintained at the TRU waste site until the NMED determines that they are no longer needed for enforcement actions, and then dispositioned as required.

Waste characterization data for each TRU mixed waste container transmitted to WIPP shall be maintained for the active life of the WIPP facility plus two years. The active life of the WIPP facility is defined as the period from the initial receipt of TRU mixed waste at the facility until the NMED receives

certification of final closure of the facility. After their active life, records shall be retired to the Federal Records Center and maintained for 30 years. These records will then be offered to the National Archives.

Nonpermanent quality records shall be retained for three years or as otherwise specified. Quality records shall NOT be destroyed until the following conditions are met:

1. The appropriately assigned National Archives and Records Administration (NARA) authorized disposition specifies destruction.

2. Regulatory requirements are satisfied.

3. The operational status permits the disposal of such records.

4. The related contractual requirements have been satisfied.

E. Design and construction of a single record storage facility shall meet the criteria of the 1989 edition of ASME NQA-1 Supplemental Requirement 17S-1, section 4.4.1 or section 4.4.2.

F. If storage at dual facilities for each record is provided, the facilities shall be at locations sufficiently remote from each other to eliminate the chance of exposure to a simultaneous hazard. Each facility is NOT required to satisfy the requirements of E above, but shall meet all other records storage requirements prescribed in this QAPD.

G. When temporary storage of records (such as for processing, review, or use) is required by an organization's procedures, the records shall be stored in a 1-hour fire-rated container. The procedures shall specify the maximum allowable time limit for temporary storage. The container shall bear a UL label (or equivalent) certifying 1-hour fire protection, or be certified by a person competent in fire protection.

H. Measures shall be established to preclude the entry of unauthorized personnel into the storage area. These measures shall guard against larceny and vandalism.

I. Measures shall be taken to provide for replacement, restoration, or substitution of lost or damaged records.

1.5.6 Retrieval of Quality Records

A. The records management system shall provide for retrieval of quality records based upon record type (Nonpermanent, Lifetime, or Post-Closure).

B. Access to storage facilities shall be controlled. A list designating personnel who are permitted access to the quality records shall be generated, maintained, and posted.

1.5.7 Correcting Information in Quality Records

A. Corrections to records will include the initials or signature of the person making the correction and the date the correction was made.

B. Corrections to quality records shall be approved by the originating organization.

C. Quality records shall NOT be corrected through the use of correction fluids or tapes.

SECTION 2 PERFORMANCE QUALITY ASSURANCE REQUIREMENTS

2.1 Work Processes

Work shall be performed to established, approved, and documented technical standards and administrative controls. Work shall be performed under controlled conditions using approved instructions, procedures, drawings, or other appropriate means. Items shall be identified and controlled to ensure their proper use. Items shall be maintained to prevent their damage, loss, or deterioration. Equipment used for process monitoring or data collection shall be calibrated and maintained.

The intent of this section is to establish the policy that each person who performs work is responsible for the quality of his or her work, and he or she will have the goal of doing work correctly the first time. To ensure that the person doing the work achieves that goal, management is responsible for establishing processes and procedures to ensure that all work is planned and performed under controlled conditions by personnel who are knowledgeable of the work requirements, and that these individuals are capable of accomplishing the work in accordance with the requirements as established in this QAPD.

This section further establishes management involvement in the work processes through their interactions with personnel performing the work and through their review and verification of ongoing and completed work. This will help ensure that the definition of "acceptable work performance" is clearly communicated and that personnel are provided the necessary training, resources, and administrative controls to accomplish their tasks properly.

2.1.1 Work

A. Personnel performing work are responsible for the quality of their work. Because the individual worker is the first line in ensuring quality, personnel will be knowledgeable of requirements for work they perform and the capability of the tools and processes they use.

B. Line managers will ensure that personnel working under their supervision are qualified and are provided the necessary training, resources, and administrative controls to accomplish assigned tasks. Criteria describing acceptable work performance shall be defined for the worker.

C. Line managers will periodically assess work and related information to ensure that the desired quality is being achieved and to identify areas needing improvement.

D. Work shall be planned, authorized, and accomplished under controlled conditions using technical standards, quality requirements, and implementing procedures commensurate with the complexity and risk of the work.

E. Management shall ensure that the following are clearly identified and conveyed to workers prior to beginning work:

- Requirements, technical standards, and acceptance criteria for the work and final product
- Hazards associated with the work
- Safety, administrative, technical, and environmental controls to be employed during the work

2.1.2 Implementing Procedures

Individuals performing work will comply with implementing procedures; however, when work can NOT be accomplished as described in the implementing procedure or accomplishment of such work would result in an undesirable situation, condition adverse to quality, or an unacceptable safety risk, the work shall be suspended and the procedures changed in accordance with the approved procedure change process.

2.1.3 Item Identification and Control

Processes will be established and implemented to identify, control, and maintain items. The identification of items will be maintained to ensure appropriate traceability. Traceability requirements shall be specified in design documents or supporting implementation procedures. Processes will be established and implemented to control consumables and items with limited operating or shelf life, prevent the use of incorrect or defective items, and identify and control suspect/counterfeit items.

2.1.3.1 Waste Isolation Items

The following additional controls shall be established:

A. Items shall be identified and traced from the time of receipt, up to and including installation or end use. Records shall be maintained to ensure that the item can be traced at all times from its source through the item's installation or end use.

B. Item identification methods shall include physical markings. If physical markings are either impractical or insufficient, other appropriate means shall be employed (such as physical separation, labels or tags attached to containers, or procedural control). When used, physical markings shall:

- Be applied using materials and methods that provide a clear, permanent, and legible identification
- NOT be detrimental to the function or service life of the item

- Be transferred to each part of an identified item when the item is subdivided
- NOT be obliterated or hidden by surface treatments, or coatings, or installation unless other means of identification are substituted

C. If codes, standards, or specifications include specific identification or traceability requirements (such as identification or traceability of the item to applicable specification or grade of material; heat, batch, lot, part, or serial number; or specified inspection, test, or other records), then identification and traceability methods shall be implemented to ensure meeting the special requirements.

D. Item identification control system records shall provide the inspection, test, and operating status of items. Items that have satisfactorily passed the required inspections and tests shall be identified. The identification methods shall preclude the inadvertent installation, use, or operation of items that have NOT passed required inspections and tests.

E. The status of inspections and tests shall be identified either on the items or in documents traceable to the items. Status shall be maintained through the use of status indicators (such as tags, markings, labels, and stamps), or other means (such as travelers, inspection or test records), and the authority for applying and removing status indicators shall be specified.

F. Where specified, items having limited calendar or operating life or cycles shall be identified and controlled to preclude use of items whose shelf life or operating life has expired.

2.1.4 Special Processes

A. Processes shall be considered as special processes if they meet any one or combination of the following criteria:

- The results are highly dependent on the control of the process
- The results are highly dependent on the skill of the operator
- The quality of the results can NOT be readily determined by inspection or test of the product

The following WID activities are examples of special processes:

- Nondestructive examination/testing (NDE/NDT)
- Code welding

B. Implementing procedures shall be established to ensure special process parameters are controlled and specified environmental conditions are maintained. In addition to the guidance provided in the section entitled "Implementing Procedures," special process implementing procedures shall include or reference:

- Requirements for qualification of personnel, process(es), and equipment
- Conditions necessary for completing the special process, including equipment, statistical process control, controlled parameters of the process, and calibration requirements

2.1.5 Handling, Storage, and Shipping

Handling, storage, cleaning, shipping, and other means of preserving, transporting, and packaging of items shall be conducted in accordance with established work and inspection implementing procedures, shipping instructions, or other specified documents.

A. If required for critical, sensitive, perishable, or high-value articles, specific implementing procedures for handling, storage, cleaning, packaging, shipping, and other preservation shall be prepared and used.

B. Measures shall be established and implemented for the marking and labeling of items for packaging, shipping, handling, and storage as necessary to adequately identify, maintain, and preserve the item. Markings and labels shall indicate the presence of special environments or the need for special controls as necessary.

C. If required for protection or maintenance of particular items, special equipment (such as containers, shock absorbers, and accelerometers) and special protective environments (such as inert gas and specific moisture and temperature levels) shall be specified, planned for, and provided.

- If special protective equipment and environments are used, provisions shall be made for verifying their adequacy.
- Special handling tools and equipment shall be used and controlled as necessary to ensure safe and adequate handling.
- Special handling tools and equipment shall be inspected and tested at specified intervals and in accordance with implementing procedures to verify that the tools and equipment are adequately maintained.
- Operators of special handling and lifting equipment shall be sufficiently experienced and trained to use the equipment.

D. If storage of items is required, then methods shall be established for the control of item identification records that are commensurate with the planned duration and conditions of storage. These methods shall provide for, as applicable:

- Maintenance or replacement of markings and identification tags damaged during handling or aging
- Protection of identification markings that are subject to excessive deterioration resulting from environmental exposure
- Update of related identification records and documentation

2.1.6 Status Indicators

Status indicators, such as tagging valves and switches to prevent inadvertent operation, shall be used to indicate operating status of items. Status indicators, such as lockout tagging, shall also be used where appropriate and shall be applied and removed by authorized personnel.

2.2 Design Control

Items and processes shall be designed using sound engineering/scientific principles and appropriate standards. Design work, including changes, shall incorporate appropriate requirements such as general design criteria and design bases. Design interfaces shall be identified and controlled. The adequacy of design products shall be verified by individuals or groups other than those who performed the work. Verification work shall be completed before approval and implementation of the design.

This section provides requirements to ensure that designs (from conceptual through final) are defined, controlled, and verified. In establishing design controls, management is responsible to ensure that design inputs are technically correct; that design interfaces are identified; that authorities, responsibilities, and lines of communication are clearly defined; and that the design processes clearly define the acceptance criteria for the product.

2.2.1 Design Input

Applicable design inputs (such as, but not limited to, design bases, conceptual design reports, performance requirements, regulatory requirements, codes, and standards) will be controlled by those responsible for the design in accordance with the following requirements:

A. Design inputs will be identified and documented, and their selection reviewed and approved by those responsible for the design.

B. Design inputs shall be specified and approved on a timely basis and to the level of detail necessary to permit the design work to be carried out correctly in a manner that provides a consistent basis for making design decisions, accomplishing design verification, and evaluating design changes.

C. Changes from approved design inputs and reasons for the changes shall be identified, approved, documented, and controlled.

D. Design inputs based on assumptions that require reverification shall be identified and controlled.

2.2.2 Design Process

The design process shall be controlled by Design Class, as defined in the Safety Analysis Report (SAR), and end use according to the following requirements:

A. Appropriate standards shall be identified and documented, and their selection reviewed and approved. Changes from specified standards, including the reasons for the change, shall be identified, approved, documented, and controlled.

B. Design work shall be prescribed and documented on a timely basis and to the level of detail necessary to permit the design process to be carried out correctly.

C. Design documents shall be adequate to support design, fabrication, construction, and operation.

D. Design documents shall be sufficiently detailed as to purpose, method, assumptions, design input, references, and units such that a person technically qualified in the subject can understand the documents and verify their adequacy without recourse to the originator.

E. Controls for identifying assemblies or components that are part of the item being designed shall be established. If a commercially available assembly or component is modified or selected by special inspection or testing to meet requirements that are more restrictive than the supplier's published product description, then the assembly or component shall be represented as different from the commercially available item in a manner traceable to a documented definition of the difference.

F. Controls for selecting and reviewing design methods, materials, parts, equipment, and processes essential to the function of an item shall be established.

G. Drawings, specifications, and other design implementation documents shall contain appropriate inspection and testing acceptance criteria.

2.2.3 Design Analyses

A. Design analyses shall be planned, controlled, and documented.

B. Documentation of design analyses shall include:

- Definition of the objective of the analyses
- Definition of design inputs and their sources
- Results of literature searches or other applicable background data
- Identification of assumptions and designation of those assumptions which shall be verified as the design proceeds
- Identification of any computer calculations, including computer type, computer software name, revision identification, inputs, outputs, and the bases (or reference thereto) supporting application of the software to the specific physical problem
- Identification of the reviewer and approver

C. Calculations shall be identifiable by subject (including structure, system, or component to which the calculation applies), originator, reviewer, and date, or by other designator such that the calculations are traceable.

D. Computer software used to perform design analyses shall be developed, qualified, and used according to the requirements of the section entitled "Software Requirements."

2.2.4 Design Interface

Design interfaces shall be identified and controlled so that efforts are coordinated among affected organizations.

A. Design interface controls shall include the assignment of responsibility and the establishment of implementing procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces.

B. Design information transmitted across interfaces shall be documented and controlled.

C. The status of the design information or issued design documents shall be identified in transmittals. Where necessary, incomplete designs that require further evaluation, review, or approval shall be identified.

2.2.5 Design Verification

The acceptability of design work and documents, including design inputs, processes, outputs, and changes, shall be verified. The following design control requirements shall be applied to verify the adequacy of design commensurate with design class, as defined in the SAR, the complexity, and risk associated with the end use application of the design.

A. Design verification shall be performed using one or a combination of the following methods:

- Design review
- Alternate calculations
- Qualification testing

B. The particular design verification method shall be identified and its use justified.

C. The results of design verification shall be documented, including the identification of the verifier.

D. Design verification shall be performed by competent individuals or groups other than those who performed the original design (but they may be from the same organization). If necessary, this verification may be performed by the originator's supervisor, provided that:

- The supervisor did NOT specify a singular design approach or rule out certain design considerations and did NOT establish the design inputs used in the design, or
- The supervisor is the only individual in the organization competent to perform the verification, and
- The determination to use the supervisor is documented and approved in advance.

E. Design verification shall be performed at appropriate times during the design process.

- Verification shall be performed before release for procurement or manufacture, construction, or release to another organization for use in other design work.
- Design verification shall be completed before relying on the item to perform its function.

F. The extent of the design verification required shall be based on the complexity, risk, uniqueness of the design, degree of standardization, state of the art, and similarity with previously proven designs. When the design has been subjected to a verification process in accordance with this QAPD, the verification process need not be duplicated for identical designs.

G. Use of previously proven designs shall be controlled according to the following requirements:

- The applicability of standardized or previously proven designs shall be verified with respect to meeting pertinent design inputs for each application.
- Known problems affecting standard or previously proven designs and their effect on other features shall be considered.
- The original design and associated verification measures shall be adequately documented and referenced in the files of subsequent application of the design.
- Changes in previously verified designs shall require reverification. Such reverifications shall include the evaluation of the effect of those changes on the overall previously verified design and on any design analyses upon which the design is based.

2.2.5.1 Design Reviews

Design reviews shall be controlled, documented, and performed. Design reviews shall consider the following:

A. The design inputs were correctly selected and incorporated.

B. Assumptions necessary to perform the design work were adequately described, reasonable, and reverified as necessary.

C. An appropriate design method was used.

D. The design output is reasonable compared to design inputs.

E. The necessary design input and verification requirements for interfacing organizations were specified in the design documents or in supporting implementing procedures.

Disposition of review comments shall be documented.

2.2.5.2 Alternative Calculations

Alternative Calculations are calculations or analyses that are made with alternate methods to verify correctness of the original calculations or analyses. The appropriateness of assumptions, input data used, computer programs, or other calculation methods used shall be evaluated.

2.2.5.3 Qualification Testing

If design adequacy is to be verified by qualification tests, the tests shall be pre-identified. Qualification testing requirements are listed below.

A. The test configuration shall be defined and documented.

B. Testing shall demonstrate the adequacy of performance under conditions that simulate the most adverse design conditions. Operating modes and environmental conditions in which the item shall perform satisfactorily shall be considered in determining the most adverse conditions.

C. If the tests verify only specific design features, then the other features of the design shall be verified by other means.

D. Test results shall be documented and evaluated by the responsible design organization to ensure that test requirements have been met.

E. If qualification testing indicates that a modification to an item is necessary to obtain acceptable performance, then the modification shall be documented and the item modified and retested or otherwise verified to ensure satisfactory performance.

F. Scaling laws shall be established and verified when tests are being performed on models or mockups.

G. The results of model test work shall be subject to error analysis, where applicable, before using the results in final design work.

2.2.6 Design Change

Design changes shall be controlled according to the following requirements:

A. Changes to final designs, field changes, and nonconforming items dispositioned "use as is" or "repair" shall be justified and shall be subject to design control measures commensurate with those applied to the original design.

B. Design control measures for changes shall include provisions to ensure that the design analyses for the item are still valid.

C. Changes shall be approved by the same groups or organizations that reviewed and approved the original design documents.

- If an organization that originally was responsible for approving a particular design document is no longer responsible, then a new responsible organization shall be designated.

- The cognizant design organization shall have demonstrated competence in the specific design area of interest and have an adequate understanding of the requirements and intent of the original design.

D. If a significant design change becomes necessary because of an incorrect original design, the design process and design verification methods and implementing procedures shall be reviewed and modified as appropriate. These design deficiencies shall be documented according to the requirements provided in the section entitled "Conditions Adverse to Quality and Significant Conditions Adverse to Quality."

E. Field changes shall be incorporated into the applicable design documents.

F. Design changes that impact related implementing procedures or training programs shall be communicated to appropriate organizations.

2.3 Procurement

WID shall ensure that procured items and services meet established technical and QA requirements and that they perform as specified. Prospective suppliers shall be evaluated and selected on the basis of documented criteria. WID shall verify that approved suppliers continue to provide acceptable items and services.

2.3.1 Procurement Planning Requirements

The procurement of items and services shall be planned and controlled to ensure that WID's requirements are accurate, complete, and clearly understood by suppliers.

2.3.1.1 Procurement Planning

Procurement activities shall be planned and documented to ensure a systematic approach to the procurement process. Planning shall be accomplished as early as possible.

NOTE: As a minimum ALL service contracts that are related to activities subject to the QA program will require QA review.

Procurement Planning shall include as appropriate based on the risks associated with the end use of the product/service:

A. Identify procurement methods and organizational responsibilities, which includes the QA organization.

B. Identify and document the sequence of actions and milestones needed to effectively complete the procurement. Provide for the integration of the following activities:

- Procurement document preparation, review, and change control
- Selection of procurement sources
- Proposal/bid evaluation and award
- Purchaser evaluation of supplier performance
- Purchaser verifications including any hold-point and witness-point notifications
- Control of nonconformances
- Corrective action
- Acceptance of the item or service
- Identification of quality records

2.3.1.2 Supplier Selection

Supplier selection shall be based on an evaluation of the supplier's capability to provide items or services in accordance with procurement document requirements.

A. Procurement documents shall identify the organizational responsibilities for determining the source selection based on the design class, as defined in the SAR, and the risks associated with the end use of the product/service. Organizations responsible for supplier source selection shall include the appropriate QA organization.

B. Measures for selecting procurement sources shall include one or more of the following elements:

- Evaluation of the supplier's history for providing an identical or similar product that performs satisfactorily in actual use
- On-site evaluation of the supplier's technical and QA capability based on an evaluation of the supplier's facilities, personnel, and quality program implementation. This evaluation will include an assessment of QA

program definition and implementation and will be performed by a qualified Lead Auditor.

C. The results of procurement source selection shall be documented.

2.3.1.3 Proposal/Bid Evaluation

A. The proposal/bid evaluation process shall include a determination of the extent of conformance to the procurement document requirements. This evaluation shall be performed by designated, technically qualified personnel, including the QA organization, and shall include, as required, the following:

- Technical considerations
- QA program requirements
- Supplier personnel skills
- Supplier production capability
- Supplier past performance
- Alternatives
- Exceptions

B. Before the contract is awarded, the purchaser shall resolve, or obtain commitments to resolve, deficient quality conditions identified during the proposal/bid evaluation.

C. Supplier QA programs shall be evaluated and accepted by the QA Department before the supplier starts work.

2.3.2 Procurement Document Requirements

The following requirements are established to ensure that procurement documents, and any changes thereto, contain appropriate technical and QA requirements.

2.3.2.1 Procurement Document Preparation

Procurement documents shall include the following provisions, as applicable to the item or service being procured:

A. The scope of work shall be defined.

B. Technical requirements shall be specified, including:

- Design bases shall be identified or referenced.

- Specific documents (such as drawings, codes, standards, regulations, DOE Orders, procedures, or instructions) that describe the technical requirements of the items or services to be furnished shall be identified.

The revision level or change status of these documents shall also be identified.

- Tests, inspections, hold points, or acceptance criteria that the purchaser shall use to monitor and evaluate the performance of the supplier shall be specified.

C. QA program requirements shall be specified, including:

- The supplier shall have a documented QA program or program requirements that implements a nationally recognized QA requirements program (e.g., ISO 9000), as required by contract language, or equivalent requirements from other recognized sources as required. The level of detail of the QA program plan and subsequent implementing procedures shall depend on the scope, nature, or complexity of the item or service being procured, but shall be specified in the purchase order or contract.

- The supplier shall incorporate the appropriate technical and QA program requirements into any subtier supplier-issued procurement document.

- When deemed appropriate, the WID may permit some or all supplier work to be performed under the WID's quality assurance program, provided that the requirements are adequately implemented. In these cases, procurement documents shall specify that the WID's quality assurance implementing procedures are applicable to the supplier and that the purchaser shall provide these applicable documents to the supplier.

D. Right of access to supplier facilities and records for inspection or audit by the purchaser, WID, or other designee authorized by the purchaser shall be established.

E. If the purchaser requires the supplier to maintain documentation that will become quality records, the retention classification and disposition requirements shall be identified.

F. When required, purchaser requirements for the supplier to report nonconformances and requirements for purchaser approval of the disposition of nonconformances shall be established.

G. Spare and replacement parts or assemblies and the appropriate technical and QA data required for ordering shall be identified.

H. Requirements for the use, control, and calibration of measuring and test equipment (M&TE) in conformance to the requirements of ANSI/NCSL Z540-1, *Calibration Laboratories and Measuring and Testing Equipment - General Requirements*, shall be identified.

2.3.2.2 Procurement Document Review and Approval

A. A review of the procurement documents and any changes thereto shall be made to verify that documents include appropriate provisions to ensure that items or services shall meet the prescribed requirements. Procurement document reviews shall be performed and documented prior to issuance to the supplier of the procurement documents or changes thereto.

B. Reviews shall be performed by personnel who have access to pertinent information and who have an adequate understanding of the requirements and scope of the procurement.

C. Procurement document reviews shall include representatives from the technical organizations and QA organization, as required based on the design class, as defined in the SAR, the risks associated with the end use of the product/service, and the graded approach in accordance with section 1.1.8.2 of this QAPD.

D. Procurement documents shall be approved by appropriate management.

2.3.3 Supplier Performance Evaluation Requirements

The purchaser of items and services shall establish measures to interface with the supplier and to verify supplier's performance, as necessary. The measures shall include:

- Establishing an understanding between the purchaser and supplier of the requirements and specifications identified in the procurement documents
- Requiring the supplier to identify planning techniques and processes to be used in fulfilling procurement document requirements
- Reviewing supplier documents that are prepared or processed during work performed to fulfill procurement requirements
- Identifying and processing necessary change information
- Establishing the method to be used to document information exchanges between purchaser and supplier
- Establishing the extent of assessment activities and inspection

2.3.3.1 Source Verification

The purchaser may accept an item or service by monitoring, auditing, surveillance, witnessing, or observing activities performed by the supplier or through receipt inspection. This method of acceptance is called source verification.

The extent of source verifications shall be a function of the relative importance, complexity, and quantity of items or services being procured, as well as the supplier's quality of performance. Source verifications shall be accomplished as early as possible, but in any case prior to the start of those activities that are required to be controlled and shall include the active involvement of the purchaser's QA organization. In addition:

A. Source verification shall be accomplished consistent with the supplier's planned inspections, examinations, or tests, and performed at intervals consistent with the importance and complexity of the item.

B. Documented evidence of acceptance of source verified items or services shall be furnished to the party receiving the item, to the purchaser, and to the supplier.

C. Source verification shall be performed by cognizant QA personnel.

2.3.3.2 Receiving Inspection

When a receiving inspection is used to accept an item:

A. The inspection shall include consideration of source assessments, verifications and audits, and the demonstrated performance quality of the supplier.

B. The inspection shall be performed in accordance with established inspection procedures or instructions.

C. The inspection shall verify, as applicable, proper configuration; identification; dimensional, physical, and other characteristics; freedom from shipping damage; and cleanliness.

D. The inspection shall be planned and executed according to the requirements stated in the section entitled "Inspection Planning."

E. Receiving inspection shall include a review of adequacy and completeness of any required supplier documentation submittal.

F. Receiving inspections shall be performed by qualified personnel.

2.3.3.3 Post-Installation Testing

When post-installation testing is used as a method of acceptance, then post-installation test requirements and acceptance documentation shall be mutually established and agreed upon by the purchaser and supplier.

2.3.3.4 Supplier Certificate of Conformance

When a Certificate of Conformance is required and used, the minimum criteria below shall be met:

A. The certificate shall identify the purchased material or equipment, such as by the purchase order number or other identification that is traceable to the requirements of the procurement document.

B. The certificate shall identify the specific procurement requirements met by the purchased material or equipment, such as codes, standards, and other specifications. This may be accomplished by including a list of the specific requirements or by providing, on-site, a copy of the purchase order and the procurement specifications or drawings, together with a suitable certificate. The procurement requirements identified shall include any approved changes, waivers, or deviations applicable to the subject material or equipment.

C. The certificate shall identify any procurement requirements that have NOT been met, together with an explanation and the means for resolving the nonconformances.

D. The certificate shall be signed or otherwise authenticated by a person who is responsible for this QA function and whose function and position are described in the purchaser's or supplier's QA program.

E. The certification system, including the procedures to be followed in filling out a certificate and the administrative procedures for review and approval of the certificates, shall be described in the purchaser's or supplier's QA program.

F. Means shall be provided to verify the validity of supplier certificates and the effectiveness of the certification system, such as during the performance of audits of the supplier or independent inspection or test of the items. Such verification shall be conducted by the QA Department at intervals commensurate with the supplier's past quality performance.

2.3.3.5 Control of Supplier Nonconformances

The purchaser and supplier shall establish and document the process for disposition of items that do NOT meet procurement document requirements according to the following:

A. The supplier shall submit a report of nonconformance to the purchaser that includes supplier-recommended disposition (for example, "use as is" or "repair") and provide technical justification for such disposition.

Reports of nonconformances to procurement document requirements or documents approved by the purchaser shall be submitted to the QA Department for approval. Examples of conditions requiring a report of nonconformance include:

- Technical or material requirements are violated.
- A requirement in supplier documents that has been approved by the purchaser is violated.
- The nonconformance can NOT be corrected by continuation of the original manufacturing process or by rework.
- The item does NOT conform to the original requirement even though the item can be restored to a condition such that the item's capability to function is unimpaired.

B. The purchaser shall evaluate and approve the supplier's recommended disposition.

C. The purchaser shall verify implementation of the disposition.

D. The purchaser shall maintain records of supplier-submitted nonconformances.

2.3.4 Commercially Available Items

Where design specifies the use of commercially available items, the following requirements are an acceptable alternative to other requirements of this section.

A. The commercially available item shall be identified in an approved design output document. An alternative commercially available item may be applied, as long as the responsible design organization provides verification that the alternative commercially available item performs the intended function and meets design requirements applicable to both the replaced item and its application.

B. Supplier selection shall be in accordance with source selection requirements.

C. Commercially available items shall be identified in the procurement document by the manufacturer's published product description.

D. After receipt of a commercially available item, WID shall ensure that:

- Damage was not sustained during shipment.
- The item received was the item ordered.

- Inspection or testing is accomplished, to the extent determined by the purchaser, to ensure conformance with the manufacturer's published requirements.

- Documentation, as applicable to the item, was received and is acceptable.

2.4 Inspection and Testing

Inspections and testing shall be performed in accordance with approved implementing procedures. An essential part of the work planning process is to identify the items and processes to be inspected or tested, parameters or characteristics to be evaluated, techniques to be used, acceptance and performance criteria, hold points, and the organizations responsible for performing the tests and inspections. Inspection and testing of specified items and processes shall be conducted using established criteria. Inspections and tests shall verify that physical and functional aspects of items, services, and processes meet requirements and are fit for use and acceptance. The acceptance of a specified item shall be documented and approved by qualified and authorized personnel. Equipment used for inspections and tests shall be calibrated and maintained.

2.4.1 Qualification and Selection of Inspection Personnel

2.4.1.1 Qualification of Inspection and Test Personnel

This section provides requirements for the qualification of personnel who perform inspection and testing to verify conformance to specified requirements for the purpose of acceptability. The requirements of this section do not apply to the qualification of personnel for performance of nondestructive examination.

The individual who performs an inspection or test to verify conformance of an item to specified acceptance criteria shall be qualified. Personnel who are directly supervised by a qualified inspector are NOT required to be qualified inspectors.

The inspection shall be performed by personnel other than those who performed or directly supervised the work being performed.

A. The Responsible department shall designate those activities that require qualified inspection and test personnel and the minimum requirements for such personnel. The responsible department shall establish written procedures for the qualification of inspection and test personnel and for the assurance that only those personnel who meet the requirements of this section are permitted to perform applicable inspection and test activities.

B. Personnel selected for performing inspection and test activities shall have the experience or training commensurate with the scope, complexity, or special nature of the activities.

C. Provisions shall be made for the indoctrination of personnel to the technical objectives and requirements of the applicable codes and standards and the QA program controls that are to be employed.

D. The need for a formal training program shall be determined, and such training activities shall be conducted as required to qualify personnel that perform such inspections and tests. On-the-job training shall also be included in the program, as appropriate, with emphasis on first-hand experience gained through actual performance of inspections and tests.

E. The capabilities of a candidate for certification shall be initially determined by a suitable evaluation of the candidate's previous education, experience, training, and either test results or capability demonstration.

F. The job performance of inspection and test personnel shall be reevaluated for capability at periodic intervals not to exceed three years. Reevaluation shall be by evidence of continued satisfactory performance or redetermination of capability in accordance with the above requirements. If during this evaluation, or at any other time, it is determined that the capabilities of an individual are not in accordance with the qualification requirements specified for the job, that person shall be removed from that activity until such time as the required capability has been demonstrated. Any person who has not performed inspection or testing activities in their qualified area for a period of one year shall be reevaluated for the required capability in accordance with the above requirements.

G. The qualification of personnel shall be certified in writing in an appropriate form and shall include the following information:

- Employer's name
- Identification of person being certified
- Activities certified to perform
- Basis used for certification, including such factors as: (1) education, experience, indoctrination, and training; (2) test results, where applicable; and (3) results of capability demonstration
- Results of periodic evaluation
- Results of physical examinations, when required
- Signature of employer's designated representative who is responsible for such certification
- The date of certification and date of certification expiration

H. The responsible department shall identify any special physical characteristics needed in the performance of each activity, including the need for initial and subsequent physical examination.

I. Records of personnel qualification shall be established and maintained by the employer. These records shall include the information required above for certification.

2.4.1.2 Qualification of Nondestructive Examination Personnel

This section identifies the requirements for the qualification of personnel who perform NDE (radiographic, magnetic particle, ultrasonic, liquid penetrant, eddy current, neutron radiographic, and leak testing) to verify conformance to specified requirements.

A. The American Society for Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A, June 1980 Edition, and its applicable supplements shall apply as requirements for personnel performing the above methods of NDE.

B. The responsible organization shall establish written procedures for the control and administration of the training, examination, and certification of NDE personnel.

C. Records of personnel qualification shall be prepared and maintained by the employer.

2.4.2 Inspection Requirements

2.4.2.1 Inspection Planning

Inspection planning shall be performed and documented to include:

- Identification of work operations where inspections are necessary
- Identification of the characteristics to be inspected and the identification of when, during the work process, inspections are to be performed
- Identification of suitable environmental conditions and required safety measures
- Identification of inspection or process monitoring methods to be employed
- Identification of acceptance criteria
- Identification of sampling requirements
- Methods to record inspection results

- Selection and identification of the M&TE to be used to perform the inspection

- Process used to ensure that the equipment being utilized for inspection or testing is calibrated and is of the proper type, range, accuracy, and tolerance to accomplish the intended function

When statistical sampling is to be used to verify the acceptability of a group of items, the statistical sampling method shall be based on recognized standard practices.

The type of item and the length of time it is expected to remain in storage should be considered during inspection planning.

2.4.2.2 Inspection Hold and Witness Points

When mandatory hold/witness points are used to control work that is NOT to proceed without the specific consent of the organization placing the hold/witness point, the specific hold/witness points shall be indicated in implementing procedures/work instructions. Only the organization responsible for the hold/witness point may waive it . Approval to waive specified hold/witness points shall be documented before continuing work beyond the designated inspection point.

2.4.2.3 In-Process Inspections and Monitoring

A. Items in process shall be inspected as necessary to verify quality. If inspection of processed items is impossible or disadvantageous, indirect control by monitoring of processing methods, equipment, and personnel shall be provided. Both inspection and process monitoring shall be conducted when control is deemed inadequate using only one method.

B. When a combination of inspection and process monitoring methods is used, monitoring shall be performed systematically to ensure that the specified requirements for control of the process and the quality of the item are met throughout the duration of the process.

C. Controls shall be established and documented for the coordination and sequencing of the work at established inspection hold or witness points during successive stages of the process.

2.4.2.4 Final Inspections

A. Final inspections shall include a review of the results and verification of resolution of all nonconformances identified by earlier inspections.

B. Finished items shall be inspected for completeness, markings, calibration, protection from damage, or other characteristics as required to verify the quality and conformance of the item to the applicable requirements.

C. Records review shall be undertaken for adequacy and completeness.

D. Modifications, repairs, or replacements of items performed subsequent to final inspection shall require reinspection or retest, as appropriate, to verify acceptability.

2.4.2.5 In-Service Inspections

A. Required in-service inspection or surveillance of structures, systems, or components shall be planned and executed by or for the organization responsible for their operation.

B. Inspection methods shall be established and executed to verify that the characteristics of an item continue to remain within specified limits.

C. Inspection methods shall include evaluations of performance capability of essential emergency and safety systems and equipment, verification of calibration and integrity of instruments and instrument systems, and verification of maintenance, as appropriate.

2.4.2.6 Inspection Documentation

Inspection documentation shall identify the:

- Item inspected and date of inspection
- Inspector's unique identifier or name of the inspector who documented, evaluated, and determined acceptability
- Method of inspection
- Inspection criteria, sampling plan, or reference documents (including revision designation) used to determine acceptance
- Results or acceptability
- Measuring and test equipment used during the inspection, including the identification number and the calibration due date
- Reference to information on actions taken in connection with nonconformances, as applicable.

2.4.3 Test Requirements

Testing shall be used to determine the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operating conditions. Examples of such tests include prototype qualification tests,

production tests, proof tests prior to installation, construction tests, and preoperational tests.

2.4.3.1 Test Planning

Test planning shall include:

- Identification of the implementing procedures to be developed to control and perform tests.
- In lieu of specially prepared written test procedures appropriate sections of related documents such as ASTM methods can be used. If used, they shall incorporate the information directly into the approved test implementing procedure, or shall be incorporated by reference in the approved test implementing procedure.
- Identification of item to be tested and the test requirements and acceptance limits, including required levels of precision and accuracy.
- Identification of the M&TE to be used to perform the test and provisions to ensure that the equipment being utilized is calibrated and is of the proper type, range, accuracy, and tolerance to accomplish the intended function.
- Test prerequisites that address calibrated instrumentation, appropriate and adequate test equipment and instrumentation, trained personnel, and suitably controlled environmental conditions.
- Mandatory hold points.
- Methods to record data and results.
- Provisions for ensuring that prerequisites for the given test have been met.

2.4.3.2 Test Documentation

Test documentation shall identify:

- The applicable test requirements, plans, and procedures, including revisions
- The item or work product tested
- Date of test
- Name of the tester and data recorders
- Type of observation and method of testing

- Identification of test criteria or reference documents used to determine acceptance
- Results and acceptability of the test
- Actions taken in connection with any nonconformances noted
- Name of the person evaluating the test results
- Identification of the M&TE used during the test (including the identification number and calibration due date)

2.4.3.3 Test Results

Test results will be documented and their conformance with acceptance criteria will be evaluated by a qualified individual within the responsible organization to ensure that test requirements have been satisfied.

2.4.4 Monitoring, Measuring, Testing, and Data Collection Equipment

The following sections establish requirements to ensure equipment used for inspection and testing is properly controlled, calibrated and maintained. For the purposes of these requirements, equipment discussed in the following sections includes M&TE, measuring and data collection equipment, equipment (either hand-held or installed) used for data indication, and other equipment used for data indication and/or collection.

2.4.4.1 Calibration

A system to control the use and calibration of M&TE shall be established and documented. Monitoring, measuring, testing, and data collection equipment shall be calibrated, adjusted, and maintained at prescribed intervals or, prior to use, against certified equipment having known valid relationships to nationally recognized standards. If no nationally recognized standards exist, the bases for calibration shall be documented. The prescribed calibration intervals shall be established and maintained to ensure acceptable reliability, where reliability is described as the probability that M&TE will remain in-tolerance throughout the interval. Intervals may be based on usage or time since last calibration.

A. Calibration standards shall have a greater accuracy than the required accuracy of the monitoring, measuring, testing, and data collection equipment being calibrated. The responsible department shall ensure that the calibration uncertainties do NOT affect the adequacy of the measurement. Well defined and documented measurement assurance techniques or uncertainty analyses may be used to verify the adequacy of a measurement process. If such techniques or analyses are NOT used, then the collective uncertainty of the measurement standard shall NOT exceed 25 percent of the

acceptable tolerance (e.g., manufacturer's specification) for each characteristic of the M&TE being calibrated or verified.

B. The method and interval of calibration for each device shall be defined based on the importance to waste isolation and safety and on the type of equipment, stability characteristics, required accuracy, intended use, and other conditions affecting measurement control. For monitoring, measuring, testing, and data collection equipment used in one-time-only applications, the calibration shall be done both before and after use based on the importance of the data to waste isolation and safety.

C. A calibration shall be performed when the accuracy of calibrated monitoring, measuring, testing, and data collection equipment is suspect.

D. Calibrated monitoring, measuring, testing, and data collection equipment shall be uniquely identified to provide traceability to calibration data and subsequent recall for calibration.

E. All calibrated monitoring, measuring, testing, and data collection equipment shall be labeled to indicate the calibration status, the date calibrated, the calibration due date or usage equivalent, and the identification of any limitations. (When it is impractical to apply a label directly to an item, the label may be affixed to the instrument container or some other suitable means may be used to reflect calibration status.)

F. All calibrations performed shall be traceable, through auditable documentation, to NIST standards, international standards or intrinsic standards.

G. When applicable, all calibrations shall be performed in controlled environmental conditions giving due consideration to temperature, humidity, lighting, vibration, dust control, cleanliness, electromagnetic interference, and any other factors affecting the results of calibration measurements. Where pertinent, these factors shall be monitored and recorded and, when appropriate, correcting compensations shall be applied to measurement results.

H. Calibration and control measure may NOT be required for rulers, tape measures, levels, and other such devices, if normal commercial equipment provides adequate accuracy.

I. A program shall be established and maintained to recall for calibration, or remove from service, M&TE that has exceeded its calibration interval, has broken calibration seals, has been modified, repaired, or has had components replaced, or is suspected to be malfunctioning because of mishandling, misuse, or unusual results.

J. Documented procedures shall be established and maintained to evaluate the adequacy of the calibration system and to ensure compliance with the requirements of this QAPD, including the acquisition of calibration services from laboratories meeting the requirements of ANSI/NCSL Z540-1, *Calibration Laboratories and Measuring and Testing Equipment - General Requirements.*

K. Measuring and test equipment shall be handled, stored, and transported in a manner that does not adversely affect the calibration or condition of the equipment.

L. Where calibration intervals are used to ensure reliability, the interval setting system must be systematically applied and shall have stated reliability goals and a method of verifying that the goals are being attained.

M. All exemptions from periodic calibration shall be approved and documented.

N. The recall system may provide for the temporary extension of the calibration due date for limited periods of time under specified conditions that do not unreasonably impair the satisfaction of task objectives.

O. Calibration services shall conform to the requirements of ANSI/NCSL Z540-1, *Calibration Laboratories and Measuring and Testing Equipment - General Requirements.*

2.4.4.1.1 Control of Out-of-Calibration Equipment

A. Monitoring, measuring, testing, and data collection equipment shall be considered to be out-of-calibration and shall NOT be used until calibrated if any of the following conditions exist:

- The calibration due date has passed without recalibration.
- The device produces results known or suspected to be in error.
- The equipment has been damaged.

B. Out-of-calibration monitoring, measuring, testing, and data collection equipment shall be controlled. The controls shall include the following requirements:

- Out-of-calibration monitoring, measuring, testing, and data collection equipment shall be tagged, segregated, or otherwise controlled to prevent use until they have been recalibrated.

- When M&TE is found to be out-of-calibration during recalibration, the validity of results obtained using that equipment since its last valid calibration shall be evaluated.

- The evaluation shall include the determination of acceptability of previously collected data, processes monitored, or items previously inspected or tested.

- The evaluation shall be documented.

- The user and QA management shall be notified.

- Corrective actions shall be taken, as applicable.

C. Recall intervals shall be established and re-evaluated based on instrument calibration history.

D. If any monitoring, measuring, testing, and data collection equipment is consistently found to be out-of-calibration during the recalibration process, it shall be repaired or replaced.

2.4.4.1.2 Documenting Calibration of Monitoring, Measuring, Testing, and Data Collection

Equipment monitoring, measuring, testing, and data collection equipment calibration documentation shall include the following information:

- Description and unambiguous identification of the item calibrated
- Physical condition of the calibrated item
- Calibration Interval
- Date(s) of performance of calibration, where appropriate
- Identification of the calibration procedure and source used, or unambiguous description of any non-standard method used
- Calibration Results, including "as found" and "as left" data and status
- Calibration action taken (adjusted, repaired, new value assigned, derated, etc.)
- Evaluation and corrective action taken in response to out-of-calibration conditions
- A signature and title, or an equivalent identification of the person(s) accepting responsibility for the content of the certificate or report (however produced), and date of issue
- Special limitations of use

SECTION 3 ASSESSMENT REQUIREMENTS

Planned and periodic assessments shall be conducted to measure management effectiveness, item and service quality and process effectiveness, and to promote improvement. Management assessments shall be performed or directed by managers to assess the effectiveness of their organization's management processes. Independent assessments shall be performed by a group or organization having authority and freedom, sufficient to carry out its responsibilities, from the line organization being assessed. Persons conducting assessments shall be technically qualified and knowledgeable of the items and processes to be assessed.

3.1 Management Assessment

Managers at every level shall periodically assess the performance of their organization to determine the effectiveness of leadership that enables the organization to meet customer requirements and expectations. This assessment shall place emphasis on the use of human and material resources to achieve the organization's goals and objectives. The management assessment should include an introspective evaluation to determine if the entire integrated management system effectively focuses on meeting strategic goals.

Managers shall retain responsibility for management assessments of processes and organizations under their cognizance. Direct participation by all levels of management is essential to the success of the process because management is in the position to view the organization as a total system.

Management assessments should focus on the identification and resolution of both process and management issues and problems. Problems that hinder the organization from achieving its objectives shall be identified and corrected.

Processes being assessed should include strategic planning, organizational interfaces, cost control, use of performance indicators, staff training and qualifications, procedures, the actual work process, and supervisory oversight and support. Effective management assessments should evaluate such conditions as the state of employee knowledge, motivation, and morale; the amount of mutual trust and communication among workers and organizations; the existence of an atmosphere of creativity and improvement; and the adequacy of human and material resources.

Management assessments shall be conducted regularly and a summary report prepared for each department at least annually. Overall management assessment results shall be reported to the General Manager at least annually.

Management assessment results should be used as input to the organization's continuous improvement process.

3.2 Independent Assessment

A process of planned periodic independent assessments shall be established and implemented. Independent assessments shall be planned, performed, documented, and reported to appropriate management personnel. Independent assessments shall focus on improving items, services, and processes by emphasizing line organization's achievement of quality. The types and frequencies of independent assessments shall be based on the status, risk, complexity, and importance to safety, waste isolation, and the demonstration of compliance to regulatory and other statutory requirements.

Independent assessments shall include reviews, inspections, testing, checking, conducting surveillances, and auditing or otherwise determining whether items, processes, or services meet specified requirements.

Surveillances shall accomplish the following:

- Monitor work in progress, if applicable;
- Document compliance or noncompliance with established requirements and procedures;
- Identify actual and potential deficiencies
- Initiate timely corrective action commitment from cognizant manager for identified deficiencies;
- Provide notification to responsible managers of the status and performance of work under assessment; and
- Verify timely implementation of corrective action(s).

3.2.1 Planning Independent Assessments

Assessments shall include technical evaluations of the applicable procedures, instructions, activities and items, as appropriate. The scope shall include the work to be assessed and corrective actions taken since the previous assessment.

Planning shall include a review of past assessment results to determine the nature of problems that have occurred. When recurring problems are found, the assessment team shall review corrective actions that have been taken and attempt to determine whether the corrective actions were effective in preventing recurrence.

Assessment preparation shall include review of pertinent background information, procedures, and technical documents so that team members are familiar with the work being assessed.

3.2.1.1 Planning Audits

In addition to the above, the organization performing an audit shall develop and document an audit plan for each audit. This plan shall include the scope, requirements, purpose, assessment personnel, work to be assessed, organizations to be notified, applicable documents, written procedures to be used, and schedule.

3.2.2 Scheduling Independent Assessments

A. Independent assessments shall be scheduled to begin as early in the life of the work as practical and shall be scheduled to continue at intervals consistent with the schedule for accomplishing the work. Internal independent assessments of work to verify QA compliance shall be performed on a risk based prioritization.

B. Regularly scheduled independent program assessments shall be supplemented by additional technical assessments (e.g., surveillances and limited scope audits) of selected work products and/or work processes.

3.2.2.1 Scheduling Audits

In addition to the above, the QA Department will maintain a schedule of audits. The audit schedule shall be developed annually and revised as necessary.

3.2.3 Independent Assessment Team Selection

Assessment team members shall be identified prior to the start of the assessment activity. The team members shall be selected on the basis of technical qualification, knowledge of the item and/or process being assessed and shall be independent from the items and/or processes being assessed. Assessment team members shall have sufficient authority and organizational freedom to carry out their assigned responsibilities. In the case of internal audits, personnel having direct responsibility for performing the activities being audited shall not be involved in the selection of the audit team.

A. An assessment team leader shall be appointed to indoctrinate and supervise the team, organize and direct the assessment and coordinate the preparation and issuance of the assessment report. When a formal QA audit is performed, the assessment team leader shall be a lead auditor.

B. Before starting the assessment, the assessment team leader shall ensure that the assigned personnel collectively have experience and training commensurate with the scope, complexity, or special nature of the work to be assessed.

C. In the performance of an audit, technical specialists, with appropriate technical expertise or experience in the work being audited, shall be used when assessing the adequacy of technical processes.

3.2.4 Assessment Personnel Qualifications

3.2.4.1 Lead Auditor Qualifications

A lead auditor shall be capable of organizing and directing audits and other assessments, reporting assessment observations, and evaluating planned and implemented corrective action. A lead auditor shall be certified as meeting the requirements provided in this section for education and experience, communication skills, training, audit participation, and passing the lead auditor examination.

3.2.4.1.1 Lead Auditor Education and Experience

The prospective lead auditor shall have verifiable evidence that a minimum of 10 credits have been accumulated under the following scoring system:

1. Education (four credits maximum)

    a. An associate's degree from an accredited institution scores one credit. If the degree is in engineering, physical sciences, mathematics, or QA, it scores two credits.

    b. A bachelor's degree from an accredited institution scores two credits. If the degree is in engineering, physical sciences, mathematics, or QA, it scores three credits. In addition, score one more credit for a master's degree (or higher) in engineering, physical sciences, business management, or QA from an accredited institution.

2. Experience (nine credits maximum)

For technical experience in such areas as scientific investigation, site characterization, nuclear waste management, production, transportation, engineering, manufacturing, construction, operation, or maintenance, or experience applicable to the auditing organization's area of responsibility, score one credit for each full year, with a maximum of five credits for this aspect of experience.

    a. If two years of this experience have been in a nuclear field, score one additional credit.

    b. If two years of this experience have been in QA, score two additional credits.

    c. If two years of this experience have been in auditing or assessment, score three additional credits.

    d. If two years of this experience have been in nuclear-related QA, score three additional credits.

e. If two years of this experience have been in nuclear-related QA auditing or assessment, score four additional credits.

3. Professional Competence (two credits maximum)

For certification of competency in engineering, science, or QA specialties, issued and approved by a state agency or national professional or technical society, score two credits.

4. Rights of Management (two credits maximum)

When determined appropriate, the organization performing the qualification may grant up to two credits for other performance factors applicable to auditing that are not explicitly called out in this section (such as leadership, sound judgment, maturity, analytical ability, tenacity, past performance, and completed QA training courses).

3.2.4.1.2 Communication Skills

The prospective lead auditor shall have the capability to communicate effectively, both in writing and orally. These skills shall be attested to in writing by the candidate's manager.

3.2.4.1.3 Lead Auditor Training

Prospective lead auditors shall be trained to the extent necessary to ensure their competence in skills as established by the organization responsible for performing audits and assessments. Training in the following areas shall be accomplished and its completion verified based upon management evaluation of the particular needs of each prospective lead auditor:

- Knowledge and understanding of this QAPD and other program related procedures, codes, standards, regulations, DOE orders, and regulatory guides
- General structure of QA plans and implementation procedures, as a whole, and as related to specific elements of this QAPD
- Auditing or assessment techniques of examining, questioning, evaluating, and reporting; and methods of identifying, following up, and closing corrective action items
- Audit planning in functional areas of nuclear QA
- On-the-job training to include applicable elements of the assessment program

3.2.4.1.4 Audit Participation

The prospective lead auditor shall have participated in a minimum of five QA audits within a period of time NOT to exceed three years prior to the date of the qualification. At least one of the five QA audits shall be a nuclear audit and shall have been performed within the last year.

3.2.4.1.5 Lead Auditor Examination

A. The prospective lead auditor shall pass an examination that evaluates the comprehension of and ability to apply the audit knowledge described in this section. The test shall be oral, written, practical, or any combination of these methods.

B. The development and administration of the examination for a lead auditor is the responsibility of the QA Department. The QA Department may delegate administrative duties related to this responsibility. The QA Department (or designee) shall:

- Maintain the integrity of the examination through confidentiality of files and, where applicable, proctoring of examinations.
- Develop and maintain objective evidence regarding the type and content of the examination.

3.2.4.1.6 Lead Auditor Certification

The lead auditors will be certified by the QA Department and WID Training as being qualified to lead audits and assessments. This certification will document the:

- Name of the organization performing the certification
- Name of the lead auditor
- Date of certification or recertification
- Basis of certification (such as education, experience, communication skills, and training)
- Signature of the designated representative of the organization responsible for certification

3.2.4.1.7 Lead Auditor Proficiency Maintenance

A. Lead auditors shall maintain their proficiency through one or a combination of the following:

- Regular and active participation in the audit process
- Review and study of codes, standards, QA implementation procedures, instructions, and other documents related to QA program auditing or assessment
- Participation in training programs

B. QA management shall evaluate the proficiency of lead auditors annually. Based on the evaluation, management shall choose to extend the qualification, require retraining, or require requalification. Management evaluations shall be documented.

C. Lead auditors who fail to maintain their proficiency for a two-year period shall require requalification to the requirements for a lead auditor of this section.

3.2.4.2 Technical Specialist Qualifications

Technical specialists selected for independent assessment assignments shall be indoctrinated by the lead auditor commensurate with the scope, complexity, or special nature of the work being assessed. In addition they shall be trained to the requirements of the assessment process associated with their duties.

3.2.4.3 Independent Assessor Qualifications

Independent assessors shall be technically qualified and knowledgeable in their assigned roles. In addition, they shall have appropriate training or orientation to develop their assessment skills and techniques. Competence of personnel performing various assessment functions shall be developed by one or more of the following methods:

A. Orientation to provide a working knowledge and understanding of the program QA requirements and implementing procedures used to perform assessments and report assessment results.

B. Training that provides fundamentals, objectives, and techniques of performing assessments. Training shall include methods of examining, questioning, evaluating, and documenting specific assessment items and methods of evaluating the effectiveness of corrective actions for conditions adverse to quality.

C. On-the-job training, guidance, and counseling under the direct supervision of a lead auditor may be substituted for the training above. Such training shall include planning, performing, reporting, and follow-up action involved in conducting assessments.

3.2.5 Performing Independent Assessments

A. All independent assessments shall be performed in accordance with written procedures or checklists.

B. Elements that have been selected for independent assessment shall be evaluated against specified requirements. Objective evidence related to the planning and technical aspects of the work performance shall be examined to the depth necessary to determine if these elements are being implemented effectively.

C. Independent assessment results shall be documented by assessment personnel and reported to and reviewed by management having responsibility for the area assessed. Conditions requiring prompt corrective action shall be reported immediately to management of the assessed organization.

D. Conditions adverse to quality shall be documented and corrected according to the requirements of the sections entitled "Conditions Adverse to Quality and Significant Conditions Adverse to Quality."

3.2.6 Reporting Independent Assessment Results

The independent assessment report shall be prepared and signed by the assessment team leader, and issued to the management of the assessed organization and any affected organizations. The assessment report shall include the following, as appropriate:

- A description of the assessment scope
- Identification of the assessors
- Identification of persons contacted during the assessment
- A summary of the documents reviewed, persons interviewed, and the specific results of the reviews and interviews (i.e., a summary of the checklist contents)
- A summary of the results, including a statement of the QA program adequacy, implementation, and effectiveness, as applicable to the assessment scope
- A description of each reported condition adverse to quality in sufficient detail to enable corrective action to be taken by the assessed organization
- Commendable practices

Findings of a common nature will be grouped together whenever possible so that systematic breakdowns can be identified. Findings will be evaluated based on the relative importance to indicate the degree of impact on compliance, nuclear safety, waste characterization, waste isolation, environmental protection, or the QA program.

3.2.7 Assessment Response and Follow Up

A. Management of the assessed organization will investigate conditions adverse to quality in accordance with section 1.3.3 of this QAPD.

B. The adequacy of corrective actions taken for conditions adverse to quality shall be evaluated and approved by the assessing organization.

C. Follow-up action shall be taken by the assessing organization to verify that corrective action is accomplished as scheduled.

3.2.8 Audit Records

The following documents shall be controlled as QA records in accordance with section 1.5 of this QAPD: audit and assessment plans, reports, checklists, responses, and documentation of corrective action completion and follow-up.

SECTION 4 SAMPLE CONTROL AND QUALITY ASSURANCE REQUIREMENTS

This section defines the requirements for the control of material samples, including identification, handling, storing, shipping, and archiving. This section also defines requirements for the disposition of samples, including nonconforming samples. The following general control requirements apply to samples:

A. Samples shall be controlled and identified in a manner consistent with their intended use.

B. Sample controls shall define responsibilities such as interfaces between organizations for documenting and tracking sample possession from sample collection and identification through handling, preservation, shipment, transfer, analysis, storage, and final disposition.

C. Sample controls shall specifically describe the location and orientation from which the sample was collected.

4.1 Sample Control

The controls for samples shall address the following requirements, as applicable:

A. A chain of custody record form shall be maintained. The chain of custody record shall provide a document trail of all persons who have custody of a given sample, including the date and time of its transfer.

B. If samples have limited hold times, then methods shall be established that preclude using the sample beyond its intended hold time.

C. If sample storage is required, then methods shall be established for the control of sample identification that are commensurate with the planned duration and conditions of storage. These methods shall provide for, as applicable,

- Maintenance or replacement of markings and identification tags damaged during handling or aging
- Protection of identification markings subject to excessive deterioration resulting from environmental exposure

D. Methods shall be established to provide for sample preservation, including protection to prevent contamination from outside sources and temperature preservation requirements.

E. Representative archival samples from difficult-to-repeat sample collection activities, such as principal bore holes, shall be maintained.

F. If a need to archive samples is identified, then the management of all archive samples shall be specified in an implementing procedure.

4.2 Sample Identification

A. Samples shall be clearly and uniquely identified at the time of their initial collection, and the identification shall be maintained until final disposition.

B. Sample identification shall be verified and documented before each transfer or release for testing, analysis, or disposition.

C. All sample numbers, sample locations, and sample dates shall be documented. Documentation shall be maintained and verified at a minimum until the final disposition of all collected samples.

D. At a minimum samples shall be clearly and legibly identified wherever possible with a label, tag, or other marker to denote the sample number, the sample date, the name of the sampler, and the sample location. If physical markings are used, they shall not be obliterated or hidden by surface treatments or sample preparation unless other means of identification are substituted. If direct physical markings are either impractical or insufficient, other appropriate means shall be employed (e.g., physical separation, labels or tags attached to containers, or procedural control).

E. Care shall be taken to ensure that sample identification does not compromise or cross-contaminate the sample.

F. If samples are to be split or subdivided then sample identification and documentation shall reference the sample identification on the original sample. Extreme care must be taken to ensure that cross-contamination does not occur when samples are split. Samples to be split shall have field blanks.

G. Sample traceability, including identification and documentation, shall ensure that the sample can be traced at all times from its collection through final disposition.

4.3 Handling, Storing, and Shipping Samples

Handling, storing, cleaning, packaging, shipping, and preservation of samples shall be conducted in accordance with established work and inspection implementation procedures or other specified documents. Controls shall provide for the maintenance of sample characteristics, sample integrity, and sample identification during storage. These measures include:

A. Methods requirements in accordance with SW-846, Test Methods for Evaluating Solid Waste, shall be identified, where applicable.

B. The controls shall be consistent with the planned duration and storage conditions and shall describe actions to be taken where maximum sample life expectancy limits are identified.

C. Storage methodology shall be developed and implemented to ensure that samples are maintained in predetermined environmental conditions commensurate with their intended use and purpose.

D. Samples shall be controlled to preclude the mixing of like samples.

E. Samples on which analysis or tests have been performed shall be identified and maintained in a separate part of the storage area.

F. If required for critical, sensitive, perishable, or high-value samples, specific measures for handling, storage, cleaning, packaging, shipping, and preservation shall be identified and used.

G. Measures shall be established for marking and labeling samples for packaging, shipping, handling, and storage as necessary to adequately identify, maintain, and preserve the sample. Markings and labels shall indicate the presence of or need for special environments or other special controls if necessary.

H. If required for particular samples, personal protective equipment, special protective equipment (such as containers), and special protective environments (such as inert gas, and moisture and temperature limits) shall be specified and provided. Such controls shall be verified and documented.

4.4 Disposition of Nonconforming Samples

A. Samples taken that are sensitive to data quality requirements and that do NOT meet requirements specified in work controlling documents (such as job packages, travelers, or work requests) shall be documented, evaluated, identified, and segregated in accordance with section 1.3 of this QAPD.

B. The disposition for nonconforming samples shall be identified and documented and shall be limited to "use-as-is," "limited use," or "discard."

C. Samples that have lost their identity shall be documented as nonconforming and shall not be used.

4.5 Environmental Data Operation Samples

Guidance for environmental data operation (EDO) sample planning must address the following items as a minimum. Additional information is contained in EPA QAMS-005/80 Interim Guidance and SW-846.

All EDO sample plans will address that the following quality indicators for the collection of data and information used to support a compliance application have been and will continue to be achieved:

A. Data accuracy (i.e., the degree to which data agree with an accepted reference or true value)

B. Data precision (i.e., a measure of agreement between comparable data gathered or developed under similar conditions expressed in terms of a standard deviation)

C. Data representativeness (i.e., the degree to which data accurately and precisely represent a characteristic of a population, a parameter, variations at a sample point, or environmental conditions)

D. Data completeness (i.e., a measure of the amount of valid data obtained compared to the amount that was expected)

E. Data comparability (i.e., a measure of the confidence with which one data set can be compared to another)

F. Data reproducibility (i.e., a measure of the variability among measurements of the same sample at different laboratories)

G. Data validation (i.e., a systematic process for reviewing a body of data against a set of criteria to provide assurance that the data are adequate for their intended use)

H. Data verification (i.e., a systematic process for reviewing a body of data to verify completeness)

4.6 Data Documentation, Control, and Validation

4.6.1 Data Identification and Usage

A. All data shall be recorded so that they are clearly identifiable and traceable to the test, experiment, study, or other source from which they were generated. Identification and traceability of the data shall be maintained.

B. The method of data recording (e.g., scientific notebooks, log books, data sheets, or computerized instrumentation systems) shall be controlled to avoid data loss and permit data retrievability. Controls shall be established to ensure that data integrity and security are maintained wherever data are stored. Controls shall prescribe how specific types of data will be stored with respect to media, conditions, location, retention time, security, and access. Data shall be suitably protected from damage and destruction during their prescribed lifetime and shall be readily retrievable.

C. Data transfer and reduction controls shall be established to ensure that data transfer is error free, that no information is lost in transfer, and that the input is completely recoverable. Data transfer and reduction will be controlled to permit independent reproducibility by another qualified individual. Examples of data transfer include copying raw data from a notebook into computerized data form or copying from computer tape to disk.

D. Data that are determined to be erroneous, rejected, superseded, or otherwise unsuited for their intended use shall be controlled to prevent their inadvertent use.

E. All processes which change either the form of expression or quantity of data, values, or number of data items (data reduction) shall be controlled by prescribed methods that allow for the validation of the conversion process.

F. Data collection and analysis shall be critically reviewed and questions resolved before the results are either used or reported. Uncertainty limits shall be derived from the data and measurement systems prior to use of the data.

4.6.2 Data Validation

Data validation is a systematic process used to review data, to assure that the required data quality characteristics have been obtained. Results of the review may require that qualifiers be placed on the use of the data.

A. Validation methods shall be planned and documented. The documentation shall include the acceptance criteria used to determine if the data is valid.

B. Data that is important to safety and waste isolation shall be validated. Validation shall include the following:

1. The relevant documentation is reviewed to evaluate the technical adequacy, the suitability for the intended use, and the adequacy of the QA record;

2. Calculations shall be checked on a sample basis;

3. The results of the data review shall be documented; and

4. The reviewer shall be independent of the data collector.

C. Data validation shall be controlled to permit independent reproducibility by another qualified individual.

D. Data considered as established fact by the scientific and engineering community, such as engineering handbook data, critical tables, etc., do not require validation.

SECTION 5 SCIENTIFIC INVESTIGATION QUALITY ASSURANCE REQUIREMENTS

This section of the WID QAPD is included as a contingency should WID become responsible for Scientific Investigations. When and if WID becomes responsible for the performance of any Scientific Investigations the requirements of this section will be implemented into this QAPD commensurate with the degree of the WID responsibilities by the appropriate departments.

SECTION 6 SOFTWARE REQUIREMENTS

6.1 General

This section of the QAPD establishes Software Quality Assurance (SQA) requirements for the development, procurement, maintenance, and use of certain computer software to support WID. It supplements, where specified herein, the basic requirements of the QAPD.

The application of specific requirements shall be prescribed in written plan(s), policies, procedures and instructions, when and to the extent specified by the organization invoking this section.

The QA requirements specified in this section of the QAPD are based on ASME industry consensus standards NQA-1-1989 (supplements 3S-1 and 11S-2), NQA-2a-1990 (Part 2.7), and guidance from NUREG/BR-0167 and NUREG-1297.

6.1.1 Applicability

A. The requirements set forth in this section of the QAPD apply to computer software which manipulates or produces data that are, in turn, used to process, gather or generate information whose output is of sufficient importance that it can be relied upon to make design, analytical, operational or compliance-related decisions affecting the performance of WIPP.

B. Exempt from the requirements of this section of the QAPD is software that is considered to be "systems software," providing that the performance history is acceptable and the basis of acceptability is documented.

C. However, specific applications, such as detailed formulas or macros, which:

- Support quality-related activities addressed in paragraph A, above,
- Are used with exempt software addressed in paragraph B, above, and
- Can be verified by hand calculations or other means,

shall meet the following requirements of this section:

- A listing of the version of the software used shall be developed and maintained.

- Documentation shall be prepared to indicate that the specific application provides the correct results for the specified range of input parameters.

6.1.2 Inventory of Software

Each organization invoking this section of the QAPD shall inventory software for which it maintains responsibility. This inventory shall identify the software's name, version,

classification, exemption status, operating environment, and the person and organization responsible for the software.

6.1.3 Classification of Software

Each organization invoking this section of the QAPD shall classify software (e.g., controlled or not controlled) identified in the inventory. The criteria for the classification shall be documented in the inventory and shall address the purpose of the software relative to its use in engineering, testing, data collection, design, analysis, and operations activities and its importance to safety or significance in managing information or augmenting mission-essential decisions.

6.1.4 Gradation of Quality Measures

The extent of control measures applied to software will vary as a function of the degree of confidence needed regarding the quality of the software. A graded approach shall be applied to the application of software controls, in accordance with section 1.1.8.2 of this QAPD.

Each organization shall make a determination concerning the gradation of quality measures; this determination shall be documented and shall include an evaluation of the software in order to identify the activities to be performed and the documentation that is needed to meet the requirements of this section of the QAPD.

6.1.5 Plans (or Procedures)

WID shall develop plans that specify applicability, methods, techniques, and responsibilities required to implement the requirements of this section. Plans and revisions to the plans shall be forwarded to the QA manager for review and concurrence.

6.1.6 Software Quality Assurance

Software used to support WID activities at WIPP is primarily commercial software purchased off-the-shelf and does not require any development effort by WID. In those cases where WID or its subcontractor develops software for use at WIPP, the following requirements for software controls shall be implemented, as appropriate.

Controls governing applicable software development projects shall be identified in controlled and documented plans. The plans shall be formally reviewed and approved. Controls governing the configuration and use of the software shall be identified in plans or procedures appropriate to the organization(s) using the software.

The following activities shall be addressed in plans or procedures:

A. Software development
B. Software verification and validation

C. Software configuration control
D. Software operation and maintenance

Plans may be issued separately or as a single, composite plan, depending upon the nature and complexity of the project. The software control plans may be a section of the overall project plan, provided that each software item is addressed and the software control portion of the plan prescribes the documentation, reviews, and controls required by this section.

A plan(s) for assuring software quality shall be prepared for each new software project at the inception of the software, or for procured software before it enters the purchaser's organization. Plan(s) may be prepared to address each software project as a generic document to be applied to categories of software. Plans shall:

A. Identify the software products governed by the plan;

B. Identify the methods to be used to develop functional performance requirements, translate those requirements into a detailed design, and implement that design in a computer program;

C. Identify the types of documentation to be prepared, reviewed, and maintained during software design, development, implementation, test, and use;

D. Identify the methodology for establishing software baselines and baseline updates (changes) and for tracking changes throughout the evolution of the software;

E. Identify the process to be used for verification and validation of the software developed for or applied to engineering and scientific analysis;

F. Identify the process for reporting and documenting software discrepancies, evaluating impacts of discrepancies on previous calculations, and determining appropriate corrective action(s);

G. Identify the procedure(s) for establishing and maintaining the integrity of data, embodied mathematical models, and output files;

H. Identify the organizations responsible for performing the work and achieving software quality and their tasks and responsibilities.

6.1.7 Verification and Validation

Plans for software verification and validation shall be prepared at the conclusion of documenting and approving software requirements.

6.2 Software Procurement

The procurement of software and related services shall be in accordance with the Procurement section of this QAPD; the applicable requirements of this section of the QAPD shall become the responsibility of the sponsoring organization upon receipt of the software.

All procured software governed by this section shall be tested in accordance with documented and approved test procedures using approved test-case specifications to ensure that the procured software will perform satisfactorily in its operating environment. The installation tests (including the test procedures), the test case specifications, and the results of the installation tests shall be identified, documented, and maintained as records according to established procedures.

Once the software has been installed and prior to its use, the department shall perform user acceptance of the software to verify the software's functional capability and the acceptability of the vendor-supplied supporting documentation (e.g., user manual, technical specification, documentary results of pre-delivery vendor testing, etc.).

For procured software, the supplier shall report software errors and failures to the sponsoring organization. The sponsoring organization shall also report software errors to the supplier.

6.3 Software Developed Under Other QA Programs

Software that has NOT been developed or approved in accordance with this section of the QAPD and has NOT been previously approved in accordance with a QA program that is consistent with this QAPD shall be evaluated using this section of the QAPD as the review criteria to determine adequacy to perform its intended functions. The evaluation shall be documented. This software shall be uniquely identified and controlled prior to evaluation, clearly traceable to the software requirements, accepted by the department and placed under configuration control prior to use.

The evaluation of existing software developed in accordance with other QA programs shall serve as the basis to determine the:

A. Adequacy of existing verification and validation and software documentation to support operation and maintenance; and

B. Activities to be performed and the documentation necessary to accept the software for its intended use and place it under configuration control.

The evaluation shall be documented and contain at a minimum:

A. User application requirements
B. Test plans and test cases required to validate the software acceptability
C. User documentation

Exceptions from the requirements of this section of the QAPD and their justification for acceptance shall be documented as part of the evaluation. Exceptions shall be approved by the QA manager.

6.4 Software Development and Maintenance

Software used to support WID activities at WIPP is primarily commercial software purchased off-the-shelf and does not require any development effort by WID. In those cases where WID or its subcontractor develops software for use at WIPP, the following requirements for software controls shall be implemented, as appropriate.

The developmental activities of software projects subject to this QAPD shall be identified in documented and approved plans to ensure that the project proceeds in an orderly and traceable manner. Sufficient information shall be provided to clearly indicate the necessary tasks, the deliverables and the baselines for each phase, the required reviews, appropriate milestones, and the responsibilities associated with each task.

Software project development plans shall identify the items that need to be baselined and the methods to be used for controlling the configuration of those baselines throughout the development process.

The activities associated with the software's evolution shall use a systematic (iterative or sequential) approach. This approach shall address the analysis of the problem under study, the transformation of the analysis into design, the implementation of the design into validated computer software, and the development of sufficient documentation (which may constitute records) to demonstrate that the specified requirements have been successfully implemented into the computer software.

The systematic approach of software consists of the activities of Requirements, Design, Implementation, Testing, Installation and Checkout, Operations and Maintenance, and Retirement. Each leads to the development of specific work products representing components of the software's baseline. Both the processes and work products associated with the systematic approach are measurable and are verified for completeness and accuracy, approved, and their quality maintained throughout the evolution of the software.

Following the development of the Software Quality Assurance Plan (for each project), no strict chronology of activity performance is required (i.e., activities may be performed serially, recursively, or concurrently) providing all activities are addressed.

6.4.1 Requirements

Software requirements shall be specified, documented, and reviewed. These requirements shall pertain to functionality, performance, design constraints, data attributes, and external interfaces as outlined in section 6.7.2, "Requirements Documentation". Each requirement shall be specified in sufficient detail to permit its

design in software and its validation. Software requirements shall be traceable throughout the software's evolution.

6.4.2 Design

Software design, based on specified requirements, shall be developed, documented, and reviewed. The design shall specify the overall structure (control and data flow), and the reduction of the overall structure into physical solutions (algorithms, equations, control logic, and data structures).

The design may necessitate the modification of the requirements documentation and the verification and validation plans.

6.4.3 Implementation

The software design shall be translated into a form (e.g., programming language) suitable for processing by a computer, and the implemented software shall be analyzed to identify and correct errors.

6.4.4 Testing

Test requirements and acceptance criteria shall be specified, documented, and reviewed and shall be based upon applicable design or other pertinent technical bases. Appropriate tests, such as verification tests, hardware integration tests, and in-use tests, shall be controlled. Software testing, using documented test plans, cases, procedures, and results, is the primary method of software validation.

Testing of software shall be performed to the extent that unintended functions are identified and their impact determined and corrected, as appropriate, to prevent degradation of the software's required performance. Requirements, design, implementation, or test plans and test cases shall be modified, if required.

6.4.4.1 Verification Tests

Verification tests are design-driven and shall demonstrate the capability of the software to produce valid results for test problems encompassing the range of permitted use defined by the software documentation. Testing of software used for operational control shall demonstrate required performance over the range of operation of the controlled function or process.

Acceptable test problem methods consist of:

A. Hand calculations;

B. Calculations using comparable proven problems;

C. Empirical data and information from confirmed published data and correlations and/or technical literature; and

D. Comparison to other validated software of similar purpose.

6.4.4.2 Validation Tests

Validation tests are requirements-driven and shall be used to validate software by comparing tests results of software execution with objective evidence obtained by the above means. The results of this evaluation shall be of sufficient scope and depth to prove the capabilities and limitations delineated in the software documentation.

6.4.5 Installation and Checkout

During Installation and checkout software becomes part of a system consisting of applicable software components, hardware, and data. The process of integrating the software with applicable components may consist of installing both hardware and software, initializing or creating databases, and verifying that all components of the system have been included in the installation. Test problems shall be developed and documented to permit confirmation of acceptable performance of the software in its operating environment.

Installation and checkout of software shall consist of the following:

A. Execution of tests for installation and integration;
B. Documented acceptance of the software for operational use; and
C. Placing the software under configuration control prior to use.

Completion of the installation and checkout activities establishes the software's current baseline.

6.4.6 Operations and Maintenance

Operation of the software is conducted by the user in accordance with the operation and usage instructions in the user's documentation. Once the software is made available for use, the software's requirements and design integrity shall be maintained. Sustaining activities shall be performed in a traceable, planned, and orderly manner.

In all cases, verification and validation of software shall be completed and approved and corrective actions performed, as necessary, prior to relying upon the software to perform its intended function.

6.4.6.1 Post Installation Maintenance

Maintenance of software to remove latent errors (corrective maintenance), to respond to new or revised requirements (perfective maintenance), or to adapt the software to changes in its operating environment (adaptive maintenance) shall be performed.

Software modifications shall be controlled, documented, approved by authorized personnel, verified, and validated.

6.4.6.2 In-Use Tests

Test problems shall be run whenever the software is installed on a different computer or when significant hardware or system software configuration changes are made. These tests shall be documented, performed by an individual technically competent in the subject area(s), and serve as the basis for determining if the software still meets specified requirements.

Periodic in-use manual or automatic self-check routines shall be prescribed and performed for that software for which computer failure or electronic drift can affect required outcomes.

6.4.7 Retirement

Criteria shall be developed to determine if software can be retired from use and methods shall be developed to prevent the use of retired software. During retirement the support for a software product is terminated.

6.5 Software Verification and Validation

Verification and validation of software shall include reviews of software activities and documentation and tests to ensure that software:

- Adequately and correctly performs all intended functions, and
- Does NOT perform any unintended function that either by itself or in combination with other functions can degrade the intended outcomes of the software.

Verification and validation shall be performed by any competent individual(s) or group(s) other than those who performed the software design, but who may be from the same organization. This means it may be performed by the designer's supervisor, provided the supervisor did NOT specify a singular design approach or rule out certain design considerations and did NOT establish the design inputs used, provided the supervisor is the only individual in the organization competent to perform the verification or validation.

6.5.1 Verification

Verification is primarily a checking activity performed throughout the evolution of the software. It shall be clearly documented, including the identification of those who performed and approved the verification. The reviewed documents shall be updated and placed under configuration control. Documentation of review comments and their disposition shall be retained until they are incorporated into the updated software.

Comments and their disposition NOT incorporated shall be retained in accordance with established procedures.

6.5.1.1 Requirements

Verification of software requirements shall ensure that the requirements are complete, verifiable through testing, consistent, and technically feasible.

6.5.1.2 Design

Verification of software design shall evaluate the technical adequacy of the design approach and ensure that the design is complete (meets all requirements and meets design completion criteria), verifiable (through testing or other means), consistent, technically feasible, and traceable to the software's requirements.

6.5.1.3 Implementation

Verification of the implementation of software design shall consist of the examination of software logic and source code (if available) to ensure adherence to standards and conventions and that the design has been implemented according to specification.

6.5.1.4 Testing

Verification of software testing shall consist of reviews to ensure that specified test criteria and expected results have been met.

6.5.1.5 Installation and Checkout

Verification of installation and checkout consists of reviews to ensure that the software's baseline has been established.

6.5.2 Validation

Software validation is primarily a testing activity that is performed prior to installation and checkout. It shall be used to demonstrate that the computational model embodied in the software is an acceptable representation of the process or system for which it is intended and that the software produces correct solutions within defined limits for each parameter employed.

Validation methods, test data, software-generated results, and conclusions shall be documented in a form that can be understood by an independent individual technically competent to use the software for the particular problem under study. The documentation shall be reviewed by a competent individual; this review shall assess the adequacy and correctness of the documentation in meeting the requirements of this section of the QAPD, and overall acceptability of the software for its intended use.

When the adequacy of the conceptual, mathematical, or computational models or the suitability of procedures and methods cannot be established through testing, alternate calculations or reference to previously established standards and practices, a documented peer review shall be performed as the means to accomplish the requirements for software validation.

The validation of software modifications shall be subject to selective regression testing to detect errors introduced during the modification of systems or system components, to verify the modifications have not caused unintended adverse effects, and to verify that a modified system(s) or system component(s) still meets specified requirements.

6.6 Software Configuration Management

Fundamental to configuration management are the concepts of a baseline and change control. A baseline is a collection of all approved components of the software representing an "evolving" configuration. As each component is approved it is added to the overall software baseline. Each baseline serves as the basis for further development and maintenance that can be changed only through formal change control procedures. Change control is the process by which a change to a baseline is proposed, evaluated, approved or rejected, scheduled, implemented, and tracked.

Software configuration controls shall be planned, including the identification of organizational positions that are authorized to make changes and the methods, procedures, and instructions to be used to control the identification of, access to, changes to, and the status of computer software. Configuration control documents shall indicate how changes will be validated, including regression testing, and how the tests will be documented. These planning documents shall be formally reviewed, approved, and in place before the release of the software for use.

6.6.1 Configuration Identification

A software baseline shall define the most recent approved software configuration. Software shall be placed under configuration control as each configuration item is approved. These items consisting of software source code, executable software, and associated documentation shall be traceable to one another by some means.

A labeling system for configuration items shall be implemented that:

A. Uniquely identifies each configuration item;

B. Identifies changes to configuration items by revision or version identifier; and

C. Provides the ability to uniquely identify each approved configuration of the revised software that is available for use.

6.6.2 Configuration Change Control

Changes to software shall be systematically proposed, evaluated, implemented, documented, and approved to ensure that the impact of a change is carefully assessed prior to updating the software's baseline. Changes to previously accepted software shall be subject to the same level of control as the original software.

Information concerning approved changes shall be transmitted to all affected organizations. All changes shall be formally evaluated and approved by the organization responsible for the original design, unless an alternate organization has been given the authority to approve the changes. Only authorized changes shall be made to software baselines. Software verification activities shall be performed for the change as necessary to ensure the change is appropriately reflected in software documentation, and to ensure that document traceability is maintained. The degree of software validation shall be commensurate with the nature and scope of the change.

6.6.3 Configuration Status Accounting

Information shall be maintained that reflects the current status of a software's baseline. This includes the identity and version of the approved configuration and the status of proposed and approved changes to the baseline components. This information shall be available to all designated users of the software upon request.

6.7 Documentation

Software shall be described in one or more documents which detail user instructions, technical basis, functional requirements and maintenance-related information sufficient to be independently verified and allow maintenance of the software and its documentation. The documentation shall be reviewed by an individual competent in the technical subject area for which the use of the software is intended; that review shall verify that the documentation adequately and accurately reflects the software that comprise the system, and is sufficient to objectively demonstrate that the software requirements have been successfully implemented. Appropriate documentation shall be made available to all designated users of the software.

6.7.1 Procurement Documentation

The applicable QA requirements shall be specified and vendor-supplied software documentation, plans, and procedures shall be identified in software procurement documentation.

6.7.2 Requirements Documentation

Software requirements documentation shall outline the requirements that the proposed software must satisfy. The software requirements shall, as applicable, address the following:

A. Functionality - the functions the software is to perform;

B. Performance - the time-related issues of software operation such as speed, recovery time, response time, etc.;

C. Constraints - those imposed on implementation activities - any elements that will restrict design options;

D. Attributes - nontime-related issues of software operation such as portability, acceptance criteria, access control, maintainability, etc.; and

E. External interfaces - interactions with people, hardware, and other software.

Software requirements shall be traceable throughout the software development cycle.

An item is a software requirement only if its achievement can be verified and validated.

6.7.3 Design and Implementation Documentation

Software design and implementation documentation consists of a document or series of documents that:

A. Describe the major components of the software design as they relate to the software requirements;

B. Describe the software's theoretical basis, embodied mathematical model, control flow, control logic, and data structure(s);

C. Describe the allowable or prescribed ranges for inputs and outputs; and

D. Describe the design in a manner that can be translated into code.

6.7.4 Verification and Validation Documentation

Software verification and validation documentation shall consist of associated plans that describe the activities, including the results of reviews and tests, and criteria for accomplishing the verification of the software throughout the systematic activities of the software's evolution. The documentation shall also specify the hardware and software configurations pertinent to the software's verification and validation.

Software verification and validation documentation shall be organized in a manner that allows traceability from the software requirements to both the software design and to the validated capabilities of the software.

6.7.5 Change Documentation

Changes to software shall be formally documented. This documentation shall contain a description of the change, the rationale for the change, and the identification of affected configuration items of the software's baseline.

6.7.6 User Documentation

User documentation should be sufficient to allow any qualified user (i.e., one having adequate technical background) to "set up" and run the software and properly respond to errors. User documentation, as a minimum, shall include:

- Software name and version identifier;
- Statement(s) of functional requirements and system limitations;
- An explanation of the mathematical model(s) and derivation of the numerical methods used in the software design. Physical and mathematical assumptions on which the software is based shall be included along with an explanation of the capabilities and limitations inherent in the software;
- User instructions that describe the user's interaction with the software, user messages initiated as a result of improper input and how the user can respond, the identification and description of input and output specifications and formats, input parameters;
- A description of any required training necessary to use the software; and
- User information for obtaining operation and maintenance support.

6.7.7 Error Documentation

Documentation of errors detected during the use of the software following its installation and checkout shall be maintained. This documentation can be used for process improvement and to prevent future recurrence during development and maintenance of software. This documentation shall contain the identity of the software, the classification of the error in terms of its significance to the integrity of the software's output, and the disposition of the error corrective action(s).

6.8 Problem Reporting and Corrective Action

Problems (i.e., errors, faults, failures, etc.) detected in released software shall be promptly reported in accordance with documented procedures. When a problem is detected in a software item, work previously performed using versions of the software that contain that problem shall be evaluated to determine the impact on the completed work. The evaluations shall be documented and retained in accordance with records requirements.

A system shall be established and maintained to record, classify, analyze, track, and report software problems and associated corrective actions. Problems shall be promptly reported to affected organizations and their resolution formally processed.

For procured software, the supplier shall report software errors, or failures, to the sponsoring organization, and the sponsoring organization shall report software errors to the supplier.

When problems are discovered in software or software results, the sponsoring organization shall determine the effect on previous use(s) and the need for corrective action based on sufficient information from affected users. Corrective action shall ensure that:

A. Problems are identified, evaluated, documented, and, if required, corrected;

B. Problems are assessed for impact on past and present uses of the software;

C. Changes to software are in accordance with the Software Configuration Management requirements of this section of the QAPD; and

D. Results are provided to affected users along with revised software documentation.

Problems which could significantly impact decisions based upon prior use or that require significant modification to the software shall be identifiable to all users. Errors that have been determined as a material attribute to a nonconformance or may represent a condition adverse to quality shall be controlled in accordance with the Nonconformances section of this QAPD.

6.9 Access Control

To the extent appropriate, controls shall be established to permit authorized and prevent unauthorized access to software that has been accepted in accordance with this section of the QAPD.

APPENDIX A - GLOSSARY

Alternative Calculations: Calculations that are made with alternative methods to verify correctness of the original calculation.

Approval: The documented determination by a responsible internal and/or external organization that a work product is suitable for the intended purpose and shall be used as required.

Assessment/Verification: The act of reviewing, inspecting, testing, checking, conducting surveillances, auditing, or otherwise determining and documenting whether items, processes, or services meet specified requirements. The terms assessment and verification, as used in 10 CFR Part 830.120 and DOE O 414.1A, are synonymous; their use is determined by who is performing the work. Assessments are performed by or for senior management. Verifications are performed by the line organizations.

Assessor: An individual who is qualified to perform assigned portions of an assessment.

Audit: A planned and documented QA program assessment performed to determine by investigation of objective evidence the adequacy of and compliance with established QA implementation procedures and the effectiveness of implementation. An audit should not be confused with surveillance or inspection activities performed for the sole purpose of process control or product acceptance.

Auditor: An individual who is qualified to perform assigned portions of an audit.

Baseline Software: Software that has been formally reviewed and agreed upon, and that can only be changed through formal change control procedures.

Certificate of Conformance: A document signed or otherwise authenticated by an authorized individual certifying the degree to which items or services meet specified requirements.

Certification: The act of determining, verifying, and attesting in writing to the qualification of personnel, processes, procedures, or items in accordance with specified requirements.

Characteristic: A property of a work product that is distinct, describable, and measurable.

Commercially Available Item: An item that is: (1) not subject to design or specification criteria that are unique to nuclear facilities, (2) used in applications other than nuclear facilities, and (3) ordered from the manufacturer or supplier on the basis of specifications set forth in the manufacturer's published product description.

APPENDIX A - GLOSSARY

Condition Adverse to Quality: An all inclusive term used in reference to deficiencies, failures, malfunctions, defective items, and nonconformances.

Configuration Item: A collection of hardware or software elements treated as a unit for the purpose of configuration control.

Controlled Document: A document that is prepared, reviewed, approved, and distributed in accordance with established implementation procedures. Controlled documents are subject to controlled distribution and to a defined and controlled change process.

Corrective Action: Measures taken to rectify conditions adverse to quality and, where necessary, to preclude repetition.

Data Quality Objective (DQO): A qualitative and quantitative statement that describes the overall level of uncertainty that a decision maker is willing to accept in results derived from data. DQOs (1) clarify the study objective, (2) define the most appropriate type of data to collect, (3) determine the most appropriate conditions from which to collect the data, and (4) specify tolerable limits on decision errors which will be used as the basis for establishing the quantity and quality of data needed to support compliance decisions. DQOs are used to develop a scientific and resource-effective data collection design.

Design Bases: Information that identifies the specific functions to be performed by items and the specific values or ranges of values chosen for controlling parameters as reference bounds for design.

Design Input: Those criteria, parameters, bases, or other design requirements upon which detailed final design is based.

Design Output: Drawings, specifications, and other documents used to define technical requirements of structures, systems, components and computer programs.

Design Process: Technical process that commences with identification of design input and ends with the issuance of design output documents.

Design Review: A documented evaluation of design output during the design process to determine design adequacy and conformance to specified acceptance criteria.

Document: Recorded information that describes, specifies, reports, certifies, requires, or provides data or results. A document is NOT considered a record until it meets the definition of record.

APPENDIX A - GLOSSARY

Document Control: The process for controlling documents that provides for adequacy review, approval for release by authorized personnel, and distribution for use at the prescribed work locations.

Error: A discrepancy between a computed, observed or measured value or condition and the true, specified, or theoretically correct value or condition.

Hold Point: A mandatory inspection point, beyond which work shall not proceed, until the inspector is present to perform the inspection or the hold point has been waived. Hold points are typically used for completed work steps which require inspection before work continues.

Independent Assessment: An assessment that is conducted by an independent group or organization, having authority and freedom from the line organization, to evaluate the scope, status, adequacy, programmatic compliance, or effectiveness of a program or activity.

Item: An all-inclusive term used in place of any of the following: appurtenance, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, unit, or support systems. Item may also refer to samples, software, or data.

Lead Auditor: An individual trained, qualified, and certified to organize and direct an audit, report audit findings, and evaluate corrective actions.

Line Management: Those management positions below senior management that are directly responsible for work task products and services.

Measuring and Test Equipment (M&TE): All devices used to measure, gage, test, inspect, or otherwise determine compliance with prescribed technical requirements. Measuring instruments used in taking quantitative and/or qualitative measurements. "Indication Only" devices, which do not require calibration, are not considered M&TE.

Metrology: The science of precision measurement.

Monitoring and Data Collection Equipment (M&DC): A subcategory of M&TE that is used in the collection of measurement data for the establishment of test conditions and general information and the collection of general measurement data NOT utilized to verify the conformance of an item or equipment to specified criteria. "Indication Only" devices, which do not require calibration, are not considered M&DC.

Nonconformance: A deficiency in characteristic, documentation, or record that renders the quality of an item or activity unacceptable or indeterminate.

APPENDIX A - GLOSSARY

Peer: A person having technical expertise in the subject matter to be reviewed to a degree at least equivalent to that needed for the original work.

Peer Review: A documented, critical review performed by peers who are independent of the work being reviewed. A peer review is an in-depth critique of assumptions, calculations, extrapolations, alternate interpretations, methodology, and acceptance criteria employed an of conclusions drawn in the original work. Peer reviews confirm the adequacy of work. In contrast to peer reviews, the term "technical review," refers to a review to verify compliance to predetermined requirements; industry standards; or common scientific, engineering, and industry practice.

Procedure: A document that specifies or describes how an activity is to be performed. The term "procedure" is also inclusive of instructions and drawings.

Process: A series of actions that achieves an end or result.

Procurement Document: Purchase orders, contracts, specifications, or other documents used to define technical and QA requirements for the procurement of items or services.

Qualification (Personnel): The characteristics or abilities gained through education, training, or experience as measured and documented against established requirements, such as standards or tests, that qualify an individual to perform a required function.

Qualification Testing: A test that is intended to provide a desired level of confidence that an item meets specified criteria.

Quality: The condition achieved when an item, service, or process meets or exceeds the user's requirements and expectations.

Quality Assurance: All those actions that provide confidence that quality is achieved.

Quality Assurance Implementing Procedure: A document that prescribes an approved process for accomplishing work in compliance with the WID QAPD requirements.

Quality Assurance Program (QAP): The overall program established to assign responsibilities and authorities, define policies and requirements, and provide for the performance and assessment of work.

Quality Record: A completed document (regardless of medium) that furnishes evidence of the quality of items and/or activities affecting safety or waste isolation.

APPENDIX A - GLOSSARY

Quality System: See *Quality Assurance Program.*

Record: A completed document or other media that provide objective evidence of an item, service, or process.

Recurring Condition Adverse to Quality: More than one similar adverse condition that resulted from the same cause (i.e., is assigned the same trend or cause code), for which corrective action/actions to prevent recurrence have been previously implemented, and which are determined by formal performance evaluation and trend analysis to represent an adverse trend or inclination.

Remedial Action: The actions taken to correct specifically identified conditions adverse to quality.

Repair: The process of restoring an item to a condition such that the capability of an item to function reliably and safely is unimpaired even though that item still does NOT conform to the original requirement.

Rework: The process by which an item is restored to original specifications by completion or correction.

Root Cause: The identified cause of a condition adverse to quality that, if corrected, will preclude recurrence or greatly reduce the probability of recurrence of the same or a similar condition adverse to quality.

Sample (Material): A physical part of a whole whose properties are sampled to gain information about the whole.

Scientific and Engineering Software: Software that uses numerical methods to complete scientific, engineering, and mathematical calculations.

Service: The performance of work, such as design, construction, fabrication, inspection, nondestructive examination/testing, environmental qualification, equipment qualification, repair, installation, or the like.

Significant Condition Adverse to Quality: A significant condition adverse to quality is one that, if uncorrected, could lead to a serious effect on safety/operability, the ability to isolate waste, TRU waste site certification, regulatory compliance demonstration, or effective implementation of the QA program; or an adverse trend or inclination, as determined by formal performance evaluation and trend analysis.

Site Characterization: The program of exploration and research both in the laboratory and the field that is undertaken to establish the geologic conditions and the ranges of parameters of a particular site.

APPENDIX A - GLOSSARY

Software: Computer programs, procedures, rules, and associated documentation and data pertaining to the operation of a computer system.

Software Life Cycle: The period of time that starts when a software product is conceived and ends when the software product is no longer available for routine use. The software life cycle typically includes a requirements phase, a design phase, and implementation phase, a test phase, an installation and checkout phase, an operation and maintenance phase, and sometimes a retirement phase.

Software Verification and Validation (V&V): The process of determining whether the requirements for a system or component are complete and correct, the products of each development phase fulfill the requirements or conditions imposed by the previous phase, and the final system or component complies with specified requirements. See Validation and Verification.

Special Process: A process, the results of which are highly dependent on the control of the process or the skill of the operators, or both, and in which the specified quality cannot be readily determined by inspection or test of the product.

Stop Work Order: A formal directive issued by management that work must be stopped until resolution of the related significant condition adverse to quality or nonconformance.

Supplier: Any individual or organization who furnishes items or services in accordance with a contract. An all-inclusive term used in place of any of the following: vendor, seller, participant, contractor, or subcontractor.

Surveillance: The act of observing real-time activities and/or reviewing documentation to verify conformance with specified requirements and to evaluate their adequacy and effectiveness.

System Software: Software which is used exclusively in the preparation, installation, or operation of executable software applications. Examples of such software include Operating Systems, Compilers, Assemblers, Translators, Interpreters, Automated Protocols, Utilities and Tools, Teleprocessing Managers, and Query Languages.

Technically Competent Personnel: The characteristics or abilities gained through education, training, or experience, as measured against established requirements, that qualify an individual to perform a required function as determined by management.

Technical Review: A documented critical review of work that has been performed within the state of the art. The review is accomplished by one or more qualified reviewers who are collectively equivalent in technical expertise to those who performed the original work. The review is an in-depth analysis and evaluation of documents, activities, material, data, or items that require technical verification or validation for

APPENDIX A - GLOSSARY

applicability, correctness, adequacy, completeness, and assurance that established requirements are satisfied.

Technical Specialist: An individual who is assigned to an assessment team when the scope, complexity, or special nature of the work to be audited warrants assistance from a technical standpoint.

Testing: An element of verification for the determination of the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operating conditions.

Traceability: The ability to trace the history, application, and location of an item, data, or sample using recorded documentation.

As related to metrology, traceability means the ability to relate individual measurement results through an unbroken chain of calibrations to one or more of the following:

(a) U.S. national standards maintained by NIST or the U.S. Naval Observatory

(b) Fundamental or natural physical constants with values assigned or accepted by NIST

(c) National Standards of other countries which are accepted by NIST

Use As Is: A disposition permitted for a nonconforming item when it can be established that the item is satisfactory for its intended use.

Validation: An activity that demonstrates or confirms that a process, item, data set, or service satisfies the requirements defined by the user. See *Software Verification and Validation.*

Verification: See *Assessment* and *Software Verification and Validation.*

Waste Isolation: As it applies to this QAPD, the confinement of radioactive and hazardous wastes through the process of receiving, handling, moving, monitoring, and disposal of TRU waste.

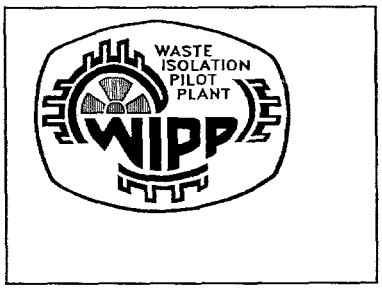
Witness Point: A mandatory inspection point beyond which work shall not proceed until the inspector is notified of the witness point and consents to the work continuing. Witness points are typically used for monitoring in-process work or verifying satisfactory quality of items and activities by indirect means (e.g., documentation review). Work shall not proceed beyond a witness point until the inspector has made arrangements to perform the inspection/monitoring or the witness point has been waived.

APPENDIX A - GLOSSARY

Work: The process of performing a defined task or activity, for example, research and development, operations, maintenance and repair, administration of maintenance activities, software development and use, inspection, safeguards and security, data collection, and analysis.

APPENDIX B - QUALITY ASSURANCE REQUIREMENTS

QUALITY ASSURANCE REQUIREMENTS CROSS-REFERENCE MATRIX				
	10 CFR 830.120 CRITERIA	DOE Order 414.1A CRITERIA	ASME NQA-1 (1989) REQUIREMENTS	EPA QAMS 005/80 ELEMENTS
MANAGEMENT	1.1 PROGRAM	1. PROGRAM	1. ORGANIZATION 2. QUALITY ASSURANCE PROGRAM	4. PROJECT ORGANIZATION AND RESPONSIBILITY
	1.2 PERSONNEL TRAINING & QUALIFICATION	2. PERSONNEL TRAINING & QUALIFICATION	2. QUALITY ASSURANCE PROGRAM	3. PROJECT DESCRIPTION 16. QUALITY ASSURANCE REPORTS TO MANAGEMENT
	1.3 QUALITY IMPROVEMENT	3. QUALITY IMPROVEMENT	15. CONTROL OF NONCONFORMING ITEMS 16. CORRECTIVE ACTION	15. CORRECTIVE ACTION
	1.4 DOCUMENTS & RECORDS	4. DOCUMENTS & RECORDS	6. DOCUMENT CONTROL 17. QUALITY ASSURANCE RECORDS	1. TITLE PAGE 2. TABLE of CONTENTS
PERFORMANCE	2.1 WORK PROCESSES	5. WORK PROCESSES	5. INSTRUCTIONS, PROCEDURES, DRAWINGS 8. IDENTIFICATION & CONTROL of ITEMS 9. CONTROL of PROCESSES 12. CONTROL of MEASURING & TEST EQUIPMENT 13. HANDLING, STORAGE, & SHIPPING	6. SAMPLING PROCEDURES 7. SAMPLE CUSTODY 8. CALIBRATION 9. ANALYTICAL PROCEDURES 13. PREVENTIVE MAINTENANCE
	2.2 DESIGN	6. DESIGN	3. DESIGN CONTROL	5. DATA QUALITY OBJECTIVES 6. SAMPLING PROCEDURES 10. DATA REDUCTION 11. INTERNAL QUALITY CONTROL 14. ROUTINE PROCEDURES to ASSESS DATA QUALITY
	2.3 PROCUREMENT	7. PROCUREMENT	4. PROCUREMENT DOCUMENT CONTROL 7. CONTROL of PURCHASED ITEMS & SERVICES	N/A
	2.4 INSPECTION & ACCEPTANCE TESTING	8. INSPECTION & ACCEPTANCE TESTING	10. INSPECTION 11. TEST CONTROL 12. CONTROL of MEASURING & TEST EQUIPMENT 14. INSPECTION, TEST, & OPERATING STATUS	8. CALIBRATION 13. PREVENTIVE MAINTENANCE
ASSESSMENTS	3.1 MANAGEMENT ASSESSMENT	9. MANAGEMENT ASSESSMENT	2. QUALITY ASSURANCE PROGRAM	3. PROJECT DESCRIPTION 14. ROUTINE PROCEDURES to ASSESS DATA QUALITY 16. QUALITY ASSURANCE REPORTS to MANAGEMENT
	3.2 INDEPENDENT ASSESSMENT	10. INDEPENDENT ASSESSMENT	18. AUDITS	12. AUDITS 14. ROUTINE PROCEDURES to ASSESS DATA QUALITY



Specification	D-0101
Revision Number	3
Revision Date	04/04/00
ECO Number	9753

SPECIFICATION
FOR
PREPACKAGED MgO BACKFILL

Prepared by
Westinghouse Electric Corporation
Waste Isolation Division
Carlsbad, New Mexico

For

U.S. Department of Energy

Cognizant Engineer J. L. Jackson /
(Printed) (Signature) Date

Cognizant Manager A. E. Strait /
(Printed) (Signature) Date

U. S. DEPARTMENT OF ENERGY
WASTE ISOLATION PILOT PLANT

SPECIFICATION D-0101
Prepackaged MgO Backfill

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SPECIFICATION D-0101 RECORD OF REVISION

ECO/REV#/DATE	PAGES AFFECTED	REVISION DESCRIPTION
8613 Rev. 0 5-23-97	All	Specification Created
8852 Rev. 1 12-18-97	2	Revised 3.3.1.3; deleted CAA test and reaction time, added reference to Attachment 1.
	5	Added 3.5.3.4 to require marking date of fill on sacks. Deleted text and title of 5.1 and 5.1.1 requiring a QA program complying with NQA-1, moved 5.2 Submittals to 5.1.
	10 & 11	Added Attachment 1, specifying the reactivity test equipment and procedure.
9724 Rev. 2 03-08-00	2, 3, 4, 6, Attachment A & B	Reduced the min bulk density to 87 lb/ft^3, increased the super sack height from 24.5 to 25.5 inches, and increased the super sack weight from 4,100 to 4,200 lbs.
9753 Rev. 3 04-04-00	2	Clarify material requirements.

1.0 SCOPE

This specification covers the definition of the pre-packaged backfill material to be emplaced in the underground areas at the Waste Isolation Pilot Plant (WIPP). The backfill material will be Magnesium Oxide (MgO), furnished in two bulk package configurations; a super sack and a mini sack. The super sack shall be shipped on a support sheet.

2.0 APPLICABLE DOCUMENTS

The requirements of this specification have precedence over all referenced documents. Where this specification appears to conflict with the requirements of a referenced document, such conflicts shall be brought to the attention of the purchaser for resolution.

2.1 REFERENCES

The codes, specifications, and standards referred to by number or title form a part of this specification. They are not furnished with the contract documents.

Code of Federal Regulations:

Title 29, Part 1910 (29 CFR 1910) Occupational Safety and Health Standards

Title 30, Part 57 (30 CFR 57) Safety and Health Standards - Metal and Non-Metal Underground Mines

Waste Isolation Pilot Plant, Waste Isolation Division

WP 13-1 Quality Assurance Program Description
- Section 1.3 Quality Improvement
- Section 1.5 Records
- Section 2.1 Work Processes
- Section 2.3 Procurement
- Section 2.4 Inspection and Testing
- Section 3 Assessment Requirements

3.0 PRODUCT AND DESIGN REQUIREMENTS

3.1 GENERAL REQUIREMENTS

3.1.1 The materials and packaging shall conform to this specification. The packaging shall be capable of transporting the backfill material without breaking or a loss of contents.

3.1.2 The vendor shall provide an MSDS for each MgO material.

3.1.3 The vendor shall provide an MSDS and flame spread, smoke generation, and decomposition product information for all materials used in the super sacks and mini sacks.

3.2 FUNCTIONAL REQUIREMENTS

3.2.1 Supplier filled super sacks will be handled during transportation to the WIPP, at receipt and during material handling operations on support sheets. Refer to Figure 3.1 for the emplaced position of the super sack.

3.2.2 Supplier filled super sacks are to be placed on a vendor furnished support sheet which will be suitable for the application when placed on the waste stack.

3.2.3 A filled "Super Sack" and its support sheet will be placed on top of one of four waste containers; Standard Waste Box (SWB), 7-pack of 55 gallon drums (Figure 3.3), Ten Drum OverPack (TDOP), or a 4-pack of 85 gallon overpack drums (Figure 3.4). The filled super sack must be able to retain its contents for a period of two years after emplacement without rupturing from its own weight.

3.3 MATERIAL REQUIREMENTS

3.3.1 Backfill Material Requirements

3.3.1.1 The sum of magnesium oxide (MgO) plus calcium oxide (CaO) shall be a minimum of 95%, with MgO being no less than 90%. The remainder of the material shall not contain any items considered hazardous to people or the environment.

3.3.1.2 Backfill material shall be of a dry granular form, which shall contain less than 0.5% particles which would be retained on a Tyler 3/8 inch sieve (3/8" x down).

3.3.1.3 Backfill material shall be tested for reactivity as outlined in Attachment B, and shall meet the temperature rise listed in the test procedure.

3.3.1.4 The backfill material which is used to fill super sacks and mini sacks shall have a minimum loose bulk density of 87 lb/ft^3.

3.3.2 Backfill super sack Material Requirements

3.3.2.1 The super sack shall be constructed of woven polypropylene material, with a minimum weight of 8.0 ounces per square yard, coated or

uncoated. Assembly shall be by normal bag fabrication methods; i.e. sewing, gluing, etc. Alternate materials and/or fabrication methods are acceptable subject to approval by WID Engineering prior to shipment. Poly Vinyl Chloride (PVC) material is not acceptable.

3.3.2.2 The assembled (empty) dimensions of the super sack shall be a hexagon which is nominally 61 inches across the flats (a 61 inch inscribed circle) by 25.50 inches high (47.6 ft^3). The super sack shall be constructed such that it retains its shape well enough to not deform beyond a 65 inch hexagon with 12 inch radius corners after filling and shipping.

3.3.2.3 The assembled super sack shall have the capacity to transport a minimum of 4,200 pounds of a material with a loose bulk density as specified in Section 3.3.1.4. The super sack shall be designed to comply with the requirements of the Flexible Intermediate Bulk Container Association (FIBCA), including a safety factor of five to one (5:1) on the working load.

3.3.2.4 Any fill opening shall be closed to prevent leakage of material during shipping and handling. No discharge opening is required.

3.3.2.5 The super sack shall provide a barrier to atmospheric moisture and carbon dioxide (CO_2) which is equivalent to or better than that provided by a standard commercial cement bag. If required, an independent liner may be added. The liner may be a separate part or attached to the super sack at the manufacturer's option.

3.3.3 Backfill mini sack Material Requirements

3.3.3.1 The mini sack shall be constructed of woven polypropylene material, coated or uncoated. Assembly shall be by normal bag fabrication methods; i.e. sewing, gluing, etc. Alternate materials and/or fabrication methods are acceptable subject to approval by WID Engineering prior to shipment. Poly Vinyl Chloride (PVC) material is not acceptable

3.3.3.2 The empty mini sack shall have the shape of a frustum of a cone, with a nominal bottom diameter of 5.75 inches, a nominal overall length of 33 inches, and a nominal top diameter of 3 inches (0.30 ft^3 volume).

3.3.3.3 The assembled mini sack shall have the capacity to transport a minimum of 27 pounds of MgO with a loose bulk density as specified in Section 3.3.1.4.

3.3.3.4 An integrally connected hook which is suitable to support the weight of

the filled mini sack, i.e. a commercial steel "S" hook, shall be provided on each bag. The hook shall be of a size to fit over the lifting clip on the SWB (See Figures 3.2 and 3.3). The hook and its connection shall be positioned on the outer diameter of the mini sack such that the bottom of a filled sack is not more than 35.50" below the top of the SWB lift clip.

3.3.3.5 Any fill opening shall be closed to prevent leakage of material during shipping and handling. No discharge opening is required.

3.3.3.6 The mini sack shall provide a barrier to atmospheric moisture and carbon dioxide (CO_2) which is at least comparable to that provided by a standard commercial cement bag. If required, an independent form-fitted liner may be added. The liner may be a separate part or attached to the mini sack at the manufacturer's option.

3.4 FABRICATION REQUIREMENTS

3.4.1 The supplier shall provide backfill containers which comply with the requirements for super sacks as outlined in Sections 3.3.2 above. The super sack shall be filled with 4,200 ± 50 pounds of backfill material as specified in Section 3.3.1 above.

3.4.2 The supplier shall provide backfill containers which comply with the requirements for mini sacks as outlined in Sections 3.3.3 above. The mini sack shall be filled with 26 ± 1.0 pounds of backfill material as specified in Section 3.3.1 above.

3.5 PACKAGING AND SHIPPING REQUIREMENTS

3.5.1 Filled backfill containers shall be delivered to the WIPP site by commercial carrier. Shipment racks and containers will be provided by the purchaser. These will be in the form of stackable/collapsible racks for the super sacks (one per rack) and stackable/collapsible wire baskets for mini sacks (approx. 140 mini sacks per container).

3.5.2 All items shall be packaged as required to provide protection from damage during shipping and handling.

3.5.3 Each individual backfill container shall be clearly labeled with the following information:

3.5.3.1 The backfill material name as it appears on the Material Safety Data Sheet (MSDS).

3.5.3.2 All applicable hazard warnings.

3.5.3.3 The backfill material manufacturer's name and address. If the vendor supplying the filled backfill containers is not the backfill material manufacturer, the both the backfill material vendor's name and address and the name and address of the vendor supplying the filled containers shall also appear on each container.

3.5.3.4 The date the backfill container was filled with backfill material.

4.0 FIELD EXECUTION

4.1 INSPECTION

All shipments of backfill containers will undergo random receiving inspection at the WIPP for the stated criteria by WID personnel for shipping damage, for compliance with specifications, and for any other abnormality.

5.0 QUALITY ASSURANCE REQUIREMENTS

5.1 SUBMITTALS

5.1.1 The supplier shall provide a certified material composition analysis and an MSDS with each shipment.

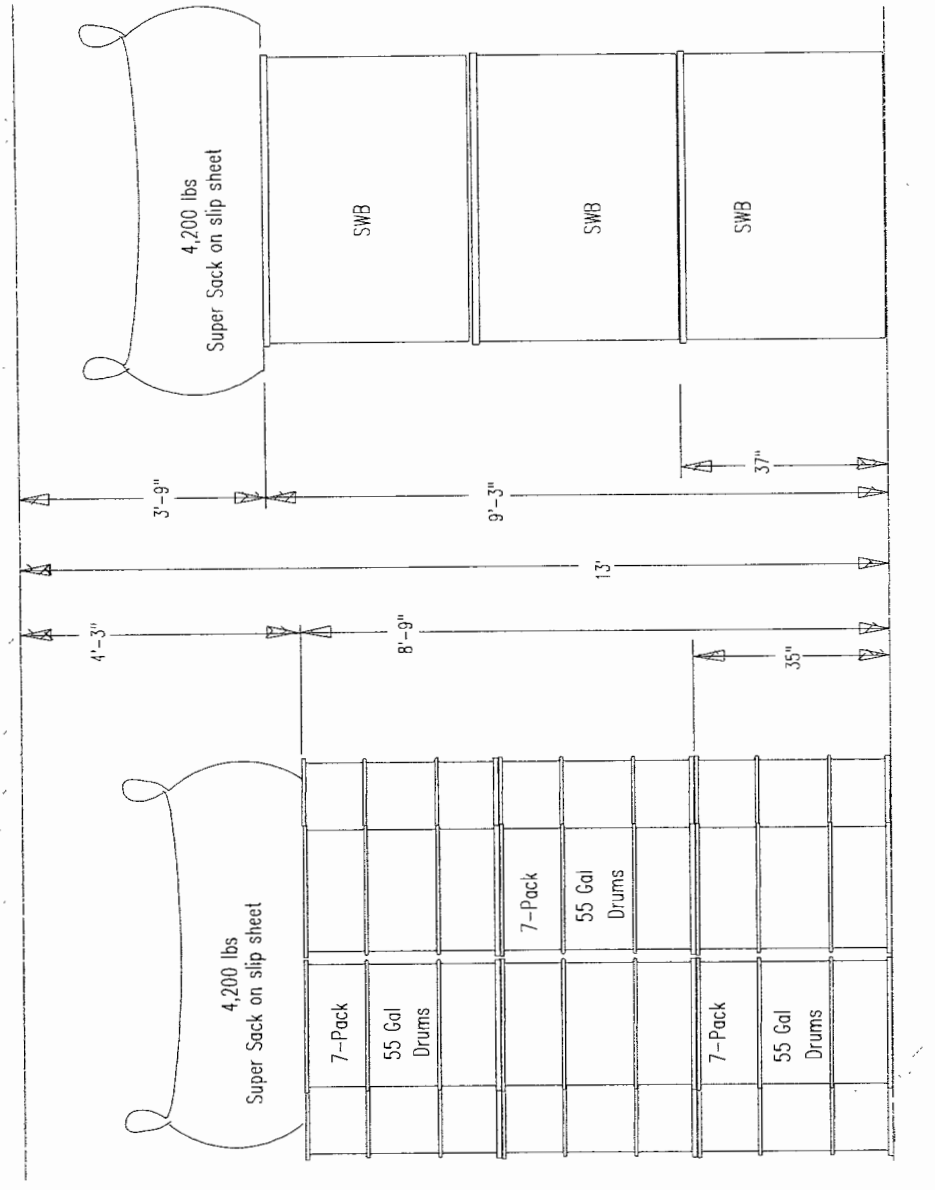

4,200 lbs
Super Sack on slip sheet
SWB
SWB
SWB
3'-9"
9'-3"
37"
13'
4'-3"
8'-9"
35"
4,200 lbs
Super Sack on slip sheet
7-Pack
55 Gal
Drums
7-Pack
55 Gal
Drums
7-Pack
55 Gal
Drums

Figure 3.1

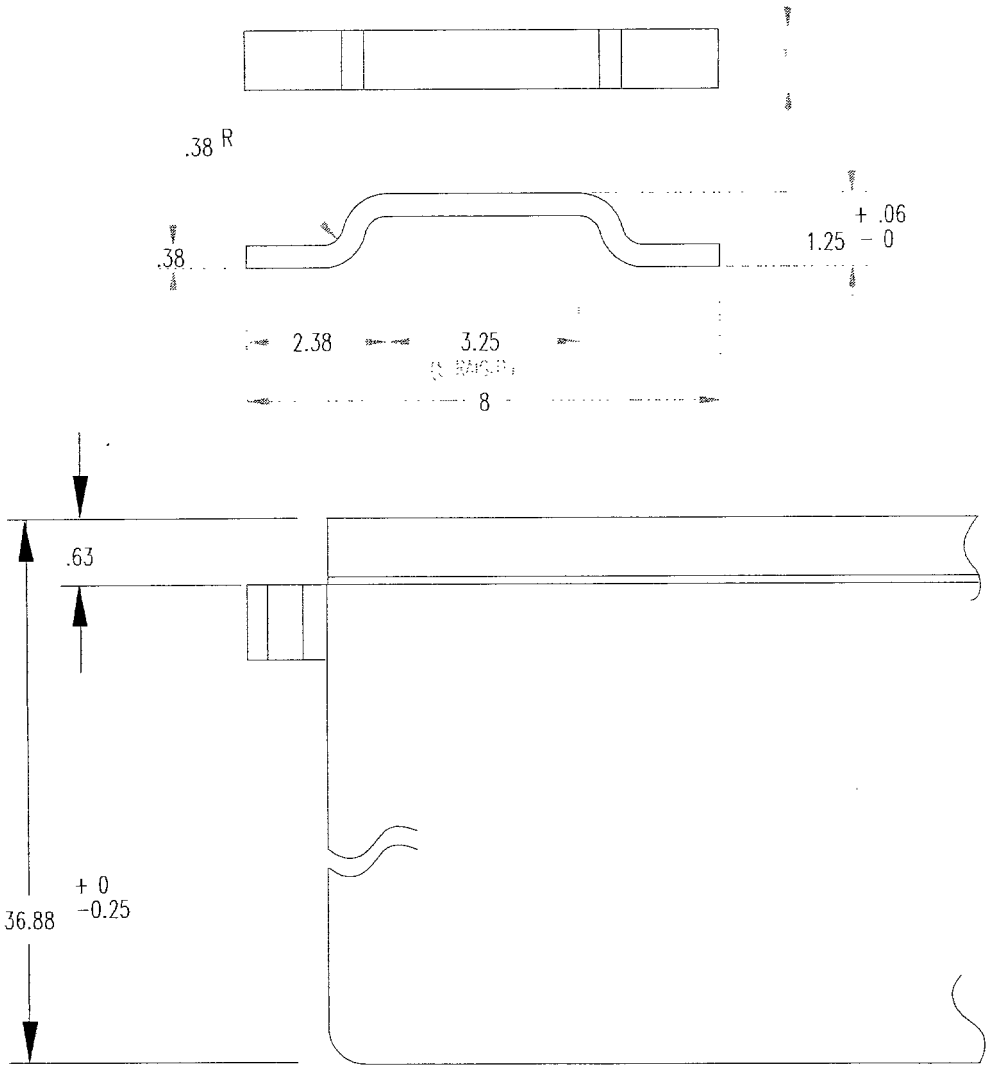


Figure 3.2

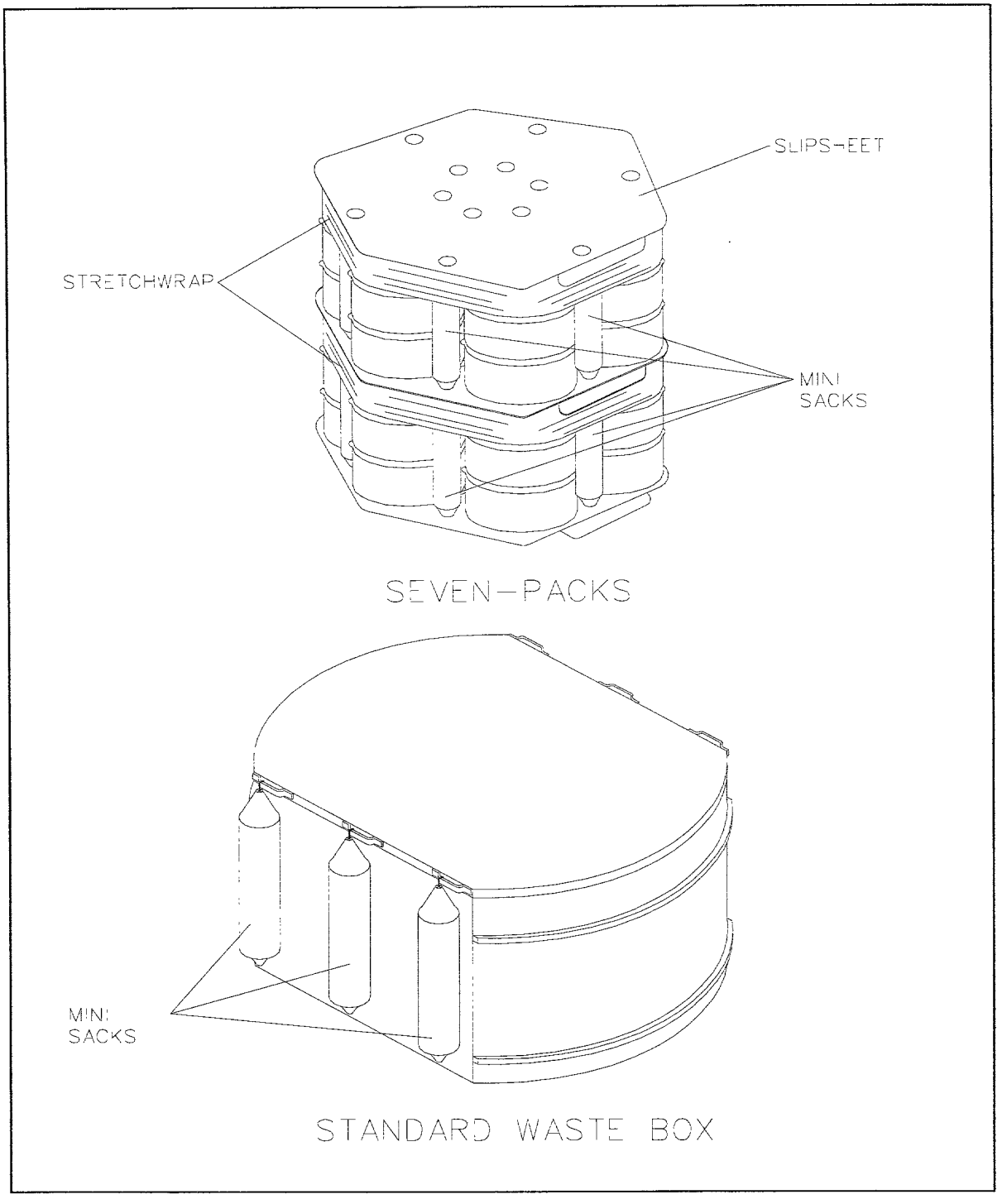
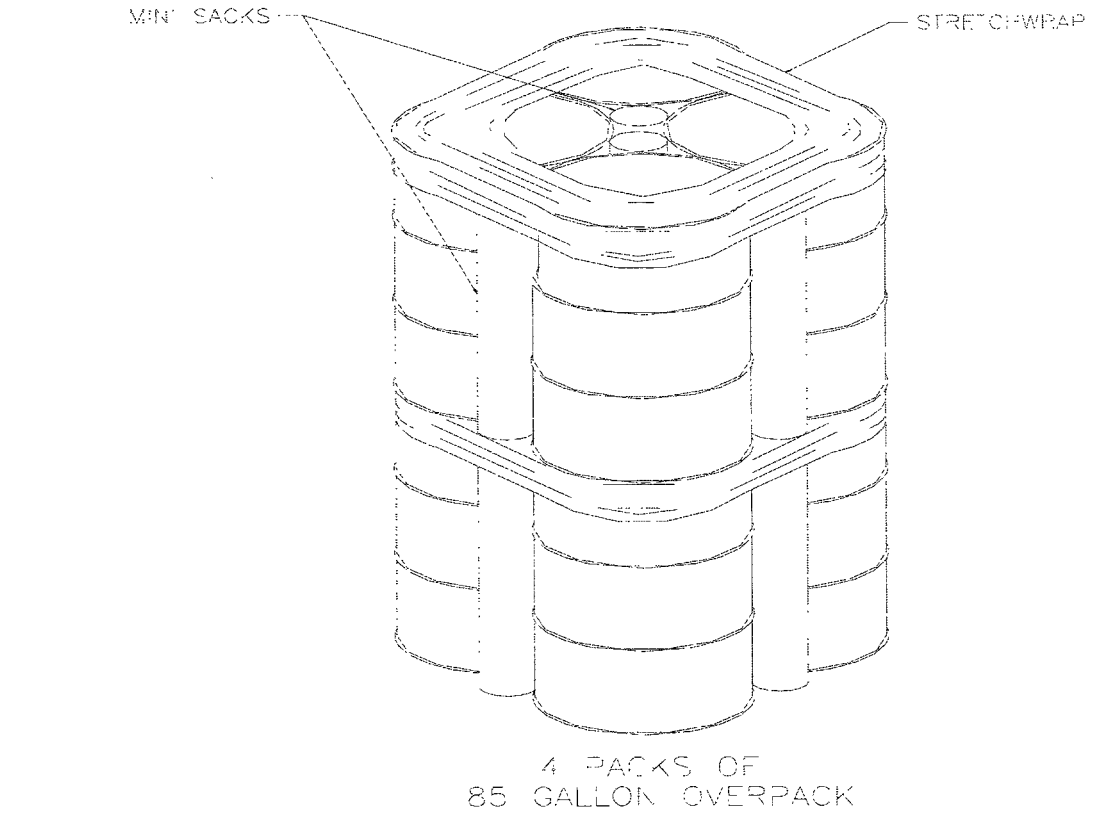

SLIPSHEET
STRETCHWRAP
MINI SACKS
SEVEN-PACKS
MINI SACKS
STANDARD WASTE BOX

Figure 3.3


MINI SACKS
STRETCH WRAP
4 PACKS OF
85 GALLON OVERPACK

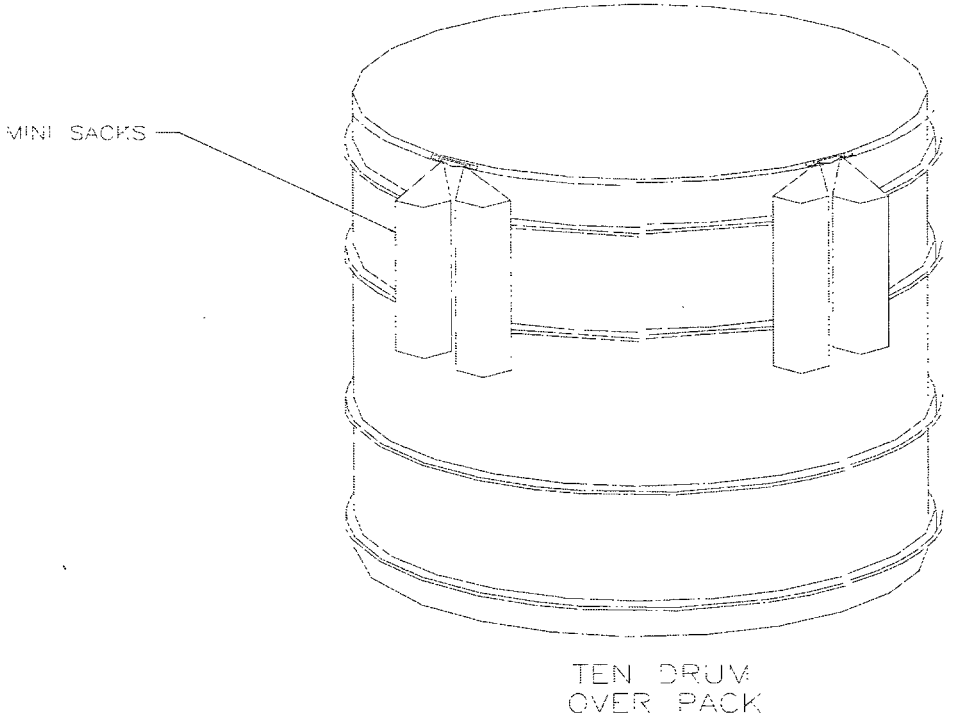

MINI SACKS
TEN DRUM
OVER PACK

Figure 3.4

ATTACHMENT A - Document Submittal Requirements

DOCUMENT SUBMITTAL REQUIREMENTS

SUBMIT DOCUMENTS PRIOR TO THE POINTS INDICATED BY THE CODE BELOW:

F – FABRICATION
T – TESTING
S – SHIPMENT
C – CONSTRUCTION/INSTALLATION
A – FINAL ACCEPTANCE

Document Requirements	See Paragraph	For Approval	For Record
1. MSDS for Bag Material	3.1.3		A
2. MSDS for MgO Material	3.1.2		A
3. MgO certified material composition analysis	5.1.1		A

Equipment Needed:

1. A drying oven able to sustain a temperature of approximately 100°C.

2. An NIST-traceable partial-immersion thermometer (or electronic equivalent) able to measure temperatures from 20°C to at least 55°C, with increments of 0.1°C, for measuring MgO solution temperature rise. A second NIST-traceable full-immersion thermometer (or electronic equivalent) with increments of 1°C for measuring room air temperature. A third NIST-traceable full- or partial-immersion thermometer, depending on oven configuration (or electronic equivalent) with increments of 1°C for measuring oven air temperature.

3. A means of supporting the thermometer in a 400 mL beaker so that the fluid level will be at the immersion mark on the thermometer.

4. An analytic balance accurate to within ± 0.01 g, calibrated with NIST traceable standards.

5. A plastic-coated magnetic stir bar 1-3 inches in length and a stir plate to drive it.

6. A source of deionized water.

7. A source of ACS Reagent Grade 85% phosphoric acid.

8. 400-mL glass beakers.

9. Stopwatch (optional).

10. Scientific notebook (or suitable alternative which provides permanent archiving of recorded information).

Procedure:

1. Mix one liter of 20% ± 0.1% phosphoric acid (by weight) from deionized water and reagent grade 85% phosphoric acid. After mixing, allow the temperature to return to within 3°C of room temperature (20 to 30°C).

2. Dry at least 60 g of as-received MgO pellets. The sample should be either dried overnight or until it is verified that the center of the MgO mass has been at approximately 100°C for at least half an hour. Verify the drying temperatures using an NIST-traceable thermometer. Pellets should be at room temperature (20 to 30°C) before being tested.

3. Weigh 300 ± 0.5 g of 20% phosphoric acid into a glass 400 mL beaker. Record the weight in the scientific notebook (or suitable alternative).

4. Place a piece of insulating cardboard on the stir plate and then place the beaker on the cardboard. Put a stir bar in the solution and initiate stirring so that a dimple about 1-2 cm deep forms in the center of the beaker.

5. Put the thermometer in the phosphoric acid to the immersion line and fix it in this position so that it cannot change during the remainder of the test.

6. Note the temperature and do not proceed until it has stabilized (e.g., does not change by more than 1°C in two minutes). Record the temperature once it has stabilized.

7. Weigh 18.00 ± 0.1 g of pre-dried as-received MgO pellets. Record the weight in the scientific notebook (or suitable alternative).

8. Add the MgO to the phosphoric acid and note the starting time of the experiment to the nearest second. Alternatively, start the stopwatch.

9. At one-minute intervals, record the temperature in the scientific notebook (or suitable alternative). Continue taking temperature measurements until the temperature starts to fall (about 30-35 minutes).

10. Perform three replicates of this procedure.

To be acceptable, the average maximum temperature rise observed in the three replicates must be at least 20°C.

Working Copy

WP 05-WH1011

Revision 12

CH WASTE PROCESSING

Technical Procedure

EFFECTIVE DATE: 04/18/01

Kim Jackson

PRINTED NAME

APPROVED FOR USE

TABLE OF CONTENTS

INTRODUCTION ①②

This procedure provides instructions for unloading the Transuranic Package Transporter (TRUPACT-II) shipping container and for downloading, and placing of waste packages and emplacing backfill in underground disposal area. The following records are generated as result of performing this procedure:

- Attachment 1 - CH Waste Processing Data Sheet
- Attachment 3 - WWIS Waste Emplacement Report Data Sheet

REFERENCES

BASELINE DOCUMENTS

- Certificate of Compliance for TRUPACT-II Package
- WP 05-TM3001, TRUPACT-II Maintenance Program & Procedure

REFERENCED DOCUMENTS

- DOE/CBFO 97-2273, WWIS User's Manual for Use by Shippers/Generators
- DOE/WIPP 93-1001, TRUPACT-II Operating and Maintenance Instructions
- WP 05-WH1002, TRUDOCK Operation 41-T-152 & 41-T-153
- WP 05-WH1101, Surface Transuranic Mixed Waste Handling Area Inspections
- WP 05-WH1810, Underground TRU Mixed Waste Disposal Area Inspections
- WP 05-WH4401, Waste Handling Operator Event Response
- WP 09-PT3001, Volume Control of Parking Area Storage Unit
- WP 12-HP1100, Radiological Surveys
- WP 12-HP4000, Emergency Radiological Control Operations

COMPLIANCE DOCUMENTS

- Hazardous Waste Facility Final Permit, Waste Isolation Pilot Plant, Permit No. NM4890139088-TSDF, issued by the New Mexico Environment Department, October 27, 1999.
- DOE/WIPP 95-2065, Waste Isolation Pilot Plant Safety Analysis Report.

EQUIPMENT

- Dry cloths
- Water
- Brushes
- Ladder
- Payload Tiedown Assembly

PRECAUTIONS AND LIMITATIONS

- Only personnel qualified as Waste Handling Technician/Engineer or trainees operating under direct supervision of qualified Waste Handling Technician/Engineer are authorized to perform waste handling activities specified in this procedure.
- The package unloading operation shall only be performed in a dry environment. In the event of precipitation during outdoor unloading or loading operations, precautions, such as covering Outer Containment Vessel (OCV) and Inner Containment Vessel (ICV) cavities, shall be implemented to prevent precipitation from entering package interior cavities. If precipitation does enter interior cavities, all free-standing water shall be removed prior to loading package for shipment and handling according to the site's waste management procedures.
- The crane and ACGLF may be set on appropriate lid at any time prior to lid removal to facilitate parallel operations of TRUPACT-IIs.
- If waste handling activities are suspended or interrupted, refer to WP 09-PT3001.
- Abnormal events that require cessation of this procedure, such as a radiological event are to be performed in accordance with WP 05-WH4401 and
  WP 12-HP4000.
- If procedure cannot be performed as written or in sequence, Waste Handling Engineer (WHE) shall be contacted.
- Failure to rotate counterweights on the Adjustable Center of Gravity Lift Fixture (ACGLF) to balance position may cause ACGLF to swing uncontrollably, resulting in equipment damage or personnel injury.
- **DO NOT** attempt to rotate ICV or OCV locking rings with mechanical force.

- If OCA Lid cannot be removed by normal process, the WHE shall be contacted. The lid will be removed following instruction in DOE/WIPP 93-1001, Abnormal Operations Sections 4.4.2 and/or 4.4.3.

- If ICV Lid cannot be removed by normal process, WHE and Waste Handling Manager (WHM) shall be contacted. WHM will develop a work package to facilitate ICV Lid removal.

- A maximum of one fully loaded facility pallet can be placed into shielded storage room.

- Loaded facility pallets in CH Surface Storage Area must maintain a minimum spacing of 44 in. (1.1m) between facility pallets.

- During normal operations a maximum of seven loaded facility pallets can be stored in CH Surface Storage Area, and the contents of four TRUPACT -II's can be stored in the TRUDOCK storage area either in the TRUPACT-II or on Facility Pallets.

- Waste is not to be placed in off-normal storage area of WHB without permission of Waste Operations Manager. If a condition exists that will cause an overflow of waste in the normal storage area(s), waste handling shall be stopped and WHE, Central Monitoring Room Operator (CMRO), and WHM contacted.

- Waste containers may be stored in TRUDOCK with TRUPACT-II lids removed.

- When waste containers are emplaced in underground disposal rooms, the following maximums are not to be exceeded:

  - Drum arrays shall not exceed three drums high. Drum arrays may be infinite in horizontal directions.

  - Box arrays shall not exceed three boxes high. Box arrays may be infinite in horizontal directions.

- Transportation Engineer (TE) may be notified at any time that container ID numbers match WWIS Shipment Summary Report.

PREREQUISITE ACTIONS

1.0 WHE, record TRUPACT-II Serial Number on Attachment 1, CH Waste Processing Data Sheet, page 19 of 21.

SIGN OFF

1.0 WHE, verify TE has validated shipping documents, inspected TRUPACT-II(s) for damage, and released TRUPACT-II(s) for unloading.

SIGN OFF

2.0 WHE, obtain WIPP Waste Information System (WWIS) Shipment Summary Report.

3.0 Verify applicable section of WP 05-WH1101, Surface Transuranic Mixed Waste Handling Area Inspections, and/or applicable section of WP 05-WH1810, Underground Transuranic Mixed Waste Disposal Area Inspections, have been completed.

4.0 Verify WP 05-WH1002, TRUDOCK Operation 41-T-152 & 41-T-153, preoperational checks are completed and applicable dock is operational.

5.0 Verify applicable equipment pre-operational inspections have been completed.

6.0 Using WWIS Shipment Summary Report, WHE schedule TRUPACT-II unloading based on ICV closure date to ensure the 60-day NRC venting requirement and/or 59 day NMED inspection requirement is not exceeded.

PERFORMANCE

1.0 TRAILER HANDLING AND UNLOADING

CAUTION

A physical check shall be made to verify air bags on trailer have fully inflated before trailer is moved by a user-site trailer jockey. Failure to do so may cause tires to rub on the bottom of rear TRUPACT-II.

[] 1.1 Position transport trailer in a designated parking area.

[] 1.2 Lower trailer jacks (landing gear) and verify trailer is level.

[] 1.3 Install wheel chocks.

[] 1.4 Install trailer stands on freestanding trailers.

[] 1.5 Loosen tie-down adjusting nuts until tension has been released from Belleville springs.

[] 1.6 **IF** TRUPACT-II is to be removed from trailer,
THEN lift tie-down assemblies from TRUPACT-II lugs, **AND** rotate away from lugs, lowering completely to trailer brackets.

[] 1.7 Rotate four forklift pocket covers to UP position or remove forklift pocket covers and store in a designated area.

[] 1.8 If required, clean TRUPACT-II before transferring into Waste Handling Building using the following methods:

- Wipe with dampened cloths
- Brush with water

NOTE

Only dry TRUPACT-IIs are allowed in the CH Bay.

[] 1.9 If required, dry TRUPACT-II before transport to TRUPACT-II unloading dock.

CAUTION

Tip back may damage the TRUPACT-II exterior surface.

[] 1.10 Transfer TRUPACT-II from trailer to airlock.

[] 1.11 Transfer TRUPACT-II from airlock to an available TRUPACT-II unloading dock.

[] 1.12 Lower TRUDOCK doors and close/latch TRUDOCK gates.

2.0 TRUPACT-II UNLOADING

[] 2.1 WHE, verify adequate Waste Handling Operations (WHO) staff is available to support CH waste processing.

SIGN OFF

[] 2.2 WHE, verify WHB is configured for Waste Handling Mode by contacting the CMRO.

SIGN OFF

2.3 *Outer Containment Assembly (OCA) Lid Removal*

[] 2.3.1 Remove and dispose of the Security Seals.

[] 2.3.2 If seal is broken or missing, contact WHE.

2.3.3 Prepare TRUPACT-II OCA Lid for removal by removing the following components:

[] • OCA Lid Lift Pocket covers

[] • OCA Locking Ring bolts (6)

[] • OCA Test-Port Access Plug

[] • OCA Vent-Port Access Plug

[] 2.3.4 Remove OCV Seal-Test Port Plug.

[] 2.3.5 Remove OCV Vent-Port Cover.

[] 2.3.6 Remove OCV Vent-Port Plug.

[] 2.3.7 Attempt to rotate Locking Ring to "UNLOCKED" position by rotating OCV lock ring assembly counterclockwise.

2.3.8 **IF** Lock Ring will not rotate,
THEN perform the following:

[] [A] Install Vent-Port Tool.

[] [B] Connect vacuum line to Vent-Port Tool.

[] [C] Start vacuum pump.

[] [D] Pull a vacuum until Locking Ring can be rotated.

[] [E] Stop vacuum pump.

[] [F] Disconnect vacuum line from Vent-Port Tool.

[] [G] Remove Vent-Port Tool.

CAUTION

Operator shall verify the two Adjustable Center-of-Gravity Lift Fixture (ACGLF) counterweights are located at 180° and 000° respectively prior to lifting an ACGLF or lid.

[] 2.3.9 Using the crane and ACGLF, lower ACGLF short legs into lift pockets on OCA Lid.

[] 2.3.10 Verify ACGLF legs are locked.

CAUTION

When lifting OCA lid by lift pockets, the load cell indicator shall not exceed 10,000 pounds.

2.3.11 Perform the following:

[] • **SLOWLY** raise OCA lid approximately six inches above the top of the ICV lid, or as directed by Radiological Controls Technician (RCT).

[] • RCT, perform dose rate survey as OCA lid is being raised.

[] 2.3.12 **IF** the OCA Lid does not lift off,
THEN contact WHE **AND** attempt to remove lid by using heat guns or pressurizing with nitrogen or compressed air in accordance with DOE/WIPP 93-1001, Abnormal Operations, Sections 4.4.2 and 4.4.3 respectively.

2.3.13 RCT, perform contamination smears of OCA lid interior surface and ICV lid exterior surface.

[] 2.3.14 Place OCA Lid on its designated storage stand.

2.3.15 RCT, monitor smears for gross levels of activity.

2.4 Inner Containment Vessel (ICV) Lid Removal

CAUTION

Operator shall verify the two Adjustable Center-of-Gravity Lift Fixture (ACGLF) counterweights are located at 180° and 000° respectively prior to lifting an ACGLF or lid.

[] 2.4.1 Using the crane and ACGLF, lower ACGLF short legs into lifting pockets on ICV lid.

[] 2.4.2 Verify ACGLF legs are locked.

2.4.3 Prepare TRUPACT-II ICV Lid for removal by performing the following:

[] • Remove ICV Lock Ring bolts (3)

[] • Remove ICV Vent-Port Cover

[] • Remove ICV Seal-Test-Port Plug

[] 2.4.4 Remove ICV Outer Vent-Port Plug.

[] 2.4.5 Install ICV Vent-Port Tool.

[] 2.4.6 Install a Radiation Assessment Filter (RAF) assembly onto ICV Vent-Port Tool.

[] 2.4.7 Install vacuum hose to RAF.

[] 2.4.8 Retrieve ICV Inner Vent-Port Plug into ICV Vent-Port Tool.

CAUTION

Vacuum should not exceed 15 inches Hg when attempting to open ICV.

[] 2.4.9 Start vacuum pump.

[] 2.4.10 Evacuate ICV cavity until ICV lock ring can be rotated.

[] 2.4.11 Manually rotate ICV lock ring to "UNLOCKED" position.

[] 2.4.12 Secure vacuum system.

[] 2.4.13 Remove RAF assembly from ICV Vent-Port Tool.

[] 2.4.14 RCT, perform contamination smear of RAF assembly quick connect.

[] 2.4.15 RCT, monitor smear and RAF for gross levels of contamination.

[] 2.4.16 RCT, place filter in Alpha-6 monitor with no flow, or into an equivalent instrument.

2.4.17 RCT, let filter count for at least 5 minutes.

2.4.18 RCT, examine plutonium region of spectrum.

2.4.19 RCT, **IF** there is a peak generating in the plutonium region, **GO TO** WP 12-HP4000, Emergency Radiological Control Operations.

2.4.20 RCT, record the following on Attachment 2, Section B of WP 12-HP1100, Radiological Surveys:

- Time
- Peak channel net count rate in cpm
- Peak channel or peak energy, as applicable

NOTE

In step 2.4.21 below, the smears were taken at step 2.3.12 on Inner OCA Lid and top of ICV Lid and at step 2.4.14 on quick connect.

[] 2.4.21 RCT, check activity on smears and RAF is below acceptable limits.

SIGN OFF

[] 2.4.22 Remove ICV Vent-Port Tool and ICV Inner Vent-Port Plug.

[] 2.4.23 RCT, verify DOCK CAM Radioactivity alarm set points are set accordingly:

- Canberra Alpha Cam Hi Alarm (Chronic) 8 DAC hrs
- Canberra Alpha Cam Hi-Hi Alarm (Acute) 40 DAC hrs
- Eberline Alpha-6/6A Hi and Hi-Hi Alarm 12 cpm

[] 2.4.24 Install CAM head and Vent Hood system.

[] 2.4.25 Verify air flows into Vent Hood.

CAUTION

When lifting the ICV lid by the lift pockets, the load cell indicator shall not exceed 7,500 lb.

2.4.26 Perform the following:

[] • **SLOWLY** raise ICV Lid to clear ICV body and hold it approximately two feet above the top of ICV body flange, or as directed by RCT

[] • RCT, perform dose rate survey as ICV Lid is being raised.

[] 2.4.27 **IF** ICV Lid does not lift off,
THEN contact WHE and WHM, **AND** attempt to remove lid by using heat guns or pressurized nitrogen or compressed air in accordance with DOE/WIPP 93-1001, Abnormal Operations Sections 4.4.2 and 4.4.3 respectively.

2.4.28 RCT, perform contamination smears of ICV lid interior and top of payload.

2.4.29 RCT, monitor smears for gross levels of activity.

[] 2.4.30 RCT, check activity on smears is below acceptable limits.

SIGN OFF

[] 2.4.31 Remove Vent Hood system and CAM head.

[] 2.4.32 Place ICV Lid on its designated storage stand.

2.5 Payload Assembly Removal

[] 2.5.1 RCT, perform smears of the guide tubes, Standard Waste Box (SWB), or TDOP connecting devices.

[] 2.5.2 RCT, monitor smears for gross levels of activity.

[] 2.5.3 Attach the appropriate legs/adaptor to ACGLF.

CAUTION

Operator shall verify that the two Adjustable Center-of-Gravity Lift Fixture (ACGLF) counterweights are located at 180° and 000° respectively prior to lifting an ACGLF or lid.

[] 2.5.4 Using the crane and ACGLF, engage payload.

[] 2.5.5 As applicable, lock the ACGLF legs into payload pallet or connect lifting clips to Standard Waste Box (SWB) or Ten Drum Overpack (TDOP).

[] 2.5.6 Position ACGLF counterweights to predetermined positions as marked on top of payload.

[] 2.5.7 Raise payload less than one foot.

[] 2.5.8 If necessary, further balance payload, using counter weight controls at ACGLF console until a balance of ± 0.5° is obtained on both axes.

[] 2.5.9 RCT, check activity on smears is below acceptable limits.

SIGN OFF

NOTE

Steps 2.5.10, 2.5.11 and 2.5.12 are performed concurrently to remove the payload.

[] 2.5.10 Monitor ACGLF indicated balance and adjust counterweights as needed.

[] 2.5.11 **SLOWLY** Raise payload.

[] 2.5.12 RCT, perform dose rate survey of the payload.

[] 2.5.13 Visually inspect payload.

SIGN OFF

[] 2.5.14 **IF** payload is damaged,
THEN notify WHE.

[] 2.5.15 RCT, perform contamination smears of payload bottom and ICV interior.

[] 2.5.16 Place Payload Assembly on facility pallet.

[] 2.5.17 RCT, monitor smears for gross levels of activity.

2.5.18 RCT, check activity on smears is below acceptable limits.

SIGN OFF

2.5.19 **IF** handling SWB's and slip-sheet installation is desired, **THEN** perform the following:

[] [A]Remove ratchet straps.

[] [B]Raise upper SWB.

[] [C] Install slip-sheet.

[] [D] Lower SWB.

NOTE

WWIS and container ID number verification can be performed during contamination surveys.

2.5.20 RCT, perform the following:

[] • Perform contamination smears on areas of payload assembly not previously accessible while in the TRUPACT-II, such as lower SWB seals, upper and lower layer of 14-pack drums.

2.5.21 RCT, perform the following:

[] • Monitor smears for gross levels of activity.

NOTE

If there is a discrepancy in WWIS and container ID numbers, the payload (TRUPACT-II, or facility pallet) should be placed in shielded storage room.

[] 2.5.22 Scan a waste container in each of the payload assemblies using WWIS bar code reader.

[] 2.5.23 **IF** WWIS bar code reader is not operational, **THEN** visually check Payload Container Numbers against WWIS Shipment Summary Report.

[] 2.5.24 Circle appropriate results for container number status, and initial Attachment 1.

SIGN OFF

[] 2.5.25 Notify Transportation Engineer (TE) that container ID numbers match WWIS Shipment Summary Report.

[] 2.5.26 **IF** the container ID numbers **DO NOT** match WWIS Shipment Summary Report,
THEN, WHE, notify the CMR, TE, and WHM of discrepant load.

[] 2.5.27 RCT, check activity on smears is below acceptable limits.

SIGN OFF

2.5.28 Remove guide tubes (if applicable).

2.5.29 **IF** dunnage is removed,
THEN, RCT:

- Perform contamination smears of newly exposed area of payload
- Check activity on smears is below acceptable limits

SIGN OFF

[] 2.5.30 Secure Payload Assembly to Facility Pallet with tie-down assembly.

[] 2.5.31 Performers of procedure enter printed name, signature, date, and initials on Attachment 1.

[] 2.5.32 Submit Attachment 1 and WWIS Shipment Summary Report (if used) to WHE.

NOTE

A maximum of seven loaded facility pallets may be placed in Northeast storage area and the contents of four TRUPACT-IIs in the TRUDOCK storage area.

Fully loaded Facility Pallets will typically be staged in the Northeast CH Container Storage Area.

Minimum spacing of 44 inches must be maintained between loaded facility pallets.

3.0 WASTE DOWNLOADING

[] 3.1 **IF** waste has been stored longer than one shift,
THEN inspect Payload Assemblies visually to check they are in good condition and that there are no signs that release has occurred.

SIGN OFF

[] 3.2 Verify WHB and Underground are configured for Waste Handling Mode by contacting CMRO.

SIGN OFF

[] 3.3 Prior to opening Door #140, notify CMRO.

[] 3.4 Open Door #140.

[] 3.5 Load Facility Pallet on Conveyance Loading Car.

[] 3.6 Close Door #140.

[] 3.7 Load facility pallet on Waste Hoist Conveyance.

3.8 Transfer waste to underground.

[] 3.9 WHE, notify underground RCT to energize Transport Notification System.

4.0 WASTE EMPLACEMENT

[] 4.1 Verify Underground Area inspections have been completed prior to emplacing waste in a disposal area.

NOTE

Waste will be emplaced in disposal panel in a sequential room to room manner, beginning with furthermost accessible room. Waste emplacement will begin at ventilation bulkhead in exhaust drift, and emplaced to beginning of disposal room. Waste will then be emplaced in disposal room to beginning of access drift. Waste will then be emplaced in access drift to a point approximately parallel with ventilation bulkhead in exhaust drift.

[] 4.2 Remove Facility Pallet from Waste Hoist.

[] 4.3 Transport waste to Waste Emplacement Area.

[] 4.4 Contact Waste Station to de-energize Waste Transport Notification System.

NOTE

Emplacement data and/or bar code scans may be performed at any time during remainder of this procedure.

[] 4.5 Unload Payload Assembly from Facility Pallet.

[] 4.6 Remove Payload Net from Payload Assembly.

NOTE

Payload assembly may be emplaced into waste stack while contamination surveys are being performed.

[] 4.7 RCT, perform contamination smears of TRUPACT-II pallet.

[] 4.8 RCT, monitor smears for gross levels of activity.

NOTE

Attachment 2, Payload Assembly Positioning, shows positioning of payloads.

NOTE

85 gallon containers shall be placed on top level of waste stack. TDOPs shall be placed on bottom level only.

[] 4.9 Position Payload Assemblies into waste stack.

[] 4.10 **IF** starting a new row,
THEN mark row number on first payload assembly emplaced.

[] 4.11 Scan Payload Assembly container with bar code reader.

[] 4.12 Enter payload assembly location information in bar code reader:

- Panel
- Room

[] 4.13 Record required information on Attachment 3.

SIGN OFF

[] 4.14 RCT, check activity on smears is below acceptable limits.

SIGN OFF

5.0 BACKFILL

NOTE

Supersacks may be placed on completed columns at anytime during the process.

[] 5.1 Place super sacks on top of each of the completed columns of the waste stack.

5.2 **WHE**, verify completed columns have necessary backfill emplaced.

SIGN OFF

6.0 UPLOAD WWIS

[] WHE, **GO TO** WWIS User's Manual to upload payload data into the WWIS, and **RETURN TO** Section 7.0.

7.0 WHE REVIEW

7.1 WHE, perform the following:

[] • Verify Attachment 1 is completed properly

[] • Verify waste location is updated in the WWIS

[] • Verify Attachment 3 is completed properly

[] • Verify the waste location from Attachment 3 is updated in the Database

[] 7.2 Forward Attachments 1 and 3 to Records Coordinator.

Attachment 1 - CH Waste Processing Data Sheet

Step No.	DESCRIPTION	INITIAL
	PREREQUISITES	
1.0	TRUPACT-II SERIAL No.:_____	WHE
2.0	Shipping documents validated, TRUPACT-II(s) inspected and released for processing	WHE
	PERFORMANCE	
2.1	Adequate WHO staff available.	WHE
2.2	WHB is configured for Waste Handling Mode.	WHE
2.4.21	Activity on smears of OCA lid interior, top of ICV lid, RAF assembly and RAF is below acceptable limits.	RCT
2.4.30	Activity on smears of ICV lid interior and top of payload is below acceptable limits.	RCT
2.5.9	Activity on smears of guide tubes, SWB or TDOP connection devices are below acceptable limits.	RCT
2.5.13	Payload inspected for damage.	WH
2.5.18	Activity on smears of bottom of payload and ICV interior is below acceptable limits.	RCT
2.5.24	Payload container numbers concur/do not concur with WWIS.	WH
2.5.27	Activity on smears of upper and lower areas of payload assembly are below acceptable limits.	RCT
2.5.29	Activity on smears of newly exposed area of payload is below acceptable limits.	RCT
3.1	Payload Assemblies inspected for damage (if stored > 1 shift).	WH
3.2	WHB & U/G is configured for Waste Handling Mode.	WHE
4.13	Completed Attachment 3	WH
4.14	Activity on smears of TRUPACT-II pallet is below acceptable limits.	RCT
5.2	Completed columns have necessary backfill emplaced	WHE

Performers, enter printed name, signature, date, and initials:

_____ / _____ / _____

_____ / _____ / _____

_____ / _____ / _____

_____ / _____ / _____

_____ / _____ / _____

_____ / _____ / _____

_____ / _____ / _____

Printed Name Signature Date Initials

REMARKS: _____

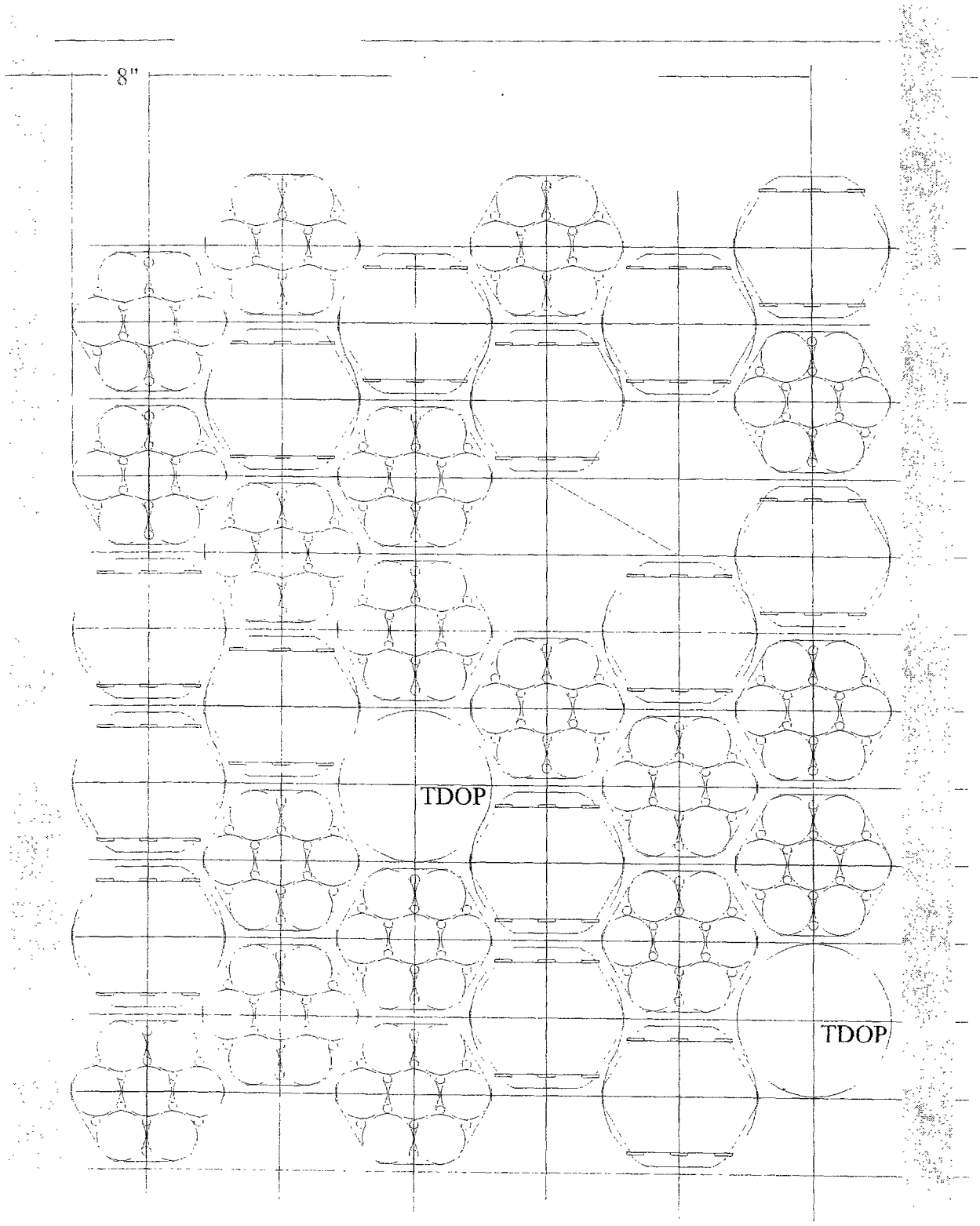
_____

_____

REVIEW/VALIDATION: _____ / _____ / _____

WHE: (Print Name) Signature Date

Attachment 2 - Payload Assembly Positioning



Payload Assembly Positioning

Attachment 3 - Waste Emplacement Report Data Sheet

TRUPACT-II Number: _____

Container Number		
Row Number		
Column (Left to Right)	1 2 3 4 5 6	1 2 3 4 5 6
Place in the Stack (Circle Location)	Top Middle Bottom	Top Middle Bottom
Disposal Cell	S1600 Main Room S1950	S1600 Main Room S1950
Disposal Room	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Disposal Panel	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8
Disposal Date		

Remarks: _____

WHE Review/Validation: _____ Printed Name _____ Signature _____ Date

Working Copy

Effective Date: 10/09/00

WP 08-NT.04
Revision 2

WIPP Waste Information System Configuration Management and Software Quality Assurance Program

Cognizant Section: National TRU Integration

Approved by: J.J. Cotton

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
CASE	Computer-Aided Software Engineering
CAO	Carlsbad Area Office
CE	Cognizant Engineer
CM	Cognizant Manager
DA	Data Administrator
DBA	Database Administrator
DEC	Digital Equipment Corporation
DOE	Department of Energy
DOE-NET	Department of Energy Network
ECO	Engineering Change Order
EFR	Engineering File Room
IEEE	Institute of Electrical and Electronics Engineers
NQA	Nuclear Quality Assurance
PC	Program Consultants
PRS	Project Records Services
QA	Quality Assurance
SDD	Software Design Description
SQA	Software Quality Assurance
SQAS	Software Quality Assurance Specialist
SRS	Software Requirements Specification
STP	Software Test Plan
SUD	Software User Documentation
V&V	Validation & Verification
WID	Waste Isolation Division
WIPP	Waste Isolation Pilot Plant
WSCCB	WWIS Software Configuration Control Board
WSCCL	WWIS Software Configuration Control Log
WSMR	WWIS Software Modification Request
WWIS	WIPP Waste Information System

WIPP Waste Information System Configuration Management and Software Quality Assurance Program
WP 08-NT.04, Rev. 2

1.0 INTRODUCTION[1]

This program provides requirements for the development, procurement, maintenance, use, and retirement of the Waste Isolation Pilot Plant (WIPP) Waste Information System software as specified in the WIPP Waste Information System Software Quality Assurance Plan, and the WIPP Computer Software Quality Assurance Procedure, Attachment 1. Refer to WP 08-NT.06, WWIS Software Requirements Specification (SRS) for details regarding WWIS functional descriptions and requirements. By following the appropriate policies, directives, and procedures, the WWIS will be maintained as a quality product.

The configuration management portion of this program provides a systematic approach to configuration management of the WWIS and all identified configuration items, including application software, system software, hardware, and documentation.

This program identifies methods used for identifying the configuration items, controlling and implementing changes, and documenting the results. The configuration management tasks consist of evaluating, identifying, coordinating, approving or disapproving, and implementing changes to configuration items after formal establishment of their configuration identifications.

2.0 SOFTWARE QUALITY ASSURANCE (SQA) ORGANIZATION AND RESPONSIBILITIES[7]

Responsibilities and authority for configuration management and software quality assurance activities are described below. SQA responsibilities are summarized in Attachment 1 of this document.

2.1 Cognizant Engineer (CE)

The CE is responsible for the technical management and configuration control of the WWIS. The CE is responsible for configuration control of the WWIS application, system software, WWIS hardware, and the maintenance, control, and modification of the database. The CE performs design verifications to ensure the WWIS design is technically adequate to meet the applicable requirements for quality, safety, and performance. The CE also ensures that appropriate engineering information is incorporated into plant design and regulatory documentation. The CE serves as chairperson for the WSCCB and participates on the WWIS Project Team. The CE is responsible for overseeing the activities of the software developers and may participate in V&V activities. The CE reviews the WWIS Document Evaluation Check Sheet, Attachment 3, and implements any required revisions to the affected document(s) prior to implementation of each WWIS modification.

2.2 Data Administrator (DA)

The data administrators (DAs) are responsible for approving activities relating to data management and for configuration control of configuration items (other than software and hardware) such as the SRS, the Software Design Description (SDD), user manuals, data, and execution of test plans. The DAs are also responsible for ensuring that changes made to WWIS data have valid reasons and that the reasons are entered into the WWIS change logs. The DAs serve as members of the WSCCB, and provide the board with the information necessary to make data management decisions.

2.3 Database Administrator (DBA)

The DBA is responsible for monitoring the performance of the WWIS database, performing system maintenance and tuning, and performing the scheduled database backups.

2.4 Quality Assurance Manager

The Quality Assurance manager oversees the activities of the SQAS and is responsible for the administration of the Quality Assurance Program at the WIPP.

2.5 Software Quality Assurance Specialist

The Software Quality Assurance Specialist (SQAS) is designated by the Quality Assurance Department Manager to provide independent quality assurance for the WWIS project and act as an independent reviewer of WWIS software documentation. To provide the required degree of objectivity during the verification and validation tasks, the SQAS verifies that applicable SQA guidelines are followed throughout the project life cycle. As a member of the WSCCB, the SQAS reviews program changes, procedural changes, analyzes and evaluates requirements, design specifications and test documentation.

2.6 Software Developers[4]

The software developers are responsible for developing and physically coding the software with which to implement the WWIS requirements in accordance with established SQA procedures. Each software developer may also act as an independent reviewer of software developed by another software developer as long as he or she was not involved with its development. The software developers are members of the WWIS Development Team.

2.7 Cognizant Manager

The CM is responsible for overseeing the DAs, DBAs, and CE, and is responsible for ensuring that the resources are available to perform the necessary WWIS support activities. The CM is the cost account manager for WWIS funding and software developers' contracts. The CM serves as the primary interface between the CE, DAs, DBAs and CAO for concurrence with major changes before implementation.

3.0 GENERAL REQUIREMENTS

The purpose of the Configuration Management portion of this program is to identify and define the configuration control activities for the WIPP Waste Information System (WWIS). This document will be used throughout the WWIS software life cycle.

The configuration management portion of this program is consistent with the requirements of the following policies, directives, and procedures:

- ANSI/IEEE Standard 828-1990, IEEE Standard for Software Configuration Plans, Institute of Electrical and Electronics Engineers
- ANSI/IEEE Standard 1042-1987, IEEE Guide to Software Configuration Management, Institute of Electrical and Electronics Engineers
- ASME NQA-2-1989, Subpart 2.7, Quality Assurance Requirements for Computer Software for Nuclear Facility Applications
- WP 09, Engineering Conduct of Operations

Any change within these policies, directives, and procedures may have an impact on the WWIS and will be evaluated by the WWIS Software Configuration Control Board (WSCCB). Changes to the WWIS software will be evaluated against the baseline configuration items listed in Section 4.0 of this plan.

The requirements set forth in this program apply to the WIPP Waste Information System (WWIS). Configuration of the hardware is maintained by the CE. The baselined hardware configuration is identified prior to integration testing of the WWIS. Any upgrades and changes to configuration must undergo evaluation using the WWIS Document Evaluation Check Sheet and be concurred with by the WSCCB. This is also documented by the ECO process, in accordance with approved engineering procedures for changing engineering documents.

3.1 WWIS Software Configuration Control Board

A WSCCB is established for the software configuration management of the system. This board is responsible for monitoring, reviewing, and concurring with additions and requested changes to the WWIS. The board is also responsible for the review of and concurrence with documentation based on software quality assurance (SQA) activities described in this document which includes test plans, procedures and test cases. The WSCCB will consist of the DAs, CE, DBAs and SQAS (with optional participation of the cognizant managers and CAO, as may be requested to assist the board in change request decisions).

The WSCCB reviews baseline changes to determine whether a change will be necessary in associated documentation in order to maintain traceability to the revised code. If so, the WSCCB initiates the document revision in accordance with Document Services processes.

4.0 SOFTWARE LIFE CYCLE[3]

4.1 Requirements Phase

The requirements for the WWIS are identified, defined and described in WP 08-NT.06, WWIS SRS.

Any modifications made to the WWIS SRS will be controlled in accordance with established Waste Isolation Division (WID) Engineering procedures. Any change within these procedures may have an impact on the WWIS and will be evaluated by the WSCCB. Changes to the WWIS software will be concurred with by the cognizant manager and others as requested. Changes will be evaluated against the baseline configuration items listed below.

A new version of a baselined item is created when a major revision is requested for application software and/or when the system software or hardware is modified in a manner which may impact the production system activities. The following configuration item categories contain items that need to be controlled and changes evaluated for impact on baselines:

Application Software - Includes the developed applications, database structures, code, scripts, and objects used to maintain the physical database structure.

System Software - Includes the operating system and any supporting software such as database management software and communication software.

Hardware - Includes the configuration and setup of the equipment used by the WWIS.

Documentation - Includes any and all documentation supporting the WWIS project and software development. This includes the following:

- WP 08-NT.06, WWIS Software Requirements Specification
- WP 08-NT.07, WWIS Software Design Description
- WP 08-NT.05, WWIS Validation and Verification Plan
- Test Plan and associated test cases and procedures
- User documents
- Other associated control documents

The WWIS requirements phase software verification and validation activities will be performed in accordance with the WWIS Software Verification and Validation Plan.

4.2 Design Phase

The design of the WWIS application software modules is detailed in the WWIS Software Design Description (SDD). Modifications to the WWIS will require the cognizant engineer (CE) to update the WWIS SDD as necessary with information pertaining to the modification.

Any modifications made to the WWIS SDD will be controlled in accordance with established WID Engineering procedures.

The WWIS design phase software verification and validation activities are performed in accordance with WP 08-NT.05, WWIS Software Verification and Validation Plan.

Test plans will be developed in accordance with Section 7.3, of this program to test the features and functions of the WWIS.

4.3 Implementation Phase[4]

WWIS software modules will be developed in an environment separate from the environment containing the production copy of the WWIS to maintain proper configuration control.

The WWIS implementation phase software verification and validation activities will be performed in accordance with WP 08-NT.05.

4.4 Testing Phase

The WWIS test cases developed in Section 4.2 will be performed in accordance with Section 7.3, of this program.

The WWIS testing phase software verification and validation activities are performed in accordance with WP 08-NT.05.

4.5 Installation and Checkout Phase[11]

The WWIS installation phase software verification and validation activities will be performed in accordance with WP 08-NT.05.

4.6 Operations and Maintenance Phase[5, 14]

All WWIS software modifications will be documented, approved, and controlled in accordance with Section 6.0 of this program. In addition, problems found will be tracked in accordance with Section 9.0 of this program.

4.7 Retirement Phase[6]

The retirement of any WWIS software modules will be documented, approved, and controlled as software modifications in accordance with Section 6.0 of this program.

5.0 SOFTWARE VERIFICATION AND VALIDATION

5.1 Software Verification

The software verification requirements for each software development cycle phase will be met by performing the associated software verification activities identified in WP 08-NT.05.

5.2 Software Validation

The initial software validation requirements of the WWIS will be met through the performance of the WWIS Integrated Acceptance Test Procedure.

Subsequent validation testing of modified WWIS software modules will be documented on WWIS Software Modification Request (WSMR) sheets, approved by the WSCCB and concurred with by cognizant management. Regression testing will be performed in accordance with Section 7.0 of this program as appropriate.

6.0 CONFIGURATION MANAGEMENT

The purpose of WWIS Configuration Management is to identify and define the configuration control activities for the WIPP Waste Information System (WWIS). Configuration Management provides a systematic approach to the configuration control of

all identified configuration items, including application software, system software, hardware, and documentation. Configuration Management will be used throughout the WWIS software life cycle.

This section identifies methods used for identifying the configuration items, controlling and implementing changes, and documenting the results. The configuration management tasks consist of evaluating, identifying, coordinating, approving or disapproving, and implementing changes to configuration items after formal establishment of their configuration identifications.

6.1 Configuration Identification

WWIS revision numbers will be formatted as "X.y" where "X" is the major revision number and "y" is the minor revision number.

- The initial revision of the WWIS will be assigned a revision number of "1.0."
- When a WWIS revision introduces a significant new feature or function, the major revision number will be incremented and the minor revision number will be reset to "0."
- When a WWIS revision incorporates only minor modifications, bug fixes, etc., the minor revision number will be incremented and the major revision number will remain the same.
- The assignment of WWIS revision numbers will be the responsibility of the WWIS Cognizant Engineer.

The following information on each WWIS revision will be included with the Engineering Change Order (ECO) used to implement the revision by the WWIS CE in accordance with Section 6.2 of this program:

- WWIS revision number
- WWIS revision date
- Brief description of software modification(s) included in the WWIS revision

6.2 Configuration Change Control

The configuration of application and system software will be controlled as described in engineering procedures. This includes the Engineering Change Order (ECO) process for control, completion of Attachment 3 of this program, as well as review of relevant changes by the WSCCB. Modifications to the WWIS software will be initiated using the WWIS Software Modification Request (WSMR) sheet (see Attachment 2). All WSMRs will be reviewed by the WSCCB as defined in the WWIS Software V&V Plan. When concurrence

by the WSCCB is achieved, the WSMRs will be attached to an ECO. All WWIS ECOs will be approved by the SQA specialist, the CE, and a DA, at a minimum, with other approvals as required by applicable engineering procedures and the cognizant manager. WSMRs will be concurred with by the cognizant management. CAO may be requested to concur with major software changes, such as removal of reference tables and data fields.

Configuration of the hardware will be maintained by the CE. The baselined hardware configuration will be identified prior to integration testing of the WWIS. Any upgrades and changes to configuration must undergo evaluation using Attachment 3 of this program and be concurred with by the WSCCB. This will also be documented by the ECO process, in accordance with engineering procedures.

For documentation, the SRS, SDD, V&V Plan, and this program will be controlled under the WID Controlled Document Processing procedure. This system provides for complete configuration control of controlling documents. The WSCCB will review baseline changes to determine whether a change will be necessary in associated documentation in order to maintain traceability to the revised code. If so, the WSCCB will initiate the document revision in accordance with Document Services processes.

User documents will be controlled under the ECO and Document Services processes described above. As with other documentation, changes must undergo evaluation using the WWIS Document Evaluation Check Sheet and be concurred with by the WSCCB.

Testing plans, procedures, and tests cases will be controlled by review and concurrence by the WSCCB as described in this program.

The WWIS data configuration will be maintained as described in this program. Deletion of data will only be performed by the data administrator for approved requests. Generator sites are required to resubmit revised data packages/records in complete form, for any changes. The WWIS will maintain an audit trail of the reasons for the changes/deletions provided by the data administrator.

WSMRs pending implementation will be maintained in the WWIS Software Configuration Control Log (WSCCL).

6.3 Configuration Status Accounting

The status of WSMRs will be tracked in the WSCCL by the WWIS CE.

A hard copy and/or electronic media copy of the initial baselined revision (1.0) of the WWIS will be retained by the Engineering File Room (EFR)/Project Records Services (PRS) for the life of the WIPP project.

A hard copy and/or electronic media copy of each new revision of the WWIS will be retained in the EFR/PRS for a period of at least one year from the date that it is superseded by a newer revision.

6.4 WWIS Data Backup

WWIS data will be backed up to magnetic tape each evening (excluding weekends and holidays). The nightly tape backup function will be the responsibility of the WWIS Database Administrator.

The WWIS software will be backed up to magnetic tape each evening as part of the routine WIPPnet nightly backup process.

Prior to the commencement of any software development work affecting the current WWIS software revision, the WWIS CE or the DBA will ensure the following actions are performed:

- An archive copy of all files associated with the current WWIS software revision will be made and the archive will be labeled with the backup date and the WWIS revision number (this archive copy will be retained for as long as the associated WWIS revision remains in the EFR/PRS)

- A duplicate copy of the WWIS source file directory structure and all included files will be made and maintained on the WWIS application server until the new WWIS software under development is placed in the EFR/PRS as the current WWIS software revision

6.5 WWIS Software Modifications

All modifications made to the WWIS software will be documented as comments in the source code of the affected software modules. Each entry will include :

- The date the modification was made
- The initials of the developer making the modification
- A description of, and/or reason for, the modification

All WWIS software modifications will be implemented in accordance with the following process:

1. Implement software changes on development instance.
2. Create SQL script to upgrade instances.
3. Replicate production instance to backup instance.
4. Run SQL script on backup instance.
5. Test backup instance.

6. If no client software problems, go to step 9.
7. Client software problems identified. Correct client software problems.
8. Go to Step 5.
9. If no server software problems, go to step 12.
10. Server software problems identified. Modify SQL script to correct server software problems.
11. Go to step 3.
12. Testing complete. Run SQL script on other instances.[15]

7.0 DOCUMENTATION

7.1 Software Requirements Documentation

The WWIS software requirements are identified and documented in the WWIS Software Requirements Specification.

7.2 Software Design and Implementation Documentation[4]

The design of the WWIS application software modules is detailed in WP 08-NT.07, WWIS Software Design Description.

7.3 WWIS Testing

Prior to implementing changes in the WWIS software, changes will be tested. Testing will be documented in a formal Test Plan which is reviewed by the WSCCB.

WWIS software Test Plan elements will include:

- Computer program tested
- Computer hardware used, when applicable
- Date tests were performed
- Testers and data recorder (may be the same individual)
- Results and acceptability, including acceptance criteria
- Action taken in correcting any deviations
- Person evaluating test results

Test Plans shall be developed to test the modified functions for minor revisions and will include version testing for major revisions. Documentation created during the Test Plan performance shall be attached to the completed Test Plan. Completed WWIS tests shall be reviewed by the WSCCB and the cognizant manager. The completed Test Plan will be incorporated into the ECO by the WWIS Cognizant Engineer.

7.4 User Documentation

User documentation, as a minimum, shall include the following:

- User instructions that contain an introduction, a description of the user's interaction with the software, and a description of any required training necessary to use the software.
- Input and output specifications.
- Input and output formats.
- A description of system limitations.
- A description of anticipated errors and how the user can respond.
- Information for obtaining user and maintenance support.

8.0 VERIFICATION REVIEWS

8.1 Software Requirements Review

A review of the WWIS software requirements will be performed in accordance with WP 08-NT.05 upon completion of the WWIS SRS.

8.2 Software Design Review[6, 9, 10]

A software design review will be performed in accordance with WP 08-NT.05 and the site's Design Verification Procedure, upon completion of the WWIS SDD.

8.3 Development Documentation Review

The WSCCB will periodically review the WIPP Waste Information System Data Management Plan and the WWIS User's Manual for Shippers/Generators in accordance with WP 08-NT.05.

9.0 PROBLEM REPORTING AND CORRECTIVE ACTION[5, 12]

Problems and associated corrective actions identified for WWIS software modules will be documented using the WWIS Quality Problem Reporting/Corrective Action Tracking Log. The log shall include the following items, at a minimum:

- Identification
- Problem Description
- Who Found
- Where Found (module, screen, field)
- Result of Defect (crashed, etc.)
- WWIS Team Evaluation - The evaluation shall include classification of the error in terms of significance to the integrity of the database, and impact on completed work. Problems which endanger software operability must be addressed immediately. Problems which inhibit or pose a potential danger to software functionality must be addressed immediately. Minor software latent defects or ergonomic enhancements will be corrected as needed.
- Remedial Action - Remedial action shall include prompt reporting of problems to affected organizations.
- Testing Needed (include regression testing)
- Corrective Action Needed
- Due Date/Completion Date

Resulting WWIS software modifications will be implemented in accordance with Section 6.5 of this program and tracked in accordance with applicable engineering procedures.

10.0 ACCESS CONTROL

Access to the WWIS will require a valid user account and password, and will require appropriate privileges assigned by the DA.

All data transmitted between the WWIS server located at a WIPP facility and the WWIS client computer(s) located elsewhere will be via the limited-access Department of Energy Network (DOE-NET).

In the event a WWIS user does not have access to the DOE-NET, special arrangements may be made with the WIPP Information Systems Security Manager to allow secure WWIS access to be provided to the user in question via other means.

11.0 PROCUREMENT

11.1 Software[1]

Any organization developing and/or supplying software for use as part of the WWIS will have an approved SQA Program meeting applicable sections of NQA-2, Subpart 2.7, in place.

The existence and acceptability of such a plan will be verified by the WID QA Department through the performance of an audit and/or any other means deemed appropriate by QA management personnel.

11.2 Software Services

All WWIS software services performed at the WIPP, regardless of the personnel performing them, will meet the requirements of this program.

12.0 RECORDS[2, 13]

Record copies of required documentation will be retained with other project records as required by codes, standards, specifications, plans, or procedures.

Specific Records

- WWIS Software Modification Request Sheet
- WWIS Quality Problem Reporting/Corrective Action Tracking Log
- WWIS Software Configuration Control Log
- WWIS Initial Baseline
- WWIS Revisions

13.0 DEFINITIONS

Application Software - Developed or procured software designed for a specific purpose or purposes. (See System Software.)

Audit - An independent examination of a work product or set of work products to assess compliance with specifications, standards, contractual agreements, or other criteria.

Baseline - software that has been formally reviewed and agreed upon, and that can only be changed through formal change control procedures. Note: Baselines, plus approved changes from those baselines, constitute the current configuration identification.

Change Control - The process by which a change is proposed, evaluated, approved or rejected, scheduled, and tracked. (See also Configuration Control).

Code - one or more computer programs, or part of a computer program.

Computer Program - a sequence of instructions suitable for processing by a computer. Processing may include the use of an assembler, a compiler, an interpreter, or a translator to prepare the program for execution as well as to execute it.

Configuration Control - (1) An element of configuration management, consisting of the evaluation, coordination, approval or disapproval, and implementation of changes to configuration items after formal establishment of their configuration identification. (2) the process of identifying and defining the configuration items in a system, controlling the release and change of these items throughout the system life cycle, recording and reporting the status of configuration items and change requests.

Configuration Identification - An element of configuration management, consisting of selecting the configuration items for a system and recording their functional and physical characteristics in technical documentation.

Configuration Item - a collection of hardware or software elements treated as a unit for the purpose of configuration control.

Configuration Management - A discipline applying technical and administrative direction and surveillance to identify and document the functional and physical characteristics of a configuration item; control changes to those characteristics; record and report change processing and implementation status; and verify compliance with specified requirements.

Error - a discrepancy between a computed, observed, or measured value or condition and the true, specified, or theoretically correct value or condition.

Portability - the ease with which software can be transferred from one computer system or environment to another.

Procured Software - Commercial off-the-shelf software, such as database management or communication.

Records - (1) A set of related data items treated as a unit. (2) All documents associated with a particular project, including agreements and/or contracts, correspondence, specifications, design documents, user documentation, training plans and procedures, test

plans and procedures, and configuration control documentation (i.e., software configuration management plans, software trouble reports, change requests and orders, change reports, and software status reports).

Regression Testing - any repetition of tests (usually after software or data change) intended to show that the software's behavior is unchanged except insofar as required by the change to the software or data.

Release - The formal notification and distribution of an approved version.

Requirement - (1) A condition or capability needed by a user to solve a problem or achieve an objective. (2) A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed documents.

Review - A process or meeting during which a work product, or set of work products, is presented to project personnel, managers, users, customers, or other interested parties for comment or approval.

Software - computer programs, procedures, rules, and associated documentation and data pertaining to the operation of a computer system.

Software Life Cycle - the period of time that starts when a software product is conceived and ends when the software product is no longer available for routine use. The software life cycle typically includes a requirements phase, a design phase, an implementation phase, a test phase, an installation and checkout phase, an operation and maintenance phase, and sometimes a retirement phase.

Software Quality Assurance Plan - a plan for the development of software products necessary to provide adequate confidence that the software conforms to established requirements.

Software Validation - the test and evaluation of the completed software to ensure compliance with software requirements.

Software Verification - the process of determining whether or not the product of a given phase of the software development cycle fulfills the requirements imposed by the previous phase.

Systems Software - software designed for a specific computer system or family of computer systems to facilitate the operation and maintenance of the computer system and associated programs, for example, operating systems, compilers, and utilities. Examples include UNIX®, Windows, Oracle®, Designer 2000, etc.

Testing - the process of exercising or evaluating a system or system component by manual or automated means, to verify that it satisfies specified requirements or to identify differences between expected and actual results.

Test Case - a specific set of test data and associated procedures developed for a particular objective, such as to exercise a particular program path or to verify compliance with a specific requirement.

Test Plan - a document describing the approach to be taken for intended testing activities. The plan typically identifies the items to be tested, the testing to be performed, and test sequences

User - The person or organization who operates or interacts with the product, or who takes delivery of the product.

Version - (1) An initial release or re-release of a computer software configuration item, associated with a complete compilation or recompilation of the computer software configuration item. (2) An initial release or complete re-release of a document, as opposed to a revision resulting from issuing change pages to a previous release. A version creates a new baseline.

14.0 REFERENCES

Title 40 *Code of Federal Regulations* (CFR) 191, Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes

Title 40 CFR 194, Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance with 40 CFR 191 Disposal Regulations

DOE/CAO [U.S. Department of Energy/Carlsbad Area Office] 1994-1012, Quality Assurance Program Description

DOE/CAO 1996-2184, Compliance Certification for the Waste Isolation Pilot Plant

IEEE-830, Recommended Criteria for Software Requirements Specifications

IEEE-1016, Recommended Criteria for Software Design

ANSI/IEEE Standard 610.12-1990, IEEE Standard Glossary of Software Engineering Terminology, Institute of Electrical and Electronics Engineers.

ANSI/IEEE Standard 828-1990, IEEE Standard for Software Configuration Plans, Institute of Electrical and Electronics Engineers

ANSI/IEEE Standard 1042-1987, IEEE Guide to Software Configuration Management, Institute of Electrical and Electronics Engineers

ASME NQA-2-1989, Subpart 2.7, Quality Assurance Requirements for Computer Software for Nuclear Facility Applications

WP 09, Engineering Conduct of Operations

SP-WO-WWIS-001, WWIS Integrated Acceptance Test Procedure

SP-WO-WWIS-004, WWIS Software Test Plan

WP 08-NT.01, WWIS Data Management Plan

WP 08-NT.05, WWIS Software Verification and Validation Plan

WP 08-NT.06, WWIS Software Requirements Specification

WP 08-NT.07, WWIS Software Design Description

WP 13-1, WID Quality Assurance Program Description

ATTACHMENT 1 - SQA RESPONSIBILITY MATRIX

SQA Task	CE	CM	DA	PC	QAM	SD	SQAS
Documentation	E	I	E	C	I	E	A
Standards, Practices, and Conventions	E	I	E	C	I	E	R
Reviews and Audits	E	I	E	I	A	I	E
Test	A	I	A	E	I	E	A
Problem Reporting and Corrective Action	A	I	A	E	I	E	A
Tools, Techniques, and Methodologies	C	I	C	-	-	E	R
Code Control	C	I	C	-	-	E	A
Media Control	C	I	C	-	-	E	R
Supplier Control	R	A	E	-	A	E	R
Records Collection, Maintenance, and Retention	A	I	E	-	-	E	R
Training	E	A	E	C	A	E	E
Risk Management	A	I	E	C	-	C	I

a. Key 1 CE=Cognizant Engineer, CM=Cognizant Manager, DA=Data Administrator, PC=Program Consultants, QAM=Quality Assurance Manager, SD=Software Developers, SQAS=Software Quality Assurance Specialist

b. Key 2

A=Approve	The assigned individual is responsible for the review and approval of SQA activities and deliverables. This action requires a formal signature for sign-off.
C=Consult	The assigned individual is consulted for information pertaining to SQA activities and deliverables. This person may not be responsible for providing this information, but this person should be consulted before any action is taken.
E=Execute	The assigned individual is responsible for the work performed on SQA activities and deliverables. This action represents the person who performs the work.
I=Inform	The assigned individual is informed of information pertaining to SQA activities and deliverables. This person should be supplied and notified of SQA activities and deliverables.
R=Review	The assigned individual is responsible for the review of SQA activities and deliverables; approval is not required. Reviewers participate in the review process and provide input to the SQA process.

ATTACHMENT 2 - WWIS SOFTWARE MODIFICATION REQUEST SHEET

WSMR Number: _____

Brief Description of Request: _____

Detailed Description of Request (use additional sheets as necessary):

Software Validation Test Description (use additional sheets as necessary):

Requester Name	Signature	Date
Approvals:		
WWIS Data Administrator Name	Signature	Date
WWIS Cognizant Engineer Name	Signature	Date
WWIS Software QA Specialist Name	Signature	Date
WWIS Database Administrator	Signature	Date
Concurrence:		
Cognizant Manager	Signature	Date
	Signature	Date

ATTACHMENT 3 - WWIS DOCUMENT EVALUATION CHECK SHEET

WWIS Version #:_____ Major_____ Minor____

Criteria: Each WWIS modification requires that changes to the WWIS program documents be implemented prior to implementation of the change.

Date	Document Number	Evaluated (✓)	Modifications Implemented (Yes or No)
	WP 08-NT.01		
	WP 08-NT.03		
	WP 08-NT.04		
	WP 08-NT.05		
	WP 08-NT.06		
	WP 08-NT.07		
	DOE/CAO - 97-2273		

Evaluator: _____ Date:_____

Reviewed By: _____ Date:_____
WWIS Cognizant Engineer

Working Copy

WP 08-NT3020

Revision 2

TRU Waste Receipt

Management Control Procedure

EFFECTIVE DATE: 05/14/01

Ruben U. Carrasco

PRINTED NAME

APPROVED FOR USE

TABLE OF CONTENTS

INTRODUCTION[18]

This procedure provides instructions for receipt of mixed or non mixed transuranic waste shipments at the Waste Isolation Pilot Plant (WIPP). This procedure does not apply to shipments of empty, unused, demonstration, or engineering models except for shipments of empty packages that accompany loaded packages on the same shipping paper.

Only personnel who have completed the following Transportation Engineer (TE) Qualification Cards or trainees operating under the direct supervision of a qualified Transportation Engineer are authorized to perform the TE function in this procedure (trainees are not authorized to sign shipping paper certifications):

- TE-01, Radioactive Materials Transportation
- TE-02, Federal Motor Carrier Safety Regulations (required for mixed shipments only)
- TE-03, Hazardous Materials
- TE-05, Hazardous Waste Shipment by Public Highway (required for mixed waste shipments only)

Performance of this procedure generates one or more of the following records:

- Attachment 1, TRU Waste Receipt Checklist
- Attachment 2, TRU Waste Receipt Log
- Shipping Paper (Uniform Hazardous Waste Manifest or Bill of Lading)
- Land Disposal Restriction (LDR) Notification Forms (mixed waste only)
- WWIS Shipment Summary Report (WWIS SSR)
- Copy of letter returning signed shipping paper to generator
- Correspondence related to discrepancy identification, notification and resolution
- Mississippi Emergency Management Agency Radioactive Waste Shipment Advance Notification and Manifest (Shipments transported through Mississippi only)

REFERENCES

BASELINE DOCUMENTS

- 40 CFR 262, Standards Applicable to Generators of Hazardous Wastes
- 40 CFR 264, Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- 40 CFR 268, Land Disposal Restrictions
- 49 CFR 100 through 178, Hazardous Materials Transportation
- DOE 460.2, Department Materials Transportation and Packaging Management
- DOE 232.1a Occurrence Reporting and Processing of Operations Information
- WP 06-1, WID Transportation Program
- WP 12-5, WIPP Radiation Safety Manual
- WP 13-1, WID Quality Assurance Program Description

COMPLIANCE DOCUMENTS

- Hazardous Waste Facility Permit (HWFP), Waste Isolation Pilot Plant, Permit No. NM4890139088-TSDF, New Mexico Environment Department, October 27, 1999

REFERENCED DOCUMENTS

- WP 05-WH1011, CH Waste Processing
- WP 06-HM3111, Return of TRU Waste to the Generator
- WP 08-NT3112, Processing the Nuclear Material Transportation Report DOE/NRC Form 741
- WP 12-ES3918, Reporting Occurrences in Accordance With DOE Order 232.1a
- WP 12-HP1100, Radiological Surveys

PREREQUISITE ACTIONS

1.0 TE, obtain copy of WWIS SSR and list of DOT required radionuclides for arriving shipment.

2.0 Central Monitoring Room Operator (CMRO) has notified TE and Radiation Control Technician (RCT) of impending arrival of TRU Waste shipment.

PERFORMANCE

1.0 WASTE RECEIPT

NOTE

Steps 1.1 through 1.2.3 may be performed concurrently.

1.1 RCT, perform surveys in accordance with WP 12-HP1100 for the following:④⑥

- Tractor
- Trailer
- Shipping Package exteriors

NOTE

If a DOT inspection is scheduled and the inspector is not present upon shipment arrival, the unloading process and driver release will be delayed 30 minutes past the scheduled shipment arrival time.

1.2 TE, perform the following:[17]

1.2.1 Obtain shipping papers from the driver at the Security Gatehouse.

1.2.2 Record the following on Attachment 1, TRU Waste Receipt Checklist:

- Shipping site
- Shipment number
- Package serial numbers
- Date and time shipment received

SIGN OFF TE

NOTE

For mixtures of radionuclides, only those isotopes determined by the formula in 49 CFR 173.433 (f)(1) must be shown on the shipping papers and labels.

1.2.3 Compare the following waste data on the WWIS SSR, the Shipping Papers and the shipping packages:

- Labels
- Package serial numbers
- Shipment Numbers
- Activity
- Radionuclides
- EPA Hazardous Waste Numbers (if mixed waste)

SIGN OFF TE

NOTE

Other inspections may be performed by state or federal agencies at this point.

1.2.4 Direct driver to perform the following:②⑦

- Park shipment in the designated area
- Verify landing gear is over the concrete pad or other support to prevent damage to the parking area
- Verify minimum 4-foot spacing between loaded TRU Waste shipments

1.2.5 If the waste data from 1.2.2 match, **GO TO** step 1.2.7.

1.2.6 If the waste data from 1.2.2 **DO NOT** match, **GO TO** Section 2.0.

NOTE

Only the following EPA Hazardous Waste Numbers will be accepted at the WIPP: D004, D005, D006, D007 D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D032, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005, F006, F007, F009, and P015.

Steps 1.2.7 through 1.3.1 may be performed concurrently.

1.2.7 Using Attachment 1, review TRU waste shipment papers for regulatory compliance, including the following:③⑥

- Shipping paper-check applicable blocks
- UHWM and UHWM continuation sheet-check applicable blocks
- Land Disposal Restriction Notification forms-check applicable blocks
- For shipments including empty packages, verify the following statement is on or with the shipping paper or the package:

  "THIS PACKAGE CONFORMS TO THE CONDITIONS AND LIMITATIONS SPECIFIED IN 49 CFR 173.428 FOR RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-EMPTY PACKAGE UN2910"

- If there are shipping documentation discrepancies or EPA hazardous waste numbers other than those listed above are on the shipping papers, **GO TO** Section 2.0.

SIGN OFF TE

1.2.8 If a DOE/NRC Form 741 accompanies the shipment, forward the Form 741 to the Nuclear Material Representative for processing in accordance with WP 08-NT3112.

1.3 RCT, perform the following:

1.3.1 Perform radiological surveys in accordance with WP 12-HP1100 as follows:④⑥

- Tractor interior (including steering wheel and floorboards)
- Tractor exterior

- Trailer
- Shipping package exteriors

1.3.2 Enter the survey report numbers on Attachment 1.

SIGN OFF RCT

NOTE

Tractor, trailer and package status will be either "Hold" or "Release".

1.3.3 RCT, determine status of the following and record status on Attachment 1.

- Tractor
- Trailer
- Packages

SIGN OFF RCT

1.4 TE, perform the following and sign off on Attachment 1:

1.4.1 If tractor, trailer or package status is "Hold" notify the following of package status:

- CMRO
- Shipping Coordination Manager
- Waste Handling Engineer (WHE)

NOTE

In Step 1.4.2, notifications may be made on the next working day for TRU Waste shipments received on the back shift, holidays or weekends.

NOTE

The package will not be released if there is a Reportable Discrepancy pending resolution in Section 2.0 of this procedure.

1.4.2 If package status is "Release," notify WHE to proceed with WP 05-WH1011, CH Waste Processing.

SIGN OFF TE

1.5 TE, enter the following in Block 20 of the UHWM, or any available space on the BOL:⑧

- "For the U.S. Dept. of Energy"
- Printed name
- Hand-written signature
- Date received

1.6 TE, perform the following and sign off on Attachment 1:

1.6.1 If tractor status is "Release", release driver with tractor and transporter copy of shipping paper.⑧

1.6.2 If tractor status is "Hold," perform the following:

[A] Obtain concurrence from RCT prior to releasing driver.

[B] Release driver with transportation copy of shipping paper **WITHOUT** the tractor.

SIGN OFF TE

1.7 TE, retain original and remaining copies of shipping paper.

1.8 TE, complete shipment information on Attachment 2:

1.9 Obtain verification of payload ID numbers from WHE.

1.10 TE, perform the following:

1.10.1 If containers are the same as listed on WWIS Summary Report, check "Bar Code Scan Matches WWIS" block on Attachment 1.

1.10.2 If a discrepancy exists, perform the following:

[A] Check "WWIS data does not match bar code scan" block in "WWIS Verification" section of Attachment 1.

[B] **GO TO** Section 2.0.

SIGN OFF TE

1.11 TE, perform the following:

1.11.1 Prepare a portfolio containing the following:[11, 12]

[A] Land Disposal Restriction (LDR) notification, if applicable.

[B] Copy of completed Shipping Paper.

[C] Copy of WWIS Shipment Summary Report.

[D] Completed Attachment 1.

1.11.2 Label portfolio with the following:

[A] Shipment number.

[B] Generator site.

[C] Date received.

1.11.3 Send a signed copy of the shipping paper and cover letter to the generator within 30 days after the delivery.

1.11.4 Record date signed copy of the shipping paper was returned to the waste generator on Attachment 2.

1.11.5 Place copy of cover letter to generator in the Shipping Coordination Letter Log.

2.0 DISCREPANCY IDENTIFIED⑩

NOTE

Steps in Section 2.0 may be performed concurrently with steps in Section 1.0 (through step 1.11.2) except as noted below regarding waste processing and emplacement.

NOTE

According to WP 12-ES3918, Reporting Occurrences in Accordance With DOE Order 232.1a, the responsibility for categorization and reporting of occurrences related to hazardous materials transportation to a DOE facility from a DOE facility belongs to the shipper.

2.1 TE, **IF** a discrepancy other than an obvious typographical error is found, **THEN**, notify CMRO to log the following information in the CMRO log:

- Shipment number
- Type and nature of the discrepancy

2.2 TE, Describe discrepancy and notifications made in the "Remarks" Section of Attachment 1.

NOTE

A Reportable Discrepancy is a difference between the number of packages or payload containers (actual vs. WWIS SSR), payload container identification numbers (bar code or visual vs. WWIS SSR), shipping package serial numbers (package vs. shipping paper vs. WWIS SSR), or the type of waste as determined by EPA hazardous waste numbers and waste profile number(s) (shipping paper vs. WWIS SSR vs. container labels).

Notifications must be made no later than the next business day and/or prior to processing (if applicable)

2.3 TE, **IF** the discrepancy is a Reportable Discrepancy, **THEN** perform the following:

2.3.1 Notify the following people and organizations:

- Waste Handling Manager
- WWIS Data Administrator
- Waste Generator Site Representative

- Environmental Compliance Manager
- Shipping Coordination Manager
- DOE Site Representative

NOTE

The signs will read "Warning-Discrepant Load DO NOT PROCESS without authorization from Shipping Coordination"

2.3.2 TE, place or cause to be placed a warning sign above each tie down on discrepant packages or the door of the shielded storage room.

2.3.3 TE, attempt to resolve the discrepancy with the Waste Generator and a WWIS Data Administrator.

NOTE

Significant manifest discrepancies are differences between the quantity or type of waste reported on the shipping paper and the quantity or type of waste received per 40 CFR 264.72(a). For shipments to WIPP, the quantity is the number of shipping packages (i.e. TRUPACTs).

2.3.4 TE, record significant discrepancy in Block 19 of the manifest or available space on the BOL.

2.3.5 **IF** there are no other discrepancies, **GO TO** Section 3.0.

2.4 TE, **IF** the discrepancy is NOT a Reportable or significant manifest discrepancy such as:

- DOT discrepancies in marking, labeling or shipping papers
- Shipment number differences between the shipping paper and the WWIS SSR
- Package activity levels differences between the package labels, shipping papers and the WWIS SSR (not including differences attributable to rounding)

THEN

2.4.1 TE, Notify the following people and organizations no later than the next business day:

- Waste Handling Manager
- Waste Generator Site Representative
- Shipping Coordination Manager
- WWIS Data Administrator (WWIS issues only)

2.4.2 Notify the Waste Handling Manager that the discrepancies identified in 2.3 must be resolved prior to the waste being emplaced.

2.4.3 Attempt to resolve the discrepancy with the Waste Generator.

SIGN OFF

3.0 RESOLVABLE DISCREPANCY

3.1 TE, **IF** discrepancy is resolved,
THEN perform the following:

3.1.1 Record the resolution, including contact information in the "Remarks" Section of Attachment 1.

3.1.2 For significant manifest discrepancies, record the resolution in Block 19 of the manifest, available space on the BOL or on an attachment to the manifest.

NOTE

Manifest errors may be corrected after receiving verbal concurrence from the Waste Generator Site Representative. A written follow-up is required.

3.1.3 With concurrence of the Waste Generator Site Representative, correct manifest errors with initials (per Generator contacted), date of correction and single line outs for deletions.

3.1.4 Request written concurrence of resolution from Waste Generator Site Representative.

3.1.5 **IF** the discrepancy is a Reportable Discrepancy,
THEN notify the following of the resolution:

- CMRO
- Waste Handling Manager (that the shipment can be processed)

- Environmental Compliance Manager
- WWIS Data Administrator
- Shipping Coordination Manager
- DOE Site Representative

3.1.6 **IF** the discrepancy is NOT a Reportable Discrepancy, notify the following of the resolution:

- CMRO
- Waste Handling Manager (that waste can be emplaced)
- Shipping Coordination Manager

3.1.7 Remove the warning signs from the package or door of the shielded storage room if applicable.

SIGN OFF TE

3.2 TE, **RETURN TO** step 1.2.7, step 1.2.8, or step 1.11, as appropriate.

3.3 If discrepancy cannot be resolved, **GO TO** Section 4.0.

4.0 UNRESOLVABLE SIGNIFICANT DISCREPANCY⑩

NOTE

An unresolvable significant discrepancy is a discrepancy that cannot be resolved with the waste generator (e.g., with telephone conversation) within 15 days after receiving the waste per 40 CFR 264.72(b). The NMED must be contacted immediately by letter, describing the discrepancy, attempts to resolve the discrepancy, and a copy of the shipping paper at issue.

4.1 TE, if the significant discrepancy cannot be resolved within 15 days of receipt, notify the following:

- Waste Handling Manager that the shipment cannot be unloaded or processed
- Environmental Compliance Manager that the discrepancy is unresolvable

- Request Environmental Compliance to contact the DOE and initiate reporting to the NMED by letter
- CMRO to place unresolvable discrepancy in CMRO Log
- Shipping Coordination Manager

4.2 TE, Complete Unresolved Significant Discrepancy Report in the "Remarks" section of Attachment 1 with the following information:

- Date Environmental Compliance contacted
- Environmental Compliance point-of-contact

NOTE

TIME LIMITS: If the discrepancy cannot be resolved, then the shipment must be returned to the Generator prior to the expiration of the 59 day WIPP HWFP Permit venting period, or within 30 days after receipt at the WIPP, whichever occurs first. Return-to-Generator shipment time must comply with these time limits. The beginning of the 60-day NRC venting period is the TRUPACT-II Inner Containment Vessel (ICV) closure date, which is on the WWIS Shipment Summary Report.

4.3 TE, if significant discrepancy cannot be resolved within the above time limits, sign off on Attachment 1 and **GO TO** WP 06-HM3111 .

SIGN OFF TE

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
1.2.2	Shipping Site: _____ Shipment Number: _____ Package Serial Numbers: # 1 _____ # 2 _____ # 3 _____ Date and Time Shipment Received: _____	_____ TE
1.2.3	**Comparison of Shipping Paper, Packages and WWIS SSR** Labels [ ] match [ ] don't match Serial #s [ ] match [ ] don't match Shipment #s [ ] match [ ] don't match Activity levels [ ] match [ ] don't match Radionuclides [ ] match [ ] don't match Haz Waste #s [ ] match [ ] don't match [ ] N/A	_____ TE
1.2.7	**Shipping Papers** **U.S. DOT Requirements** **49 CFR 172.200** [ ] "X" or "RQ" in HAZMAT column [ ] Emergency Response Number [ ] Proper Basic Description [ ] Quantity of waste (# of packages)* and container type shipped [ ] Weight of material shipped [ ] "Radioactive Material" on shipping paper [ ] Radionuclides listed [ ] Description of physical and chemical form [ ] Activity in Becquerels (Bq) [ ] Highway Route Controlled Quantity [ ] Label type [ ] Package Transportation Index [ ] Package identification marking notation [ ] Transporter Signature [ ] Signed shipper's certification [ ] Package Numbers* [ ] Shipment Number*	_____ TE

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
1.2.7	**U.S. EPA Uniform Hazardous Waste Manifest Requirements 40 CFR 262.20** [ ] Not Required for non-RCRA shipments on Bills of Lading [ ] Block 1 Shipper's EPA ID# and UHWM # [ ] Block 2 Page number [ ] Block 3 Waste Generator Name* and Address [ ] Block 4 Shipper phone number* [ ] Block 5 Transporter #1 name [ ] Block 6 Transporter #1 EPA ID# [ ] Block 9 Designated facility name and site address [ ] Block 10 Designated facility EPA ID# [ ] Block 16 Shipper printed or typed name, signature*, certification statement date [ ] Block 17 Transporter #1 Driver's name, signature, receipt date [ ] EPA hazardous waste numbers* **Uniform Hazardous Waste Manifest Continuation Sheet** [ ] Not Applicable [ ] Block 21 complete [ ] Block 22 complete [ ] Block 23 complete [ ] Block 28 complete [ ] Blocks 29, 30, and 31 complete as indicated [ ] EPA hazardous waste numbers entered*	_____ TE
1.2.7	**Land Disposal Restriction Notifications (LDR) (40CFR268.7)** [ ] Not Required for non-RCRA shipments on Bills of Lading [ ] One Time Notice on file. Form not required with shipment [ ] LDR form complete for each waste package requiring an LDR form including: [ ] EPA Hazardous Waste Number(s)* [ ] Hazardous waste manifest number* [ ] Date waste is subject to prohibition* [ ] Notice to WIPP that waste is not prohibited from land disposal (40CFR 268.7(a)(4))*	_____ TE
1.2.7	**Empty Package Certification** [ ] Not Applicable [ ] Certification statement is on or with shipping paper or package	_____ TE
1.3.2	**Radiological Survey Results** Truck and Trailer Radiological Survey Report No. _____ Package #_____Radiological Survey Report No. _____ Package #_____Radiological Survey Report No. _____ Package #_____Radiological Survey Report No. _____	_____ RCT

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
1.3.3	Package #_____ Status: [ ] Hold [ ] Release Package #_____ Status: [ ] Hold [ ] Release [ ] N/A Package #_____Status: [ ] Hold [ ] Release [ ] N/A Trailer Status: [ ] Hold [ ] Release Tractor Status: [ ] Hold [ ] Release	_____ RCT
1.4.1	Tractor, Trailer or Package status "Hold" notifications complete to: [ ] CMRO [ ] WHE [ ] Shipping Coordination Manager	_____ TE
1.4.2	Package status "Release" notification to WHE complete.	_____ TE
1.6.1	Release driver with tractor and transporter copy of shipping paper	_____ TE
1.6.2	With concurrence from RCT, release driver with transporter copy of shipping paper **WITHOUT** the tractor	_____ TE
1.10	**WWIS Verification of Bar Code Scan** Package #_____ WWIS data [ ] matches [ ]does not match Package #_____ WWIS data [ ] matches [ ]does not match Package #_____ WWIS data [ ] matches [ ]does not match	_____ TE
2.0	**Discrepancy Identified** (Use "Remarks" section below to document actions and conversations): [ ] CMRO notified [ ] Reportable or Significant Discrepancy [ ] Waste Handling Manager notified [ ] WWIS Data Administrator notified [ ] Waste Generator Site Representative notified [ ] Environmental Compliance Manager notified [ ] Shipping Coordination Manager notified [ ] DOE Site Representative notified [ ] Significant discrepancy recorded on shipping paper [ ] Warning signs placed on package or storage area door [ ] Non-reportable and less than Significant Discrepancy [ ] Waste Handling Manager notified [ ] Waste Generator Site Representative notified [ ] Shipping Coordination Manager notified	_____ TE

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
3.0	**Discrepancy Resolution** (Use "Remarks" section below to document actions and conversations) [ ] Resolution recorded on shipping paper (significant discrepancy only). [ ] Mandatory written concurrence requested from Generator Site Representative* [ ] CMRO notified [ ] Waste Handling Manager notified [ ] Environmental Compliance Manager (notified discrepancy only) [ ] DOE Site Representative notified (discrepancy only) [ ] Shipping Coordination Manager notified [ ] Warning signs removed from package or storage area door	TE
4.0	**Unresolved Significant Discrepancy Report** (Use "Remarks" section to document actions and conversations) [ ] Waste Handling Manager notified [ ] Environmental Compliance Manager notified [ ] CMRO contacted to place unresolvable discrepancy in CMRO Log [ ] Shipping Coordination Manager notified	TE

Performers responsible for step completion must enter initials, printed name, signature and date below:

Printed Name	Signature	Date	Initials

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
Remarks:		

Attachment 2 - TRU Waste Receipt Log

TRU WASTE RECEIPT LOG				
Ship OTD	**DATE RECEIVED**	**SHIPPER**	**SHIPMENT NUMBER**	**DATE SHIPPING PAPER RETURNED TO WASTE GENERATOR**

Working Copy

Effective Date: 10/20/00

WP 08-NT.03
Revision 1

Waste Stream Profile Form Review and Approval Program

Cognizant Section: National TRU Programs

Approved by: J. J. Cotton

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

AK	Acceptable Knowledge
CAO	Carlsbad Area Office
CFR	*Code of Federal Regulations*
DA	Data Administrator
DOE	Department of Energy
EPA	Environmental Protection Agency
NTP	National TRU (Transuranic) Programs
QA	Quality Assurance
RCRA	Resource Conservation and Recovery Act
RIDS	Records Inventory and Disposition Schedule
RTL	Regulatory Threshold Limit
SVOC	Semivolatile Organic Compound
TIC	Tentatively Identified Compound
TRU	Transuranic
TSDF	Treatment, Storage, and Disposal Facility
UCL_{90}	90 Percent Upper Confidence Level
VOC	Volatile Organic Compound
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WID	Waste Isolation Division
WIPP	Waste Isolation Pilot Plant
WSPF	Waste Stream Profile Form
WWIS	WIPP Waste Information System

1.0 INTRODUCTION①②

This Waste Stream Profile Form Review and Approval Program describes the process for review and approval of a generator/shipper waste stream through the use of a Waste Stream Profile Form (WSPF). Wastes in a particular waste stream can only be shipped to the Waste Isolation Pilot Plant (WIPP) for disposal after a WSPF has been approved. A WSPF is approved by WIPP if the information provided is complete and accurate and the waste stream complies with the WIPP Waste Acceptance Criteria (WAC) and the Waste Analysis Plan (WAP). Once approved, a WIPP Waste Information System (WWIS) data administrator (DA) will enter the approval date of the WSPF into the Administrative Tables. Containers will only be accepted for disposal at the WIPP if they are associated with an approved WSPF.

Waste Isolation Division (WID) National Transuranic (TRU) Programs (NTP) is responsible for coordination of the review and approval of the WSPF by the Resource Conservation and Recovery Act (RCRA) Permitting Section and the Quality Assurance (QA) Department. The WWIS DAs are part of the NTP Department.

Records generated by performance of waste stream profile form review and approval will be retained as part of the facility operating record for the life of the facility, plus two years. Implementation of this program will generate the following records:

- Waste Stream Profile Form
- Characterization Information Summary
- WWIS Waste Container Data Report
- NTP Data Review Checklist
- Quality Assurance - Data Review Checklist
- RCRA Permitting Section - Data Review Checklist
- Department of Energy (DOE)/Carlsbad Area Office (CAO) - Letter indicating Approval/Rejection of the WSPF

Characterization Information Summary, or equivalent, include a compilation of data summary reports for the sampling, testing, analytical data, and acceptable knowledge documentation available for waste containers and/or waste generating processes for a waste stream.

1.1 References

DOE/WIPP-069, Waste Acceptance Criteria for the Waste Isolation Pilot Plant (current revision)

Hazardous Waste Facility Permit, Waste Isolation Pilot Plant, Permit No. NM4890139088-TSDF (Treatment, Storage, and Disposal Facility) by the New Mexico Environment Department, October 27, 1999

1.2 Responsibilities

1.2.1 NTP WWIS Data Administrators

The WWIS Team Leader receives the WSPF from the generator site project manager and designates one of the Das to coordinate the WIPP review. The DA reviews the data package for completeness and routes a copy of the WSPF, accompanying Characterization Information Summary, and WWIS Waste Container Data Reports to RCRA Permitting and QA. The DA will ensure that the information required by the RCRA Permit, Section B-1d is provided before submittal to WID RCRA Permitting for review.

If a reviewer identifies deficiencies which need to be further addressed by the shipper/generator or any deficiency that would otherwise result in disapproval of a WSPF, the DA will convene a meeting of all reviewers to evaluate the significance and impacts of each issue or discrepancy and to develop recommendations or options to address each issue or discrepancy. NTP Management communicates the results to CAO and interfaces with CAO to resolve any noted discrepancies or issues which require the generator to revise the WSPF, the Characterization Information Summary or WWIS Waste Container data.

After all WID reviewers concur that the WSPF and Characterization Information Summary are acceptable and the completed review checklists are submitted as required, the NTP Manager forwards a copy of the WSPF package to the CAO with a cover letter recommending CAO approval of the waste stream. The CAO communicates WSPF approval to the generator/shipper and the DA makes an approval date entry into the WSPF Administrative Table, causing the database to recognize the approved waste stream profile number.

1.2.2 Quality Assurance Programs

QA participates in the review and approval activities for the WSPF, to verify that the submittal is complete and properly signed. Cognizant QA reviewers have access to the WWIS which provides the waste container data necessary to support the QA review of the WSPF. The QA reviewer performs a review of the WSPF, the Characterization Information Summary, and the WWIS Waste Container Data Reports applicable to the waste stream. The QA reviewer completes a checklist (Attachment 3) to document the review of each WSPF.

1.2.3 RCRA Permitting Section

The RCRA Permitting Section performs a review of the WSPF, the Characterization Information Summary, and WWIS Waste Container Data Reports applicable to the waste stream. Cognizant RCRA reviewers have access to the WWIS which provides the waste container data necessary to support the RCRA review of the WSPF. RCRA Permitting will verify that information submitted on the WSPF meets the requirements of the WAP,

Section B-1d, and is correct. The RCRA reviewer completes a checklist (Attachment 4) to document the review of each WSPF package.

1.3 Prerequisite Actions

The WWIS DA will ensure that sufficient waste container data has been submitted to the WWIS as a basis for review of the WSPF.

For waste containers being reported in the waste stream, hard copy or electronic waste stream data summary reports which are included in the Characterization Information Summary will consist of the following:

- A reference list which supplements the Acceptable Knowledge Information section of the WSPF.

- A Reconciliation With Data Quality Objectives form which indicates that data or acceptable knowledge are sufficient to determine the waste parameters. This form must be signed by the Site Project Manager.

- A Headspace Gas Summary data table that shows the WAP-required analytes, the number of samples in which the analytes were detected, the Maximum ppmV, the mean ppmV, standard deviation, 90 Percent Upper Confidence Level (UCL_{90}, and Regulatory Threshold Limit (RTL).

- A table that relates sample numbers (testing, sampling, and analytical) to waste container numbers

- Summary which includes the following:

  - Data which indicates that all Tentatively Identified Compounds (TICs) were appropriately identified and reported in accordance with the requirements of Permit Attachment B3, Section B3-1;

  - Data which indicates that the overall completeness, comparability, and representativeness Quality Assurance Objectives were met for each of the analytical and testing procedures as specified in Permit Attachment B3, Sections B3-2 through B3-9;

  - Data which indicates that the Program Required Quantitation Limits for all analyses were met;

- Statistical Data Summary including:

  - Mean concentrations, UCL_{90} for the mean concentrations, standard deviations, and number of samples collected for Volatile Organic

Compounds (VOCs), Semivolatile Organic Compound (SVOCs), and metals in the homogeneous waste stream;

- Mean concentrations, UCL_{90} for the mean concentrations, standard deviations, and the number of samples collected for each VOC in the headspace gas of waste containers in the waste stream; and

- Whether the waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.

- Waste container headspace gas VOC summary analytical results

- Total VOC, SVOC, and metal analytical results for homogenous solids and soil/gravel (if applicable)

- A summary of all process knowledge documentation supporting the waste stream characterization (e.g., the acceptable knowledge summary report demonstrating that each waste container holds TRU radioactive waste); and whether the waste stream exhibits a toxicity characteristic under 40 CFR Part 261, Subpart C

Reviewers are responsible for the verification that the WSPF data includes the following:

- Listing of all waste containers being presented in the Characterization Information Summary

- Listing of all testing, sampling, and analytical batch numbers associated with each waste container being reported in the Characterization Information Summary

- Data Validation Summary

2.0 PERFORMANCE

2.1 Receipt of the Waste Stream Profile Form

Upon receipt of a WSPF and accompanying waste stream characterization summary package from a generator, the DA will enter the following information into the Waste Stream Profile Form Log (Attachment 1):

- WSPF number
- Date of receipt
- Generator site

2.2 Review of the Waste Stream Profile Form

Prior to initiation of the formal WSPF review process, the DA will verify the following:

- All applicable sections of the WSPF are complete
  - The generator/storage site's name
  - Waste Stream Name
  - Generator/storage site Environmental Protection Agency (EPA) Identification
  - Date of audit report approval by NMED (if obtained).
  - Assignment of waste stream description
  - Summary category group [Note: If the summary category group designation on the WSPF is incorrect, the generator may initiate a pen-and-ink correction to the WSPF. CAO will be notified of the correction.]
  - Waste matrix code group [Note: If the waste matrix code designation on the WSPF does not match the Waste Matrix Code designation for containers in the WWIS characterization data module, the WSPF is in error and shall be re-submitted.]
  - Applicable EPA Hazardous Waste Codes. [Note: If the hazardous waste codes on the WSPF do not match the hazardous waste codes as assigned to the containers in the WWIS characterization module, NTP management will be contacted. NTP management may contact the Manager, RCRA Permitting, CAO or the generator to resolve the discrepancy. The DA will then receive instructions to either proceed with distribution of the WSPF to the RCRA and QA reviewers or wait for re-characterization data from the generator site.
  - Applicable TRUPACT-II Content (TRUCON) Codes. [Note: If the TRUCON codes on the WSPF do not match the code(s) as assigned to the containers in the WWIS characterization module, the DA will consult DOE/WIPP 89-004, most recent revision and determine the appropriate corrective action. If the DA determines that the WWIS container data field inputs from the generator must be changed, NTP management will be contacted. NTP management will then contact either the CAO or the generator site to request re-submittal of the correct TRUCON Code to the WWIS characterization container data fields. If the WWIS container data is correct and the WSPF must be revised, the generator may initiate a pen-and-ink correction to the

WSPF and the DA may proceed with distribution of the WSPF to the RCRA and QA reviewers.]

- Waste Stream Profile Certification Statement signed and dated by the Site Project Manager

- The characterization information summary is complete, signed by the generator/shipper site project manager, and attached to the WSPF. This information shall include:

  - Data Reconciliation with DQOs;

  - Cross-reference of container identification numbers to each Batch Data Report;

  - Headspace gas summary data listing the identification numbers of samples used in the statistical reduction, the maximum, mean, standard deviation, UCL_{90} RTL and associated EPA hazardous waste codes that must be applied to the waste stream;

  - TIC listing and evaluation, and verification that acceptable knowledge (AK) was confirmed;

  - Real-time radiography and visual examination summary to document prohibited items are not present and to confirm AK.

  - AK summary including waste stream name, waste stream number, point of generation, waste stream volume, generation dates, TRUCON Codes, TRU Waste Baseline Inventory Report information, generating processes, RCRA determinations and radionuclide information.

- The supporting waste container data used in preparing the WWIS Waste Container Data Report is available on the WWIS by the WSPF number

If the above criteria have been met, the DA will forward the information to QA and RCRA Permitting for concurrent review.

If the review of a WSPF and associated waste characterization data reveal nonconformance with acceptable knowledge requirements as described in Permit Attachment B3 (i.e., project level nonconformance), the waste shall not be managed, stored, or disposed of until corrective action is taken as specified in Attachment B3.

If an issue, discrepancy or problem cannot be resolved by additional documentation, the CAO will be notified and the WSPF will be filed as unacceptable. The generator site has the option of resolving the problem (if possible) and resubmitting the WSPF data package.

The unacceptable form is kept on file for reference and retention as an operational record for the life of the facility in accordance with Environment Compliance's Records Inventory and Disposition Schedule (RIDS). The DA will record the date the generator was notified of the rejection in the Waste Stream Profile Form Log. The generator will need to resubmit a corrected WSPF and characterization information summary to the CAO and WID NTP.

2.3 NTP WWIS WSPF Package Review

The WWIS DA will perform a review of the WSPF and document the results using the checklist shown in Attachment 2. Based on the review results, the DA will circle either "Acceptable" or "Not Acceptable," and sign the NTP WWIS Data Review Checklist.

If all checklists (i.e., Attachments 2, 3, and 4) review criteria and attributes are acceptable, NTP will forward the package to the CAO with a cover letter recommending approval. Upon CAO approval, the DA will list the date of acceptance in the Waste Stream Profile Form Log (see Section 3.1).

If any of the checklists (i.e., Attachments 2, 3, and 4) review criteria and attributes are not acceptable, the DA will convene a meeting of all reviewers as described in Section 1.2.1 of this procedure. If the identified issues, discrepancies, or problems cannot be resolved internally, NTP management will present the unresolved issues to CAO in a letter which recommends conditional approval or rejection of the waste stream. CAO then may elect to approve the WSPF with a contingency that the unresolved issues will be addressed by the generator site prior to the first shipment of waste from the waste stream or CAO may reject the WSPF. If the CAO cannot resolve the identified discrepancy, the DA will remove the WSPF package from active review and record the date of unacceptability in the Waste Steam Profile Form Log comments block (see Section 3.2).

2.4 QA Programs WSPF Package Review

QA Programs will complete calculation checks (for mean, variance, number of samples, and standard deviation) that are part of the checklist for 20 percent of the analytes submitted with the waste characterization container data.

QA Programs will perform the review of the WSPF package per the Quality Assurance Data Review Checklist (Attachment 3).

If the WSPF is acceptable, the QA reviewer will then sign and forward the completed checklist, and any other accompanying documentation used to establish the rationale for acceptance of the waste stream to the DA (see Section 3.1).

If the WSPF is not acceptable, the completed checklist, and accompanying documentation used to establish the rationale for rejection of the waste stream will then be forwarded to the WWIS DA (see Section 3.2.) The QA reviewer or designee will then attend the WSPF comment resoution meeting a described in Section 1.2.1 of this procedure. The QA

representative must be prepared to discuss the issue(s), significance of the issues and potential impacts as they relate to the disposal process. If there is a potential for WAC, QAPD, or WAP QA requirement(s) to be violated as the result of the WSPF as submitted or from disposal of individual containers from the waste stream in question, the QA reviewer must be prepared to substantiate the QA findings against the applicable requirement(s). If required, NTP management will contact the CAO to obtain information to resolve any recognized discrepancies. Any additional information obtained will be provided to the QA reviewer, who will evaluate the information. If the information is deemed by the QA reviewer to be acceptable, it will be attached to the checklist and forwarded to WID NTP. Upon resolution of identified issues or discrepancies, the QA reviewer will indicate concurrence by initialing the appropriate block on the checklist.

Based on the review results, the QA reviewer will circle either "Acceptable" or "Not Acceptable," and sign the Quality Assurance Data Review Checklist.

2.5 RCRA Permitting - WSPF Package Review

The designated RCRA reviewer will perform a RCRA review of the WSPF package per the RCRA Data Review Checklist (Attachment 4). Based on the review results, the RCRA reviewer circles either "Acceptable" or "Not Acceptable."

If the WSPF is acceptable, the RCRA reviewer will sign and forward the completed checklist and any other accompanying documentation used to establish the rationale for acceptance of the waste stream to the WWIS DA (see Section 3.1).

If the WSPF is not acceptable, the completed checklist, and accompanying documentation used to establish the rationale for rejection of the waste stream will then be forwarded to the WWIS DA (see Section 3.2.) The RCRA reviewer or designee will then attend the WSPF comment resolution meeting as described in Section 1.2.1 of this procedure. The RCRA representative must be prepared to discuss the issue(s), significance of the issues and potential impacts as they relate to the disposal process. If there is a potential for a WAP requirement(s) to be violated as the result of approval of the WSPF as submitted or from disposal of individual containers from the waste stream in question, the RCRA reviewer must be prepared to substantiate the RCRA findings against the applicable RCRA or WAP requirement(s). If required, NTP managment or the Manager, Environmental Compliance will contact the CAO to obtain information to resolve any recognized discrepancies. Any additional information obtained will be provided to the RCRA reviewer, who will evaluate the information. If the information is deemed by the RCRA reviewer to be acceptable, it will be attached to the checklist and forwarded to WID NTP. Upon resolution of identified issues or discrepancies, the RCRA reviewer will indicate concurrence by initialing the appropriate block on the checklist.

Based on the review results, the RCRA reviewer circles either "Acceptable" or "Not Acceptable."

3.0 COMPILATION OF WSPF DOCUMENTATION AND NOTIFICATION OF THE GENERATOR SITE

3.1 NTP/WWIS Data Administrator Receipt of Reviewed WSPF Packages

After all WID reviews of the WSPF package are complete, NTP forwards the package to the CAO with a cover letter recommending approval. If any pen-and-ink changes are made to a WSPF the changes will be initialed and dated by the individual at the generator site who made the change.

The WWIS Section will create a file for retention of the WSPF and WSPF Review/Approval Checklists. This documentation, along with the CAO WSPF approval notification letter, will be retained as part of the facility operating record for the life of the facility in accordance with Environmental Compliance RIDS.

3.2 Acceptance of Approved WSPF

Upon receipt of written approval of the WSPF from the CAO, the DA will enter the approval date for the WSPF number into the WWIS WSPF Administrative Table which then allows the generator/shipper to enter certification data into the WWIS for containers in the approved waste stream. The CAO WSPF approval notification letter will be retained as part of the facility operating record for the life of the facility in accordance with Environmental Compliance RIDS.

ATTACHMENT 1 - WASTE STREAM PROFILE FORM LOG

WSPF No.	Receipt Date	Generator Site	CAO Approval/ Rejection Date		Actions/ Comments

ATTACHMENT 2 - NTP/WWIS DATA REVIEW CHECKLIST

Waste Stream Profile Form Number: _____

Item	Criteria	Acceptable	Comments	Comment Resolution	Reviewer Initial
1.0	Data included in the Characterization Information Summary is consistent with the container data supplied to the WWIS.	Yes____ No____			
2.0	EPA Hazardous Waste Codes are limited to those included in Permit Module II.C.4.	Yes____ No____			
3.0	Waste Streams which are categorized as homogeneous solids or soil/gravel waste have been sampled and analyzed for totals analyses.	Yes____ No____			
4.0	Waste Stream is designated as defense waste on the WSPF.	Yes____ No____			
5.0	Data presented is consistent within the report and supporting documents are referenced.	Yes____ No____			
6.0	The waste stream is <u>not</u> designated as spent nuclear fuel.	Yes____ No____			
7.0	The waste stream is <u>not</u> designated as high-level waste.	Yes____ No____			

Review performed by: (Data Administrator) Acceptable/Not Acceptable (Circle one)

Name: _____ Signature: _____ Date: _____

Comments: _____

ATTACHMENT 3 - QUALITY ASSURANCE DATA REVIEW CHECKLIST

Waste Stream Profile Form Number: _____

Item	Criteria	Acceptable	Comments	Comment Resolution	Reviewer Initials
1.0	Validated (i.e., signed and dated) by authorized personnel.	Yes ___ No ___			
2.0	Sample Data supplied to the WWIS include target analytes and TICs.	Yes ___ No ___			
3.0	The generator has provided an adequate report of their statistical methodology, such that WID can reproduce descriptive statistics.	Yes ___ No ___			
4.0	On the Summary Data Report, the mean concentration of each constituent is calculated correctly. See Equation 1. *	Yes ___ No ___			
5.0	On the Summary Data Report, the variance is calculated correctly. See Equation 2. *	Yes ___ No ___			
6.0	On the Summary Data Report, the standard deviation is calculated correctly. See Equation 3. *	Yes ___ No ___			
7.0	The required number of data points are present. See Equation 4. *	Yes ___ No ___			

Review performed by: (Quality Assurance) Acceptable/Not Acceptable (Circle one)

Name: _____ Signature: _____ Date: _____

Comments: _____

_____

_____

ATTACHMENT 3 - QUALITY ASSURANCE DATA REVIEW CHECKLIST

Equation 1

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

where:
$\bar{x}$ = concentration mean
n = number of samples analyzed
x_i = concentration in the sample

* To be performed on 20% of the analytes submitted with the data.

Equation 2

$$s^2 = \frac{1}{n-1}\sum_{i=1}^{n} (x_i - \bar{x})^2$$

where:
s^2 = concentration variance
n = number of samples analyzed
$\bar{x}$ = concentration mean
x_i = concentration in the sample

Equation 3

$$s = \sqrt{s^2}$$

where:
s = concentration standard deviation
s^2 = concentration variance

Equation 4

$$n_0 = \frac{t^2_{\alpha, n_0-1} \times s^2}{E^2}$$

where:
n_0 = number of samples needed
t_{α, n_0-1} = 90th percentile for a t distribution with n_0-1 degrees of freedom (see Attachment 3)
s^2 = concentration variance
E = Allowable error. Which is = RT-
analyte being analyzed. where RT is the Regulatory Threshold for the particular

ATTACHMENT 3 - QUALITY ASSURANCE DATA REVIEW CHECKLIST

n \ F	.60	.75	.90	.95	.975	.99	.995	.9995
1	.325	1.000	3.078	6.314	12.706	31.821	63.657	636.619
2	.289	.816	1.886	2.920	4.303	6.965	9.925	31.598
3	.277	.765	1.638	2.353	3.182	4.541	5.841	12.924
4	.271	.741	1.533	2.132	2.776	3.747	4.604	8.610
5	.267	.727	1.476	2.015	2.571	3.365	4.032	6.869
6	.265	.718	1.440	1.943	2.447	3.143	3.707	5.959
7	.263	.711	1.415	1.895	2.365	2.998	3.499	5.408
8	.262	.706	1.397	1.860	2.306	2.896	3.355	5.041
9	.261	.703	1.383	1.833	2.262	2.821	3.250	4.781
10	.260	.700	1.372	1.812	2.228	2.764	3.169	4.587
11	.260	.697	1.363	1.796	2.201	2.718	3.106	4.437
12	.259	.695	1.356	1.782	2.179	2.681	3.055	4.318
13	.259	.694	1.350	1.771	2.160	2.650	3.012	4.221
14	.258	.692	1.345	1.761	2.145	2.624	2.977	4.140
15	.258	.691	1.341	1.753	2.131	2.602	2.947	4.073
16	.258	.690	1.337	1.746	2.120	2.583	2.921	4.015
17	.257	.689	1.333	1.740	2.110	2.567	2.898	3.965
18	.257	.688	1.330	1.734	2.101	2.552	2.878	3.922
19	.257	.688	1.328	1.729	2.093	2.539	2.861	3.883
20	.257	.687	1.325	1.725	2.086	2.528	2.845	3.850
21	.257	.686	1.323	1.721	2.080	2.518	2.831	3.819
22	.256	.686	1.321	1.717	2.074	2.508	2.819	3.792
23	.256	.685	1.319	1.714	2.069	2.500	2.807	3.767
24	.256	.685	1.318	1.711	2.064	2.492	2.797	3.745
25	.256	.684	1.316	1.708	2.060	2.485	2.787	3.725
26	.256	.684	1.315	1.706	2.056	2.479	2.779	3.707
27	.256	.684	1.314	1.703	2.052	2.473	2.771	3.690
28	.256	.683	1.313	1.701	2.048	2.467	2.763	3.674
29	.256	.683	1.311	1.699	2.045	2.462	2.756	3.659
30	.256	.683	1.310	1.697	2.042	2.457	2.750	3.646
40	.255	.681	1.303	1.684	2.021	2.423	2.704	3.551
60	.254	.679	1.296	1.671	2.000	2.390	2.660	3.460
120	.254	.677	1.289	1.658	1.980	2.358	2.617	3.373
∞	.253	.674	1.282	1.645	1.960	2.326	2.576	3.291

ATTACHMENT 4 - RCRA PERMITTING DATA REVIEW CHECKLIST

Item	Criteria	Acceptable	Comments	Comment Resolution	Reviewer Initials
1.0	CAO certification/re-certification has been granted to the generator.	Yes ___ No ___			
2.0	The annual site certification audit has been completed and there are no unresolved Significant Conditions Adverse to Quality. NOTE: The RCRA Permitting reviewer must coordinate closely with the RCRA auditor who performed the site certification audit. The auditor will be able to provide the latest version number of the WAC and the presence of any outstanding Corrective Action Reports from the certification audit. The auditor will provide additional information on the acceptable knowledge process and documentation used at the generator site.	Yes ___ No ___			
3.0	Has all required information been provided by the generator site?	Yes____ No____			
4.0	Waste Streams which are categorized as homogeneous solids or soil/gravel waste have been sampled and analyzed for totals analyses.	Yes____ No____			
5.0	The summary category group and the waste matrix code group correspond to the waste stream name and recorded description.	Yes ___ No ___			
6.0	EPA Hazardous Waste Codes assigned are listed on the Part A Permit. NOTE: The codes for ignitable, corrosive, reactive, or incompatible wastes are not included in the Permit Module II.C.4 and therefore must not appear on the WSPF.	Yes ___ No ___			

ATTACHMENT 4 - RCRA PERMITTING DATA REVIEW CHECKLIST

Item	Criteria	Acceptable	Comments	Comment Resolution	Reviewer Initials
7.0	Acceptable knowledge information listed under "Required Program Information" and "Required Waste Stream Information" must have been used to make a determination. References must be given for the acceptable knowledge documentation given in these WSPF sections.	Yes ___ No ___			
8.0	The summary of acceptable knowledge provided in the Data Summary Report supports the summary category group assignment, the waste matrix code group assignment, and the hazardous waste code assignment.	Yes ___ No ___			
9.0	The sampling and analysis methods used for characterization are listed as acceptable methods in the Waste Analysis Plan.	Yes ___ No ___			
10.0	Verify the following: EPA hazardous waste codes have been correctly assigned. EPA hazardous waste codes for all wastes based on sampling and analysis, fall within a 90 percent upper confidence limit. EPA hazardous waste codes assigned to all waste with analytical results over the regulatory threshold.	Yes ___ No ___			
11.0	If TICs listed in 40 CFR 261, Appendix VIII, are positively identified and are detected in 25 percent of all samples from a given matrix parameter category, the site project officer will add them to the target analyte list.	Yes __ No __			

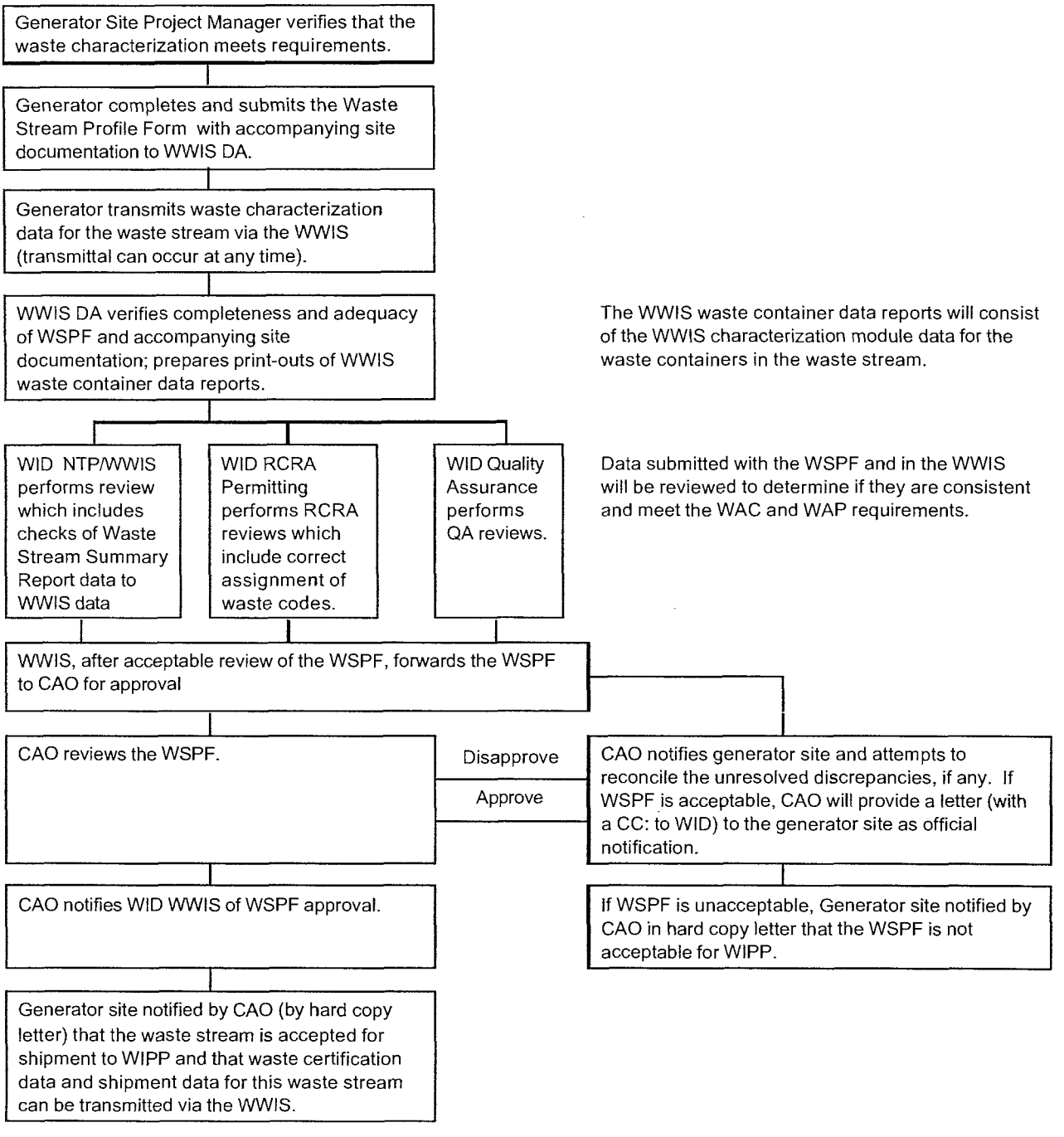
Review/approval performed by: (RCRA Permitting) Acceptable/Not Acceptable (Circle one)

Name: _____ Signature: _____ Date: _____

ATTACHMENT 4 - RCRA PERMITTING DATA REVIEW CHECKLIST

+Comments: _____

ATTACHMENT 5 - FLOWCHART OF WASTE STREAM PROFILE REVIEW AND APPROVAL PROCESS



Working Copy

WP 08-NT3020

Revision 2

TRU Waste Receipt

Management Control Procedure

EFFECTIVE DATE: 05/14/01

Ruben U. Carrasco

PRINTED NAME

APPROVED FOR USE

TABLE OF CONTENTS

INTRODUCTION[18]

This procedure provides instructions for receipt of mixed or non mixed transuranic waste shipments at the Waste Isolation Pilot Plant (WIPP). This procedure does not apply to shipments of empty, unused, demonstration, or engineering models except for shipments of empty packages that accompany loaded packages on the same shipping paper.

Only personnel who have completed the following Transportation Engineer (TE) Qualification Cards or trainees operating under the direct supervision of a qualified Transportation Engineer are authorized to perform the TE function in this procedure (trainees are not authorized to sign shipping paper certifications):

- TE-01, Radioactive Materials Transportation
- TE-02, Federal Motor Carrier Safety Regulations (required for mixed shipments only)
- TE-03, Hazardous Materials
- TE-05, Hazardous Waste Shipment by Public Highway (required for mixed waste shipments only)

Performance of this procedure generates one or more of the following records:

- Attachment 1, TRU Waste Receipt Checklist
- Attachment 2, TRU Waste Receipt Log
- Shipping Paper (Uniform Hazardous Waste Manifest or Bill of Lading)
- Land Disposal Restriction (LDR) Notification Forms (mixed waste only)
- WWIS Shipment Summary Report (WWIS SSR)
- Copy of letter returning signed shipping paper to generator
- Correspondence related to discrepancy identification, notification and resolution
- Mississippi Emergency Management Agency Radioactive Waste Shipment Advance Notification and Manifest (Shipments transported through Mississippi only)

REFERENCES

BASELINE DOCUMENTS

- 40 CFR 262, Standards Applicable to Generators of Hazardous Wastes
- 40 CFR 264, Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- 40 CFR 268, Land Disposal Restrictions
- 49 CFR 100 through 178, Hazardous Materials Transportation
- DOE 460.2, Department Materials Transportation and Packaging Management
- DOE 232.1a Occurrence Reporting and Processing of Operations Information
- WP 06-1, WID Transportation Program
- WP 12-5, WIPP Radiation Safety Manual
- WP 13-1, WID Quality Assurance Program Description

COMPLIANCE DOCUMENTS

- Hazardous Waste Facility Permit (HWFP), Waste Isolation Pilot Plant, Permit No. NM4890139088-TSDF, New Mexico Environment Department, October 27, 1999

REFERENCED DOCUMENTS

- WP 05-WH1011, CH Waste Processing
- WP 06-HM3111, Return of TRU Waste to the Generator
- WP 08-NT3112, Processing the Nuclear Material Transportation Report DOE/NRC Form 741
- WP 12-ES3918, Reporting Occurrences in Accordance With DOE Order 232.1a
- WP 12-HP1100, Radiological Surveys

PREREQUISITE ACTIONS

1.0 TE, obtain copy of WWIS SSR and list of DOT required radionuclides for arriving shipment.

2.0 Central Monitoring Room Operator (CMRO) has notified TE and Radiation Control Technician (RCT) of impending arrival of TRU Waste shipment.

PERFORMANCE

1.0 WASTE RECEIPT

NOTE

Steps 1.1 through 1.2.3 may be performed concurrently.

1.1 RCT, perform surveys in accordance with WP 12-HP1100 for the following:④⑥

- Tractor
- Trailer
- Shipping Package exteriors

NOTE

If a DOT inspection is scheduled and the inspector is not present upon shipment arrival, the unloading process and driver release will be delayed 30 minutes past the scheduled shipment arrival time.

1.2 TE, perform the following:[17]

1.2.1 Obtain shipping papers from the driver at the Security Gatehouse.

1.2.2 Record the following on Attachment 1, TRU Waste Receipt Checklist:

- Shipping site
- Shipment number
- Package serial numbers
- Date and time shipment received

SIGN OFF TE

NOTE

For mixtures of radionuclides, only those isotopes determined by the formula in 49 CFR 173.433 (f)(1) must be shown on the shipping papers and labels.

1.2.3 Compare the following waste data on the WWIS SSR, the Shipping Papers and the shipping packages:

- Labels
- Package serial numbers
- Shipment Numbers
- Activity
- Radionuclides
- EPA Hazardous Waste Numbers (if mixed waste)

SIGN OFF TE

NOTE

Other inspections may be performed by state or federal agencies at this point.

1.2.4 Direct driver to perform the following:②⑦

- Park shipment in the designated area
- Verify landing gear is over the concrete pad or other support to prevent damage to the parking area
- Verify minimum 4-foot spacing between loaded TRU Waste shipments

1.2.5 If the waste data from 1.2.2 match, **GO TO** step 1.2.7.

1.2.6 If the waste data from 1.2.2 **DO NOT** match, **GO TO** Section 2.0.

NOTE

Only the following EPA Hazardous Waste Numbers will be accepted at the WIPP: D004, D005, D006, D007 D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D032, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005, F006, F007, F009, and P015.

Steps 1.2.7 through 1.3.1 may be performed concurrently.

1.2.7 Using Attachment 1, review TRU waste shipment papers for regulatory compliance, including the following:③⑥

- Shipping paper-check applicable blocks
- UHWM and UHWM continuation sheet-check applicable blocks
- Land Disposal Restriction Notification forms-check applicable blocks
- For shipments including empty packages, verify the following statement is on or with the shipping paper or the package:

  "THIS PACKAGE CONFORMS TO THE CONDITIONS AND LIMITATIONS SPECIFIED IN 49 CFR 173.428 FOR RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-EMPTY PACKAGE UN2910"

- If there are shipping documentation discrepancies or EPA hazardous waste numbers other than those listed above are on the shipping papers, **GO TO** Section 2.0.

SIGN OFF TE

1.2.8 If a DOE/NRC Form 741 accompanies the shipment, forward the Form 741 to the Nuclear Material Representative for processing in accordance with WP 08-NT3112.

1.3 RCT, perform the following:

1.3.1 Perform radiological surveys in accordance with WP 12-HP1100 as follows:④⑥

- Tractor interior (including steering wheel and floorboards)
- Tractor exterior

- Trailer
- Shipping package exteriors

1.3.2 Enter the survey report numbers on Attachment 1.

SIGN OFF RCT

NOTE

Tractor, trailer and package status will be either "Hold" or "Release".

1.3.3 RCT, determine status of the following and record status on Attachment 1.

- Tractor
- Trailer
- Packages

SIGN OFF RCT

1.4 TE, perform the following and sign off on Attachment 1:

1.4.1 If tractor, trailer or package status is "Hold" notify the following of package status:

- CMRO
- Shipping Coordination Manager
- Waste Handling Engineer (WHE)

NOTE

In Step 1.4.2, notifications may be made on the next working day for TRU Waste shipments received on the back shift, holidays or weekends.

NOTE

The package will not be released if there is a Reportable Discrepancy pending resolution in Section 2.0 of this procedure.

1.4.2 If package status is "Release," notify WHE to proceed with WP 05-WH1011, CH Waste Processing.

SIGN OFF TE

1.5 TE, enter the following in Block 20 of the UHWM, or any available space on the BOL:®

- "For the U.S. Dept. of Energy"
- Printed name
- Hand-written signature
- Date received

1.6 TE, perform the following and sign off on Attachment 1:

1.6.1 If tractor status is "Release", release driver with tractor and transporter copy of shipping paper.®

1.6.2 If tractor status is "Hold," perform the following:

[A] Obtain concurrence from RCT prior to releasing driver.

[B] Release driver with transportation copy of shipping paper **WITHOUT** the tractor.

SIGN OFF TE

1.7 TE, retain original and remaining copies of shipping paper.

1.8 TE, complete shipment information on Attachment 2:

1.9 Obtain verification of payload ID numbers from WHE.

1.10 TE, perform the following:

1.10.1 If containers are the same as listed on WWIS Summary Report, check "Bar Code Scan Matches WWIS" block on Attachment 1.

1.10.2 If a discrepancy exists, perform the following:

[A] Check "WWIS data does not match bar code scan" block in "WWIS Verification" section of Attachment 1.

[B] **GO TO** Section 2.0.

SIGN OFF TE

1.11 TE, perform the following:

1.11.1 Prepare a portfolio containing the following:[11, 12]

[A] Land Disposal Restriction (LDR) notification, if applicable.

[B] Copy of completed Shipping Paper.

[C] Copy of WWIS Shipment Summary Report.

[D] Completed Attachment 1.

1.11.2 Label portfolio with the following:

[A] Shipment number.

[B] Generator site.

[C] Date received.

1.11.3 Send a signed copy of the shipping paper and cover letter to the generator within 30 days after the delivery.

1.11.4 Record date signed copy of the shipping paper was returned to the waste generator on Attachment 2.

1.11.5 Place copy of cover letter to generator in the Shipping Coordination Letter Log.

2.0 DISCREPANCY IDENTIFIED⑩

NOTE

Steps in Section 2.0 may be performed concurrently with steps in Section 1.0 (through step 1.11.2) except as noted below regarding waste processing and emplacement.

NOTE

According to WP 12-ES3918, Reporting Occurrences in Accordance With DOE Order 232.1a, the responsibility for categorization and reporting of occurrences related to hazardous materials transportation to a DOE facility from a DOE facility belongs to the shipper.

2.1 TE, **IF** a discrepancy other than an obvious typographical error is found, **THEN**, notify CMRO to log the following information in the CMRO log:

- Shipment number
- Type and nature of the discrepancy

2.2 TE, Describe discrepancy and notifications made in the "Remarks" Section of Attachment 1.

NOTE

A Reportable Discrepancy is a difference between the number of packages or payload containers (actual vs. WWIS SSR), payload container identification numbers (bar code or visual vs. WWIS SSR), shipping package serial numbers (package vs. shipping paper vs. WWIS SSR), or the type of waste as determined by EPA hazardous waste numbers and waste profile number(s) (shipping paper vs. WWIS SSR vs. container labels).

Notifications must be made no later than the next business day and/or prior to processing (if applicable)

2.3 TE, **IF** the discrepancy is a Reportable Discrepancy, **THEN** perform the following:

2.3.1 Notify the following people and organizations:

- Waste Handling Manager
- WWIS Data Administrator
- Waste Generator Site Representative

- Environmental Compliance Manager
- Shipping Coordination Manager
- DOE Site Representative

NOTE

The signs will read "Warning-Discrepant Load DO NOT PROCESS without authorization from Shipping Coordination"

2.3.2 TE, place or cause to be placed a warning sign above each tie down on discrepant packages or the door of the shielded storage room.

2.3.3 TE, attempt to resolve the discrepancy with the Waste Generator and a WWIS Data Administrator.

NOTE

Significant manifest discrepancies are differences between the quantity or type of waste reported on the shipping paper and the quantity or type of waste received per 40 CFR 264.72(a). For shipments to WIPP, the quantity is the number of shipping packages (i.e. TRUPACTs).

2.3.4 TE, record significant discrepancy in Block 19 of the manifest or available space on the BOL.

2.3.5 **IF** there are no other discrepancies, **GO TO** Section 3.0.

2.4 TE, **IF** the discrepancy is NOT a Reportable or significant manifest discrepancy such as:

- DOT discrepancies in marking, labeling or shipping papers
- Shipment number differences between the shipping paper and the WWIS SSR
- Package activity levels differences between the package labels, shipping papers and the WWIS SSR (not including differences attributable to rounding)

THEN

2.4.1 TE, Notify the following people and organizations no later than the next business day:

- Waste Handling Manager
- Waste Generator Site Representative
- Shipping Coordination Manager
- WWIS Data Administrator (WWIS issues only)

2.4.2 Notify the Waste Handling Manager that the discrepancies identified in 2.3 must be resolved prior to the waste being emplaced.

2.4.3 Attempt to resolve the discrepancy with the Waste Generator.

SIGN OFF

3.0 RESOLVABLE DISCREPANCY

3.1 TE, **IF** discrepancy is resolved,
THEN perform the following:

3.1.1 Record the resolution, including contact information in the "Remarks" Section of Attachment 1.

3.1.2 For significant manifest discrepancies, record the resolution in Block 19 of the manifest, available space on the BOL or on an attachment to the manifest.

NOTE

Manifest errors may be corrected after receiving verbal concurrence from the Waste Generator Site Representative. A written follow-up is required.

3.1.3 With concurrence of the Waste Generator Site Representative, correct manifest errors with initials (per Generator contacted), date of correction and single line outs for deletions.

3.1.4 Request written concurrence of resolution from Waste Generator Site Representative.

3.1.5 **IF** the discrepancy is a Reportable Discrepancy,
THEN notify the following of the resolution:

- CMRO
- Waste Handling Manager (that the shipment can be processed)

- Environmental Compliance Manager
- WWIS Data Administrator
- Shipping Coordination Manager
- DOE Site Representative

3.1.6 **IF** the discrepancy is NOT a Reportable Discrepancy, notify the following of the resolution:

- CMRO
- Waste Handling Manager (that waste can be emplaced)
- Shipping Coordination Manager

3.1.7 Remove the warning signs from the package or door of the shielded storage room if applicable.

SIGN OFF TE

3.2 TE, **RETURN TO** step 1.2.7, step 1.2.8, or step 1.11, as appropriate.

3.3 If discrepancy cannot be resolved, **GO TO** Section 4.0.

4.0 UNRESOLVABLE SIGNIFICANT DISCREPANCY⑩

NOTE

An unresolvable significant discrepancy is a discrepancy that cannot be resolved with the waste generator (e.g., with telephone conversation) within 15 days after receiving the waste per 40 CFR 264.72(b). The NMED must be contacted immediately by letter, describing the discrepancy, attempts to resolve the discrepancy, and a copy of the shipping paper at issue.

4.1 TE, if the significant discrepancy cannot be resolved within 15 days of receipt, notify the following:

- Waste Handling Manager that the shipment cannot be unloaded or processed
- Environmental Compliance Manager that the discrepancy is unresolvable

- Request Environmental Compliance to contact the DOE and initiate reporting to the NMED by letter
- CMRO to place unresolvable discrepancy in CMRO Log
- Shipping Coordination Manager

4.2 TE, Complete Unresolved Significant Discrepancy Report in the "Remarks" section of Attachment 1 with the following information:

- Date Environmental Compliance contacted
- Environmental Compliance point-of-contact

NOTE

TIME LIMITS: If the discrepancy cannot be resolved, then the shipment must be returned to the Generator prior to the expiration of the 59 day WIPP HWFP Permit venting period, or within 30 days after receipt at the WIPP, whichever occurs first. Return-to-Generator shipment time must comply with these time limits. The beginning of the 60-day NRC venting period is the TRUPACT-II Inner Containment Vessel (ICV) closure date, which is on the WWIS Shipment Summary Report.

4.3 TE, if significant discrepancy cannot be resolved within the above time limits, sign off on Attachment 1 and **GO TO** WP 06-HM3111 .

SIGN OFF TE

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
1.2.2	Shipping Site: _____ Shipment Number: _____ Package Serial Numbers: # 1 _____ # 2 _____ # 3 _____ Date and Time Shipment Received: _____	_____ TE
1.2.3	**Comparison of Shipping Paper, Packages and WWIS SSR** Labels [ ] match [ ] don't match Serial #s [ ] match [ ] don't match Shipment #s [ ] match [ ] don't match Activity levels [ ] match [ ] don't match Radionuclides [ ] match [ ] don't match Haz Waste #s [ ] match [ ] don't match [ ] N/A	_____ TE
1.2.7	**Shipping Papers** **U.S. DOT Requirements** **49 CFR 172.200** [ ] "X" or "RQ" in HAZMAT column [ ] Emergency Response Number [ ] Proper Basic Description [ ] Quantity of waste (# of packages)* and container type shipped [ ] Weight of material shipped [ ] "Radioactive Material" on shipping paper [ ] Radionuclides listed [ ] Description of physical and chemical form [ ] Activity in Becquerels (Bq) [ ] Highway Route Controlled Quantity [ ] Label type [ ] Package Transportation Index [ ] Package identification marking notation [ ] Transporter Signature [ ] Signed shipper's certification [ ] Package Numbers* [ ] Shipment Number*	_____ TE

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
1.2.7	**U.S. EPA Uniform Hazardous Waste Manifest Requirements 40 CFR 262.20** [ ] Not Required for non-RCRA shipments on Bills of Lading [ ] Block 1 Shipper's EPA ID# and UHWM # [ ] Block 2 Page number [ ] Block 3 Waste Generator Name* and Address [ ] Block 4 Shipper phone number* [ ] Block 5 Transporter #1 name [ ] Block 6 Transporter #1 EPA ID# [ ] Block 9 Designated facility name and site address [ ] Block 10 Designated facility EPA ID# [ ] Block 16 Shipper printed or typed name, signature*, certification statement date [ ] Block 17 Transporter #1 Driver's name, signature, receipt date [ ] EPA hazardous waste numbers* **Uniform Hazardous Waste Manifest Continuation Sheet** [ ] Not Applicable [ ] Block 21 complete [ ] Block 22 complete [ ] Block 23 complete [ ] Block 28 complete [ ] Blocks 29, 30, and 31 complete as indicated [ ] EPA hazardous waste numbers entered*	_____ TE
1.2.7	**Land Disposal Restriction Notifications (LDR) (40CFR268.7)** [ ] Not Required for non-RCRA shipments on Bills of Lading [ ] One Time Notice on file. Form not required with shipment [ ] LDR form complete for each waste package requiring an LDR form including: [ ] EPA Hazardous Waste Number(s)* [ ] Hazardous waste manifest number* [ ] Date waste is subject to prohibition* [ ] Notice to WIPP that waste is not prohibited from land disposal (40CFR 268.7(a)(4))*	_____ TE
1.2.7	**Empty Package Certification** [ ] Not Applicable [ ] Certification statement is on or with shipping paper or package	_____ TE
1.3.2	**Radiological Survey Results** Truck and Trailer Radiological Survey Report No. _____ Package #_____Radiological Survey Report No. _____ Package #_____Radiological Survey Report No. _____ Package #_____Radiological Survey Report No. _____	_____ RCT

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
1.3.3	Package #_____ Status: [ ] Hold [ ] Release Package #_____ Status: [ ] Hold [ ] Release [ ] N/A Package #_____Status: [ ] Hold [ ] Release [ ] N/A Trailer Status: [ ] Hold [ ] Release Tractor Status: [ ] Hold [ ] Release	_____ RCT
1.4.1	Tractor, Trailer or Package status "Hold" notifications complete to: [ ] CMRO [ ] WHE [ ] Shipping Coordination Manager	_____ TE
1.4.2	Package status "Release" notification to WHE complete.	_____ TE
1.6.1	Release driver with tractor and transporter copy of shipping paper	_____ TE
1.6.2	With concurrence from RCT, release driver with transporter copy of shipping paper **WITHOUT** the tractor	_____ TE
1.10	**WWIS Verification of Bar Code Scan** Package #_____ WWIS data [ ] matches [ ]does not match Package #_____ WWIS data [ ] matches [ ]does not match Package #_____ WWIS data [ ] matches [ ]does not match	_____ TE
2.0	**Discrepancy Identified** (Use "Remarks" section below to document actions and conversations): [ ] CMRO notified [ ] Reportable or Significant Discrepancy [ ] Waste Handling Manager notified [ ] WWIS Data Administrator notified [ ] Waste Generator Site Representative notified [ ] Environmental Compliance Manager notified [ ] Shipping Coordination Manager notified [ ] DOE Site Representative notified [ ] Significant discrepancy recorded on shipping paper [ ] Warning signs placed on package or storage area door [ ] Non-reportable and less than Significant Discrepancy [ ] Waste Handling Manager notified [ ] Waste Generator Site Representative notified [ ] Shipping Coordination Manager notified	_____ TE

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
3.0	**Discrepancy Resolution** (Use "Remarks" section below to document actions and conversations) [ ] Resolution recorded on shipping paper (significant discrepancy only). [ ] Mandatory written concurrence requested from Generator Site Representative* [ ] CMRO notified [ ] Waste Handling Manager notified [ ] Environmental Compliance Manager (notified discrepancy only) [ ] DOE Site Representative notified (discrepancy only) [ ] Shipping Coordination Manager notified [ ] Warning signs removed from package or storage area door	TE
4.0	**Unresolved Significant Discrepancy Report** (Use "Remarks" section to document actions and conversations) [ ] Waste Handling Manager notified [ ] Environmental Compliance Manager notified [ ] CMRO contacted to place unresolvable discrepancy in CMRO Log [ ] Shipping Coordination Manager notified	TE

Performers responsible for step completion must enter initials, printed name, signature and date below:

Printed Name	Signature	Date	Initials

Attachment 1 - TRU Waste Receipt Checklist

STEP NO.	DESCRIPTION CHECK APPROPRIATE BOXES * = HWFP REQUIRED ITEMS	INITIALS
Remarks:		

Attachment 2 - TRU Waste Receipt Log

TRU WASTE RECEIPT LOG				
Ship OTD	**DATE RECEIVED**	**SHIPPER**	**SHIPMENT NUMBER**	**DATE SHIPPING PAPER RETURNED TO WASTE GENERATOR**